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A YEAR OF CURIOSITY, WONDER, AND IMAGINATION:
INTENTIONALLY CONNECTING PLAY WITH LEARNING IN KINDERGARTEN

by

Adrienne MC Burns

A capstone submitted in partial fulfillment of the requirements for the degree of Master
of Arts in Teaching.

Hamline University

Saint Paul, Minnesota

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Capstone Project Facilitator: Patty Born Selly

Content Expert: Linda Corpman

Peer Reviewer: Carol Anderson, Samantha Waskowsky

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DEDICATION

To my husband and my daughter with tremendous gratitude for their patience, encouragement, faith, and love as I pursued my dream to do positive work that matters in the lives of children. Also to my parents and mother-in-law with thanks for helping with childcare so I could study and write. I could not have done this without all of your support!

“Play is often talked about as if it were a relief from serious learning. But for children, play is serious learning. Play is really the work of childhood.”
- Fred Rogers

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CHAPTER ONE

Introduction

“You can discover more about a person in an hour of play than in a year of conversation.”

- Plato

My Research Question

Please consider for a moment the word “play.” How does it make you feel? What do you remember? Is your recollection positive or negative? Now, consider for a moment the word “learning.” How does it make you feel? What do you remember? Is your recollection positive or negative? I can deduce that for most people “play” is often associated with positive thoughts, feelings, and rememberings. “Learning,” however, is more dependent upon and colored by one’s personal experiences. For people where formal, classroom learning is a struggle, the connotation of the word may be less positive. Once young children in the United States reach Kindergarten, many educators are focusing largely on teaching them with academic rigor to meet state and national standards. While an appropriate amount of differentiated academic rigor has its place in the Kindergarten classroom, it is essential that we are teaching students using developmentally appropriate practice (DAP) which best helps students learn (Phillips & Scrinzi, 2004). Learning should be a joyful process for young children of noticing, wondering, investigating, and discovery, a process that naturally occurs through play. Play often sparks learning.

Due to this tension between what is DAP and what is required by state and federal standards, I have created “A Year of Curiosity, Wonder, & Imagination: A Guide to Play in the Kindergarten Classroom” which contains details on how Kindergarten teachers can help students learn by use developmentally appropriate play including playful learning and guided play while also meeting Kindergarten grade-level academic standards. The purpose of this guide is to provide concrete information that Kindergarten teachers can use to incorporate learning through play regularly in their classrooms. I use Minnesota academic standards to show how to use standards to help guide instruction rather than using it as a curriculum. I also include in the guide the types of toys and manipulatives that help support play-based learning as well as additional ways to incorporate play throughout the school day. This project was undertaken to answer the research question: *How can developmentally appropriate play be incorporated into the Kindergarten classroom while still meeting grade-level academic standards?*

In this chapter, I will delineate the aims for my project, provide definitions of pertinent educational jargon, and briefly delve into the controversy surrounding incorporating play within the Kindergarten classroom. I will also explore my personal rationale for exploring this research question, the teaching experiences that led me here, as well as the personal and professional significance of exploring this research question.

Project Aim

My primary aim for this project is to use my guide to make a bridge between developmentally appropriate children's play and learning in the Kindergarten classroom so that my students and other Kindergarten students in the United States have the benefit of learning through play. In order to do this, opportunities for play will need to be incorporated intentionally throughout the school day so students are able to engage with topics in meaningful ways. Some of this play will be structured where students have guidelines for their play. Other times, students will have an opportunity for free play using provided materials that correspond to a key topic or theme. It is important to provide time for students to reflect and share what they have learned as a result of their play. Additionally, opportunities for learning through play are structured so that students will be able to meet the corresponding grade-level standard. The guide will also provide information to help Kindergarten teachers design their classroom to best allow for play, including the types of toys, manipulatives, and materials that can be used to help students engage in different types of play. Overall, the purpose of the guide is to help create a Kindergarten classroom environment that fosters play and where students are encouraged to wonder, explore, investigate, and discover while still meeting academic standards.

Definitions

For the purposes of this project, I am using the definition of developmentally appropriate practice (DAP) from the National Association for the Education of Young

Children (NAEYC) which includes three core components: “Knowing about child development and learning,” “Knowing what is individually appropriate,” and “Knowing what is culturally important” (NAEYC, June 2019).

I have found that play is challenging to define as it is multifaceted and complex. Typically, play in young children is child-directed, spontaneous, and done for fun. Students in Kindergarten fall within Jean Piaget’s preoperational stage where a child plays while pretending that one object is actually something else. Pretending is limited by the imagination of the child as well as their experiences and egocentrism, and the categorization of objects is limited to a single characteristic (Piaget, 1995).

Researcher Sara Smilansky (1962) collaborated with Piaget and they further found that there are three categories of play: sensorimotor play, symbolic play, and games with rules (Piaget, 1962). In her own research, Smilansky later determined there were four types of play, as shown in Table 1, which are also referenced throughout this Capstone (Smilansky et al., 1990), p. 1).

Table 1
Types of Play

Type of Play	Description	Typical Age/Stage of First Appearance
Functional	A child explores their surroundings and objects with their body and their senses and does other physical activities with their body and an object. Often involves a repetitive action while self-narrating.	Birth - 2 years, Repeated through childhood whenever there is a new object to explore.
Constructive	A child is able to learn different properties of a material to then construct patterns or assemble objects.	2 years - 3 years
Dramatic	A child uses role play to imitate or act like what they observe in the world around them.	3 years
Games with Rules	A child plays physical or other games with other children according to determined rules.	5 years +

Additionally, researcher Mildred Parten (1993) noted that children engaged in play do so using various categories of play based on developmental progression as shown in Table 2. These categories of play are also referenced throughout my project.

Table 2
Categories of Play

Category of Play	Nonsocial vs. Social	Description	Typical Age of First Appearance
Unoccupied	Nonsocial	A child observes their environment for things of interest.	Birth +
Solitary	Nonsocial	A child plays alone, typically with toys different than those of any child playing nearby.	Birth - 2 years
Onlooker	Nonsocial	A child observes others who are playing but does not join in the play.	Birth +
Parallel	Social	A child plays independently beside other children, often with similar toys.	2 ½ - 3 ½ years
Associative	Social	A child plays in groups with others where the association to the other children often supersedes the play.	3 - 4 ½ years
Cooperative	Social	A child plays in a group and tasks are divided and involve negotiation to achieve an agreed-upon common goal.	4 ½ years

Controversy

The concept of using play in education to help Kindergarten children learn is one that is quite controversial in the United States. Play, including the importance of its role in child development, has been actively studied since the 1800s. However, incorporating play as a catalyst for learning has fallen out of favor for regular use in Kindergarten classrooms. A possible reason for this is that there is increased pressure by key stakeholders for educators to teach topics with academic rigor driven by the need for students to perform well on high stakes testing. Based on the literature I have reviewed, I determined that there are essentially four perspectives on play among educators:

1. The educators who believe the academic rigor necessary to meet required state and national standards cannot be met through incorporating play into lessons;
2. The educators who acknowledge the DAP of learning through play but believe they do not have the time to include it in lessons and meet state and national standards;
3. The educators who understand the DAP of learning through play and incorporate it within their lessons when they can make adequate time and a connection to learning.
4. The educators who believe in a more holistic approach where play is purposefully and regularly incorporated into their classrooms to help students learn.

Regardless of one's opinion of academic standards in the United States, as a public school teacher, one must teach so students are able to adequately achieve what is outlined in national and state standards and benchmarks. However, I assert the argument that inappropriate academic rigor before a student is developmentally ready is more harmful than beneficial, and students will learn complex ideas more readily and more deeply when they are developmentally able to do so (NAEYC, 2009). As a result, the pedagogy used to teach students is essential. As a teacher, one must constantly prioritize and determine what is the best course of action given the many constraints and requirements they face every day. This is why I am structuring my project where students are learning through play and their learning can be linked to academic standards.

Personal Journey

When I think of the word “play,” I think of being a child who loved being creative and imaginative, going on adventures, noticing and interacting with the world around me, and making discoveries as I figured out how things worked. My feelings around the word “play” are positive because even now, I truly love to spend time playing with my daughter. When we play, I feel like we truly connect as I let her lead and I enter her world.

When I think of the word “learning,” I immediately feel conflicted. As a lifelong gifted learner, I have always loved learning, but I loved learning what I was interested in and because I was learning in a way that was interactive, engaging, and playful. I have

dyscalculia, which has made learning mathematics a challenge throughout my life. Part of the challenge of my dyscalculia has been due to the format of how mathematics was taught when I was a child because there were rarely manipulatives used to help me work my way through problems. When I think of learning, I think of how I learned about history doing role-playing, how I learned about cooking and measurement by making peanut butter playdough in Kindergarten, and how I learned to get along with others through games we played at recess.

As I have searched inward to find my “why” for this project, it is connected to my “why” for being a teacher. I have a goal to inspire a zest for learning in each of my students through integrated lessons encouraging hands-on exploration, the joy of wonder and discovery, the use of imagination and one’s natural abilities, an appreciation and understanding of the natural environment, and a love of reading that my students carry with them throughout their lives. I help my students see themselves as readers, scientists, researchers, mathematicians, engineers, biographers, gardeners, artists, musicians, naturalists, citizens, and historians – or anything that they want to be! I also work to teach them how to make healthy choices, be people of strong character, good citizens of the world, and agents of positive change. I believe that to accomplish these goals, I need to incorporate developmentally appropriate play in my lessons as well as ensure that my students are able to meet grade-level standards. I also believe that play can be used to

make learning topics more culturally-relevant and accessible to all students of varying abilities and socioeconomic backgrounds.

My story begins with growing up on a small farm in rural Southeast Iowa. My town was very diverse by small-town Iowa standards. There is a Latinx majority, a small Burmese Chin population, and over 75% of students are on free and reduced lunch. I lived seven miles from town, so the summers of my youth were largely spent on my family's farm.

I was a very imaginative child who played many hours a day both outdoors and inside. I sometimes played with my brother who was four-years older than me, or my cousins, although I mostly played alone or with my animals -- my farm cats, our dogs, and horses--which often reluctantly were brought along on the latest adventure or play scenario I had devised. I often played in our garden, in our big yard, and in the barnyard. I made mud pies, rode on a tire swing, made dandelion bracelets, and searched for interesting natural specimens. If I could imagine it, I incorporated it into my play.

My mother was a children's librarian and 3rd grade teacher, so I have always had access to great books which instilled in me a lifelong love of reading. The characters in the books I was reading often became what I acted out during my time to play where I was either one of the characters, or I inserted myself into the story with the existing characters during play. When I played inside, I could often be found playing with my Barbies, which I used to act out whatever story I was reading. I played school in my

basement with my stuffed animals where I taught them lessons. I experimented with cooking and baking. I constructed castles and forts with Legos and Lincoln Logs. I regularly played dress-up and imagined myself a part of different eras and adventures.

I attended a public country school for the majority of my elementary years which had a single section of each grade. I attended Kindergarten at age 5 in the 1988-1989 school year. I have an April birthday, so I was one of the younger students in my class. My Kindergarten teacher had also been my preschool teacher, since Kindergarten was all-day, every other day at that time. Kindergarten was a wonderful experience for me that involved lots of play, music, imagination, and art. At that time, I loved learning at school.

My 1st grade experience was as negative as my Kindergarten one was positive. While some of it was due to a difference between a Kindergarten teacher who truly loved kids and a 1st grade teacher who disliked children, there was also a big difference in their pedagogy. In Kindergarten, I was taught using developmentally appropriate practices (DAP) that were customized to where I was. The focus was on learning through play and developing me as a whole person. I learned a lot that year. First grade was all about completing worksheets. We were taught that learning is work, and it is not supposed to be fun. First grade was miserable. I hated school and I hated learning.

The rest of my formal school experience was likewise a mixed bag experience with some teachers who understood how students learn best, and others who merely gave

us worksheets and readings from textbooks. Like many gifted students who struggle with the “teach to the middle” approach, I was a strong-willed child who would read during other subjects when teachers did not appropriately challenge me and help me learn. I knew there had to be a way for me to learn that matched how I thought, and I was so frustrated at having to sit there and complete useless worksheets, regardless of whether I knew the material already or not.

As long as I can remember, I have wanted to be a Kindergarten teacher. I strayed from my path when I listened to people who told me that I would be good at other careers, but I always felt like I was not truly doing work that matters. When it came time for me to pursue my Masters degree, I could not find anything I was excited about, except Elementary Education. My husband asked me what I would do if I could do anything. I responded that I wanted to be a Kindergarten teacher, I had always wanted to be a Kindergarten teacher. He encouraged me to go do it!

I grew up with a lot of diversity, and my friends were often harassed by kids and parents from other towns who were less diverse. This profoundly affected me and is part of why I teach. I want to help all kids learn and help them build a solid foundation for life and learning, especially the kids who are diverse, the children who experience poverty, those who are outsiders, the kids other people have given up on, the kids who are the hardest to reach, and the kids on the high and the low ends of the curve. I care

deeply about helping to make a better, more equitable world for all children. I work to increase my understanding of other cultures and make a positive difference.

The idea for this project came in large part from my daughter. My toddler daughter often wakes up in the morning and greets me with excitement and tells me that she wants to play! She has reminded me that learning for children is often joyful when it is done through play. She has also shown me that play is necessary for her. If there is a time when she does not get adequate time to play, her behavior is negatively affected. When I watch her play, I see how much she learns that I have not directly taught but that I have simply provided the objects, materials, and environment she needed to help her learn when she was developmentally able. I have not forced the learning process, but have encouraged and been her companion in play, imagination, and discovery. Seeing her joy and wonder while she explores, discovers, and learns through play led me to first feel sad that when she went to Kindergarten, her experience would be vastly different from my Kindergarten year, and then to ponder what I could do as an educator to change how we are currently educating Kindergarten students. This led to the exploration of my research question and the development of my Capstone project.

Teaching Experience

I have limited teaching experience, which leads me to see some of the ideas in education from an outside perspective. This is helpful because it allows me to be open to new or different ideas rather than coming into education with preconceived notions. I do

have a lot of experience with children and some experience with education. I babysat and nannied for many years. I was a peer mentor and volunteer in elementary classrooms. I worked at the University of Minnesota and helped to administratively set up the Science, Technology, Engineering, & Mathematics (STEM) Education Center and took an active part in the planning and execution of many of their initiatives, including teacher professional development.

My teaching experience has all been done through practicum labs as part of my Masters of Art in Teaching program at Hamline University or through my student teaching experience. My first experience was in a 7th grade Language Arts classroom at a suburban middle school in Minnesota. In this experience, I noticed that while students no longer had recess or any play incorporated in their lessons, they still had a need to play and would do so in the hallways between classes and prior to class despite school rules. There were many behavior problems in each section of the Language Arts class, which may have been lessened had students had dramatic play or playful learning opportunities incorporated into their course.

I next had the opportunity to teach literacy to Kindergarten students at an urban elementary school in Minnesota. In this classroom, play was incorporated into the Morning Meeting that started every day and was often done through a game. There were also some purposeful play experiences built into the literacy centers they did during a morning literacy block. As I rotated through different centers throughout the course of

the semester, I noticed that students were more engaged and seemed to grasp concepts better when they were at the centers where purposeful play was incorporated. There were very few behavior issues with the students in this class when they were at centers where there was play incorporated or during morning meetings when they were playing. The head teacher was consistent about providing expectations prior to students engaging in the play.

This experience was followed by teaching mathematics to 3rd grade students at a suburban environmental magnet school in Minnesota. I incorporated purposeful play in lessons by having students play “get to ten Go Fish,” as well as by making a game out of rolling place value dice and writing the number correctly, as the person with the highest number won. These were intentional, guided play experiences, but the students were very receptive to them and ranked them as some of the most helpful of the activities I did with them. Incorporating play with this group did not appear to make a positive or negative difference with behavior.

I also worked with 3rd-5th grade Special Education students at an urban elementary school in Minnesota. Much like in the Kindergarten class, they started with a play activity during Morning Meeting as is typical of the Responsive Classroom approach. I was in the classroom for students who have Emotional and Behavioral Disorders (EBD), and I noticed that behavior problems were non-existent during the play portion of the day for all students with one exception. This was not the case during any

of the other daily activities, where at least half of the students in the class had behavioral difficulties. The student who had issues with behavior was dissatisfied when he got “out” during competitive play. This helped me to see that all students will not react similarly to play experiences.

Additionally, I had extensive experience working in a multi-age 2nd-4th grade classroom at a suburban elementary school in Minnesota, primarily teaching 2nd grade literacy, combined social studies, discovery, and 4th grade mathematics. Students had free choice time on Fridays where they could play board games if they had no missing assignments. A play activity was incorporated in the Morning Meeting only some of the mornings. Approximately 25% of the class regularly had behavior issues. Many of the students took part in structured activities outside of the school day, so they also reported having little play time at home. What I found most surprising in this experience was when the students did have opportunities to play, such as during recess, a large portion would not want to go outside. During Friday Free Time, they would often choose to go into the room with the movie instead of playing. Sadly, many of the students seemed to have forgotten how to play.

I was a student teacher in a 3rd grade classroom in an urban elementary school in Minnesota during Fall 2019. I worked with my students to incorporate some playful learning into lessons to help with behavior and learning. Play was regularly present mostly during Morning Meeting and recess. I noticed that even being playful during

transitions helped to build rapport and connection with the students. Students were able to earn Choice Time on Friday afternoons which typically ranged in duration from 30 minutes to 45 minutes. The students who earned this time were elated to be able to play. For the students who did not earn this time, they were consistently upset, and displayed resistance toward finishing their work. When the students were released for recess, it was amazing to see all of their pent up energy explode as they raced from the door. This anecdotal experience showed me that children need to play. In this group I also noticed that some groups of students would play, and some students would choose not play when given the opportunity at recess or during Choice Time depending on the day. However, the students frequently would play with fidgets as toys when they were given access to them in the classroom. This helped me realize that play is complex and motivation is a factor.

Project Context and Rationale

I have developed my guide to work in any public Kindergarten classroom in the United States, whether it be in a rural, suburban, or urban environment. This is an important piece of my project because I believe that play should be universal to a child's Kindergarten experience. I am choosing to limit this project to Kindergarten because it is the foundational year of a child's educational experience, and if play is not valued from the beginning, it is unlikely to be valued or remembered later. I am also limiting the standards I use to Minnesota state standards because those are the standards that I have

used in my teaching experiences and also because it is where I am a licensed elementary educator.

Personal and Professional Significance

The personal significance of my research project is that it has shaped my teaching pedagogy to be more cognizant of how young children truly learn. It has helped me to become well-versed in DAP as well as to learn and plan specific ways that I can incorporate play regularly into my Kindergarten classroom. I have learned how to purposefully and effectively bridge play and learning according to established standards.

I have also learned information through completing this project and paper that help me to far better understand how and why children learn through play. I am able to justify the importance of incorporating play into my lesson plans to colleagues, administrators, parents, and other external stakeholders. Furthermore, I can provide my students with an environment that best supports their needs.

The professional significance of my research project is that I have presented a case for why play is a DAP for learning in Kindergarten. In my guide, I provide ideas of DAP play for other Kindergarten teachers to use in their classrooms that show how to incorporate playful learning with Minnesota state standards for Kindergarten. The guide provides Kindergarten teachers with a reference for types of materials to include in their classrooms to encourage play, ways to structure the day to include time for play, and

resources they can reference to learn more about why play is a DAP that helps Kindergarten students learn.

Many Kindergarten teachers leave the field of teaching because they feel there is a gap between what they know to be best practice based on research and what the policy-makers require them to do. Others continue on, frustrated and disheartened by the lack of power to teach in a way that is what students need. Many Kindergarten students come to school excited to learn yet grow to dislike school because the academic rigor before they are developmentally ready makes them feel inadequate. Other children go through the system “successfully,” but the effects of lack of play are felt in diminished creativity, investigations, and social skills in society as a whole. My project cannot attempt to solve all of this, but is a step in the right direction, giving Kindergarten teachers support and a guide to give students play while still meeting academic standards.

Conclusion

In this chapter, I explored my research question: *How can developmentally appropriate play be incorporated into the Kindergarten classroom while still meeting grade-level academic standards?* I provided definitions of major terminology that will be used throughout my project. I discussed the controversy surrounding incorporating play within the Kindergarten classroom. I shared my personal journey as well as the personal and professional significance of this study along with my project’s context. In the next chapter, I will explore more about the psychology behind play, delve into the

research on how play is linked to learning and how it can be used effectively in the classroom to help students learn, how the pedagogy of incorporating play in Kindergarten is viewed internationally, and the research on the links between play and behavior.

CHAPTER TWO

Literature Review

“Play is the highest form of research.” - Albert Einstein

Introduction

When I began my study of play, I thought I was in the stage of learning where I “knew what I did not know.” Throughout the course of my journey, I have learned so much about play that has only deepened my passion for and my curiosity about incorporating play into the Kindergarten classroom. As I have endeavored to learn more about play and learning in the Kindergarten classroom, I have found a wide-breadth of pertinent research which has helped me to better explore and understand my research question: *How can developmentally appropriate play be incorporated into the Kindergarten classroom while still meeting grade-level academic standards?*

As a caveat, while the majority of information presented in this chapter will illustrate play positively and showcase the many benefits, there is no single pedagogical panacea for everything that children need to help them learn and grow in Kindergarten. Additionally, incorporating play in the classroom is not without its challenges, particularly with children of trauma who are often unable to engage in play in typical ways and thus, often fail to receive the same benefits from play. There are also issues to be resolved around the exclusion of some children from play as well as how some toys and types of play tend to reinforce traditional societal gender roles. Play is not inherently

good or always positive. Regardless, the research has overwhelmingly showed that the benefits of incorporating play in Kindergarten of improved health outcomes, better academic performance, improved social-emotional health and skills, and social advantages readily outweigh the challenges (Howes and Byler as cited in Singer, Golinkoff, & Hirsh-Pasek, 2006, Hirsh-Pasek, Golinkoff, Berk, & Singer, 2009; Burdette & Whitaker, 2005; Russ & Niec, 2011; Sutton-Smith, 2001).

Through this chapter, I will synthesize what I have learned from the span of knowledge related to my research question and provide my own interpretation of the implications of this research. I will begin with an exploration of the history of play, followed by the psychology of play, the controversy surrounding incorporating play into the Kindergarten classroom, and make a case for play by illustrating its many benefits to children. Then, I will examine the use of play as a pedagogy in Kindergarten, review some international perspectives on using play as a pedagogy in Kindergarten, describe ways that play can be successfully incorporated into Minnesota Kindergarten academic standards, and specify some ways the Kindergarten teachers can provide students with invitations and provocations to play. Lastly, I will discuss the implications of this research and how it will guide my project.

History of Play in the United States

Play is not unique to humans as it has been found in many species of animals, and especially in their young as a way to learn and for enjoyment purposes. However, our

ability to bring complexity to our play is a core component of our humanity.

Anthropologists believe that play during childhood was especially valued in our hunter-gatherer ancestors, as children learned the skills needed for their survival and future adult roles through their play. Except for the few hunter-gatherer societies remaining across the globe, play in most societies changed dramatically with the dawn of the agricultural revolution. As the majority of societies have continued to undergo economic changes, our approach to play in children has similarly changed throughout time (Gray, 2013).

In order to consider where we are in regards to our view on play today, we must first look back at the history that brought us to this point. Play has been a way of learning in childhood that was first supported on record by Plato during the ancient Greek times (Johnson, Christie, & Wardle, 2005). The United States' perspective on children and play follows the shift from the premodern era to the modern and postmodern eras. Play has always been associated with childhood, but we now know the importance of incorporating play throughout one's life (Johnson et al., 2005). This has not always been the case as society's attitude toward play in children has undergone a variety of permutations.

Children were playing in the United States well before the arrival of the European settlers. Indigenous children frequently incorporated play into their work (Frost, 2010, p. 4). Their play often mirrored the activities of their extended family (p. 4).

Indigenous children often played games following traditional gender roles for their culture, with males frequently playing games involving hunting and females playing at gathering and care-taking (Chudacoff, 2011, p. 103). Their play was used to help them learn about their current and future roles in their tribes, as well as to pass on cultural beliefs and traditions (Frost, 2010, p. 60).

Play in the colonial United States typically involved playing with family members. Play was often separated based on gender, with children's play frequently mirroring that of their future adult roles. The colonial children brought their existing culture of play with them to the United States (Frost, 2010). Corn cob dolls, toys whittled from wood blocks and sticks, cards, and puzzles were common toys used for play in this era (Chudacoff, 2011, p. 103). Colonial children had time to play when they were not helping with their chores, and adults often engaged in play with them (Frost, 2010, p. 60). When Indigenous children and Colonial children began to play together, the play culture changed and merged, resulting in characteristics of both cultures becoming incorporated into play (p. 60).

Puritan children, unlike colonial children, had play that was somewhat limited by their religious beliefs, including their high value of work. Play scholar David Elkind (2007) notes that in the United States some of our current cultural view on play dates back to this Puritan heritage and our American capitalist or Protestant mindset where work, especially hard work, is valued, and play is not a good use of one's time (p. 34).

This can lead to feelings of guilt when we let children play which can be compounded when the play does not produce something that can be quantitatively measured.

Slave children often incorporated elements of play into their labor. Even though their parents were regularly subject to horrifying treatment, they were able to make their children the recipients of a rich play culture (Frost, 2010, p. 60). The children had a remarkable ability to find opportunities to play, as well as to create their own toys and spaces to play despite facing extreme adversity (p. 61). Similarly to what was later observed from children in concentration camps and other children who endure traumatic experiences, slave children used play as a means of working through their feelings about their situation as a means of survival (p. 61).

The “blank slate” theory of child development was popular in the early 1800s which led to the belief that adults needed to protect children and that play was a way for children to develop into healthy, social, and strong adults (Johnson, Christie, & Wardle, 2005). It was during this time period that homemade toys like dolls, kites, and tops were popular, as was play using natural objects, and traditional play, such as construction using natural materials or gameplay (Johnson et al., 2005). However, many children during this same time period were also expected to work, often beginning as young as six years old - the age many students turn sometime during their Kindergarten year. This meant that play still occurred, but for these children, the time for play was diminished (Chudacoff, 2011, p. 102). The subsequent “Age of Enlightenment” led to the spread of

ideology where children needed adult protections, such as time to play (p. 103). While there were still few manufactured toys except for the few wealthy children, many homemade toys and creative play with natural elements were incorporated regularly into children's play.

The modernist period of the nineteenth and twentieth centuries featured the development of play approaches such as those by Parten, Piaget, and Smilansky, where there was a preset ideal and the purpose of education was to help individuals move more closely to the ideal (Johnson, Christie, & Wardle, 2005). Some of this approach is still prominent in the stringent academic standards for each grade level and subject matter found in the United States currently. Adults tend to see children's play as a matter that needs adult assistance in order to reach adult desired outcomes. Oppositely, children often feel like adults fail to understand what children really enjoy (Chudacoff, 2011, p. 101).

Culturally, the "Golden Age of Play" was in the early twentieth century as children, and subsequently, the concept of childhood, became more protected. Children were bound by law to attend school instead of work so their free time to play increased. Children were generally free to play in a relatively large area with little adult supervision. Playgrounds became fixtures in many city parks in an effort to provide places for children to safely play. Natural environments were preserved for children's recreation and play (Frost, 2010, p. 4).

The end of the “Golden Age of Play” was directly due to the Great Depression. Children still played, but time to play was diminished as children frequently needed to take available jobs to help their families survive (Frost, 2010, p. 4). After World War II, the technological revolution changed play even more dramatically as children were now exposed to television with advertising for toys starting with Mattel’s advertising on the *The Mickey Mouse Club* (Chudacoff, 2011, p. 107). Increasingly, toys were made to represent characters or to do single functions that were once imagined. Parents became more concerned about children’s safety. Children had less freedom to explore with minimal supervision. Green spaces began to disappear, and children played inside for greater amounts of time (p. 107). Frequently both parents worked outside the home, and childhood school attendance requirements and academic requirements increased (Frost, 2010, p. 4).

The postmodern era that originated in the 1980s included critical theorists who believed that European colonialism had developed the power structure in education which further resulted in policies which benefit the majority and often cause oppression to diverse students (Johnson, Christie, & Wardle, 2005). Through the work of the critical theorists, we learned that diverse parents and low-income parents often remain unconvinced about the benefits of learning through play (Johnson et al., 2005). Specifically, parents from these underrepresented groups often believe that more rigorous education is needed to stop the achievement gap (Miller & Almon, 2009, p. 33). We

also learned that play in classrooms is often structured to reflect the majority culture instead of incorporating diverse cultures.

Kindergarten classrooms of twenty to thirty years ago were regularly more play structured with students gaining geometric knowledge through block play, using dramatic play and songs to develop emergent literacy, using sensory sand and water tables as well as exploring the outdoor environment to introduce students to scientific concepts, and using dramatic play centers for students to learn social studies. This has all but disappeared from many Kindergarten classes of today, due to the increased push for teacher accountability and meeting academic standards (Pica, 2015, p. 56).

Current State of Play

Children's play in the United States is in a state of crisis. The traditional Kindergarten classroom of my youth has all but disappeared. No longer is Kindergarten a year of unstructured play, a time of discovery, music, art, and learning social norms (Miller & Almon, 2009, p. 11). Instead, Kindergarten students are now pressured to meet inappropriate developmental expectations which used to be normal standards for first grade (p. 11). Not only are children overloaded with stringent academic rigor and lack of play opportunities in school, this is followed by regular homework assignments (Rendon & Gronlund, 2017). There simply is little to no time allotted during the school day for children to play, and it is not much better at home.

As a whole, children are playing significantly less per day than children did 30 years ago (Hanscom, 2016, p. 151). They often do not have opportunities to play with other ages of children, and most play spaces provide less challenge or are only indoor which results in diminished sensory input (Hanscom, 2016, p. 151). The problem is often compounded when many parents feel the need to enrich their children's lives with a plethora of scheduled activities outside of school hours, believing that they are not providing their child with every opportunity to be successful if they are "just" allowing them to play (Hirsh-Pasek, Michnick Golinkoff, & Eyer, 2003, p. 207). Part of the diminished time for children to play is due to the parental push for students to play organized sports. While children are able to play, learn, and move when taking part in organized sports, it is not a replacement for the need to provide children with adequate time for free play (Hanscom, 2016, p. 70). Children also often play through technological means, which does a lot of the thinking for them.

Students in all-day public Kindergartens in the United States spend between 4-6 times as much of the school day devoted to mathematics and literacy as they are allowed free play or choice time (Miller & Almon, 2009, p. 41). Choice time is often less than 30 minutes per day. Kindergarten teachers in New York and Los Angeles report spending 20-30 minutes helping their students prepare for tests or having them take tests (Miller & Almon, 2009, p. 41). Many children are having issues with self-regulation, mental health, paying attention, body control that can be attributed to lack of play, especially outdoor

play (Hanscom, 2016, p. 2-3). We now have a generation of children who are falling out of their chairs due to weak core body strength and lacking the creativity for problem-solving as a direct result of limiting their ability to learn through play (Hanscom, 2016, 138-139).

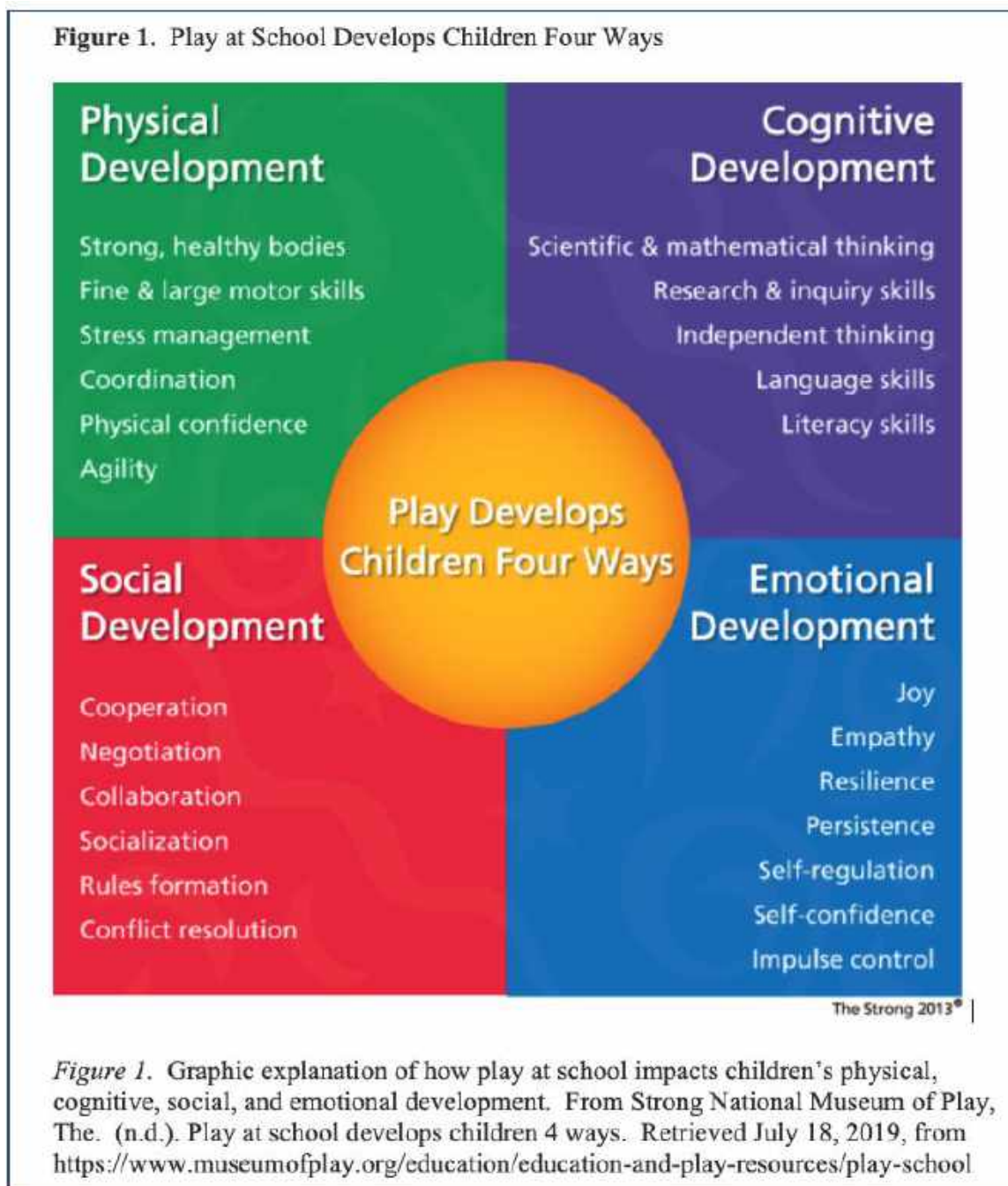
The good news is that some parents are noticing the lack of play in Kindergarten and are becoming concerned (Miller & Almon, 2009). Elkind (2007) states that because of our own play experiences, some parents and educators in the United States believe that play is valuable and healthy for children (p. 34). Those of us that value play do so because we know that much of what we learned as a child was not specifically taught, but rather learned through play. We also remember the feelings of joy and wonder that often came through play and we want the same for today's children. This same view is generally not held by the education policy-makers, those in power in academia, or parents of minority or low-income students. This creates the conflict that is often felt around incorporating play in the classroom.

Psychology of Play

In order to fully understand play and the need for learning by play in the Kindergarten classroom, we must take a look at the psychology of play to understand why children play, how children play, how play affects children's behaviors, and what the major theorists have discovered about play. The challenge is that play can be difficult not only to define, but also to understand as it can range from simple to complex. It is

further complicated because what one believes is play is in part due to the mindset of the player, as one person's play may be another person's drudgery. The study of the psychology of play is also complex because the same prominent researchers such as Dewey, Vygotsky, Bruner, and Piaget that we regularly cite in other areas of education are often overlooked when they espouse the importance of play. Despite the intricacies of play, researchers have been able to determine why children play, why humans need play, the impact of play on one's behavior, and the mind/body connection that occurs with play. Additionally, research has specified different types of play and various kinds of play.

The Strong Museum of Play in Rochester, New York, details that children develop in four ways through play: physically, cognitively, socially, and emotionally as shown in Figure 1. Brown (2009) asserts that these benefits are most prevalent when they come from authentic child-driven play (p. 104). Play undeniably drives learning for children in social, physical, emotional, and cognitive development (Miller & Almon, 2009, p. 8). With this premise, we can focus on how best to incorporate the theories from the major modern theorists into the classroom in order to help aid student development in these areas.



Major modern theories. In the study of play, there are classical, modern, and postmodern theories. The theories that have the most relevance to the Kindergarten

classroom and that are the basis for the majority of the research related to my research question are modern theories. For the purposes of this project, I limit my exploration to major modern theories of play as described by Johnson, Christie and Wardle (2005), Elkind (2007), Parten (1933), Piaget (1995), Smilansky and Shefatya (1990), Vygotsky (1967) and then provide my interpretation of the corresponding classroom significance as shown in Table 3.

Table 3
Major Modern Play Theories

Theorist	Summary of Theory	Classroom Significance
John Dewey	<ul style="list-style-type: none"> ● Children learn best through child-centered, authentic, subject integration using projects for the functional education needed once they are out of school. 	<ul style="list-style-type: none"> ● Play should be child-centered and structured through authentic play scenarios and creative learning projects.
Jean Piaget	<ul style="list-style-type: none"> ● Children's level of play corresponds to their stage of cognitive development. ● Play provides the necessary practice and repetition for concepts to be learned. 	<ul style="list-style-type: none"> ● Children should be allowed lots of time for play and provided opportunities for repetitive play.
Lev Vygotsky	<ul style="list-style-type: none"> ● Play, especially make-believe play, helps children develop representational thought. ● Play provides a context for socially assisted learning, either by older peers or adults. 	<ul style="list-style-type: none"> ● Teachers can provide scaffolding for children during play to help them do what they cannot do on their own. ● Kindergarten children should have opportunities to play and learn with children of other ages, such as older buddies.

	<ul style="list-style-type: none"> ● Play self-scaffolds children's learning within their Zone of Proximal Development so they are able to learn and achieve more. 	
Jerome Bruner	<ul style="list-style-type: none"> ● Children develop problem-solving abilities through play that they use throughout their lives. ● Play activates verbal and logical cognition in children to help them think sequentially and develop narrative thinking. 	<ul style="list-style-type: none"> ● Children should have opportunities for prolonged sociodramatic play to increase their narrative thinking.
Sara Smilansky	<ul style="list-style-type: none"> ● As children grow, they are able to engage in four types of play -- functional, constructive, dramatic, and games with rules. 	<ul style="list-style-type: none"> ● Children should have opportunities to engage in each of these types of play in the Kindergarten classroom.
Erik Erickson	<ul style="list-style-type: none"> ● Children use play to model realistic situations to be able to handle the demands of each psychosocial stage. 	<ul style="list-style-type: none"> ● Teachers should use modeling with new play materials to help play.
Mildred Parten	<ul style="list-style-type: none"> ● Children engage in various social and non-social categories of play: unoccupied, solitary, onlooker, parallel, associative, cooperative. 	<ul style="list-style-type: none"> ● Children may participate in all of these various categories of play in the Kindergarten classroom, although teachers should be cognizant of children who regularly seek out non-social types of play and help them be included in social play.

Sigmund Freud	<ul style="list-style-type: none"> ● Children use play to deal with trauma and reduce or eliminate the feeling associated with trauma by repetition and role-switching. 	<ul style="list-style-type: none"> ● Children should be provided opportunities to act out play themes that help them work through negative emotions associated with trauma.
Brian Sutton-Smith	<ul style="list-style-type: none"> ● Play allows children the adaptive variability necessary to prepare them for unknown future challenges. ● There are different rhetoric of play which influence how we value and see play: Play as progress, fate, power, identity, imaginary, self, or frivolity 	<ul style="list-style-type: none"> ● Teachers need to be cognizant whether there is a certain play rhetoric that is influencing how they structure play experiences for children. ● Children should be provided play opportunities involving problem-solving.
Loris Malaguzzi	<ul style="list-style-type: none"> ● Play should be child-centered and in self-directed environments allowing students to learn through experimentation and expression (Reggio Emilia). 	<ul style="list-style-type: none"> ● Children should have input into the direction of their play. ● Children should have play materials that allow them to explore using their senses. ● Open-ended, loose parts should be provided for students to use creatively during play. ● Opportunities for building relationships and exploring environments should be encouraged through play. ● Opportunities for self-expression and creativity should be built into play environments and considered when choosing play materials

Play and behavior. Many of the major modern theorists focus on play from a behavioral perspective. There is a concrete link between play and behavior. As children are increasingly displaying issues with behavior in the classroom, we must look at what in our practice may be contributing and what we can change. Children's behavior is affected by the quality and quantity of play they are able to engage in.

Additionally, play is an indicator of the health and well-being of a child (Miller & Almon, 2009, p. 46). Children who feel ill tend to play only a little or not at all, but a healthy child plays regularly (p. 46). Children who have been subject to major trauma may be aggressive in their play or unable to play. Teachers can use their observations of children's play to find out the reasons behind various behaviors that children may display when they lack the ability to verbalize their fears or anxieties (Hirsh-Pasek et al, 2004, p. 232-233).

Anecdotal studies show that a deficit of play leads to strong desires to fill that gap, often behaviors that adults label as undesirable (Brown, 2009, p. 43). The lack, or antithesis of play is not work, but rather depression (Hirsh-Pasek, Golinkoff, & Eyer, 2004, p. 213; Brown, 2009, p. 126). Miller & Almon (2009) found that students who went to play-based preschools spent less years in emotional and behavioral special education and significantly less felony arrests than children in a teacher-led, scripted curricula preschool (p. 45).

Play is an effective way to improve student behavior. Anthony Pelligrini, Emeritus Professor of Educational Psychology at the University of Minnesota, has found through his research that regular breaks improve learning outcomes and off-task behaviors in students (2005). Removing inappropriate academic expectations and high-stakes testing for Kindergarten, combined with the return of play to the Kindergarten classroom.

Play helps students reduce extreme behaviors as they manage their stress through play (Miller & Almon, 2009, p. 48). While more research needs to be done in this area it is logical that if play helps children manage and reduce stress as well as regulate their emotions and navigate social norms, the lack of play would be a contributing factor to the increase of childhood mental illness in the United States (p. 47).

When students engage in authentic, deep play, they enter into a state coined as the “flow experience” by researcher Mihaly Csikszentmihalyi (2014, p. 132). The flow experience is when someone is engaging in an activity that has such a high level of enjoyment that they have the motivation to continue doing them or learning more about them (p. 132). When someone is experiencing flow, they have extreme focus on the activity at hand, they are doing something that provides immediate feedback, and the activity is a balance of their skills and what is possible (p. 134-136). When engaging in a flow experience, students are in an optimal state for learning. Flow is akin to Abraham Maslow’s stage of self-actualization.

Why Children Play. Research has shown us that play has a larger purpose, despite how it might sometimes appear. According to researcher Stuart Brown (2009), founder of the National Institute for Play, play is a part of our biological makeup for survival reasons. Brown (2009) states, “When we play, we are engaged in the purest expression of our humanity, the truest expression of our individuality. Is it any wonder that often the times we feel most alive, those that make up our best memories, are moments of play?” (p. 5).

His research has led him to the belief that regular, sustained play leads to fulfillment or what Abraham Maslow referred to as “self actualization” through its contributions to our enjoyment of life, our ability to create and innovate, and the subsequent impact of play on our relationships (p. 6). Children use play to create new synapses which help grow their brain functions and further their development (Brown, 2009, p. 40; Hirsh-Pasek, Golinkoff, & Eyer, 2004, p. 206). While a child’s development cannot be accelerated, it can be stymied through a lack of play. A lack of play can lead to fixed mindsets, fixed behaviors, and a lack of curiosity and wonder (p. 71).

Children use play to help them learn about the world around them. When children explore through play, they hone their problem solving skills and practice persistence (Hirsh-Pasek, Golinkoff, & Eyer, 2004, p. 208). In the United States, five year-old children in Kindergarten typically learn through play how to invent rules for

games, use imagination and creativity during choice time, and develop their moral compass, among other skills (Murphy, 2008, p. 111).

This led me to wonder: If we know the biological underpinnings of play and the important role it has on children's development, why has learning through play been largely removed from the Kindergarten classroom? Why would we change something that worked to implement a pedagogy that could have far-reaching ramifications for our students without doing the proper research to ensure that it actually would improve outcomes?

Controversy

The roots of the controversy and shift in the use of play in Kindergarten classrooms began in 1983 when a report was written urging greater accountability and higher academic rigor for students in high school (Miller & Almon, 2009). While this was not intended to have ramifications for early childhood education, it spurred a movement that has included legislation such as No Child Left Behind Act (NCLB) and the Every Student Succeeds Act (ESSA), dramatically changing the landscape of today's Kindergarten classroom. Administrators and policy makers put increasing pressure on teachers to "teach to the test" so that their schools have better test scores which often leads to increased or sustained enrollment and more funding, despite research showing that the results of standardized tests in Kindergarten are only 50% accurate (Miller &

Almon, 2009, p. 39) The result has been that play is largely discarded as an outdated pedagogy in many circles.

Incorporating play in Kindergarten as a pedagogical tool for learning has become an either/or choice, with many educators and administrators strongly falling on one side of the argument or another. On one side of the argument are those who believe that the purpose of school is solely to have children learn (Scarlett, Naudeau, Salonijs-Pasternak, & Ponte, 2005, p. 178). The other side is split into two camps - those who believe that children should engage in what is enjoyable to them, and those who believe that play is a more developmentally appropriate practice (DAP) for Kindergarten children than traditional direction instruction (Scarlett, Naudeau, Salonijs-Pasternak, & Ponte, 2005, p. 178; Miller & Almon, 2009; Hirsh-Pasek, Golinkoff, Berk, & Singer, 2009).

Recently a third approach has gained increasing traction, that of incorporating guided play, purposeful play, or playful learning into Kindergarten classrooms. As Fisher, Hirsh-Pasek, Golinkoff, Singer, and Berk (2011) note, "Play and learning are not incompatible. It is not play *versus* learning, but rather play *via* learning for which we must strive." (p. 353). Students in Kindergarten need to be provided with a balanced approach of where there is adequate play, student choice, and oral discussion, while also having some intriguing teacher-guided activities that are structured to meet the children's developmental level and Zone of Proximal Development (Tomlinson, 2009, p. 206).

Playful learning is congruent with constructivist education theories such as those from education heavy-weights Piaget, Dewey, Bruner, Vygotsky, and Montessori (Reed, Hirsh-Pasek, & Golinkoff, 2012, p. 25). Students in Kindergarten need a balanced approach of where there is adequate play, student choice, and oral discussion, while also some intriguing teacher-guided activities that are structured to meet the children's developmental level and Zone of Proximal Development (Tomlinson, 2009, p. 206).

A challenge to bridge the gap in the debate is that preservice teachers enter the profession with beliefs about the role play should have in the classroom, which then impact what they practice in their own classrooms. Administrators, parents, and other external stakeholders often fail to see the value in using play for learning because of their own learning experiences where they learned using "skill and drill" worksheets and flashcards, despite the vast body of research showing that young children learn best through play.

Miller and Almon (2009) showcased studies of Kindergarten teachers in New York and Los Angeles to find out some key information about the barriers impeding play in their classrooms (pp. 28-32). Very little time each day was dedicated to student choice time as shown in Appendix A, Figure A1 (See Appendix A, Figure A1). When looking at the reasons for the limited play time, major barriers were lack of materials as shown in Appendix A, Figure A2 (See Appendix A, Figure A2). Other factors include lack of

time, play was not incorporated in the curriculum, and lack of administrator support as shown in Appendix A, Figure A3 (See Appendix A, Figure A3) (Miller & Almon, 2009, pp. 31). However, most of the Kindergarten teachers overwhelmingly felt that the types of play activities surveyed (block play, dramatic play, sand/water play, art activities, recess, and play with open-ended objects) were important as shown in Appendix A, Figure A4 (See Appendix A, Figure A4) (Miller & Almon, 2009, p. 32).

The Case for Play

The National Association for the Education of Young Children (NAEYC) issued a position statement on Developmentally Appropriate Practice that includes “Play is an important vehicle for developing self-regulation as well as for promoting language, cognition, and social competence” (Copple and Bredekamp, 2009, 14). While most early-childhood educators can easily observe the value of incorporating time for their students to learn through play into their day, we often need to convince administrators, parents, and other external stakeholders, especially as the focus has shifted to increased academic rigor at earlier ages. Any educator who wishes to include play as a pedagogy in their classroom needs to be well-versed on the research showing the benefits of play as well as the research showing how young children learn best through play. Fortunately, the many benefits of children learning through play are well-researched. There is clear evidence showing improved health outcomes, better academic performance, and social advantages when children learn through play.

Miller and Almon (2009) state that “The power of play as the engine of learning in early childhood and as a vital force for young children’s physical, social, and emotional development is beyond question. Children in play-based kindergartens have a double advantage over those who are denied play: they end up equally good or better at reading and other intellectual skills, and they are more likely to become well-adjusted healthy people” (p. 8).

Health benefits. It is now a trend for schools to reduce or eliminate recess in order to allow more time for academics (Hanscom, 2016, p. 65). At best this is ill-informed, and at worst, it is extremely detrimental to student development and learning. Through play, students naturally build their core strength, upper body strength, and endurance as well as fine and gross motor skills (Hanscom, 2016, p. 35-42). The limited ability for children to engage in “risky” play at recess such as spinning on the swings, playing on merry-go-rounds, and the challenging playground equipment of yesteryear is attributed to a lessening enjoyment of the play as children need physical challenges in play that help build core strength and provide regular vestibular and sensory input. The lack of this has resulted in a new phenomenon where children are literally falling out of their chairs in school and have increased difficulty with higher-level skills (p. 138-139).

Bruce McLachlan, principal of Swanson Elementary School in Auckland, New Zealand eliminated rules during recess as part of a university study. The shift to free play

resulted in students having better concentration in the classroom, less bullying, and less serious injuries (Hanscom, 2016, p. 122). Recess should not be withheld in response to student behavior as to do so in modern schools is often to deprive the child of perhaps the only opportunity within the day to engage in free play (Pica, 2015, p. 63).

Social benefits. It is normal during Kindergarten for children to engage in a mix of cooperative, parallel, and solitary play by their own choice (Tomlinson, 2009, p. 194). Play helps children handle strong emotions in a safe arena where they are in control of outcomes (Hirsh-Pasek, Michnick Golinkoff, & Eyer, 2003, p. 232). Self-regulation can be practiced through play. Socio-dramatic play not only has social benefits of children learning how to create cooperative play scenarios, but it is also rooted in literacy as children develop narratives (p. 233).

Children learn the relationship skills involving give-and-take as they may give up one desired outcome in order to keep the play scenario going with their peers (Smith, 2003). Children gain social and emotional development through play by helping others feel included through helping children understand why “You can’t say you can’t play” should be one of the guidelines around play in the Kindergarten classroom (Paley, 1992).

Economic benefits. Policymakers have cited our need to be able to compete in the global marketplace as part of the rationale behind eliminating play in Kindergarten and imposing rigorous academic standards. Corporations are increasingly finding issues with well-educated employees being unable to think creatively to find innovative

solutions (Miller & Almon, 2009). Major companies need this skill set in their employees, and the groundwork for these skills begins with play in early childhood. Play, rather than rote learning, is needed to prepare and nurture the skills students need to be successful for a dynamic and creative future (Brown, 2009, p. 99). Play is the key to the innovative breakthroughs and creative solutions that are needed for our complex world (p. 134).

Academic benefits. There is a well-established link between play and learning, especially in young children. Quite simply, young children learn best when they learn through play, especially through self-directed play experiences (Elkind, 2007). Play best fits learning in Kindergarten-aged children because developmentally they are in the preoperational stage, according to Piaget's cognitive development theory (1995). It has been found that different types of play help children learn in distinctive ways so that children need exposure and adequate time to engage in these various types of play regularly and at length. Cognitive skills are gradually built through children's play when play experiences are meaningful and of interest to the children, hands-on, and involve movement (Hanscom, 2016, p. 58-59). Play gives children the opportunity to learn through doing, to practice real-world situations and solve problems in a non-threatening way. Only the person who is doing is the person who is learning (Walker, 2017, p. 130-131). Based on this, play should be a regularly used pedagogy in the Kindergarten classroom.

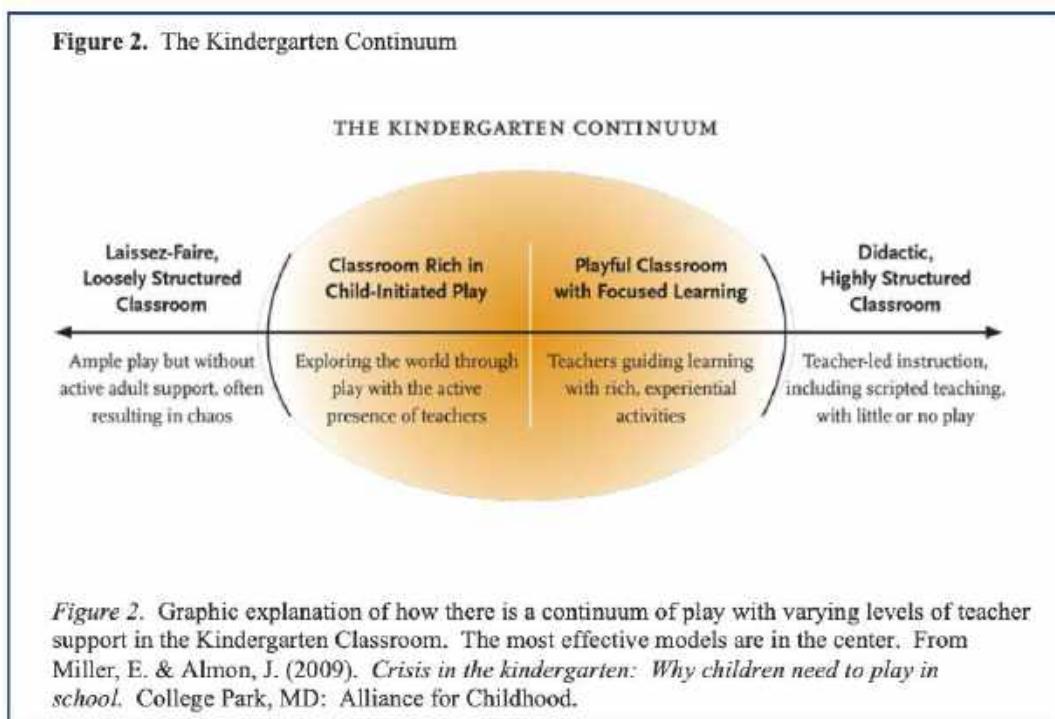
Play as a Pedagogy

When considering implementing play as a pedagogy in one's classroom, it is important to assess the different cultures of the students in the class and find ways that their cultures and learning styles can be incorporated into different types of play. Cultural responsiveness is critical as children learn about their own language and culture through play as well as the cultures and languages of others (Salinas-Gonzalez, Arregín-Anderson, Alanís, 2019, p. 36-37). This is especially critical for students who are English Language Learners so that they have a rich environment in which to use language around familiar themes and objects (p. 37).

Research shows play with adults or older children can help expand children's play beyond their current play level (Walker, 2017; Hirsh-Pasek, Golinkoff, & Eyer, 2004, p. 208-209). Advanced play only occurs between children and adults, though, when adults play within a child's existing play schema (Hirsh-Pasek et al., 2004, p. 209). While a teacher can enter children's play to help expand it or enrich the child's learning through asking higher level questions from Webb's Depth of Knowledge, they must do so in non-intrusive ways that fit with the children's current idea of the play scenario.

When considering play as a pedagogy in the Kindergarten classroom, the degree of incorporation tends to fall on the "Kindergarten Continuum" that was developed by Miller and Almon (2009) and is shown in Figure 2. The goal is for the classroom to be

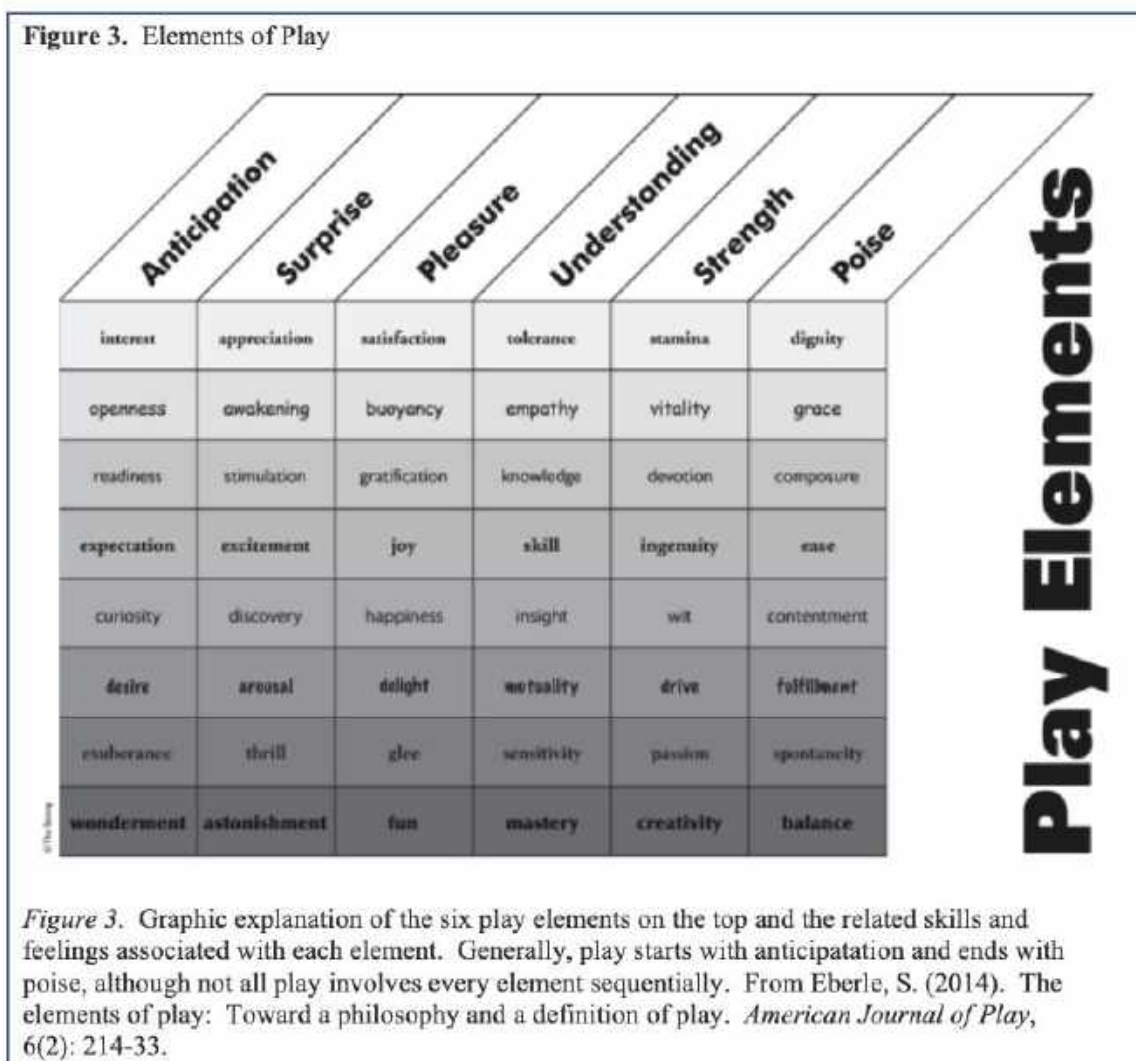
one that is rich in child-initiated play, a playful classroom with focused learning, or ideally, a mix of the two (p. 22).



Link between play and learning. While play is necessary for the expansion of a child's predisposition to fantasy, creativity, and imagination, which support higher level science and mathematics, schools have ironically largely abandoned or suppressed play in favor of a more academic focus. Kindergarten children are not able to learn new or complex skills by watching a teacher as they can only imitate what they already know how to do (Elkind, 2007, p. 92). This is why self-directed exploration and play are essential to learning. Additionally, children's perceptual development in Kindergarten is at a transitional stage and they actually do see the world differently than an adult (p. 99).

Play allows children to learn through hands-on exploration which helps them to construct new knowledge and make connections to existing knowledge (Fisher, Hirsh-Pasek, Golinsky, Singer, & Berk, 2011, p. 342).

Elements of play. Scott Eberle (2009, 2014) from the Strong National Museum of Play and editor of the *American Journal of Play*, believes that there are six various elements of play that a person usually goes through when they play. Although he believes that one does not necessarily go through the steps in a sequential order, typically play begins with anticipation and ends with poise as detailed in Figure 3 (p. 214-33). Kindergarten teachers want to be mindful to structure play environments and activities that will include as many of these elements of play as possible.

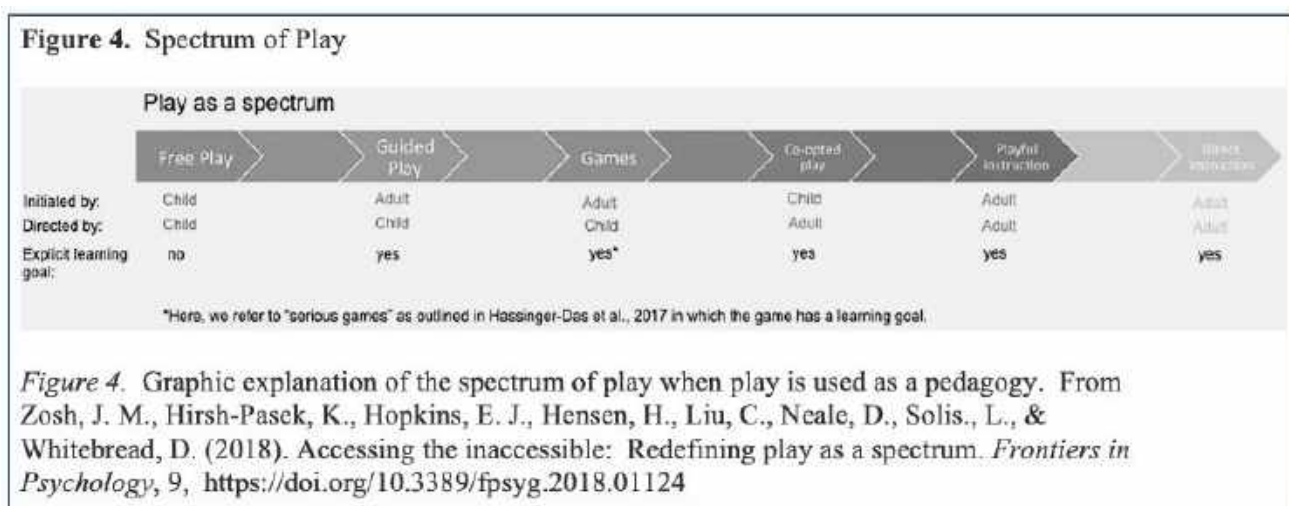


Developmental appropriateness of play. Through play, we learn how to adapt to the world at-large (Elkind, 2007, p. 3) Children of Kindergarten age (5-6) learn best through self-directed play experiences (p. 7). A challenge for teaching Kindergarten children based on age is because children developmentally reach the age of reason at different times. While children may be able to engage in syncretic thinking, they have not yet gained the ability to use syllogistic thinking where an object can be two things at once (p. 122-123).

Much as we do not teach other grade-level material before it is developmentally appropriate to do so, we should not press Kindergarten students to learn 1st grade material and preschool students to learn Kindergarten material. To do so is to deviate from what the research tells us is most effective for how students develop and learn (Pica, 2015, p. 7). Some of the pressure for academics to be a focus before it is developmentally appropriate is due to pressures from parents who not only do not want their children to be behind academically, but want them to have a head start (p. 12). The irony is that these well-meaning parents are pushing for practices that are actually detrimental to their children, because only through play can a child's development be enriched (Brown, 2009, p. 101). Teachers are encouraged to use developmentally appropriate practices instead which involve a balanced approach where there is a mix of teacher-guided and child-guided experiences (Copple & Bredekamp, 2009, p. 223).

Teachers can support student learning during play by making engaging materials available and accessible, modeling possible ways to use new materials to spark creativity, and using Webb’s Strategic Thinking and Extended Thinking as a guide when asking questions to encourage higher-level thinking (Copple & Bredekamp, 2009; Gronlund, 2010; Jones & Reynolds, 2011).

Play-based pedagogy. With play being difficult to define, it is also complex when thinking about it in terms of play as a pedagogy. One of the clearest explanations is that play is a spectrum as specified by Zosh, J. M., Hirsh-Pasek, K., Hopkins, E. J., Hensen, H., Liu, C., Neale, D., Solis., L., & Whitebread, D. (2018) in Figure 4. The variables are whether it is adult or child-initiated and whether the play has a definitive intended outcome (Zosh et al., 2018).



Playful Instruction can include elements of free play, guided play, games, and co-opted play, but ultimately the structure, initiation, and direction comes from the

Kindergarten teacher (Zosh et al., 2018). The majority of classrooms do not provide support for all types of play (Scarlett, Naudeao, Salonijs-Pasternak, & Ponte, 2005, p. 180). This issue with the implementation of play pedagogy must be resolved in order to give students the full benefits of using play to help them learn. If we want all students to be able to engage in divergent, creative thinking, we must provide ample opportunities and time for students to use all different kinds and types of play, which allows different play personalities and learning styles to be honored (Resnick, 2017, p. 140).

Project-based learning. John Dewey was an early proponent of project-based learning, or having schools provide children with the functional education they need once they are out of school. He recognized that subjects should not be taught in isolation but rather the concepts are integrated. While his goal was for children at the beginning of the 20th century to be prepared for the industrial age, the same principles are effective today because they allow opportunities for authentic, creative learning through play. (Elkind, 2007, p. 196-197). This child-centered model is currently used frequently in quality early childhood classrooms in the United States, but would be effective for elementary education (p. 200). Project-based learning helps students learn because it provides a unit which is created around an end product based on student interest. The goal is to get student buy-in for improved motivation, integrate subject matter, and create meaningful learning through authentic learning. (Walker, 2017, p. 131). When project-based learning is well executed, it incorporates elements of play.

Reggio Emilia. The Reggio Emilia philosophy created by Loris Malaguzzi focuses on using the environment to help spark creativity as students guide their own learning. Incorporating natural elements like water and dirt as well as making loose parts available will provide an environment with ample opportunity for student-led learning through play (Hanscom, 2016, p. 172).

Choice time & free play. Play is how children engage their curiosity to actively research and understand the world around them while finding out their own role. Child-driven play involves imagination, investigation, experimentation, risk-taking, and problem-solving. They have the freedom to make mistakes and opportunities for learning when they correct them (Hanscom, 2016, p. 123) Free play is so powerful because when children are engaged in free play, they can take the risks they need to test the limits of their body through movement, they can use their imaginations, and engage their senses. The body and brain are both activated and working together. (p. 73).

While many researchers advocate the importance of “free play” for children, including Brown (2009), the pervasive view of play in the United States education system makes the idea of implementing free play as the predominant pedagogy in a Kindergarten classroom as too drastic of a cultural change to implement in public education at this time. Instead, free-play can be provided for a specific block of time, longer than 40 minutes, to allow students adequate time to design and organize their play experience and then to engage in the play.

As a word of caution, the term “free play” tends to lead those not familiar with the practice to believe that there is complete and utter freedom during this time. While this may be true when the term is used outside the public education classroom, for my purposes, this is not the case. The term “choice time” better reflects that teachers have carefully planned and created play environments for children that are interesting, engaging, and will best support their learning based on what is developmentally appropriate (Dinnerstein, 2016).

During choice time, students should have the option to choose from a variety of options including dramatic/imaginative play, blocks or other open-ended construction materials, and creative/artistic play.

Guided play. Guided play is an emergent pedagogy that is starting to take root in public Kindergartens as teachers seek to teach their students through developmentally appropriate practice by using play as a way for students to learn and achieve the goals set forth by academic standards (Fisher, Hirsh-Pasek, Golinkoff, Singer, & Berk, 2011, p. 342). There are two main components of guided play: 1) the teacher provides an augmented play environment to cultivate opportunities for building knowledge through experiential learning with the purposeful integration of academic concepts and 2) the teacher uses open-ended questioning to help the student to debrief and self-assess what they noticed and further wonderings about their explorations (p. 343). A challenge with

guided play is for teachers to ensure that they are limiting their interference with the children's play (p. 343).

An advantage to guided play is that teachers are able to better able to support diverse students and English Language Learners through purposeful incorporation of cultural elements in play environments (Masterson & Bohart, 2019, p. 5)

Playful learning. John Dewey, philosopher and educator, has described the mindset of playfulness as being as more important than the actual play itself. Playful learning has been described as a “middle ground” to the two opposing sides of the argument on whether play has a place in Kindergarten classrooms (Fisher, Hirsh-Pasek, Golinkoff, Singer, & Berk, 2011, p. 342). Playful learning encompasses both the use of guided play and free play for the goal of helping children develop socio-emotionally, academically, and cognitively (p. 342). Children have been shown in observational research studies to devote significant amounts of time during free play to mathematical concepts (p. 344).

Providing enriching materials for children's play through use of guided play has also been shown to help children develop meaning and context around mathematical concepts (p. 345). Children's math and science learning through play can be scaffolded by providing rich play environments with games and toys that incorporate math or science concepts, labeling ideas, modeling new ways to use objects, co-playing, and

using strategic thinking and extended thinking questions from Webb's Depth of Knowledge (p. 346).

Literacy can be developed through free play by incorporating dramatic play into the classroom. Socio-dramatic play not only has social benefits of children learning how to create cooperative play scenarios, but it is also rooted in literacy as children develop narratives (Hirsh-Pasek, Michnick Golinkoff, & Eyer, 2003, p. 233). Dramatic play helps students learn how to provide a chronological account of their activities, which are important skills used in writing narratives (Pellegrini & Galda, 1990). In one study, when 3 to 5 year old children were provided with play environments enriched with literacy materials, they engaged in literacy activities that were of greater complexity and for a longer duration than children who did not have literacy props incorporated (Neuman & Roskos, 1992). Children's literacy outcomes were best when teachers used a multifaceted approach of both free and guided play along with providing enriched play environments (Fisher, Hirsh-Pasek, Golinkoff, Singer, & Berk, 2011, p. 349).

International Perspective on Play as Pedagogy in Kindergarten

The United States was one of three United Nations countries that did not ratify the United Nations Convention of the Rights of the Child of 1990 where Article 31 recognizes that children have rights to age-appropriate play (Gronlund & Rendon, 2017, p. 9; Human Rights Watch, 2014). While this shows that 140 countries worldwide do value a child's right to play, the perspective on play as a pedagogy in Kindergarten is not

the same globally. This fact is influenced in large part by cultural and economic factors of different societies. Some Scandinavian countries such as Finland have play-based Kindergartens for their students (Walker, 2017) that start at age 7. In some schools in Italy, birthplace of the Reggio Emilia approach, learning through play is a regular part of the Kindergarten experience. Australia, Canada, and New Zealand find challenges with incorporating play in Kindergarten pedagogy similar to what we experience in the United States due to erroneous beliefs about child development and academic achievement..

The December 2001 Programme for International Student Assessment (PISA), published by the Organization for Economic Cooperation and Development (OECD), represented a shift in global education. The PISA test is taken by 15-year-old students from 31 OECD countries around the globe, and Finland's students outranked all other countries. This shifted the focus to what Finland is doing differently and better than the rest to educate their students. Prior to this, many Finnish parents were dissatisfied with the lack of academic rigor in the Finnish education system. Yet, their system which allows for free play during regular 15-minute breaks after 45 minutes of instruction was shown to be more effective at educating students than a rigorous academic-focused approach (Sahlberg, 2015).

While "choice time" has crept into the United States Kindergarten educator's vernacular, it often means the choice to select from a variety of academic options or to

watch a movie. Instead of giving yet another academic assignment, students would benefit greatly from a break, time to decompress and free play.

There is a good deal of difficulty in comparing international perspectives on play in Kindergarten as many countries use the term “Kindergarten” to refer to what we call “preschool” in our United States vernacular, or they simply do not have an equivalent which leads us to trying to compare “apples to oranges” (Synodi, 2010; Sahlberg, 2015; Wu, 2015) Also, pedagogies always have a cultural component, which means that we cannot take the whole of the Finnish education system and use it to replace ours.

However, we can take elements of what works in countries with play-based pedagogies based on child development and apply them in the United States (Sahlberg, 2015).

Whether children live in Australia, Norway, or China, they have the same biological need for learning through play.

Incorporating Play into Minnesota Kindergarten Academic Standards

Play and academic standards have often been presented as polar opposites where educators must choose only one. The reality is that developmentally appropriate play can be purposefully and thoughtfully included in one’s pedagogy in specific ways so that students will still have the academic rigor necessary to push them into Vygotsky’s zone of proximal development and allow them to meet the grade-level guidelines set by Minnesota academic standards. Rather than seeing the Minnesota Kindergarten academic standards as a curriculum, which many schools do, they are intended to be used as

grade-level guidelines for students by the end of the year (Minnesota Department of Education, 2019). When viewed this way, suddenly there are many creative and research-supported opportunities to include play as a learning tool in the Kindergarten classroom (Jones & Reynolds, 2011).

Integration of content around larger themes enables students to make cross-subject connections (Copple & Bredekamp, 2009, p. 230). This can be done through weaving themes into play environments and experiences, using projects, and providing other related, engaging learning opportunities (p. 230). Teachers should also actively and equitably support each child's learning through honoring their culture and home experiences (Masterson & Bohart, 2019, p. 5).

Kindergarten teachers should keep in mind Eberle's Elements of Play when using play as a pedagogy in the classroom because often what teachers consider to be play activities, students consider work (Hirsh-Pasek, Golinkoff, & Eyer, 2004, p. 210-211). Only when an activity is truly play do children reap the benefits of learning through play.

Opportunities for inclusion of play. Teachers can use play at the beginning of the year to build rapport with their students and create a sense of belonging by joining students in their play and continue this playfulness throughout the year (Walker, 2017, p. 71-72). A classroom environment with joy, laughter, and humor provides an environment not only more conducive for student learning, but also where it is more enjoyable to teach (Pica, 2015, p. 18). Teachers should carefully and thoughtfully plan

opportunities, play environments, and play scenarios for Kindergarten children to help them gain the most benefit through play (Gronlund, 2013).

Invitations & provocations to play. While children often need no specific reason to play, we can help invite them to play and guide their play in the classroom through invitations or provocations to play. This can be done through using open-ended toys that children can use to explore in many ways. The classroom can be designed to promote play both in the design and color scheme. Extending learning beyond the classroom to the outdoors is another environment which has multiple opportunities to invite children to learn through play.

Some ways that we can help improve learning outcomes with children's play is by allowing more time to play, putting less rules in place around the play, making open-ended loose parts available for children to use creatively, and by giving them permission to get messy through the course of play (Hanscom, 2016, p. 159-161).

Classroom design. The design and components of a classroom should be thoughtfully redesigned to encourage play. Some ways to do this include keeping the room visually simplistic, but welcoming, and using natural or simply designed materials when possible. The room should be designed to allow adequate space for frequent, meaningful movement, with alternative seating options. A Kindergarten classroom that fosters play has carefully placed activity areas and pathways, bounded areas to give

visual and physical separation, and child-accessible materials (Scarlett, Naudeau, Salonijs-Pasternak, & Ponte, 2005, p. 182-183).

Children should have opportunities to change positions every ten to fifteen minutes, and this can be done by finding creative ways to incorporate playfulness in learning such as singing songs about concepts or tossing around a ball in a circle while sharing what they learned. Incorporating more project-based learning where student choice is honored can also help students engage in learning play in the classroom.

Sensory integration. Sensory integration should be included when selecting toys or creating provocations to play to aid the development of a child's senses through play (Hanscom, 2016, p. 55). Children whose senses are fully engaged are better able to understand and retain information than when senses are not purposefully activated (Pica, 2015, p. 1).

Music. Music is a medium which makes other subject-matter more playful for students (Walker, 2017, p. 149). There is also a plethora of research showing that music can be useful to help aid student memory and be a fun way to learn concepts.

Movement. It is recommended that children get at least 60 minutes of modest to vigorous activity in no more than 30 minute increments daily (NASPE, 2008). A child learns most effectively when movement is incorporated into the learning process. Learning through playful movement is the ideal mode of learning for children (Pica, 2015, p. 48). Play involving movement helps engage the brain and is useful for not only

learning but building qualities like being able to innovate while remaining adaptable, flexible, and persistent (Brown, 2009, p. 84). As children are rarely getting this outside of school, Kindergarten teachers must intentionally build in movement beyond recess and physical education each day (Tomlinson, 2009, p. 190). This can be done with developmental consideration when teachers first teach children introductory physical techniques, both fine and gross motor, followed by play-based experiences that allow the children to use the new techniques through creativity and experimentation (p. 190-191).

Toys. With toys, less is truly more when one wants to engage children in the dramatic thinking of imagination and fantasy. Too many toys can overwhelm students and limit their creativity (Elkind, 2007, p. 16). Toys should be rotated so that children are encouraged to think about them and play with them differently. Teachers will want to be cognizant that many toys that are electronic or marketed as learning toys are actually limited in how a child can interact with them, so open-ended, non-electronic toys are preferable to scaffold better play experiences (Hirsh-Pasek, Golinkoff, & Eyer, 2004, p. 210).

Toys are often used by children to practice their future adult roles, to engage in imagination, and for understanding of cultural norms (Elkind, 2007, p. 24). Skill toys tend to be pointed to traditional sex roles within a culture (p. 31-32). When incorporating these in the classroom, it is essential to do so in a way that makes them accessible for all children to use during play regardless of student gender identity.

Kindergarten teachers play an important role in helping children develop divergent thinking around the use of toys. Toys like LEGOs and K-Nex that are designed to be used to build a specific object have far more value when the directions are thrown away and children are encouraged to creatively and imaginatively use the materials to build something related to a specific theme (Resnick, 2017, p. 131-132). While there is value in students learning how to create and execute a plan, tinkering can help students learn to approach problems from a different angle (p. 136).

Loose parts. The Reggio Emilia approach encourages the use of open-ended loose parts for students to use as part of their exploration and play (Hanscom, 2016, p. 172). Loose parts that can be used to help students play more creatively include ribbon, yarn, sticks, tree cookies, pieces of fabric, buttons, and shells, with a few different parts available at a time so as not to overwhelm children with choices but instead spark imagination of possibilities. Building materials such as pieces of tubing and planks of wood can also be used for imaginary play (Hanscom, 2016, p. 213). Loose parts are useful and preferable to many toys by children because the ways to play with them are limitless (Daly & Beloglovsky, 2015, p. 6). Kindergarten teachers can purposefully integrate the use of selected loose parts to help students engage in active learning, divergent and analytical thinking, and support students in their development (p. 6-13). Incorporating loose parts, particularly loose parts of natural materials, in outdoor settings has been shown to greatly expand their potential uses for play (Daly & Beloglovsky,

2015, p. 19).

Outdoor/nature learning. The inclusion of Science, Technology, Engineering, and Mathematics (STEM) through integrated, project-based learning is a major trend due to many companies asserting that we are failing to produce students with the skills they need for an increasingly STEM-based workforce (Sampson, 2015, p. 102). This approach may drive the sales of many STEM-related educational toys, but often fails to make use of the original way of STEM learning -- nature-based or place-based education. Bringing children outdoors provides them with opportunities to connect their play and learning to nature, to employ divergent thinking when problem-solving, and to provide them with a play and learning environment that has been shown to make a positive impact on student's well-being (p. 102). Whenever possible, teachers should take the children outdoors to learn and play (Hanscom, 2016, p. 162-166). Even urban schools can make use of nearby parks, green spaces, and their own playground to make the outdoors their classroom at least once a week (Hanscom, 2016, p. 168-169).

Playful learning is well-adapted to nature-based outdoor learning as children have a natural curiosity, wonder, and need to explore the world around them (Louv, 2008). Specifically, learning through play in nature engages all of children's senses and naturally integrates informal play and formal learning, according to Robin Moore (Louv, 2008, p. 86).

Implications

The important role of play in a child's development and learning cannot be overstated. Play is an effective, developmentally appropriate method to help Kindergarten students learn and it should be used alongside other developmentally appropriate pedagogies. Research has shown that play and play environments can be structured in ways to support student learning of content.

Student learning is most positively impacted when there is a mix of choice time and guided play, with substantive blocks of time each day devoted to both, as well as an overall atmosphere of playful learning in the learning environment. Having open-ended materials available for students to use for play helps them engage in creative, divergent thinking. To prepare the children of today for the future of tomorrow, they must regularly have opportunities to engage in various types of play to learn throughout each day in Kindergarten.

Based on these implications for teaching and student learning in Kindergarten, I am going to structure my project to be a guide to incorporating play in Kindergarten along with meeting Minnesota academic standards. My guide will contain some resources that can be shared with parents, policy-makers, and administrators explaining the research behind why and how children learn through play along with some brief talking points. I will also include ready-made lesson plans with integration of subject matter that incorporate developmentally appropriate play through use of guided play,

structured play environments, and playful learning in ways that meet Minnesota Kindergarten academic standards. My guide will provide a reference for the types of open-ended materials that help encourage play, ways to structure the school day to incorporate adequate time for play, and ways to both design a classroom and use the outdoors as a place-based classroom to promote play. I will provide specific ideas for how to incorporate play in integrated ways and how to structure play environments to encourage play that leads to learning in a specific content area, such as literacy and mathematics.

Conclusion

I used my research question: *How can developmentally appropriate play be incorporated into the Kindergarten classroom while still meeting grade-level academic standards?* to guide the scope of my literature review. I began my literature review dismayed at the lack of play in Kindergarten and the increasing trend toward sometimes inappropriate academic rigor. However, at the end of my literature review I am left with hope that in the United States we will overcome our current crisis of children's play. Children have found ways to play and to learn through their play throughout history and in many different cultures. The children are showing us what they need, if we just follow their lead. The body of research on play and learning is vast and well-researched by scholars respected in their field who are telling teachers, administrators, policy-makers, and parents that we need to make a place for play in Kindergarten.

Over the course of this literature review I found that the evidence made me resolute to regularly and intentionally incorporate play in my pedagogy. I firmly believe that using developmentally appropriate practices provide the best long-term results for our students. This research has not only changed my own practice as a teacher, but also has changed my perspective as a parent. I am more mindful of the need to allow my daughter adequate time to simply play, especially in the outdoors, and her toy collection has been significantly and selectively pruned to promote higher levels of play.

Throughout the course of this chapter, I discussed what I have learned from the research related to my research question and provided my own interpretation of how this research impacts the Kindergarten classroom. I began by noting the history of play and how it impacts the view of play and how we play today in the United States, followed by the psychology of play, and the controversy surrounding incorporating play into the Kindergarten classroom. Then, I made a case for play by illustrating its social, health, academic, and economic benefits. I examined the use of play as a pedagogy in Kindergarten, briefly reviewed how play as a pedagogy in Kindergarten differs internationally, described some broad ways that play can be successfully incorporated into Minnesota Kindergarten academic standards, and specified some ways the Kindergarten teachers can provide students with invitations and provocations to play. Lastly, I discussed the implications of this research and how it has impacted the structure and contents of my project--a guide for teachers on incorporating play into the

Kindergarten classroom while meeting Minnesota academic standards. In Chapter 3, I will describe the methodology and design for the guide I am creating as my Capstone project.

CHAPTER THREE

Project Description

“Play is where life lives.” - George Sheehan

Introduction

Through the course of this chapter, I will provide an overview of my Capstone project, an explanation of the research paradigm and curriculum design framework which guides the creation and framework of the project, as well as provide an explanation of the methodology used. Next, I will explain the intended audience and setting where my project will be used. This is followed by an in-depth description of my project. Lastly, I will provide a timeline for completion of my project and a conclusion of the chapter.

During the process of exploring ways that I can fully address my research question: *How can developmentally appropriate play be incorporated into the Kindergarten classroom while still meeting grade-level academic standards?*, I developed two touchstones: creating a project that would inform and improve my own practice, while also providing a guide that would help other teachers incorporate play into their practice and communicate the importance of play as a developmentally appropriate pedagogy in the Kindergarten classroom. This led me to the design and final iteration of my Capstone project.

Project Overview

My Capstone project is to create “A Year of Curiosity, Wonder, & Imagination: A Guide to Play in the Kindergarten Classroom”. This guide is intended to provide a handbook for Kindergarten teachers on how to incorporate play within the Kindergarten classroom while meeting Minnesota academic standards. Components of the project provide background information of play in learning, provide specific ways to incorporate play in the Kindergarten classroom during the school day, and provide ways for Kindergarten teachers to support student learning through play. I also include research-backed talking points that Kindergarten teachers can share with parents, administrators, and other stakeholders on the importance of children learning through play in Kindergarten. Another element of the guide will be a reference list of types of open-ended materials and toys that encourage play. The guide will contain suggestions on how to use the outdoors as a place-based classroom to incorporate play, ideas on how to structure play in integrated ways, and ideas on how to structure play environments leading to specific content-area learning.

In addition to using the valuable information from the sources I found regarding how to incorporate play into the Kindergarten classroom as reviewed in Chapters One and Two, I have found and will use a curriculum design framework that helps with the framework of my lesson plans for building true student understanding and knowledge.

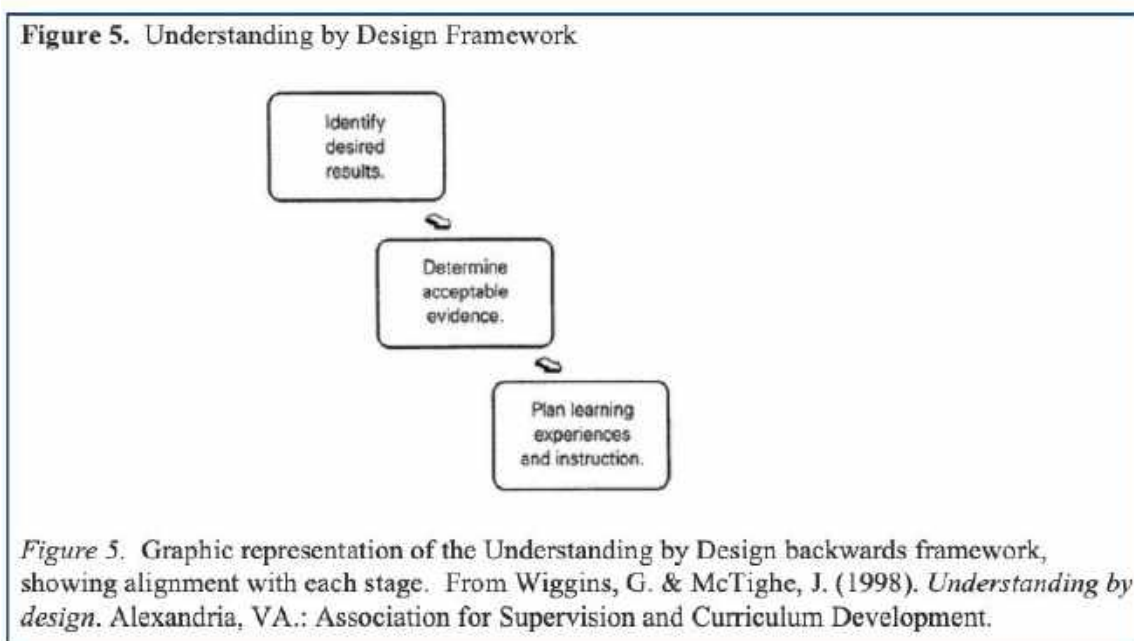
Research Paradigm & Design Framework

When considering different methodologies that would best fit the creation and design of my guide, it was important that these match with my core educational beliefs as discussed in Chapter One. My beliefs include that every child can learn; that learning should be guided by children's interests, wonderings, exploration, and the joy of discovery; and that children learn best when they learn through play. I also strongly believe in project-based learning through authentic opportunities so that children are best able to build deep understanding by engaging with interesting, realistic content. These core beliefs led me to my choice of two methodologies for my guide.

Explanation of Framework. I will use the Understanding by Design principles by Wiggins and McTighe (1998) to help with the creation and design of my guide since it is a proven way to help students learn and to promote more effective curriculum design (Wiggins & McTighe, 1998). Additionally, I will use principles of project-based learning, which originated with Dewey and is incorporated in the Reggio Emilia approach by Malaguzzi (Cadwell, 2003). I am choosing to do this because there are principles of the Reggio Emilia approach to project-based learning that work well when incorporated with play to promote student learning, engagement, and understanding (Edwards, 2002). These principles and approaches will be merged with what I described Chapters One and Two.

Understanding by Design (Ubd). The principles of UbD as specified by Wiggins and McTighe (1998) are about building student understanding as the core of the curricula, which goes beyond the often superficial measures of “knowledge” that are used to verify a student is able to meet standards. Bloom’s Taxonomy lists “understanding” or comprehension as the second tier in the cognitive domain. Instead of using this same principle, Wiggins and McTighe’s (1998) UbD describes a student’s “really understanding” as being when a student is able to use and apply what they have learned in multiple, authentic contexts that differ from the context where it was learned. The “backward” design approach is also a key element of UbD (Wiggins & McTighe, 1998).

There are six facets of understanding that are designated by Wiggins and McTighe: explanation, interpretation, application, perspective, empathy, and self-knowledge (1998). As shown in Figure 5 by Wiggins and McTighe (1998, pp. 9),

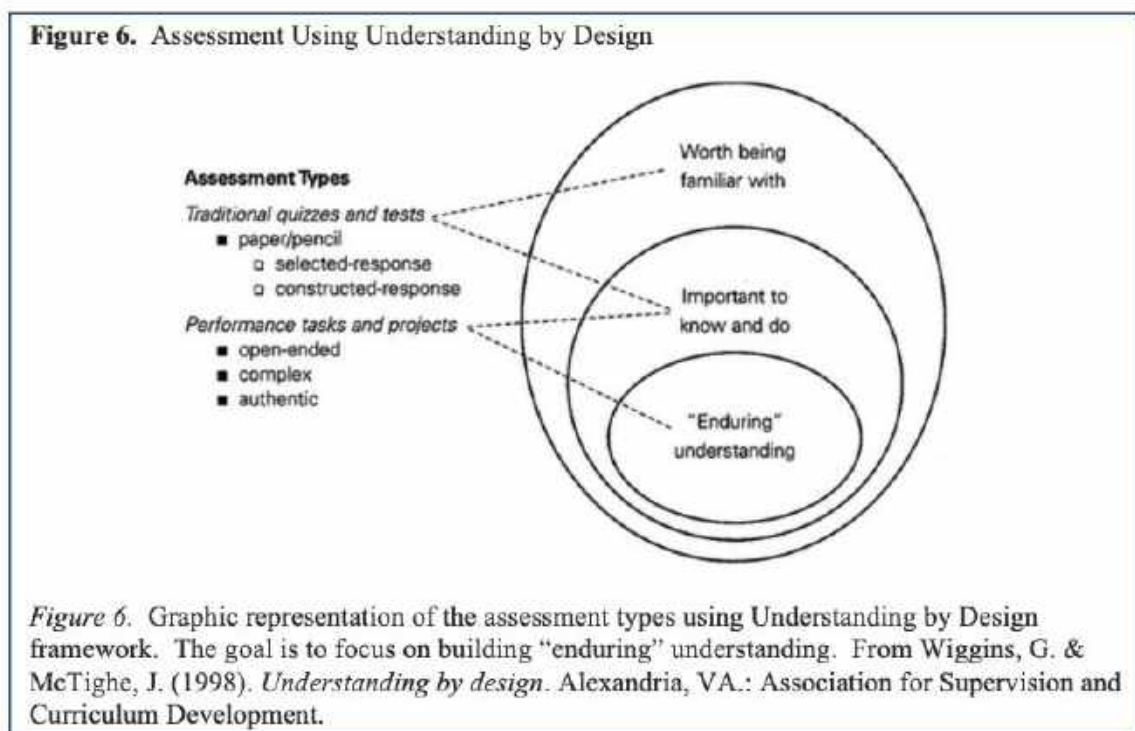


the first stage of designing a curriculum using UbD begins with a backward design of my lesson plan framework where I will start with the end goals for student understanding that comprise my aims for each lesson and unit. The second stage involves determining what is acceptable evidence to show student understanding. The third stage is planning learning experiences and instruction (Wiggins & McTighe, 1998). There must be alignment with each stage of the plan in order to have a successful plan.

Stage one requires me to ask questions such as shown in Appendix B, Figure B1 to determine what understanding of “big ideas” or overarching themes students will have after the learning experience is finished (See Appendix B, Figure B1). This requires thorough and purposeful analysis of what “big ideas” the students will learn, as well as where the lesson fits within the framework of helping students build knowledge about the “big ideas” over the course of the unit. Wiggins and McTighe (1998) describe this process of determining curricular priorities as shown in Figure 5 by designating three categories of understanding that are able to be assessed: 1) knowledge or ideas in which there is value; 2) knowledge or ideas that are important for students to be able to both demonstrate comprehension and use; and 3) knowledge or ideas where there is “true understanding” or permanent knowledge that was built (pp. 15).

Stage two focuses on what types of evidence will be used to demonstrate that students have built either knowledge or ideas that where they fully comprehend the concept and are able to implement it, or how they can demonstrate that they have

enduring understanding which can be applied in multiple contexts (Wiggins & McTighe, 1998). Figure 6 shows that in order for students to adequately demonstrate this through evidence, it is necessary to go beyond the traditional assessment types and to instead use project-based, authentic assessments guided by inquiry. Appendix B, Figure B2 shows some types of assessment that should be considered when planning a curriculum (See Appendix B, Figure B2). Stage 2 is particularly important because in UbD, the purpose is for students to build “true understanding” which can only be done when students apply learning in authentic contexts and are able to transfer the understanding to different situations.



Stage three is the stage where many teachers traditionally start their lesson plan, resulting in the lesson being more about the learning activities than about the ultimate learning goal. My own lessons plans in the past were sometimes like this, which is why I am attracted to UbD and a different, better way of building student understanding. In UbD, this is the last stage of the curriculum development. It involves asking questions such as shown in Appendix B, Figure B3 about the selection of learning activities, the extent of the content being covered, and the amount of time allotted (See Appendix B, Figure B3). These types of questions help to ensure that the learning experiences or activities are linked to the assessment and the ultimate goal of meaningful, enduring learning.

There are some unique components of this conceptualized framework that will be particularly useful as I design my curricula. The backward design element is helpful because it helps disrupt traditional, linear thinking about a lesson and instead puts the focus on student understanding. It also helps to clarify with students the success criteria they need to complete. The framework also includes purposeful thinking about commonly-held misconceptions and how to address them. The focus on building understanding of “big ideas” helps to ensure that students are able to make connections and transfer the learning (Wiggins & McTighe, 1998).

Reggio Emilia Experience. The Reggio Emilia experience has some commonalities with UbD. Both are oriented toward being student-led, involving inquiry,

containing open-ended questions, and learning through projects in authentic ways to build meaningful learning. However, the Reggio Emilia approach has some differences, too, which will help to enrich my lesson plans and unit plans.

There are two major components to the Reggio Emilio experience: 1) teachers should design a learning environment that is student-centered, nature-rich, calming, and full of open-ended materials, and 2) teachers should observe and document how children learn through learning experiences to build and deepen the learning progression (Hong, Shaffer, & Han, 2017). Students are explorers of their learning environment who use their “100 languages” to express themselves (ReggioChildren, 2010). The learning environment must be structured as open-ended to promote learning through play, investigations, research, and problem-solving, as well as individual and group interactions. The learning environment is seen as so important in the Reggio Emilia experience that it is considered one of the “teachers” (Edwards, Gandini, & Foreman, 2012). Teachers strive to provide a “rich normality” where they are able to use ordinary happenings to string them together to build meaning and quality to the learning. The aesthetics of the classroom, whether indoors or outdoors, is part of this concept (Cooper, 2012).

The Reggio Emilia approach to collaborative projects is to first create something called “learning groups” when doing a long-term project or “Progettazione” (Hong, Shaffer, & Han, 2017). Reggio Emilia fits with my belief that all students should be

treated respectfully, that students with disabilities should be integrated into the learning experience, and that every member is a valuable and contributing member of the learning group (Hong et al., 2017). Not every group will become a learning group, so the role of the teacher is to help facilitate that the group engages in an inquiry topic that is interesting to all group members. The teacher should verify that a group is being used only when it is appropriate because children would learn and achieve more by being in a group than by working individually (Hong et al., 2017) . Teachers are tasked with allocating adequate group time for inquiry investigations, and ensuring that each individual is purposefully placed in the group to help scaffold one another's learning (Hong et al., 2017).

Next, the teacher provides provocations for learning. This helps students with the inquiry mindset because they are encouraged to use different modes of learning, available materials, and various techniques to explore themes that are either chosen by the children or suggested by a teacher and honed by the children's interests (Gandini, 2012). Finally, children creatively research, discover, and explore what they find interesting around a theme, with teachers supporting through providing adequate time, appreciation of the contributions of all students, relationship building and asking deep, probing questions that will further the discovery process (Gandini, 2012).

When developing unit and lesson plans through the use of the UbD framework, by incorporating key elements of the Reggio Emilia experience, as well as considering the

research from Chapter 2, my guide will be well grounded in research-based, developmentally appropriate practices that will benefit student learning while incorporating play in the Kindergarten classroom in Minnesota.

Project Audience & Setting

My audience for my Capstone project is Kindergarten teachers in the United States with the end results of my guide impacting Kindergarten students across the United States. I am structuring my guide to be used universally in rural, suburban, and urban schools, because learning through play is a universal need for students in Kindergarten, as is the ability to meet Kindergarten academic standards. I use Minnesota Academic Standards to demonstrate how to tie playful learning to standards; however, the intention is that my guide is able to be used by Kindergarten teachers across the country.

When I am thinking of a model classroom for my guide, I am envisioning a Kindergarten classroom of 25 students in an urban school district in Minnesota where students have had little or no prior exposure to learning through play in the classroom, the teachers have little or no experience in incorporating play in their classroom while meeting academic standards, and the use of the outdoors as a learning environment is not regularly incorporated. I anticipate a mix of students from socioeconomic backgrounds, cultural backgrounds, and with varying levels of parental or caring adult involvement. My model classroom contains students who have experienced trauma, English Language

Learners, gifted learners, and learners with special needs; although differentiation for student abilities through play is not within the scope of my guide.. I also foresee my guide being used in an environment where there is little administrative or parent support for incorporating playful learning in the classroom as a learning tool.

My ultimate goal is to seek publication of my guide so that it is able to help Kindergarten teachers across the United States with incorporating playful learning in the Kindergarten classroom.

Project Description

My Capstone project is my creation of “A Year of Curiosity, Wonder, & Imagination: A Guide to Play in the Kindergarten Classroom.” This guide is intended to provide a handbook for Kindergarten teachers in the United States on how to incorporate play within the Kindergarten classroom while meeting academic standards by providing research-backed information on how students learn through play and how to purposefully incorporate playful learning in the Kindergarten classroom.. After the completion of the GED 8490 Capstone Project course, I plan to seek publication of my guide.

I am also providing teachers with some other ideas for how to incorporate play in subject-specific ways to promote student learning. My guide includes research-backed talking points that Kindergarten teachers can share with parents, administrators, and other stakeholders on the importance of children learning through play in Kindergarten. This is

included because I am using a model school district where there is little administration or general parent support for incorporating play within the Kindergarten classroom.

Since my model teacher has not regularly incorporated play within the Kindergarten classroom, I include ideas for successfully creating a model classroom environment that supports learning through play and how to set up spaces that can help provide provocations to play. Furthermore, my guide contains suggestions on how an outdoor classroom environment can be used to enhance student learning through play and deepen student inquiry.

I provide ideas of many loose parts that teachers may be able to scavenge for free for their classrooms to support the lessons in my guide and future explorations. A list is provided of the types of open-ended materials and toys that best help enhance student learning through play.

I plan to informally track the effectiveness of my guide by asking teachers to voluntarily complete a short survey with the questions as shown in Appendix C (See Appendix C). This survey request will be written into my guide with my email address. I will use these survey results to help me determine the usefulness of the guide as well as to implement changes and make additions.

While my project is ambitious in scope, I feel it is important for these elements to be incorporated to ensure that play can successfully be incorporated into the Kindergarten classroom while allowing students to meet academic standards. Realistically, play cannot

be incorporated into my model school without thinking through and providing these types of communications with administrators and parents. I anticipate working on various elements of this guide gradually over time as ideas are spurred from my student teaching experience.

Project Timeline

I have taken the GED 8490 Capstone Project course during the Spring 2020 term, with project completion occurring May 2020, and the first version of my guide will be available on Hamline University's Digital Commons. My intention is to seek publication of my guide after this time.

Conclusion

It has been of critical importance to me through the Capstone project process that I not only create something of use for the benefit of my own classroom that fits with my core beliefs, but that I also use a format where the information I create will be of use to other Kindergarten teachers in the United States. I have determined that the best way to do this is to provide the different types of resources that Kindergarten teachers need to begin incorporating play as a pedagogy in the Kindergarten classroom by using a guide format.

Through the course of this chapter, I have explored the various components of my Capstone Project that lead to the creation of my guide, "A Year of Curiosity, Wonder, & Imagination: A Guide to Play in the Kindergarten Classroom" to answer my research

question, *How can developmentally appropriate play be incorporated into the Kindergarten classroom while still meeting grade-level academic standards?* I provided an overview of my guide and explained the UbD and Reggio Emilia research frameworks and methodology that will be used to design my guide along with the research I did in Chapters One and Two. I delineated my project audience and my model setting. This chapter also provided a detailed description of different components of my project. Finally, I provided a timeline for completion of my guide.

Chapter Four will be the conclusion to my Capstone project. It will feature some of what I learned through the process of creating my guide, my personal growth through the course of the Capstone process, the potential implications and limitations of my process, and areas for further research.

CHAPTER FOUR

Conclusion

Introduction

Prior to starting my Capstone project and paper, I was undecided about my views toward implementing learning through play in Kindergarten classrooms in a way that still met academic standards. I was not sure whether it could be done. I felt frustrated with how academic standards are often treated as a curriculum by school districts, which is not how they are intended to be used. I knew that children naturally learn through play. I was concerned learning through play might be seen as a “fluff” topic, which would affect my future credibility as an educator. In fact, I expected and intended to pursue another topic altogether. Through the course of my Capstone project and paper, I have undergone a personal and professional journey which has culminated in me ending in a very different place than where I started.

This chapter is focused on how my research question has affected my personal learning through the process of creating my guide, the influence of my literature review on my work, my personal growth throughout the Capstone process, the potential implications and limitations of my project, and areas for further research, both personally and for other researchers. Throughout this chapter, each of these areas is explored through the lens of my research question: *How can developmentally appropriate play be*

incorporated into the Kindergarten classroom while still meeting grade-level academic standards?

Personal Learning

I started this project knowing very little about learning through play in Kindergarten except what I experienced as a Kindergarten student many years ago, and what I saw had changed as I was in Kindergarten classrooms during the course of my education courses for my Masters degree. I knew from my interactions with children of all ages that children naturally learn through play, but I was not sure the degree to which it could be realistically incorporated into the Kindergarten classroom of today. I felt an internal struggle with school districts choosing to use academic standards as a curriculum, which is not how they are intended, and the need for guidelines and high expectations. I was also concerned that as someone new to the education field, I would not be taken seriously if I was a proponent of learning through play in Kindergarten.

I began by reading as much as I could find from as many different legitimate, academic sources about the topic. This led me to develop an understanding of who the experts in the field are, what the research has shown, and what learning through play in a Kindergarten classroom looks like when it is done well. It also influenced my idea of my project becoming a guide for incorporating learning through play in the Kindergarten classroom.

Throughout the course of my Capstone journey, I have become more knowledgeable about what play is and is not, how students learn through play, as well as why learning through play is developmentally appropriate. Additionally, I have learned how Kindergarten teachers can plan, model, support, and reflect on playful learning in their classrooms. I have also learned about the reasons why playful learning has largely disappeared from Kindergarten classrooms in the United States and some challenges associated with bringing it back. I can provide research sources to support learning through play in the Kindergarten classroom. I also have developed a guide and tools that will be useful as I incorporate learning through play in my future classroom.

The concern about how learning through play is perceived in elementary education is real. After I have completed my Capstone paper and guide, I resolutely believe that Kindergarten students should have opportunities for playful learning throughout the school day. I have learned that I will fit best in a school where learning through play is valued by the administration. I also feel a duty to share what I have learned with parents and other educators to help them understand and value this pedagogical choice.

Literature Review Revisited

When I began my literature review, I originally envisioned that the Reggio Emilia approach would have a greater influence and prominence in my project than it did in the end result. This changed namely because as I consulted more sources, I found that

Reggio Emilia is strongly based on the culture of where it is in Italy. Upon further exploration, I did not think it was advisable to take an educational approach that fits in one culture and environment and to move it in its entirety to a very different environment and culture, as these are major factors that would affect the success of its implementation. Instead, it is important to incorporate and honor the cultural context of the students we have while providing exposure to new ideas. Educators absolutely can learn from and incorporate some elements of the Reggio Emilia approach, but with the understanding that using the approach in Kindergarten classrooms in the United States may not necessarily have the same results. Reggio Emilia is also thought of as an emergent pedagogy, and does not have widespread use in the United States. Due to these factors, I only incorporated elements of the Reggio Emilia approach that I found were supported by other research on learning through play.

Similarly, I originally thought that I may incorporate elements of Montessori and Waldorf pedagogy into both my paper and my project. As I read more about the philosophies, I decided to instead focus on finding research that would better fit a mainstream, public school Kindergarten classroom like one where I will probably teach.

I found sources such as Elkind, 2007; Miller & Almon, 2009; Eberle, 2009, 2014; Copple & Bredekamp, 2009; Dinnerstein, 2016; Gronlund & Rendon, 2017; Tomlinson, 2009; Hanscom, 2016; Louv, 2008; and multiple publications with Hirsh-Pasek and Golinkoff as authors to be helpful in writing both my paper and my guide. These sources

were useful because they were based in solid research. Additionally, these sources provided a breadth of knowledge about play in general, playful learning, and how playful learning should be implemented into Kindergarten classrooms.

Project Implications and Limitations

Imagine for a moment a Kindergarten classroom where students have experiential, hands-on learning experiences, where a classroom environment is carefully constructed for students to feel valued, included, and able to explore, discover, and imagine. Students have opportunities for playful learning throughout the school day, and the classroom environment is rich in literature, toys, and materials that facilitate learning through play. Kindergarten teachers share play documentation with parents and students to help them understand how play helps students learn. Teachers feel like they can successfully incorporate play into their Kindergarten classroom using the guide for ideas and templates. Teachers are confident about incorporating play in their classroom without professional implications because they have research they can easily access to show that their playful learning pedagogy has a strong basis in research.

What you just imagined is the type of Kindergarten classroom I have tried to create and support through the use of my guide, “A Year of Curiosity, Wonder & Imagination: A Guide to Play in the Kindergarten Classroom”. If I have succeeded, the implications of my work is that it will be valuable to both Kindergarten teachers and their students across the United States in many ways. One implication is that it can help key

stakeholders become informed that students should learn through play in Kindergarten because it is developmentally appropriate, but playful learning can also be tied to academic standards.

Potential implications for teachers are that they regain a sense of intellectual challenge due to the need to be responsive for unscripted student learning through play and they experience their own innovation and creativity that is stifled through teaching with worksheets. Teachers get to teach in a classroom where there is both joy, wonder, and learning. Teachers are playful in how academic standards can best be met and look for opportunities for integration of subject matter through provocations to play. The focus shifts from only growing a student academically to providing students with opportunities to develop as a whole person. Teachers use themes and their corresponding big ideas as well as student interests to drive the direction of study instead of using academic standards as a curriculum and following only teacher-chosen topics.

Kindergarten students benefit when their teacher uses my guide because they are not subject to inappropriate academic rigor (or are subject to diminished academic rigor), and they are forming solid, developmentally appropriate learning as a positive foundation for their formal education experience. Students develop in each of the five early childhood developmental domains through learning through play and through their playful learning during project-based learning. These potential implications for my

Capstone project show that it provides value to Kindergarten teachers, students, and the body of knowledge for the field of Elementary Education.

As with any Capstone project and paper, there are some limitations to the scope and therefore, the value of my work. There is not a good deal of support for incorporating learning through play back into the Kindergarten classroom from policymakers, administrators, parents, and some educators (Nicholson et. al., 2016). My project will not sway all of these stakeholders to be supportive of playful learning in Kindergarten, but it is a step in the right direction, giving Kindergarten teachers a guide to give students opportunities to learn through play while still meeting academic standards. My project also is focused on learning through play while meeting academic standards in public schools in the United States. As the focus of my research has not extended to private schools of which there are many iterations and different philosophies, my project is limited in the ability to influence practice in this sector of education.

My project is focused on the Kindergarten grade level. While some of the cited research, ideas, and activities may be useful for teachers of preschool or first grade, other grade levels are not the focus of this work. I purposefully limited my project to this grade-level because there are some unique features that make Kindergarten an ideal place to use playful learning in the elementary school. Starting with learning through play in Kindergarten helps to provide students with a positive foundational year for their formal education.

Another limitation of my research is that I have not focused on or included ways to differentiate learning through play for students of varying needs. The reason for this limitation is because this could be an entire guide itself, so there was not adequate bandwidth to dedicate to it. I felt that this was justifiable because many of the ways that teachers normally differentiate for their students are similar to what they would do to differentiate when students learn through play. Despite these limitations, I believe my work is valuable to Kindergarten educators, their students, and adds to the body of knowledge in the field of Elementary Education.

Future Research Potential

The limitations of my project present opportunities for future research. Specifically, it would be useful for there to be greater exploration on whether students with special needs and from different socioeconomic classes experience the same benefits from learning through play as other students. It would also be useful if there were literature providing specific guidance of how to differentiate learning through play for students who are gifted, students who have sensory issues, students who are on the Autism Spectrum, and other students with special needs. Additional studies comparing the academic performance of students in play-based Kindergarten to that of students in a non-play based Kindergarten at different grade levels would help to provide more concrete evidence of the long-term implications of using play-based learning in Kindergarten.

Personal Growth

There has been great personal growth that I have experienced during both the creation of my project and the writing of this paper. One of the main areas of personal growth has been the result of my struggle between perfection and reality. I have come to terms with the reality that I simply cannot give my all to everything all the time. There is only so much bandwidth that I have, and I have to allocate it planfully based on my priorities. Finishing my guide and this paper in the midst of a global pandemic and its resulting effect on my family has been very difficult. I have needed to devote some of my writing time to my family's needs. I lost a significant portion of my writing time as I no longer was able to have my mother-in-law or parents help out with childcare. This had led to a reframing of my thinking where instead of always being determined to give my best possible effort, I am giving my best effort that my circumstances allow.

I have also grown through my determination to finish and not give up when it got difficult. There have been times that I have questioned whether my decision to pursue this degree has been selfish and whether it was worth continuing, despite feeling that this is my calling. I became resolute that I would persist and finish my degree, including this paper and my project. I am determined to set an example for my daughter that I can do hard things, and so can she.

I have also felt growth in having a flexible mindset. I originally went into this project and paper thinking I was going to have a completely different topic based on

teaching through the use of school gardens. Learning through play was another topic choice, but I had firmly decided on a topic around school gardening. When I was encouraged to explore learning through play, I was initially apprehensive because there was very little I knew about it. However, as I have explored learning through play further, it has unexpectedly become a source of passion and continued interest. While the end result is not what I originally expected, the journey has led me to be more open to allowing for organic growth during a process.

I have grown through being open and seeking out possibilities. I would not have thought to pursue publication of my guide had it not been suggested by my professor. This has led me to ponder how I can continue to learn more about the topic of learning through play in Kindergarten and make improvements to my guide while teaching. I have always been a planner, but this experience has helped me to see that sometimes I can have bigger plans for myself.

I have experienced growth through being willing to advocate for an unpopular position. I have seen many educators diminish the value of learning through play when I have been in schools and throughout my Masters program. My motto as an educator is to “Always do what is best for the children.” Due to these criticisms, I have been resolute to provide a breadth of research supporting the use of playful learning in the Kindergarten classroom. I will continue to practice and advocate for a balanced approach for teaching in Kindergarten that includes playful learning.

This growth has come with a personal cost of lost family time. I found it ironic (and very difficult) that I would be writing about play which led me to being unable to play with my daughter as much as we both would have liked. Due to the high personal cost, it is essential to me that I use what I have learned beyond the completion of my degree to make the effort and sacrifices expended worthwhile. I plan to do this by using my guide in my own classroom and pursuing publication of my guide.

Personal Future Research

I plan to seek publication of my guide, but there is more research that I would like to add to it to further support what I have developed than time constraints permitted. I would like to add in more citations of research around using playful learning in Morning Meetings and Closing Circles, incorporating play through the use of Morning Bins, and how to regularly incorporate playful learning using the outdoors. I plan to add a section to my guide on how to support play during recess and through purposeful “brain breaks” throughout the day.

I would also like to be able to add a checklist of Common Core Kindergarten standards to improve the value of my guide for Kindergarten teachers outside of the state of Minnesota. I also plan to add signs that can be printed and posted at each learning center that shows what is being learned when the students are engaging in playful learning at each center. I will add a template for a weekly newsletter for Kindergarten families as well as copy-and-paste verbiage to be used for the section on playful learning

for each week of the school year. Finally, I would like to supplement my guide with the creation of a PowerPoint presentation that can be shared with parents and administrators to help them understand and support playful learning in the Kindergarten classroom as well as a supplemental handout.

Conclusion

Both students and teachers benefit from the use of developmentally appropriate learning through play in the Kindergarten classroom as part of a balanced pedagogical approach. No longer should play be looked down upon as a “less than” pedagogy, but instead, it should be truly valued for its positive potential implications. Playful learning can and should be implemented in Kindergarten in a way that still allows students to meet grade-level academic standards. Joy, wonder, imagination, exploration, and discovery through playful learning should be a regular part of the Kindergarten day once again.

During the course of this chapter, I described my journey of how the exploration of my research question has affected my personal learning through the process of creating my guide, the influence of my literature review on my work, my personal growth through the course of the Capstone process, the potential implications and limitations of my project, and areas for further research, both personally and for other researchers.

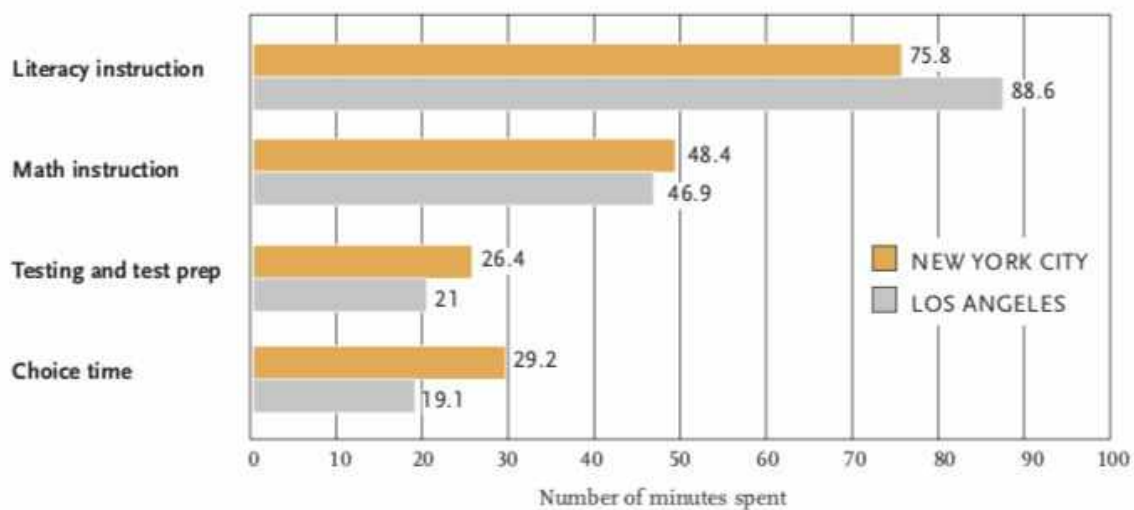
Throughout this chapter, each of these areas was explored using my research question:

How can developmentally appropriate play be incorporated into the Kindergarten classroom while still meeting grade-level academic standards?

APPENDIX A

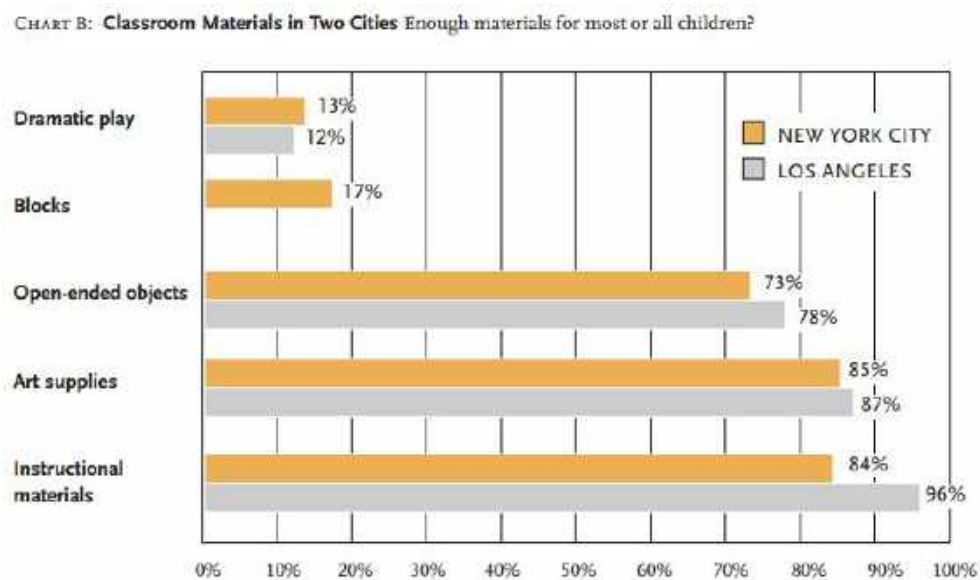
Figure A1. Daily Kindergarten Schedule in New York City and Los Angeles

CHART A: Daily Kindergarten Schedule in Two Cities Average number of minutes spent daily in selected activities



From Miller, E. & Almon, J. (2009). *Crisis in the kindergarten: Why children need to play in school*. College Park, MD: Alliance for Childhood, pp. 28.

Figure A2. Classroom Materials in New York City and Los Angeles



From Miller, E. & Almon, J. (2009). *Crisis in the kindergarten: Why children need to play in school*. College Park, MD: Alliance for Childhood, pp. 30.

Figure A3. Obstacles to Kindergarten Play in New York City and Los Angeles

CHART C: Obstacles to Kindergarten Play, New York City

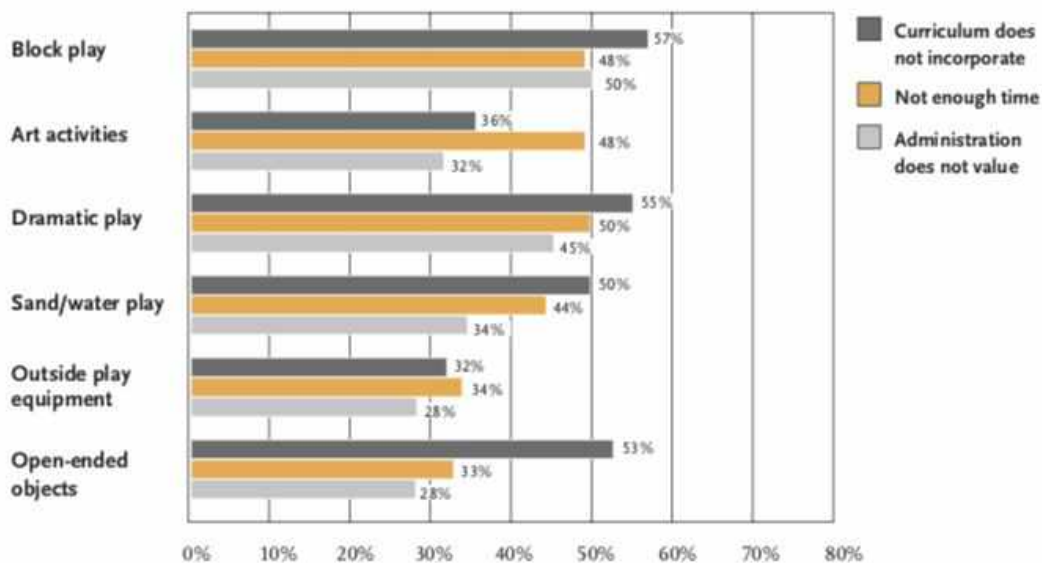
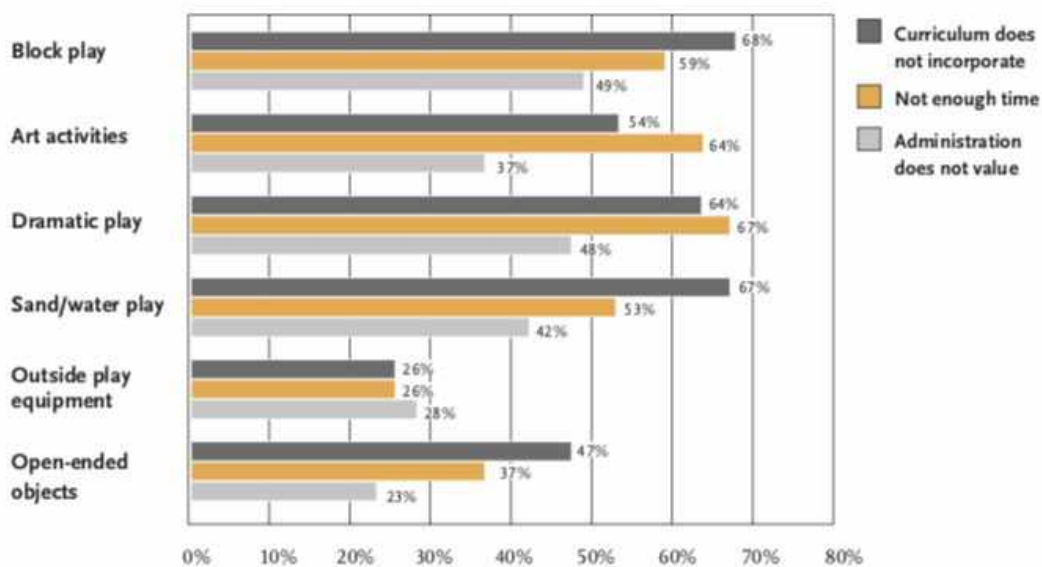
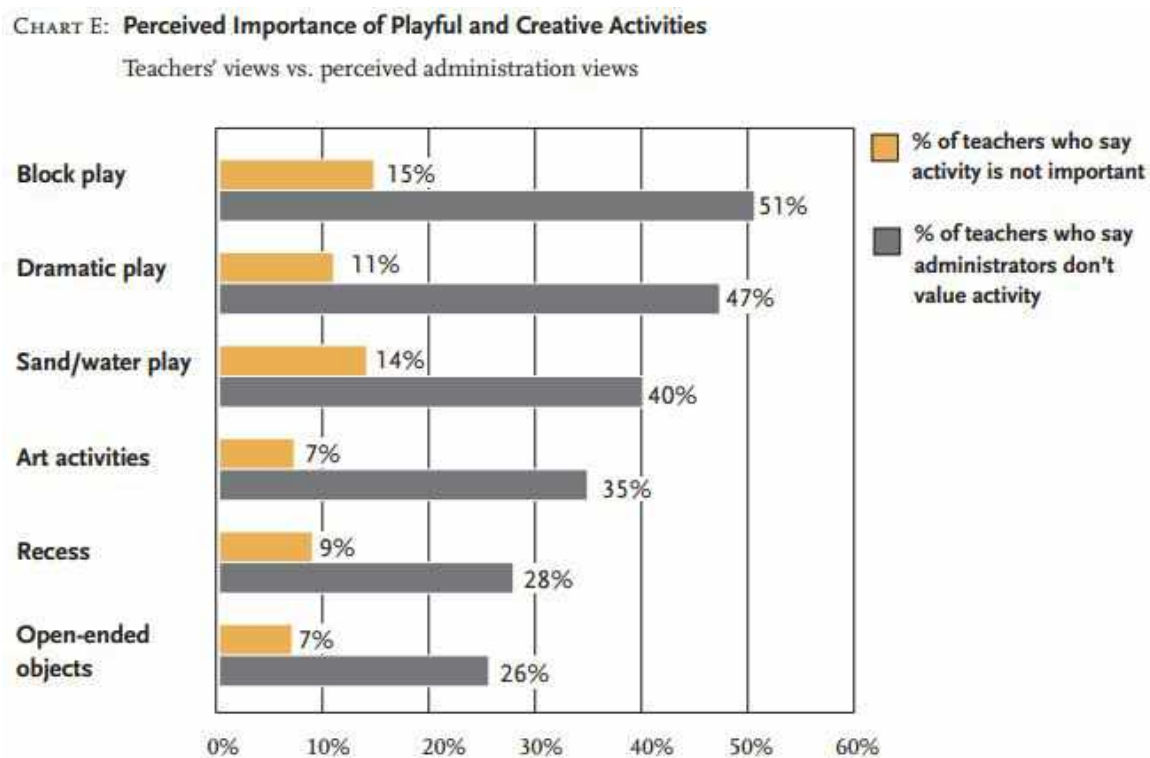


CHART D: Obstacles to Kindergarten Play, Los Angeles



From Miller, E. & Almon, J. (2009). *Crisis in the kindergarten: Why children need to play in school*. College Park, MD: Alliance for Childhood, pp. 30.

Figure A4. Perceived Importance of Playful and Creative Activities



From Miller, E. & Almon, J. (2009). *Crisis in the kindergarten: Why children need to play in school*. College Park, MD: Alliance for Childhood, pp. 31.

Figure B2. Understanding by Design - Determine Acceptable Evidence

DETERMINE ACCEPTABLE EVIDENCE

What evidence will show that students understand _____ ?

Performance Tasks, Projects

Quizzes, Tests, Academic Prompts

<p>Other Evidence <small>(e.g., observations, work samples, dialogues)</small></p> <div style="border: 1px solid black; padding: 5px; min-height: 100px;"> <hr/><hr/><hr/><hr/><hr/><hr/> </div>	<p>Student Self-Assessment</p> <div style="border: 1px solid black; padding: 5px; min-height: 100px;"> <hr/><hr/><hr/><hr/><hr/><hr/> </div>
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From Wiggins, G. & McTighe, J. (1998). *Understanding by design*. Alexandria, VA.: Association for Supervision and Curriculum Development, pp. 182.

Figure B3. Understanding by Design - Plan Learning Experiences and Instruction

PLAN LEARNING EXPERIENCES AND INSTRUCTION

Given the targeted understandings, other unit goals, and the assessment evidence identified, what knowledge and skill are needed?

Students will need to know ...	Students will need to be able to ...
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

What teaching and learning experiences will equip students to demonstrate the targeted understandings?

♦ Use additional sheets as needed. ♦

From Wiggins, G. & McTighe, J. (1998). Understanding by design. Alexandria, VA.: Association for Supervision and Curriculum Development, pp. 183.

APPENDIX C

Voluntary survey for Kindergarten teachers using “A Year of Curiosity, Wonder, & Imagination: A Guide to Play in the Kindergarten Classroom..

Statement	Please bold “Agree” or “Disagree” as appropriate for each statement.	
“A Year of Curiosity, Wonder, & Imagination: A Guide to Play in the Kindergarten Classroom” helped me incorporate play in my classroom to help students learn while still meeting Kindergarten academic standards.	Agree	Disagree
“A Year of Curiosity, Wonder, & Imagination: A Guide to Play in the Kindergarten Classroom” helped me communicate the importance of learning by play to parents.	Agree	Disagree
“A Year of Curiosity, Wonder, & Imagination: A Guide to Play in the Kindergarten Classroom” helped me communicate the importance of learning by play to administrators.	Agree	Disagree
Previously, I found it difficult to incorporate learning through play in my classroom.	Agree	Disagree
I am now incorporating learning through play in my classroom multiple times daily.	Agree	Disagree
I would recommend “A Year of Curiosity, Wonder, & Imagination: A Guide to Play in the Kindergarten Classroom” to other Kindergarten teachers.	Agree	Disagree

RESOURCES

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