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INVESTIGATING TEACHER PERCEPTIONS OF MONTANA KINDERGARTEN TO

SECOND-GRADE PLAY-BASED LEARNING PRACTICES DURING THE COVID-19

PANDEMIC

By

ERIN N. ELLIS

Master of Curriculum Studies, The University of Montana, Missoula, MT, 2008
Bachelor of Education, The University of Montana, Missoula MT, 2003

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Approved by:

Ashby Kinch
Interim Dean of the Graduate School

Dr. Fletcher Brown, Chair
Teaching and Learning

Dr. Trent Atkins
Teaching and Learning

Dr. Julie Bullard
Teaching and Learning

Dr. Kate Brayko
Teaching and Learning

Dr. Daniel Lee
Educational Leadership

Ellis, Erin N., Ed.D., May 2022   Teaching and Learning

Investigating Teacher Perceptions of Montana Kindergarten to Second-Grade Play-Based
Learning Practices During the COVID-19 Pandemic

Chairperson: Dr. Fletcher Brown

   The purpose of this mixed-method study was to examine early elementary education teachers'
perceptions of the presence, feasibility, and desirability to implement play-based learning,
including free play, guided play, and games in Montana public school K-2 classrooms, and the
impact COVID-19 health and safety protocols had on the implementation of play-based learning
compared to the previous year (before COVID-19). Using a sequential explanatory research
design, teachers self-reported their ability to implement play-based learning, including play-
based learning forms, activities, and materials before the COVID-19 pandemic (retrospectively)
compared to during COVID-19 and the impact the COVID-19 health and safety protocols had on
their play-based learning practices. Data was first collected using an online survey and followed
up with semi-structured interviews (N=9) to gain a further explanation for survey responses
(N=110). Results indicated that teachers in Montana utilized play-based learning in their
classrooms both before and during the COVID-19 pandemic. However, play-based learning,
including games, guided play, and free play, were implemented far less frequently during the
pandemic than before. The impact COVID-19 had on the presence, feasibility, and desire of
Montana teachers to implement play-based learning was large. Specifically, health and safety
protocols, including social distancing, students' inability to share school supplies, and restricting
or reducing student movement for specials, lunch, etc., were the top three hindrances of
implementing play-based learning during the COVID-19 pandemic.

Dedication

This dissertation is dedicated to my grandmother, Elinor Utech, for whom my love for reading and learning began. To my husband, Brodie Ellis, and my children, Hayden, and Natalie, who have loved and supported me through the process. To my parents, whose encouragement has meant so much. To my extended family, friends, colleagues, mentors, and students who cheered me on, I also dedicate this work.

Acknowledgments

Sincere and deep appreciation is expressed to Dr. Fletcher Brown, Committee Chair, for his guidance and steadfast belief in me and my work. I'd like to thank the members of my committee—Dr. Trent Atkins, Dr. Kate Brayko, Dr. Julie Bullard, and Dr. Dan Lee for their wisdom, support, guidance, and commitment to my education.

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Chapter 1: Introduction

Play is an essential aspect of a child's development. The National Association for the Education of Young Children (2020) stated that play is the "central teaching practice that facilitates young children's development and learning" (p. 9). Researchers of play have found that play is best defined and seen when child choice, engagement, and joy are present (NAEYC, 2020). Play-based learning is an approach that incorporates both playful and child-guided elements along with varying degrees of adult involvement. Play-based learning can be best understood when visualized across a continuum, starting with the least amount of adult involvement and the most amount of child agency on one end and moving to more adult involvement on the other end (Allee-Herndon et al., 2019; Pyle & Danniels, 2017). The play-based learning continuum includes various types of play, and for this study, three central components within the continuum were addressed: (1) free play, (2) guided play, or (3) games (Pyle & Danniels, 2017; Weisberg et al., 2013). The benefits related to play-based learning are numerous and impact children's cognitive, social, emotional, academic, and physical development as well as their executive functioning, social-emotional development, and ability to self-regulate (Allee-Herndon & Roberts, 2020; Copple & Bredekamp, 2009; Nell et al., 2013; White, 2013; Yogman et al., 2018). Despite the known benefits, kindergarten, first, and second-grade teachers report the absence of play-based learning in their classrooms (Lynch, 2015; Parker & Thomsen, 2019; and Pyle & Danniels, 2017). Barriers continue to interfere with children's opportunities for play experiences in the early elementary (K-2) school setting regardless of the well-documented benefits associated with play and children's development (Allee-Herndon & Roberts, 2020; Bubikova-Moan et al., 2017; Hassinger-Das et al., 2017; Nell et al., 2013, and Pyle & Danniels, 2017). Teachers struggle to find a balance between the

academic pressures of preparing children for testing and teaching state standards while providing play-based learning that appears academic to onlookers (Allee-Herndon & Roberts, 2020; Frost, 2010; Hassinger-Das et al., 2017; Lynch, 2015; Nell et al., 2013, and Pyle & Danniels, 2017).

In addition to these longer-standing barriers, COVID-19 mitigation added additional challenges to implementing play-based learning. Teachers were concerned with COVID-19 health and safety mandates and school district precautionary measures. We know that schools offered different learning approaches as part of their response to COVID-19. The physical school buildings' closures impacted children academically and in many other ways (American Academy of Pediatrics, 2020; Hoffman & Miller, 2020). The global pandemic changed the field of education and thus how teachers teach.

Statement of the Problem

In some places, play is losing ground to academic emphases related to achievement and curricular programming. In other places, like Canada, play has a strong presence and thrives in educational systems through mandated play-based pedagogical approaches (Pyle et al., 2017). The United States is not imploring the same focus on play; however, in places like Massachusetts, district-wide initiatives are in place to support play-based pedagogies to promote academic learning (Boston Public School: Department of Early Childhood, 2017). It can be argued that COVID-19 mitigation both made play-based learning approaches more difficult (sharing materials, social distancing, cohort grouping, and limited movement) but also raised the profile of active, outdoor learning activities, along with increased awareness regarding the importance of children's mental health and social connection—all of which are associated with play-based learning models. The question is, where does Montana stand in this landscape?

Research Questions

The following research questions, both quantitative and qualitative in nature, were addressed:

1. To what extent is play-based learning present, feasible, and desirable in Montana's early elementary (kindergarten to second-grade) public school classrooms?

2. What forms of play-based learning (i.e., free play, guided play, games) are present in public school classrooms in Montana in early elementary (kindergarten to second grade) while implementing COVID-19 health and safety protocols?

3. To what extent do teachers agree that health and safety protocols (e.g., masks, handwashing, social distancing, cohort grouping, inability to share materials, and restricting student movement) hindered their ability to implement play-based learning in early elementary (kindergarten to second-grade) public school classrooms in Montana during COVID-19?

Significance of Study

This study provides a clearer picture of (1) the extent play-based learning is present, feasible, and desirable in early elementary public school classrooms, specifically in Montana kindergarten through second grade, (2) a better understanding of what forms of play-based learning (i.e., free play, guided play, games) are present in early elementary public school classrooms during the global COVID-19 pandemic where health and safety protocols were being implemented and (3) the impact COVID-19 health and safety protocols played on the presence, feasibility, and desirability of play-based learning in K-2 classrooms.

Information regarding K-2 teacher preferences for play-based learning in combination with the feasibility and desirability of play-based learning in their classrooms will inform policymakers, researchers, educators, and administrators of the extent to which play-based

learning was present before and during the COVID-19 pandemic. Nelson and Smith (2004) recommend that teachers have opportunities to discuss their views on the practicality of developmentally appropriate practices, like play-based learning, so that they can produce "long-term solutions rather than quick fixes" (p. 78). Having a better understanding of the perspective teachers hold regarding play-based learning is key to moving forward in finding ways to support teachers and school administrators so that we do not move farther away from play-based learning (Lynch, 2015). Hearing teacher perspectives related to their pre-COVID pandemic experiences provides valuable information. Howard (2010) states that "understanding early years practitioners' perceptions of play may be particularly beneficial to other professionals working within multi-disciplinary teams to support the educational experiences of young children." Educators, administrators, and policymakers can use this information to create opportunities for play-based learning in K-2 classrooms where pandemic protocols are in place while allowing for opportunities to increase children's academic and social success.

This study informs policymakers, researchers, educators, and administrators (stakeholders) of the various forms of play-based learning present in early elementary public-school classrooms before and during the COVID-19 pandemic. Stakeholders gain information on the impact of health and safety protocols on the presence, feasibility, and desirability of play-based learning in K-2 classrooms. Stakeholders will gain a clearer understanding of play-based learning forms present in the schools before and during the COVID-19 pandemic. Current research is missing data that show what forms of play K-2 classrooms have implemented. Additionally, information regarding forms of play before and during the COVID-19 pandemic will better inform decision-makers about the play-based learning opportunities K-2 students

experienced. Information is provided regarding COVID-19 health and safety protocols'

implications for teaching and implementing play-based learning.

Summary of Methodology

This study used a mixed-method research approach called sequential explanatory design.

This study involved collecting and analyzing two independent strands of quantitative and

qualitative data, which occurred sequentially—collecting data using a quantitative instrument

generally provided an understanding of the research topic. Then follow-up interviews were

conducted to explain the scores on the quantitative outcomes further and provide more detailed

explanations of the research topic. An explanatory sequential design study allowed the researcher

to return to participants for the second round of qualitative data collection (i.e., follow-up

interviews) after participants completed the survey. Together, these two strands provided a more

extensive understanding of the overall data.

Limitations and Delimitations

There were several possible limitations to this study. One limitation of this study was

using a convenience sample, which cannot be generalizable to the general population. The size of

the sample was also a limitation. The state in which the study was conducted was broken into six

diverse regions with varied populations. Some regions were rural and had several schools with

the same administrator and minimal numbers of educators, making them hard to contact.

Turnover in these schools and schools in Montana, in general, made it hard for the Montana

Office of Public Instruction to provide the researcher with accurate contact information of

teachers and limited contact information for administrators. Another limitation was reliable and

available data due to minimal survey responses. Since this study asked administrators to forward

the survey to their K-2 staff, the possibility of bias where administrators pre-selected teachers

they felt would respond may have occurred. Therefore, it was possible that this study's sample was not as broad as it could have been. It was also possible that many K-2 teachers were not provided the opportunity to complete the survey because their administrator was the gatekeeper of disseminating the survey. Since this study was conducted during the COVID-19 pandemic, a limitation might include changes in a school setting from an in-person or mixed model to a fully remote learning setting, altering participants' responses. Different locations could have limited the data. Having worked as a teacher for 15 years, the researcher likely has unconscious and conscious biases from previous life experiences. This, too, could be seen as a limitation.

Because part of this study required participants to respond electronically, Green et al. (2015) indicated that an increase in accuracy and reduced human error could be an outcome. However, participants could still have issues related to the technology. Additionally, Creswell and Clark (2018) indicated that self-reported data is limited and can rarely be independently verified. Also, there was minimal research associated with play-based learning during a global pandemic, which is also a limitation.

The researcher set a few delimitations that made the study more manageable. The focus was only on grades kindergarten, first, and second in the state of Montana. K-2 is part of the early childhood age range and a critical age to study. Only teachers in public school settings were surveyed, rather than including K-2 teachers in other school settings. The focus was on teachers' play-based learning experiences in their Montana public school classrooms.

Definition of Terms

Play-Based Learning

Play-based learning is an approach used by teachers that involve both playful and child-guided elements along with varying degrees of adult involvement. Danniels and Pyle (2018)

define play-based learning as "essentially, to learn while at play" (p.1). While play and what is deemed as play is continually being debated, play-based learning is easier to define. "Learning is not necessary for an activity to be perceived as play but remains fundamental to the definition of play-based learning" (Danniels & Pyle, 2018, p. 1). Researchers have created visual models showing play-based learning across a continuum, starting with the least amount of adult involvement and the most amount of child agency on one end and moving to more adult involvement on the other (Allee-Herndon et al., 2019; Pyle & Danniels, 2017; Zosh et al., 2017). The play-based learning continuum includes various types of play, but for this study, three central components within a continuum were addressed: (1) free play, (2) guided play, or (3) games (Pyle & Danniels, 2017; Weisberg et al., 2013; Zosh et al., 2017).

Research literature uses *play-based learning* interchangeably with the term *playful learning* (Zosh et al., 2017). For this study, the term play-based learning will be used to reference these three forms of play (free play, guided play, and games) as a group and the act of learning through playful opportunities as they are provided in a classroom setting.

Table 1.1

Play-Based Learning Components and Continuum

	Free Play	Guided Play	Games
Adult	observe, listen, and ask questions that extend play	initiates	get children started and help children choose and play the game
Child	initiates and directs	directs	follow the rules and play the game
Key Features	less structure and more choice	balanced structure and choice	structure and choice within game rules

Table 1.1

Play-Based Learning Components and Continuum

Free Play. Free play is a form of play-based learning found on the play continuum with the least amount of teacher involvement in the play's structure and the most amount of child autonomy, as seen in Table 1.1 (Pyle & Danniels, 2017). Free play offers children free choice; children's desires are the center of unstructured play (Weisberg et al., 2016). A child's choice is a crucial component to free play. A teacher's role in free play includes observing and listening to children's play while children direct and initiate where and how they use materials. Further, a teacher's role would consist of providing materials of interest to children to engage with and space, stations, or centers for which children to play.

Guided Play. Guided play is a form of play-based learning found between free play and games. Guided play has a balanced structure and combines two main elements: child agency and adult guidance (Allee-Herndon & Roberts, 2020; Hassinger-Das et al., 2017; Weisberg et al., 2016; Yu et al., 2018). In guided play arrangements, teachers provide the structure of offering academic focus or learning goals while providing children with the autonomy of choice (Allee-Herndon & Roberts, 2020; Jensen et al., 2019). A teacher's role is to initiate play and provide play-based learning activities, centers, space, or materials. At the same time, children direct their learning by choosing how to engage in those materials, activities, centers, or areas.

Games. Games are a form of play-based learning and can be found on the opposite end of the play continuum than free play, as seen in Table 1.1 (Pyle & Danniels, 2017). Games can

be considered the most rigid type of play-based learning. With games comes structure, rules, and specific learning goals, all provided by the adult or indicated by the game rules. The adult (teacher) supports children in making a game selection, setting up the game, choosing partners to play the game, understanding and playing by the rules, taking turns at appropriate times, and understanding other specific rules directed by the game (Jensen et al., 2019). Children play the game and follow the rules and structure predetermined by the adult.

Present, Feasible, and Desirable

Definitions for three terms used in this study are provided to support the understanding of play being *present* in the early elementary classroom, *feasible* for the teacher to implement, and *desired* by the teacher as something worth doing.

Present. Researchers agree that play includes child choice, engagement, and joy and that "Everyone knows 'play' when they see it…" (UNICEF, 2018, p.7). Therefore, the definition for the presence of play/play-based learning includes teachers providing children with various opportunities of choice, actively engaging in their learning, and exhibiting signs of joy like laughing or smiling. For this study, if a teacher mentioned play-based learning in action or implementation where children were provided opportunities for choice, engagement, and an element of joy, play-based learning was considered present.

Feasible. A review of studies exploring how temporal distance affects individuals' responses to future events conducted by Trope and Liberman (2003) explored the feasibility and desirability of outcomes on individuals' preferences. These researchers indicated that feasibility was the "ease or difficulty of reaching the end state" (Trope and Liberman, 2003, p. 410). Trope and Liberman (2003) further stated, "feasibility concerns the amount of time and effort one takes to invest" in getting the outcome (p. 410). For example, a teacher to feasibly implement play-

based learning might mean she is concerned with how much time and effort she would need to invest into the task. For this study, if a teacher mentioned taking the time or putting forth an effort to provide play-based learning opportunities or materials for their students, it was reported as feasible.

Desirable. In the review of studies conducted by Trope and Liberman (2003), desirability was defined as the "value of an action's end state" (pp. 409-410). Trope and Liberman (2003) continued that desirability may reflect the value one attaches to the outcome. For example, a teacher's desire to implement play-based learning could be influenced by the value she places on play-based learning and the benefits seen by doing so. For this study, if a teacher mentioned the benefits of play-based learning or the desire to implement it because it was advantageous for their students or the teacher, it was labeled desirable.

Summary

This study researched the perceptions of K-2 teachers in Montana specifically related to play-based learning before (retrospectively) and during the COVID-19 pandemic. Additionally, this study sought to add to the limited research about the presence, feasibility, and desirability of play-based learning and the forms of play-based learning used in K-2 Montana public schools before and during the COVID-19 pandemic when health and safety protocols were in place. Lastly, this study explored teacher perceptions of COVID-19 health and safety protocols' impact on the presence, feasibility, and desirability of play-based learning in K-2 public school classrooms in Montana. This chapter provided an overview of the study, including the statement of the problem, research questions, and significance. Additionally, a summary of methodology, definitions of terms, along with limitations were described. The results of this study may serve multiple stakeholders, including teachers, administrators, and policymakers.

Chapter 2: Literature Review

While research surrounding the presence of play and play-based learning has been conducted with preschool-age children and some with kindergarten, less focus has been made on the presence of play-based learning in early elementary school-age classrooms (K-2). Research on teachers' perceptions of the feasibility and desirability of implementing play-based learning in K-2 classrooms is limited. Furthermore, the field of education has been impacted by the COVID-19 pandemic and how play-based learning was implemented. The need to further understand the role of play-based learning as a developmentally appropriate practice in early elementary classrooms and the impact COVID-19 had on its implementation is necessary.

This chapter aims to provide a thorough literature review on play-based learning in early elementary schools (K-2). The following topics were covered to give a clear understanding of the study, (1) the history and theory of learning through play, (2) play-based learning forms, materials, and activities within the school setting (3) the benefits associated with play-based learning, (4) the barriers associated in schools pre-and post-implementation of COVID-19 health and safety protocols on play-based learning, (5) the importance of teacher perceptions and (6) play-based learning as it relates to the presence, feasibility, and desirability in schools.

Selection Criteria

Inclusion Criteria

This literature review includes articles based on the following established criteria: articles that provided background information on the development of play and play-based learning to support the progression of play in school settings, those that provided guidance related to play-based learning pedagogies; articles that focused on research specific to teacher perspectives or beliefs, and studies particular to the early elementary school years, kindergarten through second

grade were included. Studies were excluded that were not within the grade level range (K-2) or were not specific to play and learning (play-based learning). However, if articles met the inclusion criteria, those articles were included when preschool was listed as part of the PK-2 age range. Literature that was conducted in a public school setting was included. Search criteria included play-based learning, where play and learning were researched together.

Articles specific to the definitions of terms (*presence, feasibility, desirability, play-based learning, free play, guided play,* and *games*) were included. Ideally, articles referenced play-based learning specifically, but articles were included that used variations of play-based learning such as play-based curriculum, play-based activities, playful learning, or one of the play forms (free play, guided play, or games). Studies specific to recess time, outdoor play, or not conducted in a public school setting were excluded. Research has been conducted in Canada, and other locations outside the United States; these studies were also included. Additional articles were found through citation chaining and were selected because they fit the predetermined inclusion parameters.

History of Learning Through Play

Play-based learning has existed in educational settings throughout history (Frost, 2010; Hirsh-Pasek et al., 2009, Pramling et al., 2019). The notion of play dates to Plato's developmental levels, specifically, the nursery stage, where children 3 to 6 years of age were encouraged to play and hear fairy tales (Frost, 2010). Plato supported play as a positive outcome and central role in a child's development and education. Theorists like Froebel and Montessori also saw play as a guiding principle in education (Frost, 2010). For example, Froebel is often mentioned as the founder of kindergarten, and his preferred "vehicle of instruction was play," which focused on child-centered, joyful childhood experiences (Frost, 2010; Nell et al., 2013).

Lev Vygotsky, a well-known learning theorist, believed that play was one of the critical development factors and specifically thought that imaginary play was where children determine their roles and rules in the world (Copple & Bredekamp, 2009; Nell et al., 2013; Vygotsky, 1978). Jean Piaget held a similar belief that play allows children to make sense of their world rather than an opportunity to learn a specific skill (Copple & Bredekamp, 2009; Nell et al., 2013; Wood & Attfield, 2006). Piaget emphasized that children need adults to create environments where discovery and exploration occur. Piaget's work focused on action, which has provided educators with the justification to lean on hands-on experiences encouraging children to play and learn by doing (DeVries & Kohlberg, 1987).

The modern play-based learning movement has its roots in "play schools," which were the focus of the University of California in the early 1900s (Frost, 2010). Play schools provided an ideal blend of play and learning through playful exploration, fostered physical, emotional, mental, moral, and cultural development in children ages four to twelve. Play schools became the next evolution of American elementary schools to include play-based learning opportunities through activities that would prove successful in society (Frost, 2010).

During World War II (1939-1945), men went to war, women stepped into the workforce, and children needed somewhere to go during the day. With this transition in America, emergency nursery schools, appropriately called "play schools," were instated to provide children a place to go while their parents went to work (Frost, 2010). These play schools offered indoor and outdoor spaces for children, ages two to six, to play freely. Later, in 1965, Frost (2010) stated that these schools became the first Head Start programs, and play continued to be the learning delivery mode. Head Start existed on such a large scale and implemented play which helped solidify play-based learning's prevalence in the U.S. educational system.

These theorists thought that play was a desirable component of education. Piaget saw play as essential to the development of children's intelligence. Vygotsky believed that play had a significant purpose and gave children an advantage in allowing children to reach and learn to advanced levels. Other play advocates throughout history have seen the benefit of play-based learning and have continued using play as a learning vehicle.

Play and Play-Based Learning Forms

Researchers and philosophers have struggled for years to define play because of its complexity and various forms (Zosh et al., 2018). According to the NAEYC (2020), play can include "self-directed, guided, solitary, parallel, social, cooperative, onlooker, object, fantasy, physical, constructive, and games with rules," and can be an activity performed both indoors and outdoors (p. 9). Each of these forms has various characteristics and descriptors. The NAEYC (2020) provides three main components associated with the pedagogy of play to include "*choice* (the children's decisions to engage in play, as well as decisions about its direction and its continuation), *wonder* (children's continued engagement as they explore, gather information, test hypotheses, and make meaning), and *delight* (the joy and laughter associated with the pleasure of the activity, making discoveries, and achieving new things)" (p. 9).

Because play is so complex and can be seen in many forms (Zosh et al., 2017), researchers are moving towards defining play using a continuum including free play, guided play, and games under the term play-based learning. Zosh et al. (2018) use the following characteristics to describe and define play-based learning so that it can encompass the many different types and forms of play. Those characteristics include active, mind-on thinking, engaged, meaningful, socially interactive, iterative, and joyful (Zosh et al., 2018). Zosh et al. (2018) suggest that a range of play approaches provides opportunities for a clearer understanding

of where different forms of learning, educational demands, and expectations can coincide with playful elements. The play continuum provided by Zosh et al. (2017) allows educators and specialists to move along a range of play approaches when incorporating playful learning opportunities. Jensen et al. (2019) stated, "for young children to progress, educators need to start where they [children] are and challenge them to go further. No single practice can do this, but a spectrum of engaging practices can" (p. 10). Copple and Bredekamp (2009) indicate that both child-guided and teacher-guided experiences are essential for children to learn and develop. Child- and teacher-guided approaches are part of the play continuum and meet the NAEYC's guidance.

The portion of the play continuum described by Zosh et al. (2017) that is also most seen in kindergarten through second grade includes free play, guided play, and games was the focus of this study (see Table 1.1). These three forms of play comprise a play continuum where children's learning is supported and are collectively called play-based learning.

Free Play

Free play is a form of play-based learning found on the play continuum, as seen in Table 1.1, and offers children free choice and unstructured play centered around the child's desires (Pyle & Danniels, 2017; Weisberg et al., 2016). A child's choice is a crucial component to free play. Children are encouraged to "follow their own interests and build a play environment that suits their experiences" (Jensen et al., 2019, p. 12). Jensen et al. (2019) indicate that the adult is needed to provide the "time and space for children's safe, and inclusive play" (p. 12). "Adults can support children's free play by observing, acknowledging, listening, accepting and meeting requests that assist their play" (Jensen et al., 2019, p. 12).

Guided Play

Guided play has a balanced structure and combines two main elements: child agency and adult guidance (Allee-Herndon & Roberts, 2020; Hassinger-Das et al., 2017; Weisberg et al., 2016; Yu et al., 2018). Guided play is a form of play-based learning between free play and games. Teachers provide the structure of offering academic focus or learning goals while providing children with the autonomy of choice (Allee-Herndon & Roberts, 2020; Jensen et al., 2019). One definition of guided play stated:

> Playful learning or guided play actively engages children in pleasurable and seemingly spontaneous activities that encourage academic exploration and learning. Here, teachers using guided play have learning goals in mind. They are subtly directive, embedding new learning into meaningful contexts that correspond with children's prior knowledge and experiences. (Hirsh-Pasek et al., 2009, 27-28)

In guided play, the teacher is responsible for scaffolding the learning objectives and providing specific learning goals for children that may appear to be spontaneous. Teachers give the structure of offering academic focus or learning goals while providing children with the autonomy to engage in the learning process actively (Allee-Herndon & Roberts, 2020; Jensen et al., 2019).

Games

On the other hand, games can be found on the oppositive end of the play continuum from free play, as seen in Table 1.1. Learning through games can have some similarities to guided play. However, games are seen as a more rigid form of play-based learning. With games comes structure, rules, and specific learning goals, all provided by the adult or game itself. The adult supports children in making a game selection, setting up the game, choosing partners to play the

game, understanding, and playing by the rules, taking turns at appropriate times, and understanding other specific rules directed by the game (Jensen et al., 2019). Children playing games can lose their ability to make choices and initiative (Jensen et al., 2019).

Activities and Materials Associated with Play-Based Learning

Creating play environments is key to providing play-based learning opportunities for children (Nell et al., 2013; Sloane, M., 1999; Zosh et al., 2017). Centers, sometimes called stations, can be part of the configuration of a classroom. Sloane (1999) states that "center-based classrooms are ideal environments for implementing developmentally appropriate practice with primary students" (p. 82). One way teachers can create an environment that promotes play-based learning is to divide their classrooms into areas where children can explore learning centers and provide them with play-based activities. These centers and activities can include blocks, writing materials, art materials, books, or other items that can be used open-endedly. Some centers might include art materials where children can play with playdough, paint, drawing materials, or use scissors to cut their own shapes out of paper. While other centers might allow children to explore dramatic play materials and engage in pretend play, another might have manipulatives for children to explore.

Teachers provide materials in centers and then determine their level of involvement based on their goals. For instance, children can be provided materials and guided on how to use them, which could be seen as guided play. Similarly, teachers who provide opportunities for children to sing and dance with a goal in mind utilize a guided play approach (Hirsh-Pasek et al., 2009). However, if the same materials are provided for children to explore and do with them what they want, this would be seen as free play because it is child-directed play (Pyle & Danniels, 2017).

Play-based learning is determined based on the use of the materials rather than the materials themselves.

Play-Based Learning Benefits

Play-based learning is considered a developmentally appropriate practice (DAP). DAP refers to the National Association for the Education of Young Children's (NAEYC) DAP framework outlined in their position statement (NAEYC, 2020). Specifically, NAEYC defines DAP as "methods that promote each child's optimal development and learning through a strengths-based, play-based approach to joyful, engaged learning" (NAEYC, 2020, p. 5). Educators use the DAP's core considerations to design and implement learning opportunities and environments, including 1) commonality, 2) individuality, and 3) context to "help all children achieve their full potential across all domains of development and all content areas" (NAEYC, 2020, p. 5). The NAEYC's (2020) position statement provides guidelines and recommendations based on research that supports DAP for children.

Positive Impacts Associated with Play-Based Learning

One guideline, the NAEYC (2020) provides states that "all domains of child development—physical development, cognitive development, social and emotional development, and linguistic development (including bilingual or multilingual development), as well as approaches to learning—are important; each domain both supports and is supported by the others" (p. 9). Because these domains are intertwined, they provide benefits when children's development is fostered. Educating children through play-based learning offers numerous benefits for children and should be a desirable pedagogical approach for teachers, administrators, and schools. Research indicates that the benefits children experience when they have opportunities to play include improvements in their cognitive, social, emotional, academic, and

physical development (Copple & Bredekamp, 2009; Hirsh-Pasek et al., 2009; Nell et al., 2013; White, 2013; Yogman et al., 2018). A clinical report published by the American Academy of Pediatrics (AAP) for pediatricians goes so far as to recommend prescribing play for children, insisting that play promotes social-emotional, cognitive, language, and self-regulation skills that build executive function and prosocial brain (Yogman et al., 2018). Further benefits associated with play-based learning include an improvement in children's executive functioning (EF), social-emotional development (SED), and self-regulation (SR). The AAP states, "play is not frivolous: it enhances brain structure and function and promotes executive function (i.e., the process of learning rather than the content), which allows us to pursue goals and ignore distractions" (Yogman et al., 2018, p.1). EF, SED, and SR skills overlap and include children's ability to follow directions, understand social situations, problem solve, sustain attention on challenging tasks that require the use of one's working memory, recalling details, mental representation, time management, and the ability to plan, organize, classify, and reason which are all critical to a child's ability to learn and function well in a school setting (Allee-Herndon & Roberts, 2020; Copple & Bredekamp, 2009; Nell et al., 2013; White, 2013; Yogman et al., 2018).

Many of these benefits are essential for students' success in school and life. Copple and Bredekamp (2014) insist that play needs to be a "significant part of the young child's day--and part of a developmentally appropriate classroom" because it helps children gain the skills, they need to be successful (p. 328). Play provides children with opportunities to develop and practice newly acquired skills, develop and use language, take turns, solve problems, make friends, and regulate emotions and behaviors in various situations. EF, SED, SR, social skills, cognitive development, and other beneficial skills children can develop through play-based learning

(Allen-Herndon & Roberts, 2020; Nell et al., 2013; White, 2013).

Negative Impacts Associated with the Absence of Play-Based Learning

Play-based learning can provide children with positive outcomes in schools and help diminish the negative impacts of children's environmental risk factors (Allen-Herndon & Roberts, 2020). The adverse environmental risk factors that can interfere with children's academic and school success include poverty, stress, parental divorce, death, family members' incarceration, and toxic stress. The AAP asserts that play has health benefits, including decreasing anxiety, fatigue, injury, and depression, and supports children, particularly those managing toxic stress, possibly associated with chronic poverty (Yogman et al., 2018).

According to Yogman et al. (2018), "play helps children deal with stress" (p. 6). In a study, children exhibiting anxiety and stress before entering preschool were provided with 15 minutes of play and showed a "two-fold" decrease in their anxiety because of the intervention (Yogman et al., 2018). Yogman et al. (2018) stated that play decreases stress, fatigue, and depression. White (2013) reported that "play can help children to regulate their emotions by providing an outlet to deal with stress" and provide them a coping tool (p. 22).

Research shows that play-based learning supports SED, EF, and SR skills in children who have experienced one or more of these risk factors (Allen-Herndon & Roberts, 2020; Yogman et al., 2018). Additionally, teachers can be concerned with their students' challenging behaviors and insufficient classroom attention. Lack of SR and underdeveloped SED skills can cause children to misbehave. Play-based learning pedagogies can support teachers who are often concerned with these issues (Allen-Herndon & Roberts, 2020). Therefore, children would benefit from play-based learning approaches in the classroom that support their SED, EF, and SR skill development, among other things (Allen-Herndon & Roberts, 2020).

Play-Based Learning Barriers

Despite all this vital support for play-based learning, we have seen a decrease in play in the classroom due to various pressures and expectations (Allee-Herndon & Roberts, 2020; Bubikova-Moan et al., 2017; Lynch, 2015; Nell et al., 2013; Nicolopoulou, 2010; and Pyle & Danniels, 2017). Three main barriers conflict with the implementation of play-based learning and have contributed to its decline, if not disappearance, from early elementary school classrooms; (1) people misunderstand and undervalue the benefits of play-based learning, and (2) people perceive academic learning as more important than play opportunities, and (3) pressures associated with standardized testing and the trickle-down effects of policies (Allee-Herndon & Roberts, 2020; Danniels & Pyle, 2018, Lynch, 2015; Nell et al., 2013, and Pyle & Danniels, 2017). Referencing Trope and Liberman's (2003) research, the argument could be that because of the barriers to implementing play-based learning, the time and effort to do so would be difficult. Therefore, the desire to implement play-based learning would have to reflect a high value that warrants the effort needed to fight those challenges.

One reason a decrease is seen in play in early elementary classrooms is that people misunderstand and undervalue play (Danniels & Pyle, 2018). The term play is often misunderstood and quite challenging to define, making it hard to explain, hard to implement in the classroom, and even harder to justify. The difficulty when policymakers, administrators, parents, and some educators hear the term play, it indicates something contrary to academic growth and development. They might think of recess and after-school sports as the appropriate place and adequate dose of play in schools. Parents, administrators, and policymakers can be unaware of the importance of play and its connection to learning and development, possibly only thinking of play as sports, which hinders teachers from using play as a learning tool (Nell et al.,

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2013, p. 82; Myck-Wayne, 2010).

Additionally, some parents, teachers, and administrators do not know the benefits associated with play, decreasing its presence in early elementary school classrooms (Nell et al., 2013). When teachers struggle to see the connection or understand how to blend play and academic learning, we see less play-based learning in their classrooms. Some teachers see play and learning as dichotomous constructs and struggle to create opportunities that combine playful elements while addressing academic skills or standards (Pyle & Danniels, 2017).

Another reason, closely related to the first, is that play is disappearing from the classroom because play is considered separate from academic learning. Therefore, more academic-focused pedagogy takes precedent. Despite the evidence that play is developmentally appropriate and that it provides numerous benefits for children, play is not seen in the early elementary classrooms as often as it should be (Allee-Herndon & Roberts, 2020; Copple & Bredekamp, 2009; Hassinger-Das et al., 2017; Kobylak & Kalyn, 2017; NAEYC, 2020; Nell et al., 2013; Pyle & Danniels, 2017; White, 2013; Yogman et al., 2018). Children are often deprived of play-based opportunities as early as preschool to prepare them for the academic classroom demands (DeVries and Kohlberg, 1987). Schools provide children with what many deem a formal education emphasizing a more academic approach to learning, including desk work and educational testing that can start once children enter school (Parker & Thomsen, 2019).

In a study that looked at teacher perspectives related to the decrease of play in classrooms and the challenges associated with implementing play-based learning opportunities, it was clear that some teachers wanted to include play in their classroom environment (Lynch, 2015). Some teachers cited fear as being the reason they did not include play-based learning opportunities in their schedules. Those teachers mentioned they feared disciplinary action from

administrators because they were not following the curriculum precisely by implementing play. Play might not appear academic enough if an administrator were to see a class engaged in play-based learning. The concern that someone might walk by or walk in and see a classroom of children being active learners and think children are just playing is a genuine reason for teachers not to include play-based learning in their teaching practices (Lynch, 2015).

Another reason play is disappearing from the early elementary school classroom can be attributed to political pressures (Bubikova-Moan et al., 2017). The decrease in play from the early elementary classroom may have started with outdoor play opportunities disappearing first. Politicians' decisions during the 20th century led to more industrialized school models, pushed for standardized curricula, influenced child-rearing practices, and altered other factors that led to decreased traditional play and growth previously seen in schools (Frost, 2010). In the early twenty-first century, it became an easy transition to focus more on academics when the media warned parents of outdoor play's dangers in the streets and neighborhoods. Children did not seem to mind because they had electronic toys to play with indoors (Frost, 2010). In 2006, a study by the International Play Association found that 40 percent of American public schools were limiting or reducing outdoor recess opportunities for children (Frost, 2010). The reduction of outdoor play started the trend of removing play in other school day areas. Policymakers often focus on organized physical education and sports when considering the fitness of American children. Frost (2010) and many other play advocates find the lack of policymakers mentioning free play, recess, or outdoor play environments as concerning. The decrease of outdoor recess or free play opportunities, concerns of cyber play and paranoia and hovering parents, the national playground safety standards, the threat of lawsuits, and high-stakes testing collectively reduced centuries of play (Frost, 2010).

Fast forward to today, where the expectations and pressures to prepare students for standardized testing trickle down to kindergarten teachers which contributes to the disappearance of play in schools (Allee-Herndon & Roberts, 2020). Because testing has become high-stakes for schools, teachers face top-down directives on how and what to teach regardless of their beliefs about play and academic learning (Jensen et al., 2019). Adults remove children from play contexts to teach assessment strategies because of the importance of the test results (Jensen et al., 2019). Bubikova-Moan et al. (2017) report that of the many challenges teachers encounter, policy mandates and curricular concerns are the number one reason why teachers are not implementing play-based learning.

Although the 2020 position statement published by the NAEYC does not directly reference the disappearance of play-based learning, as early as the 2009 position statement, the NAEYC addressed the issues related to its absence, indicating,

> Standards overload overwhelms teachers and children and can lead to potentially problematic teaching practices. At the preschool and K–3 levels, practices of concern include excessive lecturing to the whole group, fragmented teaching of discrete objectives, and insistence that teachers follow rigid, tightly packed schedules. There is also concern that schools are curtailing valuable experiences such as problem-solving, rich play, collaboration with peers, opportunities for emotional and social development, outdoor/physical activity, and the arts. In the high-pressure classroom, children are less likely to develop a love of learning and a sense of competence and ability to make choices, and they miss much of childhood's joy and expansive learning. (p. 4)

COVID-19, Another Barrier, and a New Opportunity

Montana's attempt to slow the spread of COVID-19 in schools by implementing various

health and safety protocols, along with other mitigation strategies in our schools, has created an additional barrier to implementing play-based learning (CDC, 2021a; CDC, 20210b; Montana Office of the Governor, 2020, June; Montana Office of Public Instruction July 2020). For instance, health and safety measures including mask-wearing, hand washing, social distancing, disinfectant use, and space dividers were implemented to keep kids from spreading the virus when they returned to in-person learning. Some schools also restricted the sharing of materials during centers or class instruction, eliminated the ability to group children for math and reading, and diminished school social opportunities in general by having students stay in cohort groups in their designated spaces. A global pandemic that alters the school systems and adds additional stressors on students and teachers but does not alter the expectations associated with teaching can have adverse effects on all involved and push play-based learning further away from the classroom setting (Hoffman & Miller, 2020; Yogman et al., 2018).

Teachers should use play-based learning to address the negative impacts of COVID-19 health and safety protocols. Play-based learning is the pedagogical approach that supports children's development. Research shows that play can help children decrease their stress, including toxic stress they may be experiencing (Hoffman & Miller, 20200; Yogman et al., 2018). The benefits of providing children with play-based learning opportunities during a pandemic would support children in their management of challenging stressors during the global pandemic. Since play-based learning is active, engaging, and tends to be joyful, now is the best time to reimagine our classroom pedagogies to include play-based learning.

Teacher Perceptions

This study investigates kindergarten, first, and second-grade teacher perceptions of the overall presence of play-based learning and the feasibility and desire to implement play-based

learning during the COVID-19 pandemic. Charlesworth et al. (1991) state, "it is the beliefs teachers have regarding what is important and not important and how these beliefs affect their students, is critical to understanding the genesis of teachers' actions in planning, teaching, and assessing" (p.19). Pajares (1992) stresses that educational research should focus on the beliefs of teachers and teacher candidates to inform educational practices better because the connection between one's beliefs is the best indicator of the decisions that an individual will make—understanding what teachers believe is important, what they find desirable, and what they deem as feasible impacts their teaching practices (Howard, 2010; Pajares, 1992). It is worth noting that literature on teacher beliefs uses the word *perception* as a synonymous term. "The beliefs teachers hold influence their perceptions and judgments, which, in turn, affect their behavior in the classroom," and understanding this is "essential to improving their professional preparation and teaching practices" (Pajares, 1992, p. 307). Understanding teacher perceptions about play-based learning before and during COVID-19 supports the need to understand further how play is being implemented in K-2 classrooms. Howard (2010) reports, "gaining an insight into the type of theoretical knowledge guiding practitioners play practice and the nature of the challenges they face, would enable other professionals to help them overcome perceived constraints, making their own support and intervention more effective."

One study by Jung et al. (2016) surveyed future teaching professionals on their perspectives of play and how they impact their desire, or intent, to implement play-based learning in their future practices. Jung et al. (2016) indicated that future teachers with high efficacy beliefs intended to implement play-based practices in their classrooms, but the "connection between intentions and actual practices" were not further investigated (p.1346). It was clear that future teachers valued play and intend to incorporate play in their teaching

practices; however, we do not know if their desire and belief that play-based learning is feasible would play out into actual practices once hired.

When considering the motivators behind people's decisions, Trope and Liberman (2003) suggest that feasibility and desirability impact outcomes. Though Trope and Liberman (2003) did not study teachers directly, their research can be used to infer that teacher practices could be impacted by the feasibility and desirability of play-based learning. The feasibility, or how challenging or easy a task is, as well as how much time and effort it takes to complete or implement, could impact a teacher's ability to complete it. Desirability is also a factor to consider. How much value a teacher attaches to the outcome, or their willingness to implement play-based learning, may impact their perception. Trope and Liberman (2003) indicate that something highly desirable motivates someone to complete a task that seems infeasible, whereas in contrast, an individual would prefer to complete a task that is less desirable but highly feasible. Trope and Liberman's (2003) findings influenced this study in that teachers' perceptions on whether they find the forms, activities, and materials of play-based learning to be feasible and desirable to implement before and during the COVID-19 pandemic.

Presence, Feasibility, and Desirability of Play-Based Learning

Very few studies use the terms presence, feasibility, or the desirability of implementing play-based learning. Some research has studied the presence, feasibility, and desirability (though indirectly) of play in preschool settings (Alford et al., 2015; Bubikova-Moan et al., 2017; Cohen & Emmons, 2017; Fisher et al., 2013; Hirsh-Pasek et al., 2009; Jachyra & Fusco, 2016; Jensen et al., 2019; Pelletier & Corter, 2019). There have been some studies conducted in kindergarten (Alford et al., 2015; Bubikova-Moan et al., 2017; Charlesworth et al., 1991; Charlesworth et al., 1993; Keung & Keung, 2019; Keung & Fung, 2020; Moedt & Holmes, 2018; Pyle et al., 2017;

Pyle, A., & Alaca, B., 2018; Pyle et al., 2018a; Pyle et al., 2018b; Wickstrom et al., 2019) but far fewer in first and second grade centered on play-based learning (Alford et al., 2015; Cohen & Emmons, 2017; DeLiema et al., 2019; Kobylak & Kalyn, 2017; Nguyen et al., 2016; Sliogeris & Almeida, 2016). Other research indicates desirability and feasibility, but the actual presence of play-based learning is missing in K-2 classrooms (Nguyen et al., 2016; Jung et al., 2016).

Presence of Play-Based Learning

It's not uncommon to see playful learning opportunities for preschool children (Bubikova-Moan et al., 2017). Play-based learning is becoming more widely studied as countries like Canada have moved towards the promotion of learning through play in their kindergarten programs (Pyle et al., 2017; Danniels & Pyle, 2022). However, few studies focus on play-based learning in early elementary school (K-2). Two systemic reviews of the literature were found on play-based learning (Bubikova-Moan et al., 2017 & Pyle et al., 2017). One study reviewed 168 articles on play-based pedagogies in kindergarten education (Pyle et al., 2017). The second study examined 62 articles on play-based learning from the viewpoint of early childhood educators for children ages zero to six (Bubikova-Moan et al., 2017). Both concluded that various perspectives impact play-based learning and how and why play is implemented. Pyle et al. (2017) found that teacher-guided play was seen as supporting academic learning while child-directed free play was seen as supporting developmental learning.

In contrast, Bubikova-Moan et al. (2017) indicated that the two groups were those teachers who mainly used free play and the other group who utilized a variety of play types. Thus, several studies show that play-based learning is present in different forms and for various reasons. To move towards more presence of play-based learning, Pyle et al. (2017) suggest that researchers and teachers move away from this divided stance of free play or guided play and

consider play-based learning as both benefiting developmental and academic learning of children.

Feasibility of Implementing Play-based Learning

A host of reasons exist in the literature indicating why play-based learning should be implemented (Copple & Bredekamp, 2009; Hirsh-Pasek et al., 2009; Nell et al., 2013; White, 2013; Yogman et al., 2018) and why it is not implemented, as was illustrated in the benefits and barriers section of this literature review (Allee-Herndon & Roberts, 2020; Bubikova-Moan et al., 2017; Lynch, 2015; Nell et al., 2013; Nicolopoulou, 2010; and Pyle & Danniels, 2017).

Studies that discuss teachers' perspectives provide insight into which forms of play are implemented (Bubikova-Moan et al., 2017; Lynch, 2015; Pyle et al., 2017). Through Pyle et al.'s (2017) review of the literature, three themes emerged indicating that the feasibility of implementing play was impacted by teachers' "difficulty integrating the concepts of play and learning," inconsistencies between what teachers believe compared to how they teach in their classrooms, and the numerous barriers that teachers report hinder their ability to implement play-based learning and therefore make it not feasible.

Bubikova-Moan et al. (2017) included three categories that relate to feasibility: (1) teachers' beliefs about play-based learning, including the "degree of conceptual compatibility between play and learning," as well as their beliefs regarding the benefits of play-based learning, (2) adult-child involvement, and their roles within play-based learning and (3) the challenges and barriers associated with implementing play-based learning (p. 87).

The connection between the small amount of research on play-based learning in first and second grade could be associated with the increase in the challenges teachers face in these grades that hinder its implementation (Alford et al., 2015; Moedt & Holmes, 2018; and DeLiema, et al.,

2019).

Desirability to Implementing Play-Based Learning

Since the term desirable is not commonly used in play-based learning studies, literature that shares reasons why teachers do or do not implement play-based learning can be used to connect the dots of its desirability. Bubikova-Moan et al. (2017) indicated that some teachers are proponents of play and learning while others are opponents, thus showing a divide in desirability.

The value teachers place on playful learning and the potential benefits children experience because of play-based learning support the desire to implement play-based practices. For instance, Pyle et al. (2017) shared in their synthesis of the research that play was desirable for different reasons and that there was a split between teachers who implemented play for developmental learning versus those who did so for academic learning. Furthermore, they found that those in favor of implementing play for developmental learning supported the teacher as a passive observer and that their role involved creating free play environments that allowed for child-directed play. Therefore, the specific outcome or the role the teacher or child plays in play-based learning impacts the implementation desirability. Additionally, the desire to implement play-based learning was affected by those teachers who encounter challenges and barriers that make choosing play-based learning the less desirable option (Bubikova-Moan et al. 2017).

The lack of research in first and second-grade classrooms addressing the presence, feasibility, and desirability of play-based learning shows a need for further investigation. Additional research connecting kindergarten, first, and second-grade play-based learning experiences based on play forms, materials, and activities may support this research.

Summary

This chapter provided a thorough literature review on play-based learning in early elementary schools (K-2). Specifically, the following topics were covered to give a clear understanding of the study, (1) the history and theory of learning through play, (2) play-based learning forms, materials, and activities within the school setting (3) the benefits associated with play-based learning, (4) the barriers associated in schools pre-and post-implementation of COVID-19 health and safety protocols on play-based learning, (5) the importance of teacher perceptions and (6) learning through play as it relates to the presence, feasibility, and desirability in schools.

Chapter 3: Methods

Introduction

   This mixed-method study examined early elementary education teachers' perceptions of the presence, feasibility, and desirability to implement play-based learning in Montana public school classrooms and the impact of COVID-19 health and safety protocols on implementing play-based learning.

The following questions were addressed:

1. To what extent is play-based learning present, feasible, and desirable in Montana's early elementary (kindergarten to second-grade) public school classrooms?

2. What forms of play-based learning (i.e., free play, guided play, games) are present in early elementary (kindergarten to second-grade) public school classrooms in Montana while implementing COVID-19 health and safety protocols?

3. To what extent do teachers agree that health and safety protocols (e.g., masks, handwashing, social distancing, cohort grouping, inability to share materials, and restricting student movement) hindered their ability to implement play-based learning in early elementary (kindergarten to second-grade) public school classrooms in Montana during COVID-19?

   The researcher discusses the applicability of distributing a survey and then conducting follow-up interviews in this chapter. The research plan, including methodology, study participants, measures, procedures, data analyses, and ethical concerns, are the primary components of this chapter.

Research Design

   One mixed-method research approach is a sequential explanatory design study. A

sequential explanatory design study involves collecting and analyzing two independent strands of quantitative and qualitative data, which occurs sequentially. A mixed-method sequential explanatory design study is appropriate when a researcher seeks to start with a quantitative instrument and move on to a qualitative tool. Creswell and Plano Clark (2018) suggest collecting data using a quantitative instrument to understand the research topic generally. Then conduct follow-up interviews to help explain the scores on the quantitative outcomes in more depth and provide more detailed explanations of the research topic.

Conducting a sequential explanatory design study allowed the researcher to return to participants for the second round of qualitative data collection (i.e., follow-up interviews) after participants had completed the survey. A sequential approach provided a more extensive understanding of the overall data. See Table 3.1 for details on the sequential explanatory design study sequence.

Table 3.1

Explanatory Design Study Sequence

Steps	Phase	Procedure	Product
Step 1	Quantitative Data Collection	Distribute the survey to all K-2 MT teachers	Numerical data (survey ordinal item scores)
Step 2	Quantitative Data Analysis	Descriptive statistics	Median
Step 3	Qualitative Data Collection	Select # of participants Conduct semi-structured interviews	Text data (interview notes)
Step 4	Qualitative Data Analysis	Analysis	Themes
Step 5	Integration of the Quantitative and Qualitative Results	Interpretation and explanation of the quantitative and qualitative results	Discussion Implications Future research

In this design, the researcher first collected and analyzed the quantitative (numeric) data from the survey of K-2 public school teachers in Montana. Secondly, the researcher collected and analyzed the qualitative (text) data from the open-ended survey questions and the follow-up interviews to help explain or elaborate on the quantitative results from the first phase. Phase two, the qualitative phase, built on the first phase, quantitative results, where the two phases were combined. The researcher used the qualitative results to explain the initial quantitative results (Creswell & Plano Clark, 2018).

Sample

The sample population featured one key demographic: early elementary education teachers in Montana. The research questions addressed the need for more information about Montana early childhood teachers and their ability to implement play-based practices in their classrooms. Therefore, Montana teachers in kindergarten through second grade were selected as the sample for this study. The collected responses from the online survey (N=110) were obtained from a convenience sample of kindergarten to second-grade public school teachers in Montana.

Survey Sample

Inclusion Criteria. To be included in the survey portion of this study, participants had to be: (1) a current K-2 certified teacher in a Montana public school, (2) able to read and respond to the survey questions in English, (3) have access to an electronic device on which to respond to the survey, and 4) have a signed, written, informed consent under an approved Institutional Review Board (IRB) protocol.

Exclusion Criteria. Participants were excluded from the survey portion of this study due to: (1) not being a current certified K-2 teacher in a Montana public school, (2) unable to read and respond to the survey questions in English, (3) a lack of access to an electronic device on

which they would have responded to the survey, (4) a lack of signed, written, informed consent under an approved IRB protocol.

Interview Sample

The sample population for follow-up interviews was pulled from the same demographic: early elementary education teachers in Montana. For follow-up phone interviews, the researcher recruited nine participants from the survey responses. These nine participants were selected from those early elementary educators in Montana that participated in the survey and had shown interest in the follow-up interview.

Inclusion Criteria. To be included in the follow-up interview portion of this study, participants must be: (1) a current K-2 certified teacher in a Montana public school, (2) indicated on the survey that they are interested in participating in a follow up-interview, (3) able to participate in a phone interview in English, and (4) provide consent under an approved IRB protocol.

Exclusion Criteria. I excluded participants from the follow-up interview portion of this study if they: (1) did not hold a current certified K-2 teacher in a Montana public school, (2) were unable to participate in a phone interview in English, and (3) did not provide consent.

IRB Process

The researcher conducted this study in a manner that honors the participants. Before starting the study, the researcher secured approval from the IRB to conduct research with adults. A consent statement was provided in the invitation letter that included full disclosure of the study, its purpose, and how the survey data was used to collect information about teacher perceptions. A description of participant selection was also included and ensured the participants were: (a) protected from any physical, mental, social, or professional harm; (b) provided

confidentiality and anonymity; (c) assured that the data collected did not reflect individual practice in the classroom or be used for school-level evaluations; (d) assured that participation in the study was optional; (e) allowed to opt-out of the survey at any time. The participants were informed that by answering the first question of the survey and completing/submitting the survey, the participant provided consent to use their data for this study. At the start of the interviews, the researcher asked the participants for their consent, allowing the researcher to record the conversation and for the participant to participate in the interview.

Survey Instrument

The preferred type of quantitative data collection for this study was a survey instrument. A survey is ideal for data collection because of its convenience, low cost, anonymity advantage, efficiency, reach, and rapid turnaround time (Van Selm & Jankowski, 2006). Boynton and Greenhalgh (2004) state that a survey can "offer an objective means for collecting information about people's knowledge, beliefs, attitudes, and behavior" (p. 1312). Since this study's goal was to further understand K-2 teacher perspectives across the state of Montana, a survey was a good fit.

For this study, a Likert scale survey modified from its original form developed by Charlesworth et al. (1991 & 1993) was used. The original survey was created and administered by Charlesworth et al. (1991) and revised and readministered by Charlesworth et al. (1993) as part of their study assessing kindergarten teachers' beliefs and practices based on the guidelines for the developmentally appropriate practice of the NAEYC. The Charlesworth et al. (1993) survey was an existing survey that focused on developmentally appropriate practices in an early childhood classroom, which aligned closely with this study. Additionally, Charlesworth et al.

(1991) established the validity and reliability of their instrument. Permission was received from Craig Hart, the second author in the 1993 study, to modify their survey for my research.

Charlesworth et al. (1993) survey included 100 questions split between demographic details and two subscales: demographic questions (30 questions), The Teacher Beliefs Scale (TBS; 36 questions), and the Instructional Activities Scale (IAS; 34 questions). Besides six demographic questions, the IAS portion of the Charlesworth et al. survey was used and refined for this study. Twelve questions asking "how often" the children participated in various activities were included because they pertain specifically to play-based learning experiences or included materials commonly seen with play-based learning. Some of these questions were modified further to support current 21st-century technology; instead of listening to records or tapes, listening to music, and listening centers were adapted. Other questions that did not pertain to the research study's topic of play-based learning or were not associated with the present time or related to the current practices were eliminated.

The researcher used a four-phase process to modify and refine the Charlesworth et al. (1993) survey while preserving validity. Benson and Clark's (1982) four-phase process: 1) planning, 2) construction, 3) evaluation, and 4) validation. Phase one is the planning phase and includes creating a clear purpose for the instrument and selecting item format. Phase two is the construction phase and involves reviewing related literature to determine the operational definitions of components being measured, writing a pool of items, and then choosing which types of items would provide the most meaningful data through content validation and qualitative evaluation. In phase three, the quantitative evaluation phase, the instrument is prepared, and pilot tested with participants representative of the target group. Finally, phase four is the validation phase, where face validity is established.

The researcher modified and refined this study's survey using Benson and Clark's (1982) process as a guide. First, the researcher determined what research questions would be studied based on the literature review. Then the researcher combed through research for an existing survey on the developmentally appropriate play-based learning practice. Once a closely aligned survey was found, the researcher contacted the authors to ask permission to use and modify their survey. Once permission was granted, the researcher began refining the existing survey by first eliminating questions unrelated to the current study. Since this study asked participants to respond to questions that pertained to current practices and practices during a time when COVID-19 was not present, before and after formatting of questions were created. The researcher asked experts for guidance on the creation and design of the survey. Then a qualitative evaluation session was conducted where experts in data collection and early childhood read through the survey questions. These experts looked for double-barreled, confusing, and leading questions and clarity in addressing this study's research questions. Participants provided additional guidance for further revisions and were asked to critique the instrument by taking the survey to determine how long it would take to complete, provide comments on the clarity of instructions and items, and offer other recommendations to improve the instrument. Changes were made, additional piloting was conducted until no further adjustments were needed, and the final survey was ready to be sent out to participants.

Survey Instrument Specifics

Section 1. In the first section of the survey, participants answered six demographic questions that provided information about the variables used for the descriptive analysis (location, degree level, current grade, years of teaching, and students' total number in their classroom).

Descriptive Variables. Participant descriptive data was collected to assess differences in survey answers based on the following variables:

1. **Location**. Teachers indicated where they teach based on regions across Montana, including (1) Region 1 – North West, (2) Region 2 - North Central, (3) Region 3 – North East, (4) Region 4 – South West, (5) Region 5 - South Central, and (6) Region 6 – South East. This information provided information about the range of responses as the researcher attempted to receive surveys from each region.

2. **Degree Level**. Teachers indicated their highest level of education completed; (1) Bachelor's Degree, (2) Master's Degree, (3) Doctorate (Ed.D/Ph.D.), or (4) Other.

3. **Formal Training.** Teachers indicated what play-based learning training they had; (1) attended a workshop, (2) took a course, (3) it was part of early childhood education endorsement, (4) other (specify), or (5) no training.

4. **Current Grade.** Teachers indicated which grade they taught during their COVID-19 school year from (1) Kindergarten, (2) First, (3) Second, or (4) Other.

5. **Total Years Taught.** Teachers indicated how many full years they have taught, starting with (1) less than 1 year, (2) 1 year, (3) 2 years, (4) 3 years, (5) 4 years, (6) 5 years, (7) 6 years, (8) 7 years, (9) 8 years, (10) 9 years, (11) 10 years or more.

6. **Students in Their Classroom.** Teachers indicated how many students they were responsible for teaching from (1) less than 10, (2) 10-15 (3) 16-20, (4) 21-25, (5) 26-30, or (6) 30 or more.

Section 2. In the next section, participants rated the presence of play-based learning in their classrooms before the COVID-19 pandemic (retrospectively) and while COVID-19 health and safety protocols were in place.

Section 3. In the next section, participants rated the feasibility of play-based learning in their classrooms before the COVID-19 pandemic (retrospectively) and while COVID-19 health and safety protocols were in place.

Section 4. In the next section, participants rated the desirability of play-based learning in their classrooms before the COVID-19 pandemic (retrospectively) and while COVID-19 health and safety protocols were in place.

Montana administrators were emailed directly because no database exists with contact information for K-2 teachers in Montana public schools. The survey was distributed to all K-2 early elementary public-school administrators in Montana. The total number of principals that received the request to forward the survey to their K-2 staff included 356 Montana administrators. According to the Montana Office of Public Instruction, there was a potential of 2830 K-2 teachers in Montana that could have received the survey. Therefore, since there was no way to email these teachers directly, there was no way to ensure they received the survey.

Potential participants were identified for the study by contacting the Montana Office of Public Instruction for a contact list with Montana K-2 administrators. Montana public school administrators were asked to forward the request to participate in the survey to their K-2 teachers via email. The letter to teachers shared a brief description of the study and invited them to participate in the survey. Follow-up emails to school administrators were sent asking them to forward the invitation to K-2 teachers in their district and school during weeks three and four. The administrator letter shared a brief description of the study, a short request to forward the invitation to participate to their teaching staff, and the researcher's contact information.

Montana K-2 teachers completed the survey from May 1-31, 2021. It was expected to take participants 20 minutes to complete the survey. The final question in the content-related

portion of the survey asked respondents to provide their email addresses if they were interested

in participating in this study's follow-up interview portion. A total of 28 participants were

interested in having a follow-up email/interview.

Procedures

The researcher emailed the survey out in early May 2021. On Monday, May 3, 2021, the

researcher sent 356 Montana administrators an email requesting that they forward the survey to

their K-2 teachers, asking them to participate in the survey. The researcher followed up with a

few administrators between May 8 and 24, where administrator snowball sampling supported the

dissemination of the survey to other schools for teachers to complete. During week three,

administrators contacted colleagues across the state, asking them to take note of the survey

request and forward it to their staff. During the fourth week, all administrators received a follow-

up email requesting that they forward the survey to their teachers. These follow-up email

reminders were personalized with the administrator's name in the salutation.

At the end of May, surveys were completed, and the researcher could see participants

interested in participating in the follow-up interview. Participants did not have to provide their

email addresses to include their survey information. Email addresses provided voluntarily by the

participants were not associated with online survey responses after the interview. The researcher

retained participant identifying information if the participant provided their email addresses for a

possible follow-up interview. The email and names of interested participants were kept

confidential. This information was only necessary to make initial contact with the consenting

participant and complete the semi-structured follow-up interview. The researcher stored email

addresses in a separate excel file on a password-protected private computer. Contact information

was immediately destroyed after completing the follow-up interview two months after the online survey completion.

Data Collection

Data was collected via an online survey software called Qualtrics. Qualtrics is a survey software for all faculty and students to support teaching and research. The researcher sent a specific link to Montana administrators to forward to the K-2 teachers in their schools. Qualtrics software allows for the de-identified recording of responses. The online survey and resulting data reside on the Qualtrics server, not on private computers. Participants did not use a username or password to sign in to Qualtrics, so no identifying information was retained. The researcher was able to access anonymous data through secure login and password. After completing data collection, the Qualtrics server will store data for no longer than ten years.

Quantitative Analysis

Descriptive statistics were used to describe the data from all three research questions. Central tendency measures of median were used to compute the survey responses that are ordinal in measurement. The researcher used inferential statistics to compare data about the presence, feasibility, and desirability of play-based learning before and during the COVID-19 pandemic. The paired t-test was used to compare means from the responses of ordinal measurement of the two related groups (before COVID-19 and during COVID-19). The Likert scale responses were averaged to provide a numerical indication of the average responses (Carifio and Perla, 2008; Norman, 2010). Ho (2017) states that Likert scale responses are often averaged to report the "measurement of perceptions and attitudes" among respondents (p. 677). Additionally, effect sizes are provided to show the magnitude of the responses between the means. Statistical significance and effect size are provided to understand the quantitative data fully.

The same teacher responded for two separate periods that were compared, looking at the difference between the two measurements. Using SPSS, the researcher analyzed the data by completing the steps outlined by Privitera (2012): (1) State the hypotheses, (2) Set the criteria for a decision, including the level of significance for this test was set at .05. Calculate the degrees of freedom, (3) Compute the test statistic by first computing the mean, variance, and standard deviation of difference scores and then computing the estimated standard error for difference scores, followed by computing the test statistic, and (4) Decide by comparing the obtained value to the critical value.

Before running the statistical analysis, the researcher filtered out participants who did not meet the eligibility criteria identified by the screening question. Additionally, the researcher used pairwise data deletion to exclude those participants that were missing data required for the specific analysis run in SPSS. Participant data was included in any analyses for which they had the necessary information (Pallant, 2013). Pairwise data deletion was used to retain the maximum possible data (Schlomer, Bauman, & Card, 2010).

Follow-up Phone Interviews

The researcher conducted semi-structured interviews as a follow-up to the survey responses. The researcher purposefully selected participants for the semi-structured interviews from survey respondents based on their interest and willingness to participate and ability to represent the various regions across the state of Montana. Participants interested in participating in the 15-20 minute interview could enter their names and email addresses at the end of the online survey for contact purposes. The researcher planned to intentionally select interviewees with different survey responses and experiences. The target sample size for these interviews was 12-15. This number of respondents supports the study's conclusions, makes connections, finds

convergence, and corroborates the survey data by conducting in-depth interviews with fewer respondents. The researcher contacted those participants that indicated a willingness to be interviewed from the online survey for participation. Of the 28 participants who showed interest in participating in the follow-up interview, only nine were able to commit and followed through with the interview.

Interviews were conducted between the interviewee and researcher one at a time for approximately 15-20 minutes. These interviews took place over Zoom, except for one interview, where the participant requested a face-to-face meeting. The researcher coordinated and scheduled interviews at the interviewee's day and time preference. All interviews took place in late June 2021. Following verbal consent, which was obtained before the start of the interview, the researcher reminded the participant that they may skip any question they would prefer not to answer for any reason. Content-specific questions and elaboration on their survey responses were asked of the participants. The researcher used questions to elicit responses about the feasibility of, benefits of, and barriers to providing playful opportunities for children in grades K-2 during the COVID pandemic.

Once a month had passed from the end of the survey, the researcher no longer utilized Zoom interviews. The researcher then removed the option to indicate a willingness for interview participation from the Qualtrics survey online at the end of the survey timeframe.

Procedures

Semi-structured interviews were completed in June after all survey responses were submitted. Interviews were conducted over Zoom at the convenience of the respondents. Interviews took 18 minutes on average to complete. The interviews were recorded using the Zoom iCloud recordings feature with permission from the participants. Zoom also provided a

transcription option. Once the transcripts were downloaded, names were changed to maintain the anonymity of participants. The transcriptions from the Zoom interviews were deleted upon immediately transferring these notes to the word file on a password-protected private computer.

The goal was to interview teachers from all of Montana's six regions to represent each region. In case cancellations occurred or other attrition issues arose, the researcher attempted to schedule additional interviews to ensure a minimum of six interviews were conducted: one from each region. Follow-up interviews asked the same online survey questions in an open-ended format that allowed further elaboration.

The interview began with a friendly welcome and a thank you to the interviewee for participating in the interview. The researcher obtained consent before starting the interview. The researcher followed interview procedures, such as remaining within the study boundaries, using the protocol to guide the questions, completing the interview within the time specified, being respectful and courteous, and offering little advice (Creswell, 2013). The researcher explained to the interviewee that permission to stop the interview at any time would be granted. Questions from the survey were provided in an open-ended format, seeking engagement and elaboration from the respondent regarding play forms, beliefs, and implementation feasibility before and during the COVID-19 pandemic. After the interview, the researcher asked a general question requesting any further information the interviewee would like to provide about play-based learning. Then, the participant was thanked one last time and the interview was concluded.

Qualitative Analysis

Qualitative methods were used to help the researcher further make sense of the quantitative data. Nine early elementary school teachers across the state were interviewed. The researcher grouped qualitative data from the survey and interviews according to the research

questions, patterns, and themes. The open-ended responses were used to identify, analyze, and report themes within the data (Zhang & Wildemuth, 2009). The researcher noted more detailed accounts about themes generated as they connected to the research questions.

Using Zhang and Wildemuth's (2009) suggested steps of qualitative analysis, the data was prepared and analyzed:

Step 1: Prepare the data

Step 2: Define the Unit of Analysis

Step 3: Develop Categories and Coding Scheme/Codebook

Step 4: Test Your Coding Scheme on a Sample Text

Step 5: Code All the Text

Step 6: Assess Your Coding Consistency

Step 7: Draw Conclusions from the Coded Data

Step 8: Report Your Methods and Findings

The researcher used Creswell and Plano Clark's (2018) text and process to guide the analysis of the qualitative data: 1) read through each transcription to develop a general understanding of the data; 2) record initial thoughts by noting broad categories of information such as codes or themes and develop a codebook; 3) generate additional codes and remove unnecessary codes; 4) analyze the data to address the research questions; 5) group the themes and codes; 6) review transcription; and 7) finally, form significant ideas of the transcription.

Code Generation. The researcher hand-coded the data (interview transcripts and open-ended survey responses) on a typed transcript. A deductive process was used with these data to begin coding. The researcher started with a set of a priori codes (codebook) based on the research questions to establish and assign codes to the qualitative data. Afterward, themes were

generated related to the codes. While reading each piece of qualitative data, the researcher took notes to establish patterns and themes further as they related to the research questions.

Trustworthiness

The primary technique used to address the trustworthiness (validity) of the qualitative phase of this study was methodological triangulation (Creswell and Plano Clark, 2018; Lincoln and Guba, 1985; Patton, 2015). Methodological triangulation included using different data collection methods (quantitative and qualitative) to explain where data converged, diverged, or complemented each other and data collection modes (interviews and open-ended survey responses). Trustworthiness was strengthened using quantitative and qualitative approaches and different collection modes (Lincoln and Guba, 1985).

Additionally, Lincoln and Guba (1985) provide specific criteria for trustworthiness, including credibility, transferability, dependability, and confirmability.

First, credibility refers to the confidence in the truth value of the data and the researcher's interpretations of them. Credibility was addressed during data collection through prolonged engagement, using audio recording and verbatim transcription, data triangulation, saturation of data, and member checks. During coding and analysis, credibility was addressed through rigorous transcription and data cleaning, intercoder reliability checks, and peer debriefing. Interviews with various participants from across the state of Montana and different levels of experience and environments provided credibility through triangulation. The researcher spent months emersed in the transcription data cleaning, organizing, reading, and analyzing. Creswell (2013) recommends that peer reviewers (debriefers) work to keep the researcher honest by asking "hard questions about methods, meanings, and interpretations" to support the credibility of the study (p. 251). The researcher utilized other experts in the field of early childhood

education and knowledgeable in mixed methodology as peer debriefers. Member checks were conducted during the interview to verify the participants' intentionality and to offer immediate opportunities to correct errors or wrong interpretations (Lincoln and Guba, 1985).

Second, dependability refers to the reliability or stability of data over time and conditions. Dependability was addressed through careful documentation and triangulation of the data method. The researcher carefully documented interview data and coding. Method triangulation involved using multiple forms of data collection. This included semi-structured interviews and open-ended survey responses.

Third, confirmability refers to the potential for congruence between two or more people about the data's accuracy, relevance, or meaning. Through careful documentation and thick descriptions, confirmability was provided.

Finally, transferability refers to the ability to generalize the findings to other groups or settings. For qualitative data to be transferred to different locations or people, thick descriptions were provided. The saturation of data was also completed.

Summary

The purpose of this chapter was to explain the mixed-method design and its connection to the research questions being studied. In this chapter, the methodology was described through the description of the research design, research questions, sample, measures, data collection, research procedures, how trustworthiness was addressed, and how the data was analyzed. This mixed-method study examined early elementary education teachers' perceptions of the presence, feasibility, and desirability to implement play-based learning in Montana public school classrooms and the impact COVID-19 health and safety protocols had on implementing play-based learning. This study also adds to the existing body of literature on play-based learning in

early elementary education and aids in discussing educational needs related to COVID-19 health

and safety protocols' impacts on educators and their students.

Chapter 4: Findings

This sequential explanatory mixed-methods study was designed to examine early elementary education teachers' perceptions of the presence, feasibility, and desirability to implement play-based learning in Montana public school classrooms and the impact of COVID-19 health and safety protocols had on the implementation of play-based learning. An online survey of 110 kindergarten, first, and second-grade teachers in Montana public schools was used to explore three key concepts measured by the survey. The first key concept was to gain teacher perceptions of the changes in play-based learning presence, feasibility, and teacher desirability while implementing COVID-19 health and safety protocols compared to play-based learning before the COVID-19 pandemic. Another key concept involved gaining teacher perceptions on the forms of play-based learning used during and before COVID-19 health and safety protocols were implemented. Finally, the extent to which teachers felt COVID-19 health and safety protocols hindered their ability to teach using play-based learning was explored.

Additionally, nine participants who completed the survey showed interest in the follow-up interview. Nine educators who teach kindergarten, first or second grade in Montana public schools were recruited and interviewed to further explore the same three critical concepts by providing a greater understanding of the quantitative findings.

The following research questions, both quantitative and qualitative in nature, guided this study:

1. To what extent is play-based learning present, feasible, and desirable in Montana's early elementary (kindergarten to second-grade) public school classrooms?

2. What forms of play-based learning (i.e., free play, guided play, games) are present in early elementary (kindergarten to second-grade) public school classrooms in Montana

while implementing COVID-19 health and safety protocols?

3. To what extent do teachers agree that health and safety protocols (e.g., masks, handwashing, social distancing, cohort grouping, inability to share materials, and restricting student movement) hindered their ability to implement play-based learning in early elementary (kindergarten to second-grade) public school classrooms in Montana during COVID-19?

Quantitative Findings

Sample Selection

The study's target population was Montana-certified early elementary (kindergarten, first, and second-grade) teachers. This population was comprised of 2830 teachers across Montana. The collected responses from the online survey were obtained from a convenience sample of Montana kindergarten, first, and second-grade public school teachers. In preparation for analysis, the sample and data were screened and cleaned. First, participants that did not provide consent to participate in the survey and did not hold a Montana teaching certificate in their screening responses were removed from the data. Secondly, using pairwise exclusion, all cases in the study with missing values for any other variables were excluded if they had missing data required for the specific analysis (Schlomer, Bauman, & Card, 2010). The results of disqualification and pairwise exclusion for each variable in the study are as follows:

- Non-consent: 2 cases disqualified for not providing consent

- Non-certified teachers: 8 cases disqualified for not being certified teachers

- Missing data for both consent and certification: 6 cases with missing values

- Exclusion criteria used: 3 cases that indicated preschool, Title, or 5th-grade as teaching grades

- Did not complete beyond consent and certification: 5 cases with missing values

Using screener criteria, 16 cases were omitted from the study: resulting in a sample size of 110 teachers. Using pairwise exclusion, participants with missing data remained but were filtered out during comparison analysis if missing values were present. During comparison analysis associated with the presence and feasibility of play-based learning, the sample size was narrowed to 71 participants. During comparison analysis for the desirability of play-based learning, the sample was narrowed down to 65 participants.

Descriptive Statistics of Sample

According to Privitera (2012), descriptive statistics describe or summarize numeric data and can be presented in tables, graphs, or statistics. Descriptive statistics provided an organized format to present the data. The descriptive statistics provide demographic information on the study's participants, and the frequencies of variables within the sample are provided in the descriptive statistics as presented in Table 4.1. The breakdown of participants for each key concept (presence, feasibility, and desirability of play-based learning) is also provided. This breakdown is based on the pairwise exclusion completed while doing comparison analysis using the statistical program Statistical Package for the Social Sciences (SPSS).

Demographic Information

Of the respondents, 43.6% (n=48) were from Region 1, 12.7% (n=14) were from Region 2, 12.7% (n=14) were from Region 3, 14.5% (n=16) were from Region 4, 8.2% (n=9) were from Region 5, and 8.2% (n=9) were from Region 6.

Of the respondents, 57.3% (n=63) held a bachelor's degree, 40.9% (n=45) had a master's degree, and 1.8% (n=2) indicated other, which referred to teachers currently enrolled in a

doctoral program and another teacher who has a bachelor's degree with an early childhood endorsement.

Of the 110 Montana-certified teachers, 40.9% (n=45) of the respondents were kindergarten teachers, 23.6% (n=26) were first grade teachers, 28.2% (n=31) were second-grade teachers, and 7.3% (n=8) indicated other which referred to teachers teaching in combination classes (n=4) or in one room schoolhouses (n=4).

The years of experience varied from 2.7% (n=3) of the respondents indicating they have less than one year of teaching experience, 6.4% (n=7) indicated they have 1 year of experience, 8.2% (n=9) indicated they have 2 years of experience, 5.5% (n=6) indicated they have 3 years of experience, 4.5% (n=5) indicated they have 4 years of experience, 9.1% (n=10) indicated they have 5 years of experience, 8.2% (n=9) indicated they have 6 years of experience, 2.7% (n=3) indicated they have 7 years of experience, 3.6% (n=4) indicated they have 8 years of experience, 5.5% (n=6) indicated they have 9 years of experience, and 43.6% (n=48) indicated they have 10 years or more of teaching experience.

Teachers reported that the number of students in their classrooms ranged from 12.7% (n=14) of respondents had less than 10 students in their classrooms, 25.5% (n=28) of respondents had 10-15 students in their classrooms, 59.1% (n=65) of respondents had 16-20 students in their classrooms, .9% (n=1) of respondents had 21-25 students in their classrooms, and 1.8% (n=2) of respondents had 30 or more students in their classrooms.

Of the respondents, 42.7% (n=47) indicated they had formal training in play-based learning, whereas 57.3% (n=63) indicated they had no formal training in play-based learning. Formal training included 22.7% (n=25) indicated they had attended a play-based learning workshop, 18.2% (n=20) indicated they had attended a college course where play-based learning

was taught, 12.7% (n=14) indicated they had an early childhood endorsement, and 5.5% (n=6) indicated they'd attended a play-based learning school-sponsored training.

Table 4.1

Demographic Characteristics of Participants (N=110)

	Presence		Feasibility		Desirability		Total	
Characteristic	*n*	%	*n*	%	*n*	%	*n*	%
Montana K-2 Teacher Certification								
Certified	71	100	71	100	65	100	110	100
Not Certified	0	0	0	0	0	0	0	0
Montana Regions								
Region 1	35	49.3	35	49.3	31	47.7	48	43.6
Region 2	8	11.3	8	11.3	7	10.8	14	12.7
Region 3	9	12.7	9	12.7	8	12.3	14	12.7
Region 4	8	11.3	8	11.3	8	12.3	16	14.5
Region 5	4	5.6	4	5.6	4	6.2	9	8.2
Region 6	7	9.9	7	9.9	7	10.8	9	8.2
Highest Level of Schooling								
Bachelor's degree in college (4-year)	38	53.5	38	53.5	34	52.3	63	57.3
Master's degree	33	46.4	33	46.4	31	47.7	45	40.9
Doctorate degree	0	0	0	0	0	0	0	0
Grades Teach								
Kindergarten	31	43.7	31	43.7	28	43.1	45	40.9
First	18	25.4	18	25.4	17	26.2	26	23.6
Second	17	23.9	17	23.9	16	24.6	31	28.2

Table 4.1

Demographic Characteristics of Participants (N=110)

Characteristic	Presence		Feasibility		Desirability		Total	
	n	%	*n*	%	*n*	%	*n*	%
Other	5	7.0	5	7.0	4	6.2	8	7.3
Years Taught								
Less than 1 year	2	2.8	2	2.8	2	3.1	3	2.7
1 year	2	2.8	2	2.8	2	3.1	7	6.4
2 years	3	4.2	3	4.2	2	3.1	9	8.2
3 years	3	4.2	3	4.2	2	3.1	6	5.5
4 years	4	5.6	4	5.6	4	6.2	5	4.5
5 years	8	11.3	8	11.3	8	12.3	10	9.1
6 years	6	8.5	6	8.5	5	7.7	9	8.2
7 years	1	1.4	1	1.4	1	1.5	3	2.7
8 years	2	2.8	2	2.8	2	3.1	4	3.6
9 years	6	8.5	6	8.5	5	7.7	6	5.5
10 or more years	34	47.9	34	47.9	32	49.2	48	43.6
Number of Students in their Class								
Less than 10	8	11.3	8	11.3	7	10.8	14	12.7
10-15	17	23.9	17	23.9	16	24.6	28	25.5
16-20	45	63.4	45	63.4	42	64.6	65	59.1
21-25	0	0	0	0	0	0	1	.9
26-30	0	0	0	0	0	0	0	0
30 or more	1	1.4	1	1.4	0	0	2	1.8
Formal Training Experiences								

Table 4.1

Demographic Characteristics of Participants (N=110)

Characteristic	Presence		Feasibility		Desirability		Total	
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*
1a. Attended a Play-based Learning Workshop	15	21.1	15	21.1	13	20	25	22.7
1b. Didn't Attend a Play-based Learning Workshop	56	78.9	56	78.9	52	80	85	77.3
2a. Attended a college course about PBL	12	16.9	12	16.9	11	16.9	20	18.2
2b. Didn't Attend a college course about PBL	59	83.1	59	83.1	54	83.1	90	81.8
3a. Have an ECE Endorsement	11	15.5	11	15.5	10	15.4	14	12.7
3b. Don't have an ECE Endorsement	60	84.5	60	84.5	55	84.6	96	87.3
4a. Attended a Play-based Learning School Training	5	7.0	5	7.0	4	6.2	6	5.5
4b. Didn't Attend a Play-based Learning School Training	66	93.0	66	93.0	61	93.8	104	94.5
5a. Has other Play-Based Learning Training	4	5.6	4	5.6	3	4.6	5	4.5
5b. Doesn't have other Play-Based Learning Training	67	94.4	67	94.4	62	95.4	105	95.5
Total for some form of training	30	42.3	30	42.3	27	41.5	47	42.7

Table 4.1

Demographic Characteristics of Participants (N=110)

	Presence		Feasibility		Desirability		Total	
Characteristic	*n*	%	*n*	%	*n*	%	*n*	%
Total for no training	41	57.7	41	57.7	38	58.5	63	57.3

*Note. N=110; Each group had a different *n* due to pairwise deletion.

Inferential Statistics

According to Privitera (2012), inferential statistics are used to infer what is unknown about the population and "generalizing observations made with samples to the larger population from which the sample was selected" (p. 4).

A paired-samples *t*-test was conducted to evaluate the presence of play-based learning before the COVID-19 pandemic as compared to the presence of play-based learning during the COVID-19 pandemic, to evaluate teachers' feasibility of offering play-based learning before COVID-19 as compared to their feasibility to offer play-based learning during COVID-19, and to evaluate teachers' desire to offer play-based learning before COVID-19 as compared to their desire to offer play-based learning during COVID-19. The paired-samples *t*-tests were used to determine statistically significant differences in mean scores between the before COVID-19 responses (retrospectively) and the during COVID-19 responses.

The researcher used effect sizes to assess practical significance (Cohen, 1988,1992). Specifically, Cohen's *d* was used to compare the means between responses of the *t*-tests. Ranges used include less than .2 to .5 indicates a small effect, between .5 and .8 indicates a medium effect size, and equal to or greater than .8 indicates a large effect size (Andrade, 2020; Cohen, 1988).

Research Question 1

Research question one states: To what extent is play-based learning present, feasible, and desirable in Montana's early elementary (kindergarten to second-grade) public school classrooms?

There are twenty-six comparisons indicated as pairs for research question one. Pairs 1 through 4 compare teachers' perceptions of the presence of play-based learning, including all forms of play, and the presence of each form, including free play, guided play, and games before COVID-19 and their presence of play-based learning during the COVID-19 pandemic. These four pairs provide the analysis addressing the presence portion for question one.

Pairs 5 through 16 compare teachers' perceptions of the presence of specific materials and activities, including blocks, student-selected centers, pretend play, listening centers, singing and listening to music, playing games and puzzles, dancing, exploring topics of their children's interests before COVID-19 as compared to the presence of these same materials and activities during COVID-19. These 12 pairs add to the analysis addressing the presence portion of question one.

Pairs 17 through 20 compare teachers' feasibility of offering play-based learning, including all forms of play, and their feasibility in each specific form, including free play, guided play, and games before COVID-19, as compared to their feasibility of offering play-based learning during COVID-19. These four pairs provide the analysis addressing the feasibility portion for question one.

Pair 21 compares teachers' desire to offer play-based learning, including all forms of play before COVID-19, to their desire to offer play-based learning during COVID-19. This pair provides the analysis addressing the desirability portion for question one.

Pairs 22 through 26 compare teachers' desire to offer play-based learning for various benefits, including the purpose of *academic development* (math skills, language skills, or other academic areas), *physical development* (greater physical fitness, fine motor development, gross motor development), *mental health* (stress relief; feeling calm, happy, or peaceful), *social-emotional development* (cooperating with other children, making friends, recognizing & expressing emotions) and *executive and cognitive functioning* (working memory, improved concentration, and ability to make observations) before COVID-19 as compared to the desire to implement play-based learning because of these same benefits during COVID-19. These five pairs add to the analysis addressing the desirability portion for question one.

Presence of Play-Based Learning. To address the presence portion of this question, the researcher looked at the comparison of play-based learning before and during COVID-19 to determine if there was a decrease during COVID-19 in early elementary (kindergarten to second-grade) public school classrooms in Montana.

The null hypothesis for this portion of question one states: There is no statistically significant difference in the presence of play-based learning from before COVID-19 to during COVID-19 when health and safety protocols were put into place in early elementary (kindergarten to second-grade) public school classrooms in Montana during COVID-19 than before.

The following pairs (1 through 4) compare teachers' perceptions of the presence in play-based learning, including all forms of play, and the presence in each specific form, including free play, guided play, and games before COVID-19 and their perceptions of the presence of play-based learning during COVID-19 (see Table 4.2). A pair consists of teachers' responses about their perceptions of play-based learning before COVID-19 compared to during COVID-19.

These four pairs provide the analysis addressing the presence portion of question one and are provided in the order in which they were presented in the survey to teachers. Additionally, for reference, individual teacher responses are provided for all four forms of play in a frequency distribution table by grade level (see Table 4.3).

Presence of Play-Based Learning Pairs. Pair 1 compared teachers' perceptions of the presence of play-based learning, including all forms of play (free play, guided play, and games) before COVID-19 to the presence of play-based learning during COVID-19. There was a statistically significant difference in teachers' perceptions of the presence of play-based learning including all forms of play from *before* COVID-19 (M = 4.06, SD = 1.19) to *during* COVID-19 (M = 3.27, SD = 1.61), t (70) = 4.29, p < .001 (two-tailed). The mean decrease in scores was 0.79, with a 95% confidence interval ranging from 0.42 to 1.16. The *Cohen's d* statistic, d = .56, indicated a medium effect size based on Cohen's (1988, 1992) guidelines.

Pair 2 compared teachers' perceptions of the presence of *free play* before COVID-19 to the presence of *free play* during COVID-19. There was a statistically significant difference on teacher perceptions of the presence of *free play before* COVID-19 (M = 3.37, SD = 1.43) to *during* COVID-19 (M = 2.87, SD = 1.68), t (70) = 2.79, p = .007 (two-tailed). The mean decrease in scores was 0.49, with a 95% confidence interval ranging from 0.14 to 0.85. The Cohen's d statistic, d = .32, indicated a medium effect size.

Pair 3 compared teachers' perceptions of the presence of *guided play* before COVID-19 to their perception of the presence of *guided play* during COVID-19. There was a statistically significant difference on teacher perceptions of the presence of *guided play before* COVID-19 (M = 3.89, SD = 0.92) to *during* COVID-19 (M = 3.25, SD = 1.36), t (70) = 4.07, p < .001 (two-

tailed). The mean decrease in scores was 0.63, with a 95% confidence interval ranging from 0.32 to 0.94. The Cohen's *d* statistic, *d* = .55, indicated a medium effect size.

Pair 4 compared teachers' perceptions of the presence of *games* before COVID-19 to their perception of the presence of *games* during COVID-19. There was a statistically significant difference on teacher perceptions of the presence of *games before* COVID-19 (M = 3.46, SD = 0.92) to *during* COVID-19 (M = 2.94, SD = 1.30), *t* (70) = 3.51, *p* = .001 (two-tailed). The mean score decrease was 0.52 with a 95% confidence interval ranging from 0.23 to 0.82. The Cohen's *d* statistic, *d* = .46, indicated a medium effect size.

Table 4.2

Presence of Play-Based Learning Before and During COVID-19

	Before COVID		During COVID				
	M	*SD*	*M*	*SD*	*t* (70)	*p*	Cohen's *d*
Free play	3.37	1.43	2.87	1.68	2.79	.007	0.32
Games	3.46	0.92	2.94	1.30	3.51	.001	0.46
Guided play	3.89	0.92	3.25	1.36	4.07	< .001	0.55
Play-based learning	4.06	1.19	3.27	1.61	4.29	< .001	0.56

Note. All coefficients are significant at p < .05. Findings are provided in ranked order by effect size.

Figure 4.1

Mean Total for the Presence of Play-Based Learning and Play Forms Before and During

COVID-19 Compared
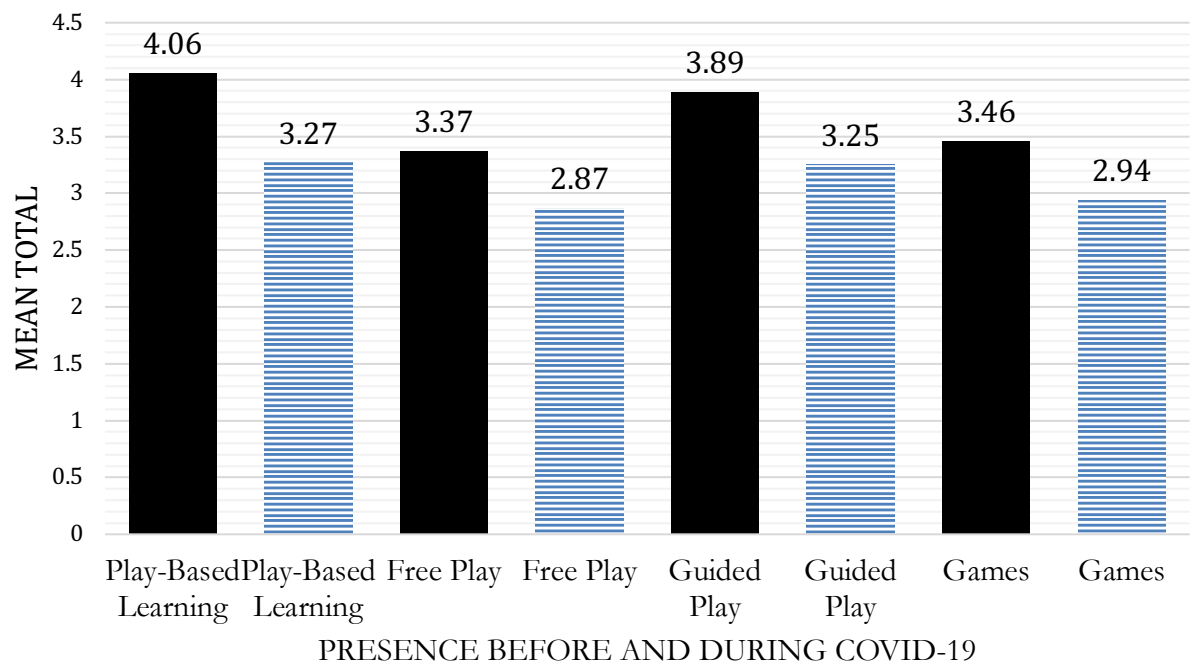
Note. This figure shows the mean total for the presence of play-based learning and play forms (free play, guided play, and games) before (indicated as the first bar for each pair) and during COVID-19 (indicated as the second bar for each pair).

Table 4.3

Presence of Play-Based Learning Before and During COVID-19 by Grade Taught and

Frequency

Grades	Before COVID					During COVID				
	K	*1*	*2*	*Other*	*Total*	*K*	*1*	*2*	*Other*	*Total*
Play-Based Learning										
Never	1	0	1	0	2	3	0	4	0	7
Less than monthly	0	1	1	0	2	2	2	0	0	4
Monthly	3	3	3	0	9	3	3	2	1	9
Weekly	3	4	3	0	10	3	3	8	1	15
2-4 times per week	6	10	6	4	26	8	3	2	2	15
daily	22	5	7	4	38	12	7	1	1	21
Total	35	23	21	8	87	31	18	17	5	71
Free Play										
Never	0	0	2	0	2	4	1	4	0	9
Less than monthly	4	3	3	0	10	2	3	2	1	8
Monthly	1	4	0	0	5	3	4	3	0	10
Weekly	5	11	8	2	26	1	8	6	1	16
2-4 times per week	8	4	3	2	17	8	2	1	1	12
daily	17	1	5	4	24	13	0	1	2	16
Total	35	23	21	8	87	31	18	17	5	71
Guided Play										
Never	0	1	1	0	2	0	0	2	0	2
Less than monthly	1	2	0	0	3	1	1	3	0	5
Monthly	1	0	2	0	3	6	5	2	1	14
Weekly	8	6	8	4	26	6	3	7	3	19
2-4 times per week	12	9	7	3	31	7	4	2	1	14
daily	13	5	3	1	22	11	5	1	0	17
Total	35	23	21	8	87	31	18	17	5	71
Games										
Never	0	0	0	0	0	2	0	2	0	4
Less than monthly	0	3	1	1	5	2	2	1	0	5
Monthly	4	2	3	0	9	7	3	3	1	14
Weekly	16	4	9	5	34	10	4	7	3	24
2-4 times per week	10	10	6	1	27	7	5	3	1	16
daily	5	4	2	1	12	3	4	1	0	8

| Total | 35 | 23 | 21 | 8 | 87 | 31 | 18 | 17 | 5 | 71 |

Presence of Play-Based Learning Activities and Materials. The first part of the first research question generally asks about the presence of play-based learning in early elementary classrooms. The following twelve pairs (5 through 16) provide the analysis addressing the presence of activities and common materials used during play-based learning and are provided in the order in which they were presented in the survey to teachers (see Table 4.4). These pairs compare teachers' perceptions of the presence of *blocks, student-selected centers, pretend play, listening centers, singing and listening to music, playing games and puzzles, dancing, and exploring topics of their children's interests* before COVID-19 as compared to the presence of these same materials and activities during COVID-19. Additionally, individual teacher responses are provided for all four forms of play in a frequency distribution table by grade level (see Table 4.5).

Pair 5 compared teachers' perceptions of the presence of *blocks* before COVID-19 to the presence of *blocks* during COVID-19. There was a statistically significant difference on teacher perceptions of the presence of *blocks before* COVID-19 (M = 3.25, SD = 1.23) to *during* COVID-19 (M = 2.56, SD = 1.62), t (70) = 4.25, p < .001 (two-tailed). The mean decrease in scores was 0.69, with a 95% confidence interval ranging from 0.37 to 1.01. The Cohen's d statistic, d = .48, indicated a medium effect size.

Pair 6 compared teachers' perceptions of the presence of student-selected *centers* before COVID-19 to that of student-selected *centers* during COVID-19. There was a statistically significant difference on teacher perceptions of the presence of *student selected centers before* COVID-19 (M = 3.06, SD = 1.63) to *during* COVID-19 (M = 1.99, SD = 1.87), t (70) = 5.81, p <

.001 (two-tailed). The mean score decrease was 1.07, with a 95% confidence interval ranging from 0.70 to 1.44. The Cohen's *d* statistic, *d* = .61, indicated a medium effect size.

Pair 7 compared teachers' perceptions of the presence of *pretend play* before COVID-19 to the presence of *pretend play* during COVID-19. There was a statistically significant difference on teacher perceptions of the presence of *pretend play before* COVID-19 (M = 3.04, SD = 1.41) to *during* COVID-19 (M = 2.42, SD = 1.80), *t* (70) = 3.56, *p* = .001 (two-tailed). The mean decrease in scores was 0.62, with a 95% confidence interval ranging from 0.27 to 0.97. The Cohen's *d* statistic, *d* = .38, indicated a medium effect size.

Pair 8 compared teachers' perceptions of the presence of a *listening center* before COVID-19 to the presence of a *listening center* during COVID-19. There was no statistically significant difference of teacher perceptions of the presence of *listening center before* COVID-19 (M = 3.07, SD = 1.52) to *during* COVID-19 (M = 2.80, SD = 1.79), *t* (70) = 1.40, *p* = .166 (two-tailed). The mean decrease in scores was 0.27 with a 95% confidence interval ranging from -0.11 to 0.65. The Cohen's *d* statistic, *d* = .16, indicated a small effect size.

Pair 9 compared teachers' perceptions of the presence of *singing and listening to music* before COVID-19 to the presence of *singing and listening to music* during COVID-19. There was no statistically significant difference of teacher perceptions of the presence of *singing and listening to music before* COVID-19 (M = 4.21, SD = 1.09) to *during* COVID-19 (M = 4.10, SD = 1.14), *t* (70) = 1.18, *p* = .241 (two-tailed). The mean decrease in scores was 0.11 with a 95% confidence interval ranging from -0.08 to 0.30. The Cohen's *d* statistic, *d* = .10, indicated a small effect size.

Pair 10 compared teachers' perceptions of the presence of *playing games/puzzles* before COVID-19 to the presence of *playing games/puzzles* during COVID-19. There was a statistically

significant difference on teacher perceptions of the presence of *playing games/puzzles before* COVID-19 (M = 3.48, SD = 1.15) to *during* COVID-19 (M = 2.90, SD = 1.38), *t* (70) = 4.13, *p* < .001 (two-tailed). The mean decrease in scores was 0.58, with a 95% confidence interval ranging from 0.30 to 0.86. The Cohen's *d* statistic, *d* = .46, indicated a medium effect size.

Pair 11 compared teachers' perceptions of the presence of *dancing* before COVID-19 to the presence of *dancing* during COVID-19. There was no statistically significant difference on teacher perceptions of the presence of *dancing before* COVID-19 (M = 3.61, SD = 1.42) to *during* COVID-19 (M = 3.48, SD = 1.47), *t* (70) = 1.18, *p* = .244 (two-tailed). The mean decrease in scores was 0.13 with a 95% confidence interval ranging from -0.09 to 0.34. The Cohen's *d* statistic, *d* = .09, indicated a small effect size.

Pair 12 compared teachers' perceptions of the presence of *exploring topics of their interest* before COVID-19 to the presence of *exploring topics of their interest* during COVID-19. There was a statistically significant difference on teacher perceptions of the presence of *exploring topics of their interest before* COVID-19 (M = 2.96, SD = 1.22) to *during* COVID-19 (M = 2.65, SD = 1.34), *t* (70) 2.71, *p* = .009 (two-tailed). The mean decrease in scores was 0.31 with a 95% confidence interval ranging from 0.08 to 0.54. The Cohen's *d* statistic, *d* = .24, indicated a medium effect size.

Pair 13 compared teachers' perceptions of *student-coordinated centers* before COVID-19 to the presence of student-coordinated *centers* during COVID-19. There was a statistically significant difference on teacher perceptions of the presence of *student coordinated centers before* COVID-19 (M = 2.32, SD = 1.72) to *during* COVID-19 (M = 1.65, SD = 1.68), *t* (70) = 3.64, *p* = .001 (two-tailed). The mean decrease in scores was 0.68, with a 95% confidence

interval ranging from 0.31 to 1.05. The Cohen's *d* statistic, *d* = .39, indicated a medium effect size.

Pair 14 compared teachers' perceptions of the presence of *drawing, painting, and working with playdough or other art media* before COVID-19 to the presence of *drawing, painting, and working with playdough or other art media* during COVID-19. There was no statistically significant difference on teacher perceptions of the presence of *drawing, painting, working with playdough or other art media before* COVID-19 (M = 3.41, SD = 1.09) to *during* COVID-19 (M = 3.39, SD = 1.19), *t* (70) = 0.14, *p* = .890 (two-tailed). The mean decrease in scores was 0.01, with a 95% confidence interval ranging from -0.19 to 0.22. The Cohen's *d* statistic, *d* = .02, indicated a small effect size.

Pair 15 compared teachers' perceptions of the presence of *cutting their own shapes out of paper* before COVID-19 to the presence of *cutting their own shapes out of paper* during COVID-19. There was no statistically significant difference on teacher perceptions of the presence of *cutting their own shapes out of paper before* COVID-19 (M = 2.94, SD = 1.30) to *during* COVID-19 (M = 3.04, SD = 1.29), *t* (70) = -1.07, *p* = .289 (two-tailed). The mean decrease in scores was -0.099, with a 95% confidence interval ranging from -0.28 to 0.085. The Cohen's *d* statistic, *d* = .08, indicated a small effect size.

Pair 16 compared teachers' perceptions of the presence of *manipulatives* before COVID-19 to the presence of *manipulatives* during COVID-19. There was statistically significant difference on teacher perceptions of the presence of *manipulatives* COVID-19 (M = 3.59, SD = 1.12) to *during* COVID-19 (M = 3.04, SD = 1.50), *t* (70) = 3.51, *p* = .001 (two-tailed). The mean decrease in scores was 0.55 with a 95% confidence interval ranging from 0.24 to 0.86. The Cohen's *d* statistic, *d* = .42, indicated a medium effect size.

Table 4.4

Presence of Play-Based Learning Activities and Materials Before and During COVID-19

	Before COVID		During COVID				
	M	*SD*	*M*	*SD*	*t* (70)	*p*	Cohen's *d*
Art Media - Drew, painted, worked with playdough	3.41	1.09	3.39	1.19	0.14	.890	0.02
Cut shapes	2.94	1.30	3.04	1.29	-1.07	.289	0.08
Danced	3.61	1.42	3.48	1.47	1.18	.244	0.09
Sang or listened to music	4.21	1.09	4.10	1.14	1.18	.241	0.10
Listening center	3.07	1.52	2.80	1.79	1.40	.166	0.16
Explored topics of interest	2.96	1.22	2.65	1.34	2.71	.009	0.24
Pretend play	3.04	1.41	2.42	1.80	3.56	.001	0.38
Student coordinated centers	2.32	1.72	1.65	1.68	3.64	.001	0.39
Manipulatives	3.59	1.12	3.04	1.50	3.51	.001	0.42
Played games/puzzles	3.48	1.15	2.90	1.38	4.13	< .001	0.46
Blocks	3.25	1.23	2.56	1.62	4.25	< .001	0.48
Centers	3.06	1.63	1.99	1.87	5.81	< .001	0.61

Note. All coefficients are significant at p < .05. Findings are provided in ranked order by effect size.

Figure 4.2

Mean Total for the Presence of Play-Based Learning Activities and Materials Before and

During COVID-19 with Significance
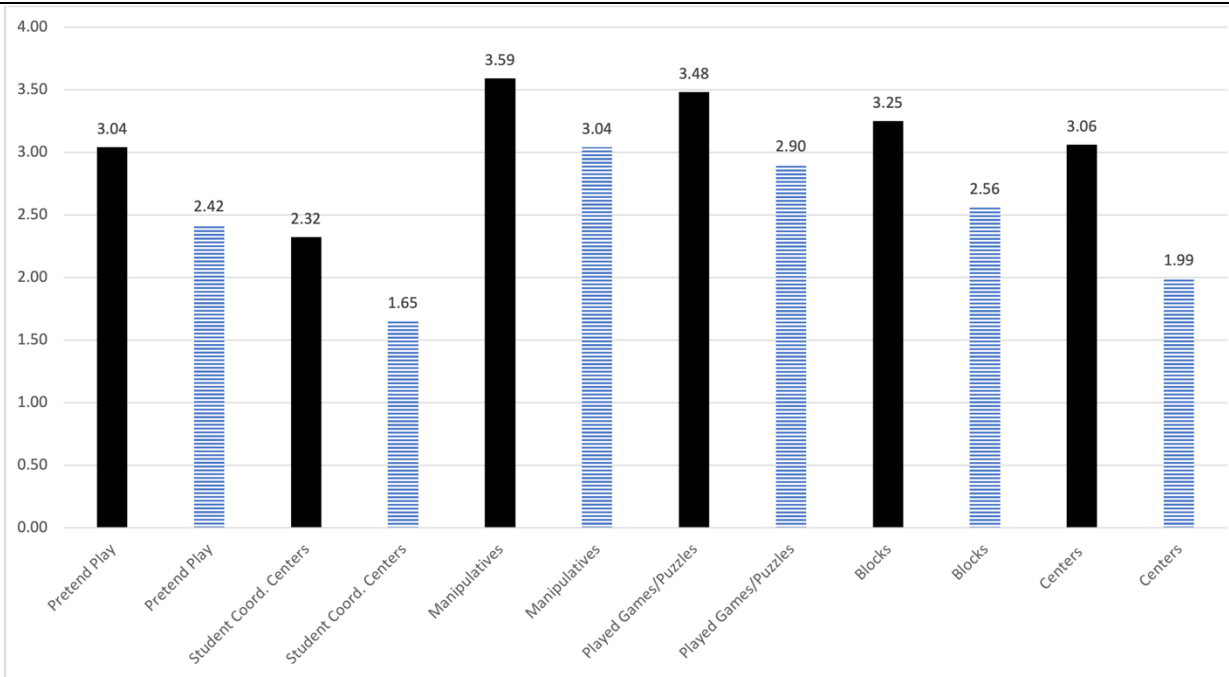
Note. This figure shows the mean total for the presence of play-based learning and play forms (free play, guided play, and games) before (indicated as the first bar for each pair) and during COVID-19 (indicated as the second bar for each pair) that showed statistically significant differences.

Figure 4.3

Mean Total for the Presence of Play-Based Learning Activities and Materials Before and

During COVID-19 without Significance
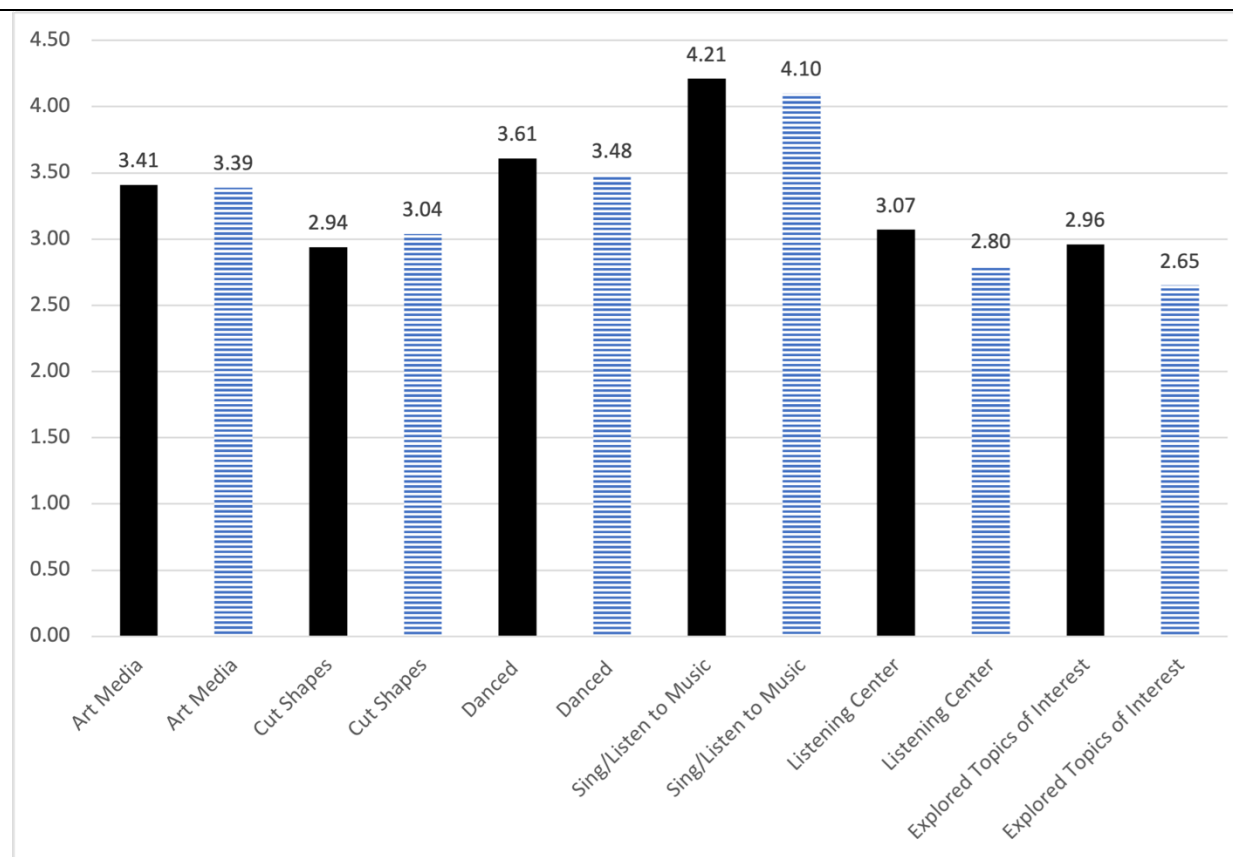
Note. This figure shows the mean total for the presence of play-based learning activities and materials before (indicated as the first bar for each pair) and during COVID-19 (indicated as the second bar for each pair) that showed no statistically significant difference.

Table 4.5

Presence of Play-Based Learning Activities and Materials Before and During COVID-19 by Grade Taught and Frequency

Grades	Before COVID					During COVID				
	K	1	2	Other	Total	K	1	2	Other	Total
				Blocks						
Never	0	0	4	0	4	2	0	8	0	10
Less than monthly	1	2	3	1	7	4	3	3	2	12
Monthly	3	3	1	1	8	4	4	1	0	9
Weekly	10	11	10	2	33	9	3	4	1	17
2-4 times per week	10	7	2	4	23	4	7	1	2	14
Daily	11	0	1	0	12	8	1	0	0	9
Total	35	23	21	8	87	31	18	17	5	71
				Student Selected Centers						
Never	2	5	4	0	11	10	4	8	1	23
Less than monthly	5	2	0	1	8	5	2	4	2	13
Monthly	3	3	5	1	12	5	3	0	0	8
Weekly	10	3	6	4	23	1	2	2	1	6
2-4 times per week	2	3	5	0	10	5	2	3	1	11
Daily	13	7	1	2	23	5	5	0	0	10
Total	35	23	21	8	87	31	18	17	5	71
				Pretend Play						
Never	0	2	2	0	4	6	2	5	0	13
Less than monthly	2	4	2	1	9	4	5	3	3	15
Monthly	5	3	3	0	11	3	3	3	0	9
Weekly	6	10	7	3	26	3	5	3	0	11
2-4 times per week	13	3	4	1	21	6	2	0	1	9
Daily	9	1	3	3	16	9	1	3	1	14
Total	35	23	21	8	87	31	18	17	5	71
				Listening Center						
Never	2	1	2	1	6	5	2	3	1	11
Less than monthly	6	5	1	2	14	5	4	0	1	10
Monthly	5	2	0	1	8	5	2	1	0	8
Weekly	8	2	8	1	19	3	2	6	0	11
2-4 times per week	6	7	7	0	20	6	3	5	1	15
Daily	8	6	3	3	20	7	5	2	2	16
Total	35	23	21	8	87	31	18	17	5	71

Sang or Listened to Music

Never	0	0	0	0	0	0	0	0	0	0
Less than monthly	2	1	1	0	4	2	0	2	0	4
Monthly	0	0	0	0	0	0	1	1	0	2
Weekly	3	4	7	3	17	5	0	5	2	12
2-4 times per week	5	5	5	4	19	5	7	4	2	18
Daily	25	13	8	1	47	19	10	5	1	35
Total	35	23	21	8	87	31	18	17	5	71

Play Games/Puzzles

Never	0	0	2	0	2	1	0	3	0	4
Less than monthly	0	1	1	0	2	2	2	4	0	8
Monthly	5	6	4	0	15	6	4	2	1	13
Weekly	9	3	7	4	23	8	4	7	2	21
2-4 times per week	12	9	3	3	24	8	5	1	2	16
Daily	9	4	4	1	18	6	3	0	0	9
Total	35	23	21	8	87	31	18	17	5	71

Danced

Never	0	0	2	0	2	1	0	3	0	4
Less than monthly	2	3	2	0	7	1	0	3	1	5
Monthly	2	3	3	2	10	2	1	2	0	5
Weekly	7	4	5	2	18	8	5	5	1	19
2-4 times per week	5	5	6	2	18	5	5	4	1	15
Daily	19	8	3	2	32	14	7	0	2	23
Total	35	23	21	8	87	31	18	17	5	71

Explored Topics of Interest

Never	0	0	0	0	0	1	1	1	0	3
Less than monthly	3	2	5	1	11	5	4	4	0	13
Monthly	3	8	7	2	20	5	4	6	2	17
Weekly	17	4	4	2	27	10	3	1	3	17
2-4 times per week	8	4	2	2	16	6	5	4	0	15
Daily	4	5	3	1	13	4	1	1	0	6
Total	35	23	21	8	87	31	18	17	5	71

Student Coordinated Centers

Never	7	9	7	1	24	11	6	8	0	25
Less than monthly	5	3	2	2	12	5	4	5	3	17
Monthly	2	3	3	1	9	3	1	2	1	7
Weekly	6	4	5	3	18	2	2	2	0	6
2-4 times per week	9	3	3	0	15	6	5	0	1	12

Daily	6	1	1	1	9	4	0	0	0	4
Total	35	23	21	8	87	31	18	17	5	71
Drew, painted, worked with playdough or other art media										
Never	0	0	1	0	1	0	0	1	0	1
Less than monthly	1	1	4	0	6	2	0	3	0	5
Monthly	2	1	2	1	6	1	3	1	1	6
Weekly	12	11	7	0	30	10	7	7	2	26
2-4 times per week	12	10	6	4	32	8	7	3	1	19
Daily	8	0	1	3	12	10	1	2	1	14
Total	35	23	21	8	87	31	18	17	5	71
Cut their own shapes out of paper										
Never	0	0	1	0	1	1	0	1	0	2
Less than monthly	5	4	6	1	16	4	2	2	0	8
Monthly	4	5	2	1	12	3	1	6	1	11
Weekly	9	8	10	2	29	9	10	4	1	24
2-4 times per week	10	3	1	3	17	8	3	3	2	16
Daily	7	3	1	1	12	6	2	1	1	10
Total	35	23	21	8	87	31	18	17	5	71
Manipulatives										
Never	0	0	1	0	1	0	0	4	0	4
Less than monthly	2	0	1	0	3	4	1	4	0	9
Monthly	3	2	2	2	9	4	3	3	1	11
Weekly	4	11	10	0	25	4	7	6	1	18
2-4 times per week	16	8	2	4	30	8	4	0	2	14
Daily	10	2	5	2	19	11	3	0	1	15
Total	35	23	21	8	87	31	18	17	5	71

Note. Frequencies of responses provided by grade before pairwise deletion. Other indicates teachers who taught multiple grades (i.e., K-9, 1&2, Pk-6, K/1 combo, etc.).

Summary of the Presence of Play-Based Learning. The quantitative data results for pairs 1-4 (see Table 4.2) indicate that the presence of play-based learning, including free play, guided play, and games, significantly decreased from before COVID-19 as compared to the presence of play-based learning, including all three play forms during COVID-19. The impact COVID-19 had on the presence of play-based learning, including all three forms, as reported by Cohen's *d*, yielded medium effect sizes.

The quantitative data results for pairs 5-16 (see Table 4.4) indicate that the presence of play-based learning materials and activities such as *blocks, student-selected centers, pretend play, playing games/puzzles, exploring topics of their interest, student coordinated centers,* and *manipulatives* significantly decreased from before COVID-19 as compared to the presence of these materials and activities during COVID-19 (see Figure 4.2). The impact COVID-19 had on the presence of the play-based learning materials and activities as implemented by Montana teachers yielded medium effect sizes.

There was, however, no significant change in the presence of play-based learning materials and activities such as a *listening center, singing and listening to music, dancing, drawing, painting, working with playdough or other art media, and cutting their own shapes out of paper,* from before COVID-19 as compared to the presence of these materials and activities during COVID-19 and yielded small effect sizes (see Figure 4.3).

Since the null hypothesis stated that there was no statistically significant difference in the presence of play-based learning from before COVID-19 to during COVID-19, when health and safety protocols were put into place in early elementary (kindergarten to second-grade) public school classrooms in Montana, the null hypothesis was rejected (see Table 4.10).

Feasibility. To address the feasibility portion of this question, the researcher looked at the feasibility of implementing play-based learning before and during COVID-19 to determine if there was a decrease during COVID-19 in early elementary (kindergarten to second-grade) public school classrooms in Montana.

The null hypothesis for this portion of question one states: There is no statistically significant difference in teachers' feasibility of offering play-based learning before COVID-19 to during COVID-19 when health and safety protocols were put into place in early elementary

(kindergarten to second-grade) public school classrooms in Montana during COVID-19 than before.

The following pairs (17 through 20) compare teachers' feasibility of offering play-based learning, including all forms of play, and their feasibility in each specific form, including free play, guided play, and games before COVID-19, as compared to their feasibility to offer play-based learning during COVID-19. These findings are provided in the order in which they were presented in the survey to teachers; however, they are ranked by effect size. A pair consists of teachers' responses about the feasibility of offering play-based learning before COVID-19 compared to during COVID-19. These four pairs provide the analysis addressing the feasibility portion of question one (see Table 4.6).

Feasibility Pairs. Pair 17 compared teachers' feasibility of offering play-based learning, including all forms of play, before COVID-19 to their feasibility of offering play-based learning during COVID-19. There was a statistically significant difference on teachers' feasibility to offer play-based learning including all forms of play from *before* COVID-19 (M = 3.56, SD = .890) to *during* COVID-19 (M = 2.44, SD = 1.38), t (70) = 6.28, p < .001 (two-tailed). The mean score decrease was 1.13, with a 95% confidence interval ranging from .77 to 1.48. The Cohen's d statistic, d = .96, indicated a large effect size.

Pair 18 compared teachers' feasibility of offering *free play* before COVID-19 to their feasibility of offering *free play* during COVID-19. There was a statistically significant difference on teachers' feasibility to offer *free play before* COVID-19 (M = 3.41, SD = 1.08) to *during* COVID-19 (M = 2.14, SD =1.51), t (70) = 7.203, p < .001 (two-tailed). The mean decrease in scores was 1.268, with a 95% confidence interval ranging from .917 to 1.619. The Cohen's d statistic, d = .97, indicated a large effect size.

Pair 19 compared teachers' feasibility of offering *guided play* before COVID-19 to their

feasibility of offering *guided play* during COVID-19. There was statistically significant

difference on teachers' feasibility to offer *guided play before* COVID-19 (M = 3.69, SD = .689)

to *during* COVID-19 (M = 2.63, SD = 1.233), t (70) = 6.17, p < .001 (two-tailed). The mean

decrease in scores was 3.69, with a 95% confidence interval ranging from .72 to 1.40. The

Cohen's d statistic, d = 1.06, indicated a large effect size.

Pair 20 compared teachers' feasibility of offering *games* before COVID-19 to their

feasibility of offering *games* during COVID-19. There was a statistically significant difference

on teachers' feasibility to offer *games before* COVID-19 (M = 3.07, SD = .571) to *during*

COVID-19 (M = 2.56, SD = 1.26), t (70) = 6.88, p < .001 (two-tailed). The mean score decrease

was 1.141, with a 95% confidence interval ranging from .81 to 1.47. The Cohen's d statistic, d =

.52, indicated a medium effect size.

Table 4.6

Feasibility to Offer Play-Based Learning Before and During COVID-19

	Before COVID		During COVID				
	M	SD	M	SD	t (70)	p	Cohen's d
Games	3.70	0.57	2.56	1.26	6.88	<.001	0.52
Play-Based Learning	3.56	0.89	2.44	1.38	6.28	<.001	0.96
Free play	3.41	1.08	2.14	1.51	7.20	<.001	0.97
Guided play	3.69	0.69	2.63	1.23	6.16	<.001	1.06

Note. All coefficients are significant at p < .05. Findings are provided in ranked order by effect size.

Figure 4.4

Mean Total for the Feasibility of Play-Based Learning and Play Forms Before and During
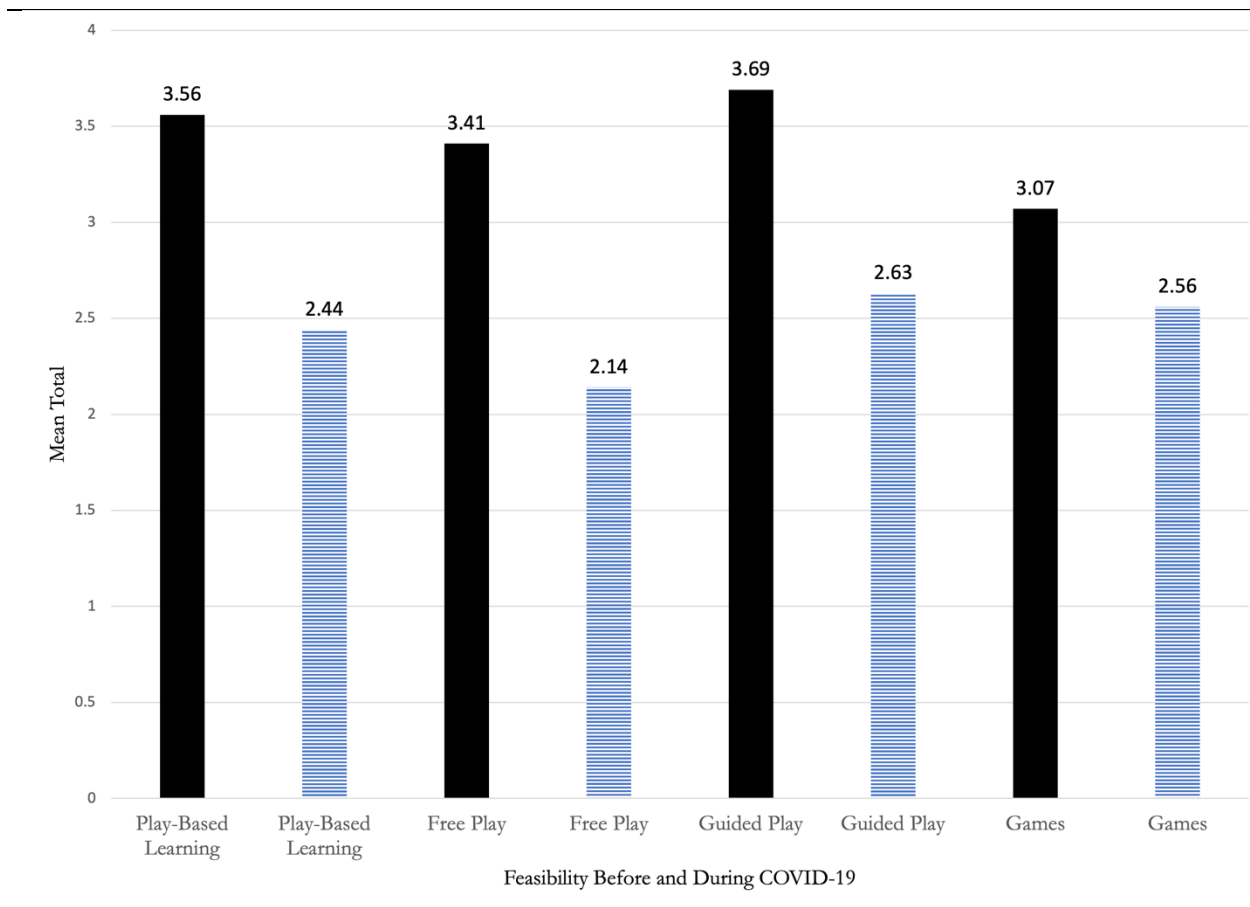
COVID-19

Note. This figure shows the mean total for the feasibility of play-based learning and play forms before (indicated as the first bar for each pair) and during COVID-19 (indicated as the second bar for each pair).

Summary of Feasibility. The findings reported in pairs 17-20 (see Table 4.6) indicate that teachers' feasibility to offer play-based learning, including all forms of play, significantly decreased during the COVID-19 pandemic compared to teachers' feasibility to offer play-based learning before COVID-19. Additionally, the feasibility for teachers to provide guided play, games, and free play significantly decreased during COVID-19 compared to teachers' feasibility

to provide these three forms of play before COVID-19. The impact COVID-19 had on the feasibility for teachers to offer play-based learning, including all three forms, as reported by Cohen's *d*, yielded three large effect sizes and one medium effect size for games.

Since the null hypothesis stated that there is no statistically significant difference in teachers' feasibility to offer play-based learning before COVID-19 to during COVID-19 when health and safety protocols were put into place in early elementary (kindergarten to second-grade) public school classrooms in Montana, the null hypothesis was rejected (see Table 4.10).

Desirability. To address the third portion of research question one on the desirability of teachers to offer play-based learning in early elementary classrooms, the researcher looked at the comparison of their desire to implement play-based learning before COVID-19 as compared to their willingness to implement play-based learning during the COVID-19 pandemic.

The null hypothesis for the desirability portion of question one states: There is no statistically significant difference in the desire to offer play-based learning from before the COVID-19 pandemic to during COVID-19 when health and safety protocols were put into place in early elementary (kindergarten to second-grade) public school classrooms in Montana.

The following five pairs compare teachers' desire to offer play-based learning, including all forms of play before COVID-19, to their willingness to offer play-based learning during COVID-19 and provide the analysis addressing the desirability portion of question one (see Table 4.7). Pair 21 compares the overall desire to implement play-based learning. In contrast, pairs 22 through 26 compare teachers' desire to offer play-based learning because of the benefits children experience, including the purpose of *academic development* (math skills, language skills, or other academic areas), *physical development* (greater physical fitness, fine motor development, gross motor development), *mental health* (stress relief; feeling calm, happy, or

peaceful), *social-emotional development* (cooperating with other children, making friends, recognizing & expressing emotions) and *executive and cognitive functioning* (working memory, improved concentration, and ability to make observations) before COVID-19 as compared to the desire to implement play-based learning because of these same benefits during COVID-19. A pair consists of teachers' responses about their desire to offer play-based learning because of the outcome (benefits) children can gain before COVID-19 compared to during COVID-19. These findings are provided in the order in which they were presented in the survey to teachers.

   Desirability Pairs. Pair 21 compared teachers' desire to offer play-based learning, including all forms of play before COVID-19, to their desire to offer play-based learning during COVID-19. There was no statistically significant difference in teachers' desire to offer play-based learning including all forms of play from *before* COVID-19 (M = 3.54, SD = 0.81) to *during* COVID-19 (M = 3.49, SD = 0.85), *t* (64) = 4.78, *p* = .635 (two-tailed). The mean decrease in scores was .046, with a 95% confidence interval ranging from -0.15 to 0.24. The Cohen's *d* statistic, *d* = .06, indicated a small effect size.

   Pair 22 compared teachers' desire to offer play-based learning for *academic development* (math skills, language skills, or other academic areas) before COVID-19 to their desire to offer play-based learning for *academic development* (math skills, language skills, or other academic areas) during COVID-19. There was no statistically significant difference in teachers' desire to offer play-based learning for the purpose of *academic development before* COVID-19 (M = 3.38, SD = 0.80) to *during* COVID-19 (M = 3.14, SD = 0.93), *t* (64) = 1.98, *p* = .052 (two-tailed). The mean decrease in scores was 0.246 with a 95% confidence interval ranging from -0.002 to 0.494. The Cohen's *d* statistic, *d* = .28, indicated a medium effect size.

Pair 23 compared teachers' desire to offer play-based learning for *physical development* (greater physical fitness, fine motor development, gross motor development) before COVID-19 to their desire to offer play-based learning for *physical development* (greater physical fitness, fine motor development, gross motor development) during COVID-19. There was statistically significant difference in teachers' desire to offer play-based learning for the purpose of *physical development before* COVID-19 (M = 3.43, SD = 0.77) to *during* COVID-19 (M = 3.11, SD = 0.95), t (64) = 2.39, p = .020 (two-tailed). The mean decrease in scores was 0.323, with a 95% confidence interval ranging from 0.05 to 0.59. The Cohen's d statistic, d = .37, indicated a medium effect size.

Pair 24 compared teachers' desire to offer play-based learning for *mental health* (stress relief; feeling calm, happy, or peaceful) before COVID-19 to their desire to offer play-based learning for *mental health* (stress relief; feeling calm, happy, or peaceful) during COVID-19. There was statistically significant difference in teachers' desire to offer play-based learning for the purpose of *mental health before* COVID-19 (M = 3.55, SD = 0.75) to *during* COVID-19 (M = 3.31, SD = 0.81), t (64) = 2.2, p = .031 (two-tailed). The mean decrease in scores was 0.25, with a 95% confidence interval ranging from 0.02 to 0.47. The Cohen's d statistic, d = .31, indicated a medium effect size.

Pair 25 compared teachers' desire to offer play-based learning for *social-emotional development* (cooperating with other children, making friends, recognizing & expressing emotions) before COVID-19 to their desire to offer play-based learning for *social-emotional development* (cooperating with other children, making friends, recognizing & expressing emotions) during COVID-19. There was statistically significant difference in teachers' desire to offer play-based learning for the purpose of *social-emotional development before* COVID-19 (M

= 3.66, SD = 0.67) to *during* COVID-19 (M = 3.32, SD = 0.89), *t* (64) = 2.96, *p* = .004 (two-tailed). The mean decrease in scores was 0.34 with a 95% confidence interval ranging from 0.11 to 0.57. The Cohen's *d* statistic, *d* = .43, indicated a medium effect size.

Pair 26 compared teachers' desire to offer play-based learning for *executive and cognitive functioning* (working memory, improved concentration, and ability to make observations) before COVID-19 to their desire to offer play-based learning for *executive and cognitive functioning* (working memory, improved concentration, and ability to make observations) during COVID-19. There was a statistically significant difference in teachers' desire to offer play-based learning for the purpose of *executive and cognitive functioning before* COVID-19 (M = 3.55, SD = 0.66) to *during* COVID-19 (M = 3.17, SD = 0.80), *t* (64) = 3.95, *p* = .000 (two-tailed). The mean decrease in scores was 0.385, with a 95% confidence interval ranging from 1.90 to 0.56. The Cohen's *d* statistic, *d* = .52, indicated a medium effect size.

Table 4.7

Desirability of Play-Based Learning Before and During COVID-19

	Before COVID		During COVID				
	M	*SD*	*M*	*SD*	*t* (64)	*p*	Cohen's *d*
Play-based learning	3.54	0.81	3.49	0.85	4.78	.635	0.06
Academic development	3.38	0.80	3.14	0.93	1.98	.052	0.28
Mental health	3.55	0.75	3.31	0.81	2.20	.031	0.31
Physical development	3.43	0.77	3.11	0.95	2.39	.020	0.37
Social-emotional development	3.66	0.67	3.32	0.89	2.96	.004	0.43
Executive and cognitive function	3.55	0.66	3.17	0.80	3.95	<.001	0.52

Note. All coefficients are significant at p < .05. Findings are provided in ranked order by effect size.

Figure 4.5

Mean Total for the Desirability of Play-Based Learning because of the Potential Benefits

Before and During COVID-19
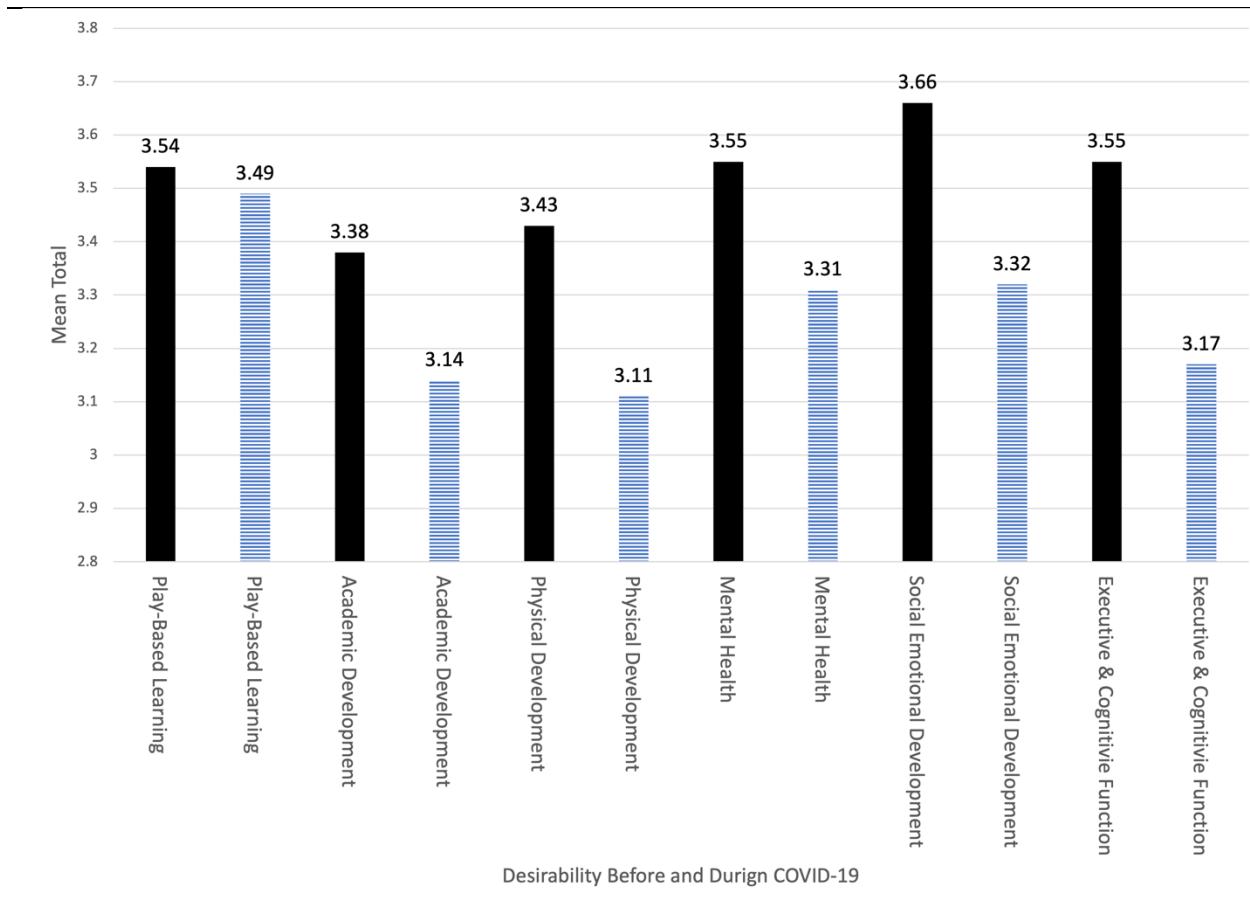
Note. This figure shows the mean total for the desirability of play-based learning because of the potential benefits before (indicated as the first bar for each pair) and during COVID-19 (indicated as the second bar for each pair).

Summary of Desirability. The quantitative data for pair 21 (see Table 4.7) indicated no

significant change in teachers' desire to offer play-based learning, including all forms of play,

during COVID-19 compared to their desire to offer play-based learning before COVID-19. The

impact COVID-19 had on the desire for teachers to offer play-based learning, because of the benefits, as reported by Cohen's *d*, a small effect.

The quantitative data for pairs 22-26 (see Table 4.7) indicated no change in teachers' desire to offer play-based learning for the benefit of *academic development* during COVID-19 as compared to before COVID-19. However, teachers' desire to offer play-based learning for the benefits of *physical development, mental health, social-emotional development,* and e*xecutive and cognitive functioning* significantly decreased during COVID-19 compared to before COVID-19. Since the null hypothesis stated that there is no statistically significant difference in teachers' desire to offer play-based learning before COVID-19 to during COVID-19 when health and safety protocols were put into place in early elementary (kindergarten to second-grade) public school classrooms in Montana during COVID-19 than before, the null hypothesis was rejected (see Table 4.10). The impact COVID-19 had on the desire for teachers to offer play-based learning, because of the benefits, as reported by Cohen's *d*, yielded medium effect sizes.

Research Question 2

Research question two states: What forms of play-based learning (i.e., free play, guided play, games) are implemented in early elementary (kindergarten to second-grade) public school classrooms in Montana while implementing COVID-19 health and safety protocols?

The null hypothesis for question two states: There is no difference in teachers' implementation between guided play, free play, or games.

Three comparisons are indicated as pairs for research question two (see Table 4.8). Pair 27 compares free play with games during COVID-19. Pair 28 compares guided play with games during COVID-19. The final pair, pair 29, compares free play with guided play during COVID-19.

Presence of Play Forms Pairs. The first comparison is between *free play* and *games*. Pair 27 compared teachers' perceptions of the presence of *free play* during COVID-19 to the presence of *games* during COVID-19. There was no statistically significant difference on teacher perceptions of the presence of *free play* during COVID-19 (M = 2.87, SD = 1.68), to *games* during COVID-19 (M = 2.94, SD = 1.30), *t* (70) = -0.34, *p* = .732 (two-tailed). The mean decrease in scores was -0.07, with a 95% confidence interval ranging from -0.48 to 0.34. The Cohen's *d* statistic, *d* = .05, indicated a small effect size.

The second comparison is between *guided play* and *games*. Pair 28 compared teachers' perceptions of the presence of *guided play* during COVID-19 to the presence of *games* during COVID-19. There was a statistically significant difference on teacher perceptions of the presence of *guided play* during COVID-19 (M = 3.25, SD = 1.36), to *games* during COVID-19 (M = 2.94, SD = 1.30), *t* (70) = 2.09, *p* = .040 (two-tailed). The mean decrease in scores was 0.31 with a 95% confidence interval ranging from 0.01 to 0.61. The Cohen's *d* statistic, *d* = .23, indicated a medium effect size.

The third comparison is between *free play* and *guided play*. Pair 29 compared teachers' perceptions of the presence of *free play* during COVID-19 to the presence of *guided play* during COVID-19. There was no statistically significant difference on teacher perceptions of the presence of *free play* during COVID-19 (M = 2.87, SD = 1.68) to *guided play* during COVID-19 (M = 3.25, SD = 1.36), *t* (70) = -1.97, *p* = .053 (two-tailed). The mean decrease in scores was -0.38, with a 95% confidence interval ranging from -0.77 to 0.004. The Cohen's *d* statistic, *d* = .25, indicated a medium effect size.

Table 4.8

Presence of Play Forms During COVID-19 Compared

Free Play		Guided Play		Games		*t*(70)	*p*	Cohen's *d*
M	*SD*	*M*	*SD*	*M*	*SD*			
Pair 27 Free Play compared to Games								
2.87	1.68			2.94	1.30	-.34	.732	0.05
Pair 28 Guided Play compared to Games								
		3.25	1.36	2.94	1.30	2.09	.040	0.23
Pair 29 Free Play compared to Guided Play								
2.87	1.68	3.25	1.36			-1.97	.053	0.25

Note. All coefficients are significant at p < .05. Findings are provided in ranked order by effect size.

Summary of Presence of Play Forms During COVID. The quantitative data (see table 4.8) indicates a significant change in the presence of two of the three play forms during COVID. There was no significant increase in the presence of guided play and games compared to free play during COVID. However, there was a decrease in the presence of guided play compared to the presence of games during COVID. The data indicates that there was more guided play than both games and free play and still more games than free play during COVID-19. Since the null hypothesis stated there is no difference in teachers' implementation between guided play, free play, or games, the null hypothesis was rejected (see Table 4.10). The impact COVID-19 had on the presence of free play compared to games, as reported by Cohen's *d*, yielded a small effect. However, the impact COVID-19 had on the presence of free play compared to guided play yielded a medium effect. This was also true for the impact COVID-19 had on teachers to provide guided play compared to games which yielded a medium effect.

Research Question 3

Research question three states: To what extent do teachers agree that health and safety protocols (e.g., masks, handwashing, social distancing, cohort grouping, inability to share materials, and restricting student movement) hindered their ability to implement play-based learning in early elementary (kindergarten to second-grade) public school classrooms in Montana during COVID-19?

The null hypotheses for question three states: Teachers are neutral that health and safety protocols (e.g., masks, handwashing, social distancing, cohort grouping, inability to share materials, and restricting student movement) hindered their ability to implement play-based learning in early elementary (kindergarten to second-grade) public school classrooms in Montana during COVID-19.

Descriptive statistics are provided for question three (see Table 4.9). Teachers were asked about seven everyday health and safety protocols implemented during the COVID-19 school year. These seven health and safety protocols include wearing a mask (as the teacher, students wearing a mask, student handwashing, social distancing, cohort grouping (students staying with the same group of students all day), students not being able to share school supplies, and restricting or reducing student movement for specials, lunch, etc. Teachers rated their perceptions of the impact on a Likert scale ranging from *strongly disagree*, *somewhat disagree*, *neither agree nor disagree*, *somewhat agree*, to *strongly agree*.

Health and Safety Protocols. For research question three, the results of the extent 69 teachers agree that health and safety protocols (e.g., masks, handwashing, social distancing, cohort grouping, inability to share materials, and restricting student movement) hindered their

ability to implement play-based learning in early elementary public school classrooms in

Montana are described.

Wearing a Mask (as the teacher). The first health and safety protocol teachers rated was

the impact wearing masks (as the teacher) had on their implementation of play-based learning

(see Figure 4.6). 30.4% (n=21) teachers strongly disagreed, 14.5% (n=10) somewhat disagreed,

23.2% (n=16) neither agreed nor disagreed, 23.2% (n=16) somewhat agreed, and 8.7% (n=6)

strongly agreed that wearing a mask (as the teacher) impacted their ability to implement play-

based learning in early elementary public (kindergarten to second-grade) school classrooms in

Montana during COVID-19. Wearing masks as the teacher during COVID-19 ($M = 1.65$, SD =

1.359).

Figure 4.6

Feasibility of Implementing Play-Based Learning while Wearing a Mask (as the teacher)
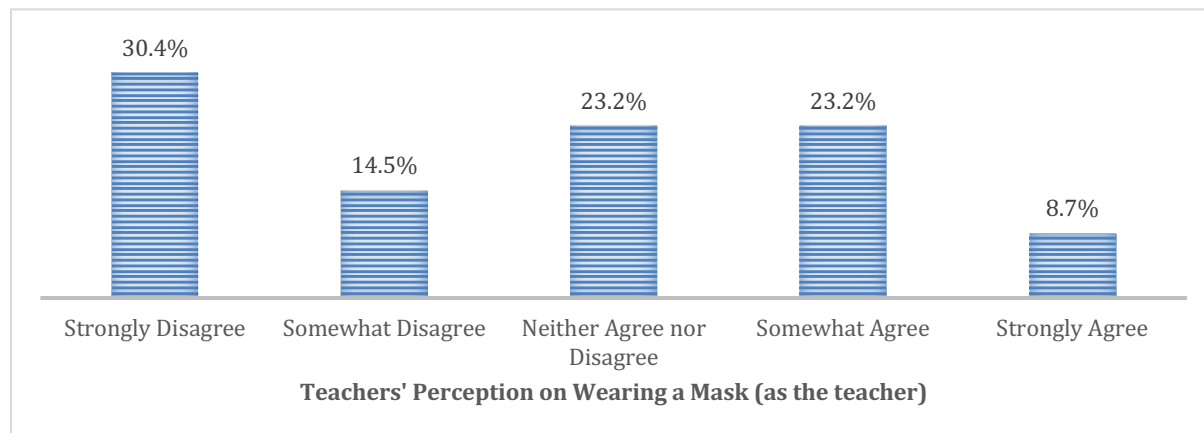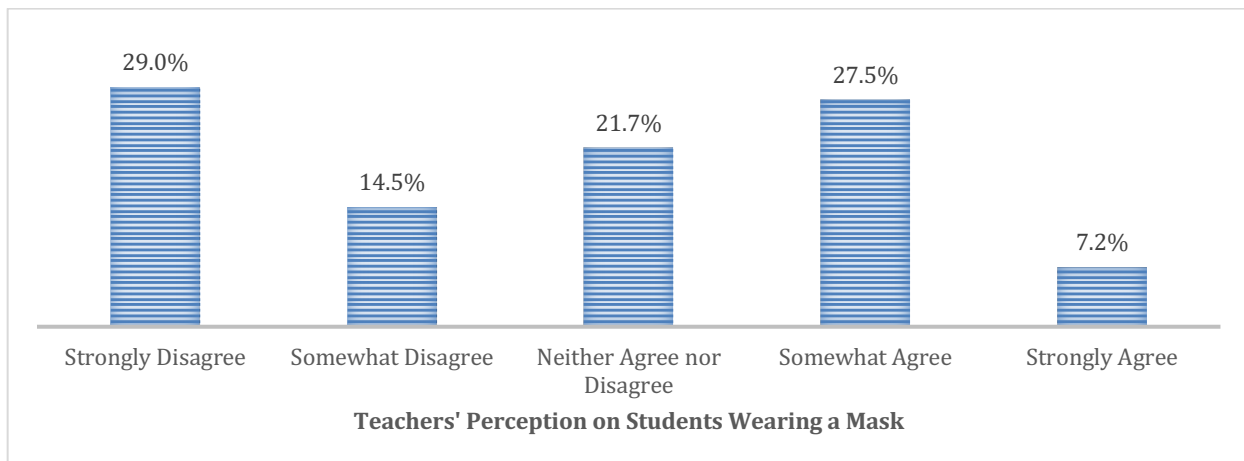

Note. This figure shows the percentile breakdown of responses from teachers on their feasibility to implement
play-based learning with the health and safety protocol of wearing a mask (as the teacher).

Students Wear a Mask. The second health and safety protocol teachers rated was the impact students wearing masks had on their implementation of play-based learning (see Figure 4.7). 29.0% (n=20) teachers strongly disagreed, 14.5% (n=10) somewhat disagreed, 21.7% (n=15) neither agreed nor disagreed, 27.5% (n=19) somewhat agreed, and 7.2% (n=5) strongly agreed that students wearing a mask impacted their ability to implement play-based learning in early elementary (kindergarten to second-grade) public school classrooms in Montana during COVID-19. Students wearing masks during COVID-19 (M = 1.70, SD = 1.343).

Figure 4.7

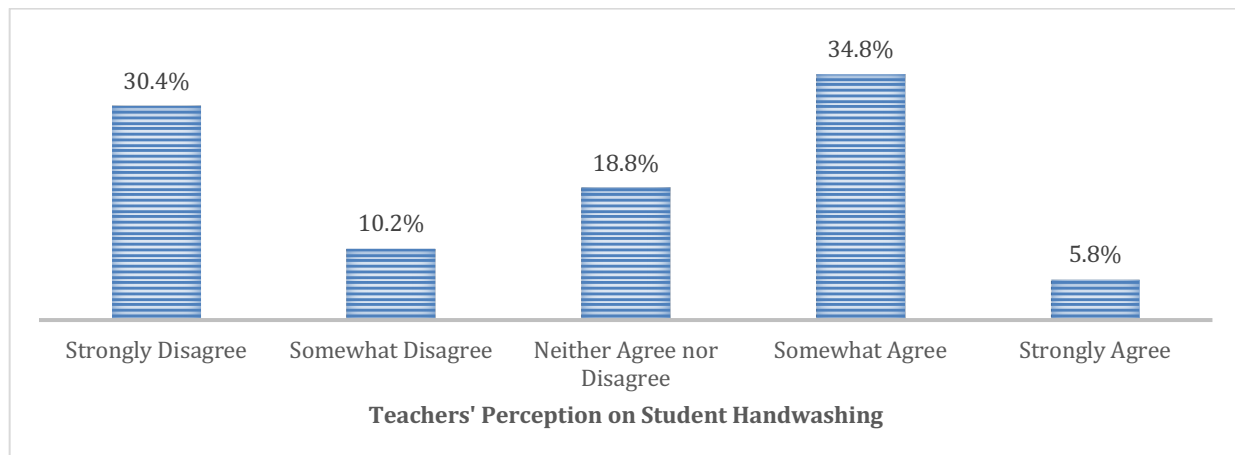*Feasibility of Implementing Play-Based Learning while Students Wear a Mask*

Note. This figure shows the percentile breakdown of teachers' responses on the feasibility of implementing play-based learning with the health and safety protocol of students wearing masks.

Student Handwashing. The third health and safety protocol teachers rated was the

impact students' handwashing had on their implementation of play-based learning (see Figure

4.8). 30.4% (n=21) teachers strongly disagreed, 10.1% (n=7) somewhat disagreed, 18.8% (n=13)

neither agreed nor disagreed, 34.8% (n=24) somewhat agreed, and 5.8% (n=4) strongly agreed

that students handwashing impacted their ability to implement play-based learning in early

elementary (kindergarten to second-grade) public school classrooms in Montana during COVID-

19. Students' handwashing during COVID-19 (M = 1.75, SD = 1.366).

Figure 4.8

Feasibility of Play-Based Learning with Increased Student Handwashing

Note. This figure shows teachers' frequency breakdown of responses on their feasibility of implementing play-based learning with the health and safety protocol of increased student handwashing.

Social Distancing. The fourth health and safety protocol teachers rated was the impact social distancing had on their implementation of play-based learning (see Figure 4.9). 8.7% (n=6) teachers strongly disagreed, 7.2% (n=5) somewhat disagreed, 8.7% (n=6) neither agreed nor disagreed, 26.1% (n=18) somewhat agreed, and 49.3% (n=34) strongly agreed that social distancing impacted their ability to implement play-based learning in early elementary (kindergarten to second-grade) public school classrooms in Montana during COVID-19. Social distancing during COVID-19 (M = 3.00, SD = 1.295).

Figure 4.9

Feasibility of Play-Based Learning with Social Distancing
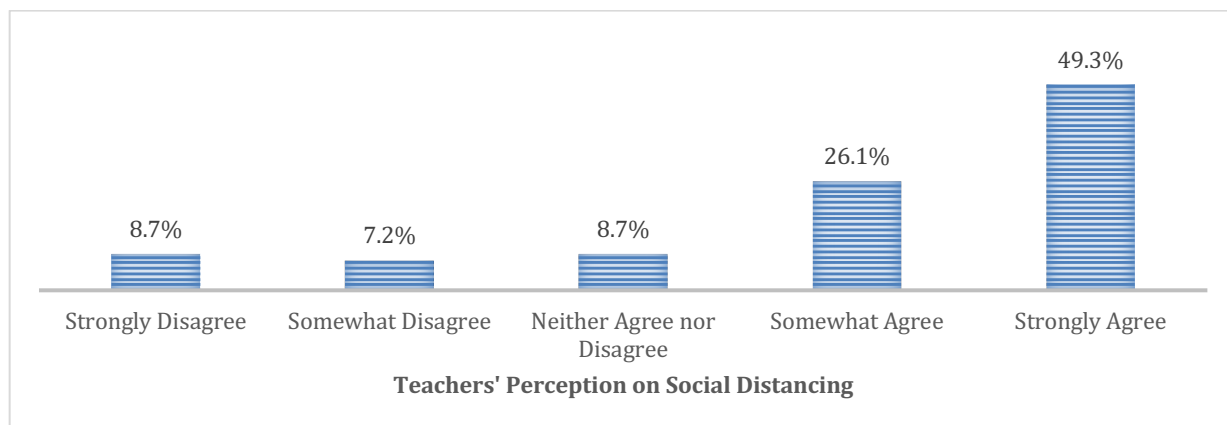

Note. This figure shows the frequency breakdown of teachers' responses on the feasibility of implementing play-based learning with the health and safety protocol of social distancing.

Cohort Grouping. The fifth health and safety protocol teachers rated was the impact

cohort grouping (students stay with the same group of students all day) had on their

implementation of play-based learning (see Figure 4.10). 24.6% (n=17) teachers strongly

disagreed, 13.0% (n=9) somewhat disagreed, 24.6% (n=17) neither agreed nor disagreed, 17.4%

(n=12) somewhat agreed, and 20.3% (n=14) strongly agreed that cohort grouping impacted their

ability to implement play-based learning in early elementary (kindergarten to second-grade)

public school classrooms in Montana during COVID-19. Cohort grouping during COVID-19 (M

= 1.96, SD = 1.460).

Figure 4.10

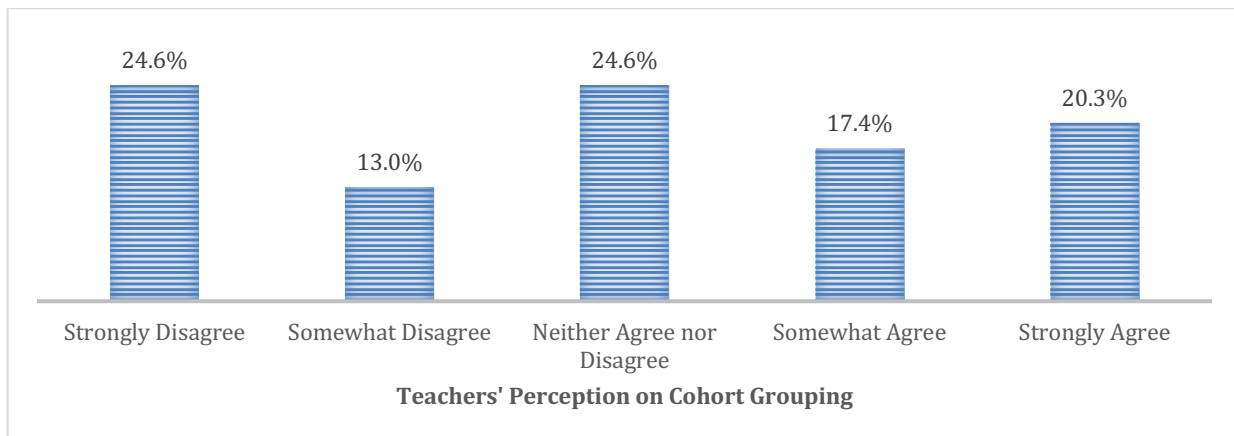*Feasibility of Play-Based Learning with Cohort Grouping*

Note. This figure shows the frequency breakdown of teachers' responses on the feasibility of implementing play-based learning with the health and safety protocol of cohort grouping, where students stayed with the same group of students throughout the school day.

Students Not Sharing School Supplies. The sixth health and safety protocol teachers

rated was the impact students' inability to share school supplies had on their implementation of

play-based learning (see Figure 4.11). 14.5% (n=10) teachers strongly disagreed, 5.8% (n=4)

somewhat disagreed, 11.6% (n=8) neither agreed nor disagreed, 15.9% (n=11) somewhat agreed,

and 52.2% (n=36) strongly agreed that students not being able to share school supplies impacted

their ability to implement play-based learning in early elementary (kindergarten to second-grade)

public school classrooms in Montana during COVID-19. Students not being able to share school

supplies during COVID-19 (M = 2.86, SD = 1.478).

Figure 4.11

Feasibility of Play-Based Learning with Students Not Sharing School Supplies

Note. This figure shows the percentile breakdown of responses from teachers on the feasibility of implementing play-based learning with the health and safety protocol of students not being able to share school supplies.

Restricting or Reducing Student Movement. The seventh health and safety protocol

teachers rated was the impact of restricting or reducing student movement for specials, lunch,

etc., on their implementation of play-based learning (see Figure 4.12). 21.7% (n=15) teachers

strongly disagreed, 5.8% (n=4) somewhat disagreed, 7.2% (n=5) neither agreed nor disagreed,

26.1% (n=18) somewhat agreed, and 39.1% (n=27) strongly agreed that restricting or reducing

student movement for specials, lunch, etc., impacted their ability to implement play-based

learning in early elementary (kindergarten to second-grade) public school classrooms in Montana

during COVID-19. Restricting or reducing student movement for specials, lunch, etc., during

COVID-19 (M = 2.55, SD = 1.577).

Figure 4.12

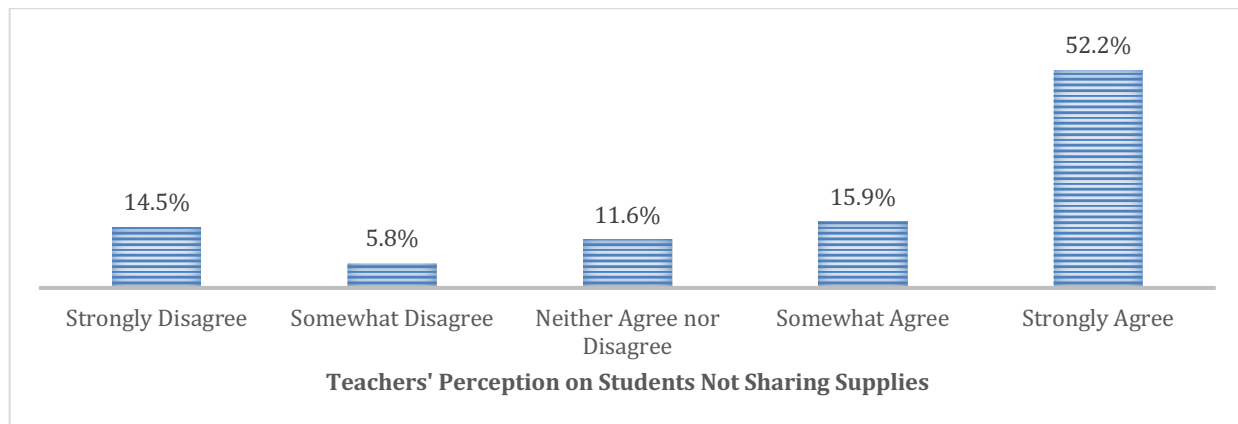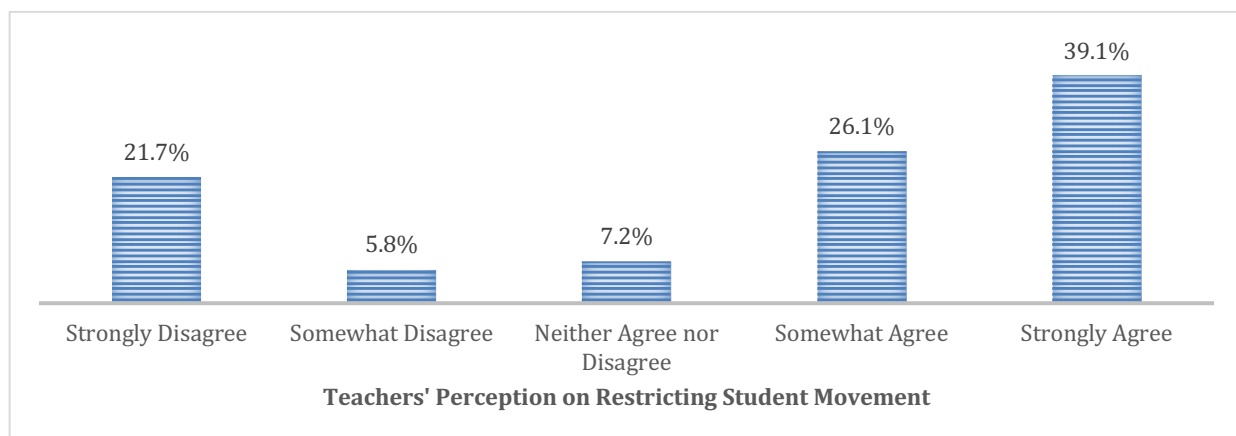*Feasibility of Play-Based Learning with Restricting or Reducing Student Movement*

Note. This figure shows the percentile breakdown of teachers' responses on the feasibility of implementing play-based learning with the health and safety protocol of restricting or reducing student movement throughout the school day, including for specials and lunch.

Table 4.9

Descriptive Statistics for Play-Based Learning & COVID-19 Health & Safety Protocols

(n=69)

Characteristic	*n*	%
Wearing a Mask (as the teacher)		
Strongly Disagree	21	30.4
Somewhat Disagree	10	14.5
Neither Agree nor Disagree	16	23.2
Somewhat Agree	16	23.2
Strongly Agree	6	8.7
Students Wearing a Mask		
Strongly Disagree	20	29.0
Somewhat Disagree	10	14.5
Neither Agree nor Disagree	15	21.7
Somewhat Agree	19	27.5
Strongly Agree	5	7.2
Student Handwashing		
Strongly Disagree	21	30.4
Somewhat Disagree	7	10.1
Neither Agree nor Disagree	13	18.8
Somewhat Agree	24	34.8
Strongly Agree	4	5.8
Social Distancing		
Strongly Disagree	6	8.7
Somewhat Disagree	5	7.2
Neither Agree nor Disagree	6	8.7

Table 4.9

Descriptive Statistics for Play-Based Learning & COVID-19 Health & Safety Protocols

(n=69)

Characteristic	*n*	%
Somewhat Agree	18	26.1
Strongly Agree	34	49.3
Cohort Grouping (Students stay with the same group of students all day)		
Strongly Disagree	17	24.6
Somewhat Disagree	9	13.0
Neither Agree nor Disagree	17	24.6
Somewhat Agree	12	17.4
Strongly Agree	14	20.3
Students not being able to share supplies		
Strongly Disagree	10	14.5
Somewhat Disagree	4	5.8
Neither Agree nor Disagree	8	11.6
Somewhat Agree	11	15.9
Strongly Agree	36	52.2
Restricting or Reducing Student Movement for specials, lunch, etc.		
Strongly Disagree	15	21.7
Somewhat Disagree	4	5.8
Neither Agree nor Disagree	5	7.2
Somewhat Agree	18	26.1
Strongly Agree	27	39.1

Summary of Feasibility due to Health and Safety Protocols. The quantitative data indicated that teachers believe that the health and safety protocols of wearing a mask (as a teacher), students wearing a mask, student handwashing, and cohort grouping, did not hinder their ability to implement play-based learning during the COVID-19 pandemic. However, the health and safety protocols of social distancing, students not being able to share school supplies, and restricting or reducing student movement for specials, lunch, etc., did hinder their ability to implement play-based learning during COVID-19. Social distancing and the inability to allow students to share school supplies were the top issues in providing play-based learning during COVID-19. Since the null hypothesis states that teachers are neutral that health and safety protocols (e.g., masks, handwashing, social distancing, cohort grouping, inability to share materials, and restricting student movement) hindered their ability to implement play-based learning in early elementary (kindergarten to second-grade) public school classrooms in Montana during COVID-19, the null hypothesis was rejected (see Table 4.10).

Table 4.10

Research Questions and Hypotheses

	Research Question and Null Hypothesis	Results
	RQ1. To what extent is play-based learning present, feasible, and desirable in early elementary (kindergarten to second-grade) public school classrooms in Montana?	
Presence	1a. There is no statistically significant difference in the presence of play-based learning from before COVID-19 to during COVID-19 when health and safety protocols were put into place in early elementary (kindergarten to second-grade) public school classrooms in Montana during COVID-19 than before.	Null was rejected
Feasibility	1b. There is no statistically significant difference in teachers' feasibility to offer play-based learning before COVID-19 to during COVID-19 when health and safety protocols were put into place in early elementary (kindergarten to second-grade) public school classrooms in Montana during COVID-19 than before.	Null was rejected
Desirability	1c. There is no statistically significant difference in the desire to offer play-based learning from before the COVID-19 pandemic to during COVID-19 when health and safety protocols were put into place in early elementary (kindergarten to second-grade) public school classrooms in Montana.	Null was rejected

RQ2. What forms of play-based learning (i.e., free play, guided play, games) are present in early elementary (kindergarten to second-grade) public school classrooms in Montana while implementing COVID-19 health and safety protocols?

There is no difference in teachers' implementation between guided play, free play, or games during COVID-19 when health and safety protocols were put into place in early elementary (kindergarten to second-grade) public school classrooms in Montana.	Null was rejected

RQ3. To what extent do teachers agree that health and safety protocols (e.g., masks, handwashing, social distancing, cohort grouping, inability to share materials, and restricting student movement) hindered their ability to implement play-based learning in early elementary (kindergarten to second-grade) public school classrooms in Montana during COVID-19?

Teachers are neutral that health and safety protocols (e.g., masks, handwashing, social distancing, cohort grouping, inability to share materials, and restricting student movement) hindered their ability to implement play-based learning in early elementary (kindergarten to second-grade) public school classrooms in Montana during COVID-19.	Null was rejected

Qualitative Findings

Results from the open-ended responses from the survey data and semi-structured interviews of nine educators across the state of Montana are presented here. Qualitative survey questions were elicited from 110 K-2 educators across Montana, and semi-structured interviews were conducted with nine educators. Interview questions were asked over 15-20 minute one-on-one interviews with each of the nine participants, which were conducted over Zoom. The purpose of the qualitative research portion was to explain the quantitative findings in greater detail and provide further depth to the survey results.

Qualitative data, including interviews and open-ended survey responses, were analyzed using manual coding. Three research questions were addressed using deductive coding with the predefined set of codes from the codebook (Saldana, 2021).

Sample Selection

Nine participants were interviewed using the same target population of Montana early elementary (kindergarten, first, and second-grade) certified teachers. From the 110 completed survey responses, 28 educators showed interest in the follow-up interview. Of the 28 participants who showed interest in participating in the follow-up interview, only nine committed and followed through with the interview. These nine teachers were current kindergarten, first, and second-grade teachers in Montana public schools.

Demographic Information

Participants for the semi-structured interviews were selected from the sample of elementary education teachers in Montana that completed the survey and had shown interest in participating in the follow-up interview. For follow-up Zoom interviews, the researcher recruited nine participants from the survey responses using inclusion and exclusion criteria. The target

sample for these interviews was 12-15. It would have provided a broader perspective if each of the six regions had two representative educators. However, after contacting the 28 participants who showed interest in participating in the follow-up interview, only nine were able to commit and followed through with the interview. All nine participants were current K-2 certified teachers in a Montana public school and met the inclusion criteria. See Table 4.11 for a summary of the following demographics and Table 4.12 for specific participant demographics.

Of the respondents, 44.4% (n=4) of were from Region 1 (North West), 0% (n=0) of the respondents were from Region 2 (North Central), 11.1% (n=1) of the respondents were from Region 3 (North East), 22.2% (n=2) of the respondents were from Region 4 (South West), 0% (n=0) of the respondents were from Region 5, and 22.2% (n=2) of the respondents were from Region 6. Region 2 (North Central) and 5 (South Central) were not represented because no teachers showed interest in participating in the follow-up interview or did not respond to the follow-up request sent after the survey was completed to schedule an interview. At the time of the interview, three of the participants taught kindergarten, three participants taught first grade, and three taught second grade. All participants were female.

55.5% (n=5) of the respondents held a bachelor's degree, and 44.4% (n=4) had a master's degree.

Of the nine Montana-certified teachers, 33.3% (n=3) of the respondents were kindergarten teachers, 33.3% (n=3) were first-grade teachers, and 33.3% (n=3) were second-grade teachers.

The years of experience varied from 0% (n=0) of the respondents indicating they have less than one year of teaching experience, 0% (n=0) indicated they have one year of experience, 11.1% (n=1) indicated they have two years of experience, 0% (n=0) indicated they have three

years of experience, 22.2% (n=2) indicated they have four years of experience, 0% (n=0) indicated they have five years of experience, 0% (n=0) indicated they have six years of experience, 0% (n=0) indicated they have 7seven years of experience, 0% (n=0) indicated they have eight years of experience, 11.1% (n=1) indicated they have nine years of experience, and 55.5% (n=5) indicated they have ten years or more of teaching experience.

Teachers reported that the number of students in their classrooms ranged from 11.1% (n=1) of respondents had less than 10 students in their classrooms, 33.3% (n=3) of respondents had 10-15 students in their classrooms, 55.5% (n=5) of respondents had 16-20 students in their classrooms, 0 % (n=0) of respondents had 21-25 students in their classrooms, and 0% (n=0) of respondents had 30 or more students in their classrooms.

Of the respondents, 44.4% (n=4) indicated they had formal training in play-based learning, whereas 55.5% (n=5) indicated they had no formal training in play-based learning. Formal training included 22.2% (n=2) indicated they had attended a play-based learning workshop, 22.2% (n=2) indicated they had attended a college course where play-based learning was taught, 11.1% (n=1) indicated they had an early childhood endorsement, and 11.1% (n=1) indicated they'd attended a play-based learning school-sponsored training.

Table 4.11

Demographic Characteristics of Interview Participants by Question (n=9)

	Total	
Characteristic	*n*	%
Montana K-2 Teacher Certification		
Certified	9	100
Not Certified	0	0

Table 4.11

Demographic Characteristics of Interview Participants by Question (n=9)

Characteristic	Total *n*	%
Montana Regions		
Region 1	4	44.4
Region 2	0	0
Region 3	1	11.1
Region 4	2	22.2
Region 5	0	0
Region 6	2	22.2
Highest Level of Schooling		
Bachelor's degree in college (4-year)	5	55.5
Master's degree	4	44.4
Doctorate degree	0	0
Grades Teach		
Kindergarten	3	33.3
First	3	33.3
Second	3	33.3
Other		
Years Taught		
Less than 1 year	0	0
1 year	0	0
2 years	1	11.1
3 years	0	0
4 years	2	22.2

Table 4.11

Demographic Characteristics of Interview Participants by Question (n=9)

	Total	
Characteristic	*n*	%
5 years	0	0
6 years	0	0
7 years	0	0
8 years	0	0
9 years	1	11.1
10 or more years	5	55.5
Number of Students in their Class		
Less than 10	1	11.1
10-15	3	33.3
16-20	5	55.5
21-25	0	0
26-30	0	0
30 or more	0	0
Formal Training Experiences		
1a. Attended a Play-based Learning Workshop	2	22.2
1b. Didn't Attend a Play-based Learning Workshop	7	77.7
2a. Attended a college course about PBL	2	22.2
2b. Didn't Attend a college course about PBL	7	77.7
3a. Have an ECE Endorsement	1	11.1
3b. Don't have an ECE Endorsement	8	88.8
4a. Attended a Play-based Learning School Training	0	0
4b. Didn't Attend a Play-based Learning School Training	0	0

Table 4.11

Demographic Characteristics of Interview Participants by Question (n=9)

	Total	
Characteristic	*n*	%
5a. Has other Play-Based Learning Training	1	11.1
5b. Doesn't have other Play-Based Learning Training	8	88.8
Total for some form of training	4	44.4
Total for no training	5	55.5

Table 4.12

Demographic Characteristics of Interview Participants by Participant

Interview Participants	Region	Grade Taught	Degree	Degree and play-based learning experience	Years Taught	Number of children
Participant 1	1	2	Bachelors	none	10+	16-20
Participant 2	1	1	Bachelors	college course	10+	16-20
Participant 3	1	K	Bachelors	Workshop	4	10-15
Participant 4	1	2	Masters	none	10+	16-20
Participant 5	3	1	Masters	yes other; but not specified began career in 1990 when...	10+	16-20
Participant 6	4	K	Masters	none	4	10-15
Participant 7	4	K	Bachelors	workshop; college course; endorsement	9	10-15
Participant 8	6	1	Bachelors	none	10+	<10
Participant 9	6	2	Masters	none	2	16-20

Qualitative Results

What follows are the themes from the 110 elicited open-ended survey responses and the nine Zoom interviews that were conducted as they address each research question. The researcher used Creswell and Plano Clark's (2018) text and process to guide analysis of the qualitative data. The qualitative research was the follow up to the quantitative research with the purpose of explaining in greater detail the quantitative findings and to further understand the results related to the research questions.

Open-ended survey responses and interview data were analyzed and hand coded. Through a deductive process the data was read for repetitive comments and thoughts. The

researcher assigned codes to the qualitative data using a set of a priori codes, the codebook. Afterwards, themes were generated related to the codes. While reading each piece of qualitative data, the researcher took notes to further establish patterns and themes as they related to the research questions. Three major themes emerged from the analysis of the qualitative data: (1) play-based learning is present in schools even during a pandemic, (2) educators creatively found ways to provide play-based learning opportunities to their students while also implementing COVID-19 health and safety protocols, and (3) educators believe that play is important, and the COVID-19 pandemic has reinforced its importance.

In the sections that follow, the themes will be further discussed as the qualitative findings are provided for each question.

Research Question 1

Research question one states: To what extent is play-based learning present, feasible, and desirable in early elementary (kindergarten to second-grade) public school classrooms in Montana?

By utilizing open-ended questions in the survey and follow-up interview questions the researcher was able to explore more deeply the presence, feasibility, and desire for play-based learning in K-2 classrooms. Open-ended survey questions nine, 13, 17, and 19 addressed research question one (see Table 4.13). Asking interview questions one, two, and three helped explain the presence, feasibility, and desire teachers have towards implementing play-based learning and helped to explain the quantitative findings in greater detail.

Table 4.13

Qualitative Questions Related to Play-Based Learning Presence, Feasibility, and Desirability

Survey Questions
Q9: Please explain how you implemented play-based learning in your classroom before COVID-19.
Q13: Please explain how you were or were not able to implement play-based learning in your classroom before COVID-19.
Q17: Please explain your perceptions of the benefits of play-based learning before implementing COVID-19 health and safety protocols.
Q19: Please explain if your perceptions of the benefits of play-based learning changed while implementing COVID-19 health and safety protocols.

Interview Questions
Q1: As you know, the term play-based learning references three forms of play (free play, games, and guided play) and includes the act of learning through playful opportunities. Please explain how you implemented play-based learning in your classroom before COVID-19.
Q2: Before COVID-19 (a year ago or more), can you think of anything that contributed or hindered your ability to implement play-based learning in your classroom?

Presence of Play-based Learning. To conduct a deeper assessment of the extent play-based learning is present, feasible and desirable in early elementary public school classrooms in Montana each component (presence, feasibility, and desirability) is looked at individually and together as a whole.

The quantitative results indicated that play-based learning including free play, guided play, and games was present, feasible, and desirable in K-2 classrooms across Montana before the COVID-19 pandemic. The data also showed that the presence of play-based learning including free play, guided play, and games significantly decreased during COVID-19 as compared to the presence of play-based learning before COVID-19.

The qualitative data support and enhance the quantitative findings in that K-2 teachers reported that play-based learning was present, feasible, and desirable before COVID-19. K-2

teachers mentioned using all three forms of play-based learning as part of their classroom instruction before the COVID-19 pandemic. However, before COVID-19, many teachers reported providing free play more often than the other two forms. Teachers mentioned that play-based learning was most feasible when implemented daily and through a station or center type structure.

Play-based learning was highly desirable before COVID-19. Some examples of why play-based learning was desirable included that children learn through play, they problem solve, manage conflict, and understand the world through play. The desire to implement play was also indicated because of the benefits it provided to teachers to offer students the support they need, help children work through their real-life issues, and to provide one-on-one instruction and assessment. A teacher shared her passion for play-based learning by saying, "Play is work for children. Allowing them to learn through play is their job". Another teacher described her desire to use play-based learning as a key component of her teaching practice by saying,

> I think a play-based classroom is the way to a child's enjoyment of school. I love
> observing them during the day. I decided every subject area has room for hands-on-
> learning and open-ended play. It is a conscious choice to make sure the students are
> having fun while learning. That is my philosophy.

Presence of Play-Based Learning Activities and Materials. As part of research question one, the presence of materials was also considered. Teachers were asked what activities and materials they provided to their students before and during COVID-19. The quantitative data related to the presence of play-based learning materials and activities showed that some materials were used less often during COVID-19 than previously used. The presence of materials and activities such as *blocks, student selected centers, pretend play, playing games/puzzles, exploring*

topics of their interest, student coordinated centers, and *manipulatives* significantly decreased

during COVID-19 as compared to the presence of these materials and activities before COVID-

19. There was, however, no change in the presence of play-based learning materials and

activities such as a *listening center, singing and listening to music, dancing, drawing, painting,*

working with playdough or other art media, and cutting their own shapes out of paper, from

before COVID-19 as compared to the presence of these materials and activities during COVID-

19.

        Qualitative data supports and deepens the understanding of why some materials and

activities were less used during COVID-19. According to the responses provided through open-

ended survey and interview responses teachers continued to use centers and materials during

COVID-19 only if they allowed for teachers and students to follow the health and safety

protocols outlined by the state and/or school. Educators mentioned listening, singing and

listening to music, or dancing activities were implemented during COVID-19 because they

allowed them to continue to keep students socially distant and did not require students to share

materials. Additionally, drawing, painting, and working with playdough or other art media were

also present in their classrooms during COVID-19 because students did not have to interact with

one another to engage in these activities and teachers could follow the health and safety

protocols while allowing students to use engage in these materials or activities. Many teachers

found creative ways to continue to provide play-based learning opportunities in their classrooms

while also following health and safety protocols. One teacher echoed many of the other teachers

across the state by saying,

        To comply with COVID-19 restrictions, I created separate toy bags that the students keep

        in their cubbies for one week and then I spray them with Lysol. I also created stem bins

that students are allowed to check-out. I have not been able to do centers but have adapted to do more whole group art using materials and lessons that I can manage whole group. We listen to music and recite poems with body signs daily.

A variety of materials were used for play-based learning before COVID-19 including playdough, blocks, unifix cubes, play money, puzzles, board games, pretend play materials, Legos, connecting blocks, art materials, math manipulatives, stuffed animals, storyboards, books, writing materials, Magna-tiles, linking chains, and dice. Many of these same materials were used during COVID-19 as well, however, teachers made bags or bins with divvied-up materials for students so that they could have access to materials when sharing materials, and movement around the room were restricted.

Feasibility and Desirability. To address the part of research question one related to the feasibility and desirability of play-based learning, the following questions were addressed: Does the feasibility to offer play-based learning decrease during the implementation of COVID-19 health and safety protocols in early elementary (kindergarten to second-grade) public school classrooms in Montana? Does the teachers' desire to offer play-based learning increase during implementation of COVID-19 health and safety protocols in early elementary (kindergarten to second-grade) public school classrooms in Montana?

Quantitative data indicated that teachers' feasibility to offer play-based learning including all forms of play significantly decreased during COVID-19 as compared to teachers' feasibility to offer play-based learning before COVID-19. Additionally, the feasibility for teachers to offer guided play, games, and free play significantly decreased during COVID-19 compared to teachers' feasibility to offer these forms of play-based learning before COVID-19. Additionally, the quantitative data indicated that there was no significant change in teachers' desire to offer

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play-based learning including all forms of play during COVID-19 compared to their desire to offer play-based learning before COVID. Teachers indicated a decrease in their desire to implement play-based learning during the pandemic. The individual desire to include the various forms was not asked and therefore not compared.

The qualitative data supports and deepens our understanding of these findings. Prior to COVID-19 teachers reported that play-based learning was feasible, and they often used centers or stations to provide play-based learning opportunities with their academic agenda and curriculum. One educator shared how and why she offered play-based learning this way, "Centers, games, and manipulatives are used daily on a rotational basis in my kindergarten classroom. Physical, social, emotional, and intellectual areas of development are supported through play-based learning". Other teachers reiterated that centers allowed for students to have access to play-based learning in the form of technology and educational applications, music or listening materials, science and social studies related items, and often supported reading, writing, and math. Clara, a seasoned teacher, shared her thoughts about how and why she implements play-based learning,

> I try to pull in lots of playing while we're learning math and while we're reading. I do games and then in a non-COVID year I would do stations and, of course, at stations, I would have for them writing and the math and the reading and possibly the listening or the technology, but there's always, always, always a free play station which is daily. I kept that spot wide open because I feel like if you are six and seven, and you walk into the room and that's one of the highlights of your day, even when they don't know they're actually learning. It's something that you can't take from them. That's their, that's how they, that's their work. The work of children is play.

Centers or stations were mentioned frequently as the way in which educators seamlessly provided play-based learning in K-2 classrooms. Teachers provided many reasons for setting up play-based learning in this format. A teacher's survey response elaborated by writing, "Centers create an opportunity to build confidence, be creative, talk and share with others, and get a lot more done in the classroom".

The benefits associated with play-based learning were a large reason teachers desired to use play-based learning both before and during COVID-19. A few benefits that teachers mentioned included, social-emotional growth including problem solving, building relationships, and gaining a deeper understanding of their world, as well as providing children with engaging and joyful materials and activities that support their overall development as being reasons they provide play-based learning. Speaking about benefits, one teacher wrote, "I implemented play-based learning for mental, social-emotional, executive, and cognitive functioning. It is greatly needed and benefits the children".

Looking more closely at the various forms of play, the quantitative data indicated that the feasibility to offer free play decreased significantly during COVID-19, but not their ability to offer guided play and games. Through interviews and open-ended survey responses, teachers reported that during COVID-19 they were not using free play as part of their play-based learning because of the health and safety protocols made it nearly impossible to allow children to engage in free play. The top reasons included social distancing and not being able to allow children to share materials. Both reasons restrict students from playing with others in a traditional fashion. "I was able to implement play-based learning. Before COVID, I didn't need to worry about sanitation between activities or needing individual items for each student." A few teachers

mentioned continuing to use play-based learning but that small numbers of students helped make play more feasible,

> Play-based learning still happened during COVID-19 using appropriate health and safety protocols. Masks were worn and social distancing of six feet was implemented. Games requiring more than one person were not played. Individual students participated in centers, stations, and manipulatives. Low class size in my classroom made this feasible. It would be very difficult to implement play-based learning in a classroom with more than 10 students.

Desirability Because of Benefits

Additionally, teachers were surveyed about specific benefits seen in research and whether they implemented play-based learning because of these benefits more before COVID-19 as compared to during COVID-19. The quantitative data indicated that there was no change in teachers' desire to offer play-based learning for the benefit of *academic development* during COVID-19 as compared to before COVID-19. However, teachers' desire to offer play-based learning for the benefits related to *physical development, mental health, social-emotional development,* and e*xecutive and cognitive functioning* significantly decreased during COVID-19 as compared to before COVID-19. Teachers' desire to implement play-based learning for *academic development* stayed about the same from before COVID-19 compared to during COVID-19. Their desire to implement play-based learning for the other reasons listed decreased during COVID-19.

Qualitative data provided support for the findings related to how teachers felt about the benefits associated with play-based learning before COVID-19. However, the qualitative data for responses about during COVID-19 did not match the quantitative data findings. Before COVID-

19, teachers indicated that children benefited from play-based learning. Particularly, in the areas of social-emotional development, mental health, and academic development. Teachers believed students benefited most during play-based learning because children were provided opportunities to build relationships, solve problems, interact with others, and learn collaboratively. One teacher wrote, "I see play-based learning as hugely beneficial to all aspects of development in our youngest learners". Teachers also mentioned that play-based learning was often implemented to provide children with joy. Another teacher wrote about the benefits and the fun play-based learning provides to children by writing, "Before implementing COVID-19 health and safety protocols I perceived the benefits of play-based learning to be for fostering creativity, developing social and emotional skills, and to have fun and nurture relationships in the classroom".

During COVID-19, many teachers stated that play-based learning was not their top priority, and considering the benefits, therefore, was not either. This would make sense why responses to benefits decreased from before to during COVID-19. However, qualitative data responses indicated that the benefits associated with play-based learning were "more important" now than before. They saw the benefits associated with children's development as important and because of the challenges their students were experiencing during COVID-19 they were excited to find ways to use play-based learning more. One teacher wrote,

> The importance of play-based learning became even stronger in my classroom when I saw how much students struggled with working together and interacting with each other. I made it a priority to figure out ways to still utilize play during COVID for the benefit of my students.

Research Question 2

Research question two states: What forms of play-based learning (i.e., free play, guided play, games) are implemented in early elementary (kindergarten to second-grade) public school classrooms in Montana while implementing COVID-19 health and safety protocols?

Open-ended survey questions 11, 15, and 19 addressed research question two (see Table 4.14). Asking interview question one and two helped explain the play-based learning forms further and helped to explain the quantitative findings in greater detail.

Table 4.14

Qualitative Questions Related to Play-Based Learning Forms

Survey Question
Q11: Please explain how you implement play-based learning in your classroom while COVID-19 health and safety protocols were in place.
Q15: Please explain how COVID-19 health and safety protocols impacted your ability or inability to implement play-based learning in your classroom.
Q19: Please explain if your perceptions of the benefits of play-based learning changed while implementing COVID-19 health and safety protocols.
Interview Questions
Q1: As you know, the term play-based learning references three forms of play (free play, games, and guided play) and includes the act of learning through playful opportunities. Please explain how you implemented play-based learning in your classroom before COVID-19.
Q2: Before COVID-19 (a year ago or more), can you think of anything that contributed or hindered your ability to implement play-based learning in your classroom?

The quantitative data results provided a comparison between each form of play-based learning. The results indicated that there was a significant difference in the presence of free play as compared to guided play and games during COVID-19. Additionally, there was a significant difference in the presence of guided play as compared to games during COVID-19.

The qualitative data did not support these results. Teachers reported implementing play-based learning in their classrooms specifically in the form of games during COVID-19 more than

either guided play or free play. Guided play was used less often, and free play was diminished substantially. Though it appears that teachers implemented less play-based learning during COVID-19, very few teachers indicated that they did not implement any form of play-based learning while implementing COVID-19 safety and health protocols. One teacher stated that "Play-based learning was easier before COVID. Not being able to allow students to move and social distancing played a key role in educators not being able to implement play-based learning". Teachers provided games that followed the health and safety protocols in their schools. For instance, teachers used Go Noodle, an online platform that offers interactive activities that students can participate in from their desk side, and they many provided partner games that children could play at their desk spots. A survey response stated that "Students had their own 'safe space' to play these games. If they were not physically distant, they wore masks". Some teachers elaborated on how games could still be played while implementing COVID-19 health and safety protocols,

> I worked hard to try to make it work within the safety protocols in place. I felt it was even more important that they were able to play games and interact, but I had to modify to mostly partner activities.

> Another response from a teacher's survey shared the challenge of providing play-based learning but how making modifications could feasibly allow for playing games, "The students had to play games on their own game boards with their own manipulative while wearing masks and staying 6 feet apart".

> An additional teacher echoed modifications could be made but only allowed for games that were played individually,

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Social distancing meant no partner/group work or play time. All my games and centers

are to be done individually or in a small group with teacher monitoring and sanitizing.

There is a strong sense of community still, but it feels more like we are banding together

because we are going through tough times than being together by choice.

Research Question 3

Research question three states: To what extent do teachers agree that health and safety

protocols (e.g., masks, handwashing, social distancing, cohort grouping, inability to share

materials, and restricting student movement) hindered their ability to implement play-based

learning in early elementary (kindergarten to second-grade) public school classrooms in Montana

during COVID-19?

Open-ended survey questions 11, 15, and 19 addressed research question three (see Table

4.15). Asking interview questions two through six helped explain the health and safety protocols

that may have had an impact on teachers' ability to implement play-based learning further and

helped to explain the quantitative findings in greater detail (see Table 4.10).

Table 4.15

Qualitative Questions Related to Health and Safety Protocols Implemented

Survey Questions
Q11: Please explain how you implement play-based learning in your classroom while COVID-19 health and safety protocols were in place.
Q15: Please explain how COVID-19 health and safety protocols impacted your ability or inability to implement play-based learning in your classroom.
Q19: Please explain if your perceptions of the benefits of play-based learning changed while implementing COVID-19 health and safety protocols.

Interview Questions
Q2: Before COVID-19 (a year ago or more), can you think of anything that contributed or hindered your ability to implement play-based learning in your classroom?
Q3: In your opinion, how did children benefit from play-based learning *before* COVID-19?

Table 4.15

Qualitative Questions Related to Health and Safety Protocols Implemented

Q4: What changed in your classroom about how you incorporated play-based learning once you started implementing COVID-19 health and safety protocols?
Q5: In what way did implementing COVID-19 health and safety protocols impact your ability to provide play-based learning in your classroom the most?
Q6: While implementing COVID-19 health and safety protocols, what do you think students missed out on the most by not having play-based learning?

The quantitative data results indicated that the COVID-19 health and safety protocols impacted their ability to implement play-based learning. Specifically, the three health and safety protocols that significantly impacted their ability to implement play-based learning during COVID-19 included social distancing, students not being able to share school supplies, and restricting or reducing student movement for specials, lunch, etc. However, teachers perceived that wearing a mask (as a teacher), students wearing a mask, student handwashing, and cohort grouping, did not significantly hinder their ability to implement play-based learning during COVID-19.

The qualitative data supported these findings and further understanding is provided. Here a teacher explains the extent to which she had to implement the safety and health protocols so that children could have access to play opportunities while staying socially distanced and not sharing materials,

> To comply with COVID-19 restrictions, I created separate toy bags that the students keep in their cubbies for one week and then I spray them with Lysol. I also created stem bins that students are allowed to check-out. I have not been able to do centers but have adapted to do more whole group art using materials and lessons that I can manage whole group. We listen to music and recite poems with body signs daily.

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Another teacher shared that because children could not share materials the teacher found ways to make the limited number of materials available to her students, "I spent many hours washing and dividing up my class manipulatives. Each student has a box of pattern blocks at their home spot. These were the manipulatives along with two-sided counters that they had in their personal space".

Many said that COVID-19 health and safety protocols made play-based learning more difficult:

We are not allowed to have our adult helpers in the classroom which makes that management of play-based learning activities challenging. In addition, the social distancing rules do not allow students to play with one another. The cleaning and sanitizing required with COVID-19 does not allow for a true free-choice activity because students are not free to touch many toys in one day. In addition, I have had to put away any toys that are impossible to control the amount of germs on such as our play kitchen, large puzzles to be used as a group, puppets, etc.

It was not reported that masks worn by the teacher, or masks worn by the students caused any significant issues, but rather the need to keep children socially distanced, the constant cleaning of play materials, and the inability to share those materials had the biggest impact on teachers.

The qualitative data supports the quantitative findings that social distancing, students not being able to share school supplies, and restricting or reducing student movement were the top three hindrances to offering play-based learning during the COVID-19 pandemic.

Summary

This study used a sequential explanatory mixed-method approach to examine early elementary education teachers' perceptions of the presence, feasibility, and desirability to implement play-based learning, including free play, guided play, and games in Montana public school K-2 classrooms, and the impact of COVID-19 health and safety protocols had on the implementation of play-based learning. This chapter presented the quantitative and qualitative findings from the results associated with the three research questions. Data were presented and described using descriptive and inferential statistics.

Chapter 5: Conclusions and Recommendations

Limited research is available about play-based learning in early elementary school settings. The impacts of COVID-19 health and safety protocols on implementing play-based learning are also unfamiliar. This research is some of the first to explore teachers' perceptions of play-based learning and the extent to which COVID-19 had on their ability to provide play-based learning opportunities. Play is a necessary and beneficial component of a child's development. Various hindrances have caused play-based learning to be less prevalent in the classrooms, and the rise in health and safety protocols due to the COVID-19 pandemic further complicated teachers' ability to incorporate play-based learning. The limited amount of research available about play-based learning in early elementary schools during the COVID-19 pandemic showed a gap in information. The following research questions were addressed:

1. To what extent is play-based learning present, feasible, and desirable in Montana's early elementary (kindergarten to second-grade) public school classrooms?

2. What forms of play-based learning (i.e., free play, guided play, games) are present in early elementary (kindergarten to second-grade) public school classrooms in Montana while implementing COVID-19 health and safety protocols?

3. To what extent do teachers agree that health and safety protocols (e.g., masks, handwashing, social distancing, cohort grouping, inability to share materials, and restricting student movement) hindered their ability to implement play-based learning in early elementary (kindergarten to second-grade) public school classrooms in Montana?

In chapter one, an introduction to the study was provided. In chapter two, a review of the literature was completed, and chapter three followed with the study's methodology being explained. Chapter four outlined the findings from the quantitative and qualitative data. This

chapter will present a summary of the results, a discussion of the study, recommendations for future research, and concluding statements.

Summary of Results

The quantitative data were obtained from a convenience sample of 110 kindergarten, first, and second-grade public school teachers in Montana who completed the online survey. The K-2 teachers completed the 69-question survey using a 5-point Likert scale from zero (*strongly disagree*) to five (*strongly agree*) and zero (*never*) to five (*daily*). Descriptive statistics were used to describe the sample. The majority of respondents were from Region 1, North West Montana (43.6%), held a bachelor's degree (57.3%), had about 16-20 students in their classrooms (59.15%), and had taught for 10 or more years (43.6%).

The qualitative data were obtained using the same target population of Montana early elementary (kindergarten, first, and second-grade) certified teachers. Nine teachers participated in the one-on-one interviews. The majority of respondents were from Region 1 (44.4%), held a bachelor's degree (55.5%), had about 16-20 students in their classrooms (55.5%), and had taught for 10 plus years (55.5%). At the time of the interview, three of the participants taught kindergarten, three participants taught first grade, and three taught second grade. All participants were female.

Inferential statistics were used to analyze and summarize the quantitative data associated with research questions one and two. Descriptive statistics were used for responses to research question three. Twenty-nine pairs of data were compared for research questions one and two. During comparison analysis associated with the presence and feasibility of play-based learning, the sample size was narrowed to 71 participants. During comparison analysis for the desirability of play-based learning, the sample was narrowed down to 65 participants.

The qualitative component of the explanatory sequential mixed methods design was used to understand further and explain the quantitative results. The qualitative component also gave a voice to Montana teachers' responses regarding play-based learning and the impact COVID-19 had on their teaching. Three major themes emerged from the analysis of the qualitative data: (1) play-based learning is present in schools even during a pandemic, (2) educators creatively found ways to provide play-based learning opportunities to their students while also implementing COVID-19 health and safety protocols, and (3) educators believe that play is essential, and the COVID-19 pandemic has reinforced its importance. Additionally, qualitative data provided explanations specific to the three research questions outlined in this study.

Summary of Research Question One

This study's first research question sought to explain: to what extent is play-based learning present, feasible, and desirable in Montana's early elementary (kindergarten to second-grade) public school classrooms? The quantitative data results indicated that play-based learning is present, feasible, and desirable in Montana's early elementary (K-2) public school classrooms before COVID-19 and during COVID-19. The qualitative findings supported K-2 teachers' report that play-based learning was present, feasible, and desirable before COVID-19.

Presence. Specifically, the study's results indicated that the presence of play-based learning, including free play, guided play, and games, significantly decreased during COVID-19 compared to before COVID-19. The qualitative results indicated that play-based learning in these three forms (free play, guided play, and games) was also present in classrooms before COVID-19. The quantitative data also indicated that the presence of play-based learning materials and activities such as *blocks, student selected centers, pretend play, playing games/puzzles, exploring topics of their interest, student coordinated centers,* and *manipulatives*

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significantly decreased from before COVID-19 as compared to the presence of these materials and activities during COVID-19. There was, however, no significant change in the presence of play-based learning materials and activities such as a *listening center, singing and listening to music, dancing, drawing, painting, working with playdough or other art media, and cutting their own shapes out of paper,* from before COVID-19 as compared to the presence of these materials and activities during COVID-19. This is consistent with the qualitative findings and what we know teachers were able to do during the pandemic. In particular, the inability to allow children to share materials hindered their ability to allow children to explore and move around the room for various activities or to use communal materials. Therefore, teachers found ways to implement play-based learning activities while children stayed at their assigned spots. Listening to music, drawing, dancing in their area, and working with materials that did not have to be shared were implemented more frequently during COVID-19.

Feasibility. The quantitative findings indicated that teachers' feasibility of offering play-based learning, including all forms of play, significantly decreased during COVID-19 compared to before COVID-19. Additionally, the feasibility for teachers to provide *guided play, games,* and *free play* significantly decreased during COVID-19 compared to before COVID-19. Previous research supports these findings indicating that challenges and barriers interfere with the ability for teachers to offer play-based learning (Bubikova-Moan et al., 2017; Lynch, 2015; Pyle et al., 2017). Before COVID-19, teachers reported that play-based learning was feasible, and they often used centers or stations to provide play-based learning opportunities with their academic agenda and curriculum. Additionally, before COVID-19, a recurring theme showed that teachers used centers to provide students with play-based learning opportunities in the form of technology and educational applications, music or listening materials, science and social

studies related items, and often supported reading, writing, and math.

The qualitative data supported these findings. Because of the health and safety protocols, it was clear that teachers could not provide their students with the same level of play-based learning as they had before COVID-19. Teachers could not allow their students to share materials, partner up for games and activities, or move around the room and use materials freely during this time. Thus, the feasibility of offering all three forms of play-based learning decreased during the pandemic.

Desirability. The quantitative data indicated a significant change in teachers' desire to offer play-based learning, including all forms of play during COVID-19 compared to before COVID-19; teachers stated that they desired to implement play-based learning about the same during the pandemic as before. The findings indicated no change in teachers' desire to offer play-based learning for the benefit of academic development during COVID-19 compared to before COVID-19. However, teachers' desire to offer play-based learning for the benefits related to *physical development, mental health, social-emotional development,* and e*xecutive and cognitive functioning* significantly decreased during COVID-19 compared to before COVID-19.

Qualitative data supported the quantitative data that play-based learning was highly desirable before COVID-19 and showed that the benefits associated with play were a large reason teachers desired to use play-based learning both before and during COVID-19. Teachers mentioned the following benefits as reasons to implement play-based learning both before COVID-19 and during the COVID-19 pandemic: social-emotional growth, including problem-solving, building relationships and gaining a deeper understanding of their world, as well as providing children with engaging and joyful materials and activities that support their overall development. These findings align with other researchers who have also found that the desire of

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implementing play-based learning by knowing the benefits and finding value in play-based learning is not enough to ensure that teachers' practices will align with their beliefs (Bubikova-Moan et al.,2017; Charlesworth et al., 1993; Lynch 2015; Pyle et al., 2017).

Summary of Research Question Two

This study's second research question sought to explain: what forms of play-based learning (i.e., free play, guided play, games) are present in early elementary (kindergarten to second-grade) public school classrooms in Montana while implementing COVID-19 health and safety protocols? The study's null hypothesis stated there is no difference in teachers' implementation between guided play, free play, or games was rejected.

The quantitative data indicated that there was no significant decrease in the presence of free play compared to guided play and games during COVID-19. However, there was a considerable increase in the presence of guided play compared to the presence of games during COVID-19. The quantitative results showed that games were the most used form of play-based learning, followed by guided play and then free play.

The qualitative data did not support the quantitative results. During COVID-19, teachers reported implementing play-based learning in their classrooms, specifically in the form of games, more often than guided play or free play. Guided play was used less often, and free play was diminished substantially. Though teachers implemented less play-based learning during COVID-19, very few teachers indicated that they eliminated play-based learning entirely while implementing COVID-19 safety and health protocols. The variation between the quantitative and qualitative results could mean a difference between beliefs and practice, like what Charlesworth et al. (1993) found in their study, that teachers "viewed the appropriate beliefs as having some degree of importance even though they might not include developmentally appropriate activities

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frequently" (p. 272). Therefore, it is possible that teachers indicated on the survey that they implemented play-based learning more frequently before COVID-19 and did not eliminate it entirely; however, without an observational component, it is hard to compare their beliefs to actual practice.

Summary of Research Question Three

This study's third research question sought to explain: to what extent do teachers agree that health and safety protocols (e.g., masks, handwashing, social distancing, cohort grouping, inability to share materials, and restricting student movement) hindered their ability to implement play-based learning in early elementary (kindergarten to second-grade) public school classrooms in Montana? The null hypothesis for research question three stated that teachers are neutral regarding health and safety protocols (e.g., masks, handwashing, social distancing, cohort grouping, inability to share materials, and restricting student movement), hindering their ability to implement play-based learning in early elementary (kindergarten to second-grade) public school in Montana during COVID-19 was rejected.

The quantitative data indicated that teachers believed that the health and safety protocols of wearing a mask (as a teacher), students wearing a mask, student handwashing, and cohort grouping, did not hinder their ability to implement play-based learning during COVID-19. However, the health and safety protocols of social distancing, students not being able to share school supplies, and restricting or reducing student movement for specials, lunch, etc., did hinder their ability to implement play-based learning during COVID-19. Social distancing and the inability to allow students to share school supplies were the top issues in providing play-based learning during COVID-19.

Specifically, the quantitative and qualitative data point to three health and safety protocols significantly impacting teachers' ability to implement play-based learning during COVID-19. Social distancing, students' inability to share school supplies, and restricting or reducing student movement for specials, lunch, etc., were the top three hindrances to offering play-based learning during the COVID-19 pandemic. However, teachers perceived that wearing a mask (as a teacher), students wearing a mask, student handwashing, and cohort grouping did not significantly hinder their ability to implement play-based learning during COVID-19.

Limitations

The findings of this study need to be considered with several limitations, including potential personal bias, sampling issues, self-reported survey data, and possible setting and causal relationship impacts during the COVID-19 pandemic. Another limitation is a lack of research on play-based learning in kindergarten to second-grade settings.

As a teacher of 15 years in preschool to sixth-grade public school settings, with an early childhood education endorsement, the researcher has the expertise and places importance on play-based learning. Unconscious and conscious biases may have impacted the interpretation of the data.

Sampling issues may be a limitation. Participants in this study were selected through convenience sampling, which cannot be generalizable to the general population. The researcher attempted to broaden the sample diversity by seeking participants from all six regions across the state of Montana. The sample size is small and can also be considered a limitation. To gain more participants, the researcher reached out to the school administrators numerous times, expressing the desire for teachers to complete the survey.

The sample size was an issue because some regions in Montana are more rural than others and have many schools with one administrator shared between them. Additionally, the contact list used to reach these schools included minimal numbers of educators, making them hard to contact. Turnover in these schools, and in Montana in general, made it hard for the Montana Office of Public Instruction to provide the researcher with accurate contact information of teachers and limited contact information for administrators. Another limitation was reliable and available data due to minimal survey responses. Since this study asked administrators to forward the survey to their K-2 staff, the possibility of bias where administrators pre-selected teachers they felt would respond may have taken place. Therefore, it was possible that this study's sample was not as broad as it could have been. It was also possible that many K-2 teachers were not provided the opportunity to complete the survey because their administrator was the gatekeeper of disseminating the survey.

Technology issues could have been a limitation since participants responded electronically (Green, 2015). Additionally, self-reported data is limited in that it can rarely be independently verified (Creswell, 2013).

Since this study was conducted during the COVID-19 pandemic, a limitation to consider was possible changes in a school setting from an in-person or mixed model to a fully remote learning setting which could alter the responses participants provided. Different settings could have limited the data. The focus of this study on play-based learning before and during the COVID-19 pandemic and the focus on possible causal relationships could also be a limitation.

Also, there was minimal research associated with play-based learning during a global pandemic and limited research in kindergarten to second-grade settings, which is also a limitation.

Recommendations for Future Research

After conducting the study and analyzing and interpreting the data, several future studies are recommended. Since this research was undertaken solely in Montana, it could be replicated in other states or across the United States. Also, conducting a study in which observations can be made in K-2 classrooms to observe the presence, feasibility, and desirability of play-based learning could be beneficial.

Using the three major themes that emerged from the analysis of the qualitative data: (1) play-based learning is present in schools even during a pandemic, and (2) educators found creative ways to provide play-based learning opportunities to their students while also implementing COVID-19 health and safety protocols, and (3) educators believe that play is essential, and the COVID-19 pandemic has reinforced its importance, the researcher can recommend a few other future study possibilities.

First, we know from this study that play-based learning was present before and during the pandemic. We also know that games and guided play were the top forms of play-based learning utilized during the COVID-19 pandemic. It would be beneficial to understand further what types of games and guided play educators use in their classrooms during the pandemic. Further research could include an observational component to this study to seek a clearer understanding of the types of games and guided play that teachers utilize and what subjects and topics teachers are addressing. This will help give stakeholders a clearer understanding of the practices in place after the pandemic. This could further support stakeholders in finding and using a curriculum that focuses on delivering material through these developmentally appropriate play forms.

We know that free play was far less used because of the health and safety protocols implemented during the pandemic. Future research could investigate what issues teachers

encounter now when implementing play-based learning due to the health and safety protocols put into place during the COVID-19 pandemic that could further impact the presence, feasibility, and desirability for play-based learning.

The researcher learned from this study that early elementary school teachers found creative ways to provide play-based learning opportunities to their students during a global pandemic. Digging deeper into teachers' creativity and how they provide play-based learning in their classrooms during some of the most challenging times could further benefit other teachers with the additional barriers that interfere with their play-based learning practices. The emphasis on academic learning and standardized testing continues to be a focus in schools, so a specific research goal could include focusing on how to provide play-based learning with a focus on standards in grades K-2 public school settings. However, ideally, it would be worth exploring ways to eliminate or lessen the barriers teachers face making play-based learning more feasible to implement.

Lastly, the researcher learned that Montana educators feel strongly about the importance of play-based learning and that the COVID-19 pandemic has revived the value they see in play-based learning. Before the COVID-19 pandemic, other barriers made the implementation of play-based learning difficult and contributed to its decline (Allee-Herndon & Roberts, 2020; Bubikova-Moan et al., 2017; Charlesworth et al., 1993; Lynch, 2015; Nell et al., 2013; Pyle et al., 201; Pyle & Danniels, 2017). Specifically, the overall undervaluing of play-based learning as a developmentally appropriate and necessary practice for children was an issue. A future research direction could include further surveying and interviewing teachers to see how they implement play-based learning now because of the value they place on play-based learning. Additionally, seeking further understanding of what barriers are hindering play-based learning

use now, after the COVID-19 pandemic, and what outcomes are most needed for students would

provide information and direction for stakeholders.

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