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The impact of play-based learning on early childhood development

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The Impact of Play-Based Learning on Early Childhood Development

A Master's Project

In Partial Fulfillment of the Requirements for the Degree

Master of Science in Teaching

State University College at Cortland

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Abstract

This action research project emphasizes the recognized influence of play on children's social. emotional, and cognitive growth. The researcher explored how play-based learning strategies contribute to students' development, drawing insights from existing literature. The research used mixed methods to analyze the impact of play-based learning on social, emotional, and cognitive development in a sixth-grade classroom. The researcher collected data over six weeks. Initial findings showed the effect of play-based learning on students' development. The baseline data in this action research project showed that this group of students enjoys playing inside, outside, independently, or in a group. The researcher found that these students crave that time for creativity and fun in their daily schedules. Students had a difficult time regaining focus following free play and no play. However, the researcher observed that students engaged in free play were more inclined to invite others to play with them. The researcher observed that students were more willing to work with people outside their friend groups in the third week of this intervention. Research shows that when students are engaged in meaningful, play-based activities, they are more open to all kinds of learning. This action research project provides information on the many benefits of play-based learning on students' cognitive, social, and emotional development.

Introduction

Over the years, the shift towards incorporating more play-based learning in the classroom has grown. The need for play-based learning is increasing as recess times are shrinking and more time is allotted for computer-driven test prep. The education system has been taking more and more play away from students and replacing it with structured activities that require no imagination or hands-on work. We have come to a sad time in the world with a growing number of kids who don't know how to play or interact with their peers. The socialization students get from engaging in play-based activities is crucial to their overall development. Children practice social skills, emotional regulation, language acquisition, cognitive skills, and physical health through play. Play-based learning is a fun way to learn, where you can explore, experiment, and discover new things while having a great time. It's all about using your imagination, curiosity, and creativity to learn naturally and inclusively. Implementing play-based learning creates an environment where students feel motivated, engaged, and excited to participate actively in their education. When students engage in a play-based activity, their minds and bodies learn. The sixth-grade class at Grimshaw Elementary struggled with teamwork, creativity, and controlling their emotions. Through research and exploration, play-based learning can significantly benefit student development. This action research project will answer the question: How does play-based learning shape young children's cognitive, social, and emotional development?

Play-based learning is an academic approach that uses play as a central tool for children's learning and cognitive development. Play-based learning focuses on engaging students in more pleasurable, unconstrained, and intrinsically motivated activities rather than traditional instruction methods. This approach acknowledges the importance of play in fostering cognitive, emotional, social, and physical development. Reviewing literature on the various pedagogical strategies and techniques related to play-based learning can provide educators with insight into how play supports different aspects of students' development. This recognition allows teachers to make informed decisions when drafting curriculum, designing activities, and encouraging a learning environment that supports every student's development. Play-based learning enhances cognitive, social, and emotional development in young children. This action research project will answer the following questions: How does play-based learning shape young children's cognitive, social, and emotional development? What lasting effects does it have on their overall well-being?

Literature review

To gain a deeper understanding of the benefits of play-based learning on early childhood development, the researcher looked at five articles centered around the common themes of educational outcomes, cognitive development, and social development. Through these three themes, we can understand how play-based learning can positively impact students' overall growth and learning experiences. Patton, B. (2023) and Danniels, E., & Pyle, A. (2023) explore how play-based learning can be inclusive and cater to diverse needs, ensuring that play-based learning is accessible to all students in the classroom, making it possible to achieve positive academic outcomes. Hunter, J. (2019) and, Taylor, M.E.,& Boyer, W. (2020) explore cognitive outcomes associated with play-based learning and resources or strategies to help educators integrate play into their curriculum. Lastly, Mabagala, S. (2016) examines the social

consequences of implementing play-based classroom learning. These three themes will be explained and presented in detail using evidence and insight from these five articles.

Educational outcomes of play-based learning

Teachers can explore the benefits of play-based learning through various pedagogical approaches that strengthen and support the educational outcome of students in the classroom. "Play-based learning is centered around children's play and the teacher's role in enhancing the learning that takes place in play, including both developmental (i.e., literacy, math) skills (OME, 2016) (Danniels & Pyle, 2023)." Play-based learning is not simply letting students run around and do whatever they want. Play-based learning makes learning fun for students, allows students to explore and inquire naturally, and teaches them inclusion when implemented correctly. Through play-based learning, students work collaboratively on something they are interested in. The educational outcome of play-based learning "provides children with joyful experiences associated with their learning, adds motivation, and keeps children's attention (Patton, 2023, p. 2)." Creating a learning environment that fosters inclusive play-based learning approaches caters to various learning styles and abilities, supporting literacy and numeracy development for all students. Play-based activities like storytelling, rhyming, imaginative play, and playing with sounds enhance students' literacy development. Interactive games that involve building or manipulating objects, counting or arranging objects, and incorporating numbers into games improve students' numeracy skills. Researchers found that learning in the classroom can become more intentional through play and that children develop skills and understanding that help to further their academic skills (Patton, 2023)." When students are interested in what they are learning, they are no longer learning because teachers want them to but because they want to. Implementing play-based learning benefits students' educational outcomes by enhancing the

learning already taking place in the classroom and creating play-based activities centered around how and what students are interested in.

Understanding the cognitive benefits of play-based learning

Play-based learning in the classroom enhances cognitive skills by providing an engaging environment where students can overcome challenges, think critically, make decisions, and express themselves. For students to grow, they must feel welcomed and connected in their learning environment and confident in their abilities as learners (Hunter, 2019). Integrating play in the classroom ensures cognitive skills are developed in a structured learning environment. Activities involving sensory experiences through open-ended activities during the learning process contribute to cognitive development (Taylor & Boyer, 2020). In play-based learning, students learn to collaboratively solve problems by working with one another and respecting one another's belongings and feelings in a shared space. Play-based learning allows students to work collaboratively when faced with difficulties or challenges in a scenario that mimics Real-life situations in a meaningful and engaging way (Danniels & Plyle, 2023). Students can express themselves through building, drawing, and engaging in imaginative play in a play-based learning classroom. Play encourages students to explore new ways of thinking and generating new ideas creatively (Taylor & Boyer, 2020). In a play-based learning environment, students are given a certain amount of freedom to decide how they engage with learning. Integrating developmentally appropriate learning experiences in the classroom is often challenging. Allowing students to think, read, learn, remember, reason, and pay attention in an exciting and engaging environment will enable them to think critically and express themselves.

Play-based learning promoting social skills development

Play-based learning fosters an empathetic perspective and develops a sense of community within a classroom. Vygotsky believed that play is a tool to guide children in mastering their behavior, as he viewed it as social development (Mabagala, 2016). Research shows that children play using verbal and non-verbal communication, and they have learned to express themselves, listen to others, and interpret social cues (Mabagala, 2016). Play-based learning allows students to experience and work through conflict. Teachers can play a supportive role in promoting social interactions among students during play by asking questions, offering help, and providing suggestions to help students work cooperatively (Danniels & Plyle, 2023). Teachers can also support students by connecting play situations and real-life experiences in an inviting and stimulating environment (Hunter, 2019). As children play and learn together, they form a little community within their classroom where students are all actively working towards a common goal. Through play-based learning, students learn to contribute and share in this community they have created. Play-based learning allows students to express and understand emotions through interaction and learning to recognize and respond to the feelings of others (Taylor & Boyer, 2020). When students think creatively and use their imaginations, they can consider different perspectives and think about situations from another point of view. Through cooperation and exploration, play-based learning allows students to develop empathy, take on new perspectives, and develop a sense of community within the classroom.

Methods

Play-based learning methods utilize play as a central component of students' educational experience, creating an engaging environment where students actively explore, experiment, and build knowledge. In these methods, play is not merely a break from learning but rather how

learning occurs. Through play-based learning, students develop essential skills such as communication, collaboration, critical thinking, and self-regulation. These skills set students up for lifelong learning. Play-based learning methods celebrate the unique learning styles of each student, allowing them to learn at their own pace. At the beginning of the year, I saw students craving play in their lives. Students would beg for extra recess, more activity time during morning meetings, or sneak video games when they were supposed to be working.

This group of 45 students gets along well, coexisting in their classrooms and hallways with civility. However, when paired randomly, students expressed discomfort with the arrangement. They even argued with the matchup solely because they did not get paired with their friends. When students are grouped randomly, it helps them build the mindset that every student is an equal participant in the classroom. By incorporating play-based learning strategies, educators can create an atmosphere that encourages engagement and participation, even among students who may initially be hesitant to work with each other. While some play-based activities are individual, others may naturally promote social interaction. As students engage in games, they indirectly collaborate or communicate with their peers, helping build social skills in a more relaxed setting. Play-based learning taps into students' natural curiosity and intrinsic motivation. When activities are enjoyable and exciting, students are more likely to engage willingly, even if they are hesitant to work with others. Play-based learning often allows for individual exploration and creativity. Students reluctant to collaborate directly with their peers can still participate in activities independently, gaining valuable skills and knowledge. Like any class, this class would benefit from play-based learning in many ways.

Setting

LaFayette is a small town in Onondaga County, New York, with just under five thousand people. Grimshaw Elementary serves approximately 288 K-6 public school students in the LaFayette Central School District. Within those 288 students, 0% are Black or African Americans, 1% Hispanic or Latino, 0% Asian or Native Hawaiian/ Other Pacific Islander, 75% White, 1% Multiracial, and 23% American Indian of Alaska Natives. There are approximately 0% English language learners, 15% students with disabilities, 47% economically disadvantaged, 0% migrants, and 0 homeless, foster care, or parents in the armed forces. Grimshaw Elementary comprises approximately 55% male students and 45% female. The researcher collected data in a classroom consisting of fourteen students, ten male and four female.

The sixth-grade team comprises three teachers: Meagan Jean teaches social studies and science, Holly Brooks teaches ELA, and Patrick Wilson teaches Math. Meagan Jean has been an educator at Grimshaw Elementary for nine years and describes her experience with the district as nothing less than extraordinary. She has felt nothing but support from her coworkers and the district. This small district has a strong sense of community seen throughout the school. Ms. Jean takes pride in the community she has built within her sixth-grade classroom. Once a month, the sixth-grade team meets with a member from the Onondaga Nation School for a professional learning community or PLC meeting to discuss what has been working/not working in the classrooms. There is a strong sense of teamwork and unity within the sixth-grade team and the entire district. Several students in the class receive modifications such as having things read to them in ELA and access to devices like multiplication tables in math. These services are provided by a resource teacher who pushes in during both classes. Working closely alongside the sixth-grade team to ensure each student can perform to the best of their abilities.

Participants

Student demographics refers to the student's ethnicity, race, gender, etc., within a school or district's population. Student demographics display a range of characteristics possessed by their community. Teachers need to know the student demographics in their communities to provide the best possible education to every child. Analyzing the community's demographics allows you to better understand the students in your classroom and where they come from: their cultural backgrounds, family life, and beliefs. It is crucial to incorporate and accept different cultures in your classroom and work with families to find a curriculum that best suits their children's strengths.

Procedures

The researcher would observe students as they transitioned between classes, interacted with their peers, and played at recess. This group of sixth graders gets along exceptionally well. Many of the students are engaged in group activities at recess. Students stop to chat with one another in the hallway as they walk to their next class. The findings of the baseline data show that this cohort gets along well with no issues. However, this is not true. To the naked or outside eye, this group of sixth-grade students seems to excel in cognitive, social, and emotional development. The baseline data showed that students enjoy playing outdoors and engaging in hands-on activities, which most children do. Collecting the baseline data from students' guardians provided insight into students' home lives, how they seem to learn best, and how they prefer to spend their time. Children love to play, and that is no secret. However, children generally don't see the developmental benefits of playing games with their peers. By sixth grade, many students had fallen into a set friend group and were fighting over who would be in what group or who would sit next to whom at the morning meeting. I observed students refusing to

work with other students because they did not like them. This group needed to learn to work as a team and build social skills. The information gathered from the baseline data provided the insight necessary to introduce students to play-based learning and how it benefits them. This cohort learns best from participating in engaging hands-on activities. This cohort will benefit most from social-emotional activities that focus on team-building skills. Building social skills through play is effective and enjoyable for students

To collect baseline data to assess how students are impacted by play-based learning, the researcher started by collecting information about their current skills, attitudes, and behaviors related to learning. In September 2023, the researcher administered surveys for students to bring home to their caregivers (see Appendix A). These surveys were used to gather baseline data on students' attitudes toward learning, their interests in and outside of school, and their perceptions of play-based learning. The researcher observed students in various learning environments to understand their engagement levels, social interactions, and problem-solving abilities. The researcher observed students' behaviors during structured and unstructured play activities and their interactions with peers. The researcher then asked students to complete a survey of questions on the benefits of play-based learning and how and when they have seen it implemented (see Appendix C). The researcher encouraged students to reflect on their strengths and attitudes towards play-based learning. The week before taking the survey, the researcher allowed students 15 minutes of undirected free time for the activity portion of the morning meeting. The week following taking the survey, the researcher eliminated the activity portion of our morning meetings. Two weeks following the survey, the researcher reintroduced the activity portion of our morning meetings. At the end of the second week, the researcher reviewed the survey questions with students and asked them to answer a yes or no question. Did you feel that

you were better prepared for learning after engaging in an activity during the morning meeting, yes or no? By collecting the baseline data through these methods, the researcher could understand and evaluate the benefits of play-based learning and measure changes in students' skills, attitudes, and behaviors. Using quantitative and qualitative research methods, the researcher observed students' understanding of play-based learning and its benefits for their overall learning experience.

The first step of the research project was to understand student interests, culture, learning styles, and struggles. The results from a survey sent home to students' guardians expressed that these students enjoy spending time outdoors and participating in hands-on activities (Appendix A). An inconsistency I ran into with the student interest surveys was not receiving all the surveys from families. The second step was introducing play-based learning to the students (Appendix B). Explaining play-based learning empowers students to become active participants in their learning experience, fosters a positive attitude towards learning, and equips them with the essential skills for success in school and life after school. Students may not initially recognize the educational value of play-based activities. Introducing the concept of play-based learning helps students understand that these activities are purposeful and contribute to their learning and development. When students understand and appreciate the value of play-based learning, it fosters a positive learning culture in the classroom. Students developed a sense of curiosity, resilience, and openness to new experiences. Introducing the principles of play-based learning helped students transfer the skills and knowledge they gained from play-based activities to other areas of their lives. They learned to apply creativity, critical thinking, and problem-solving skills in various contexts. The third step of the research project was to have students complete a survey using Google Forms on what they believe are the benefits of play-based learning (Appendix C).

This survey provided insight directly from the students, allowing the researcher to understand their perceptions, attitudes, and experiences related to play-based learning. Completing this survey prompted students to reflect on their own learning styles, preferences, and strengths. Implementing this survey gave students a voice in their classroom and created a more student-centered learning environment. The findings helped guide the implementation of the intervention so that the researcher was able to see the impact of play-based learning on early childhood development.

Creating an intervention practice for exploring the benefits of play-based learning involved designing and implementing strategies that encourage and support students' natural inclination to learn through play. The researcher wanted to promote student collaboration, communication, and social interaction. We start each class with a morning meeting with a greeting, share, and activity. This fall, the researcher observed how dependent students were on these morning meetings to start their class. The selected intervention practice was implemented over several weeks during our morning meeting. Before implementing intervention practices, the researcher had to see what students knew about play-based learning. Through surveys and discussions, the researcher learned that students had difficulty seeing and understanding the benefits of play-based learning. For the intervention practice, the researcher used several weeks to see how students felt with more or less play-based activities during their morning meetings. After students had participated in both surveys and a discussion on play-based learning, they were given the option of free play for the activity portion of the morning meeting for one week. Students played with Play-Doh, legos, Chromebooks, board games, and more. Students were not given any time for an activity during their morning meetings the following week. In the third

week, students returned to the structured games they were used to participating in for the activity portion of the morning meetings.

This action research project ran from January 22nd, 2024, to March 8th. The three baseline data collection steps in the table below took place from January 22nd, 2024, to February 16th, 2024. After collecting the data, the researcher used the information to implement an intervention strategy. The intervention steps were implemented from February 12th, 2024, to March 8th, 2024. After three weeks of implementing this intervention strategy, the researcher collected post-intervention data from March 11th, 2024, to March 15th, 2024. Using a Google form, the researcher collected data on the benefits of play-based learning on students' development and overall behavior (Appendix D).

Chart of project timeline:

Steps	Description	Dates
1- Collecting Baseline Data	Student Interest Survey sent home (Appendix A)	January 22nd, 2024- January 26th, 2024
1- Collecting Baseline Data	Discussion on Play-Based Learning (Appendix B)	February 5th, 2024- February 9th, 2024
1- Collecting Baseline Data	Google Forms Survey (Appendix C)	February 12th, 2024 - February 16th, 2024
2 - Implementing an Intervention	Morning Meeting Activity: Free Play	February 12th, 2024- February 16th, 2024
2 - Implementing an Intervention	Morning Meeting Activity: None	February 26th, 2024- March 1st, 2024
2 - Implementing an intervention	Morning Meeting Activity: Normal	March 4th, 2024- March 8th, 2024
3 - Collecting Post Intervention Data	Google Forms Survey (Appendix D)	March 11th, 2024- March 15th, 2024
4 - Analyze Data	Review baseline data and data	March 11th, 2024- March

from the intervention	15th, 2024	

Baseline data

The take-home surveys shown in Appendix A allowed this action research project to go beyond the classroom. What are students' lives like outside of the classroom? What do they like to do when they're not at school? What are some of the struggles they've experienced in school? Answering these questions allowed the researcher to understand how this cohort works best. A fault in the baseline data collected for this action research project is the lack of surveys returned by caregivers. Seventeen out of thirty surveys helped me implement an intervention strategy for this specific group of sixth graders. When discussing play-based learning, referencing students' interests outside of school allowed them to make the connection between play and learning—for example, talking about how a football can contain both potential and kinetic energy with an avid Buffalo Bills fan. The baseline data collected from students' guardians in the take-home survey allowed the researcher to see where each student was cognitively, socially, and emotionally. The researcher developed a deeper understanding of students' developmental needs using the baseline data to better understand individual students' strengths, interests, and weaknesses. Aside from the take-home surveys, the researcher collected baseline data through daily observation of this cohort.

The researcher conducted a whole-group discussion with the sixth-graders on play-based learning, as shown in Appendix B, and what it can look like. The sixth graders understood play-based learning and could identify what form of play-based learning was used in certain situations (ex, free play vs. teacher-directed play). After the whole-group discussion, a short six-question yes or no survey was administered to students. When asked if play-based learning involved playing games and having fun, 16.3% of students said no, and 83.7% said yes. When

asked if play-based learning encouraged creativity and imagination, 25.6% said no, and 74.4% said ves. Most students understood that they could learn a lot by playing fun games. When asked if play-based learning was only for younger kids, 44.2% said no, and 55.8% said yes. Many students associate play-based learning with the younger grades. They recall playing math and word recognition games when they were younger but not as they grew older. When asked if play-based learning helps students develop essential life skills like problem-solving and teamwork, 11.6% said no, and 88.4% said ves. Most students understood that learning through play builds life skills that they can implement in their daily lives. When asked if play-based learning can be as educational as traditional learning, 37.2% said no, and 62.8% said ves. Students understood that through play-based learning, they are actively engaged in their own learning process and can learn just as much, if not more. Finally, when asked if students would like to see more play-based learning activities in their classroom, 9.3% said no, and 90.7% said yes. Most students expressed wanting to participate in more play-based learning activities. The students who expressed that they did not wish to see more play-based learning activities in their classroom expressed that they are easily distracted and worry that they will be unable to follow along. Conducting this whole-group discussion allowed the researcher to encourage student engagement and collaboration in the data-collecting process. Discussing play-based learning and what it might look like allowed students to advocate for themselves and work as a team to develop critical thinking skills. Following the discussion, the sixth-graders better understood what play-based learning is and what social, emotional, and cognitive benefits it may offer.

A survey was administered using Google Forms to better understand students' thoughts and feelings on play-based learning, shown in Appendix C. The questions provided valuable insight into the perspectives of sixth graders on play-based learning and its benefits. When asked

what activities students enjoy most during school hours, most students said they enjoyed recess, hands-on or fun activities, and specials. This survey showed that students prefer actively engaging and participating in hands-on activities. When asked how often they engage in play-based activities during school, most students answered one to three times a day. The sixth graders needed help understanding what this question meant by engaging in play-based activities. The common misconception was that the play-based activity had to be instructional. Many students thought that play-based learning only referred to the core subjects (math, ELA, science, and social studies) when, in reality, there is so much more to learn from play-based learning. When asked if they think they learn better when playing or when they are engaged in traditional classroom activities, 75% said they learn better when playing. The researcher concluded that this cohort is likelier to engage in play-based activities. When asked what they believe are the benefits of play-based learning, many students stated that it helps them focus, learn hard things, and stay awake. The variety of responses allowed the researcher to see the many benefits of play-based learning within this specific cohort. The sixth graders see the fun in play-based learning. encouraging student engagement. The researcher observed that many students may still need clarification on the social, emotional, and cognitive benefits of play-based learning. When asked what subjects are best suited for play-based learning, more students selected science and social studies versus math and ELA. This cohort participates in a morning meeting at the start of every social studies/ science class, including an activity. This question was misinterpreted as to which subjects already implement play-based learning. After reviewing the survey results, the researcher presented this question again, asking students which classes they believe could benefit most from play-based learning, to which most students answered math. Most students understand how play-based learning helps develop skills like problem-solving and creativity. Students expressed

that they often have to problem-solve during morning meeting activities. Students understood that participating in play-based activities allows them to identify problems, come up with solutions, and test their ideas. When asked if students remembered learning something new while playing, their responses varied between in-school and out-of-school activities. The researcher observed that this question may have been misleading and could have been asked differently for a more accurate response. Students recalled playing a game in ELA that required them to move around the classroom as game pieces in the game Candy Land, participating in a math game this fall, and many students recalled hands-on activities from science.

Collecting baseline data from two different surveys (see Appendix A and C), one completed by students' families and one completed by students, the researcher developed an intervention practice that meets the needs of diverse learners after receiving more information on play-based learning. The researcher tailored the intervention to students' baseline knowledge, skills, and attitudes. The baseline data informed the researcher's decisions regarding instructional strategies and differentiation. By understanding students' unique needs and abilities, the researcher could adjust the pace and format of the intervention to optimize the student experience. Involving parents in collecting baseline data gave the researcher insights into the student's strengths, challenges, and learning preferences. Collecting baseline data supported the researcher in implementing the intervention.

Implementing intervention

Following the baseline data, the researcher decided to implement an intervention using the activity portion of the morning meeting. The researcher implemented the intervention over several weeks. The students participate in a morning meeting at the start of each class. The morning meeting is composed of a greeting, a share, and a teacher-guided activity. In week one,

the students engaged in free play during the activity portion of the morning meeting. Free or unstructured play is when students choose games or activities that interest them with no expected learning outcome. Free play allows students to freely choose activities, use their imagination, and be creative. Free play promotes cognitive, social, and emotional development by giving students the freedom to learn through unstructured play. On the first day, many students immediately jumped on their Chromebooks and started playing video games with one another; other students chose to color, play uno, play with Play-Doh, or use one of the board games in the room. By the middle of the week, more students engaged in board games, uno, or Play-Doh. At the end of the week, all but three students who choose to color independently engaged in a group game of bingo. The researcher observed that students engaged in free play were more inclined to invite others to play with them towards the end of the week. The students tried to get everyone to join in the bingo game. Students were more willing to work with students outside their friend group when engaged in free play. Most of these students were at home, attending school virtually away from all of their classmates for the majority of their concrete operational stage of development due to the COVID-19 pandemic. According to Jean Piaget, children become less egocentric during this stage and start thinking about how other people may think or feel (Mcleod, 2024). The researcher connected that students' lack of socialization during that time may have caused their lack of social and emotional development. After observing this cohort engaged in free play for one week, the researcher observed that the students did not know how to play with one another. Most students engaged in independent or small group play with their friends at the beginning of the week.

As the week progressed, students started to get bored. Free or unstructured play forces children to be creative and come up with ways to entertain themselves. Piaget referred to children as lone scientists, interacting with their environments and exploring (Mcleod, 2024).

Free or unstructured play creates an environment for students to practice the skills we consistently use daily. As these students engaged in free play, they developed shared understandings, advancing their social, emotional, and cognitive development. The researcher observed that following the morning meeting when students engaged in free play, it was difficult for them to regain attention in the class. The students had a difficult time refocusing and sitting quietly for the lesson. The students were very chatty, discussing the games they played, who won, or what they would play tomorrow. The students kept getting out of their seats to use the bathroom or sharpen their pencils and were very distracted. The researcher observed that although engaging in free play for the activity portion of the morning meeting was beneficial to students' social, emotional, and cognitive development, it was challenging for students to transition from free play to class.

During the second week of intervention, the morning meetings did not have an activity portion. Following the share portion, students would return to their seats and get right into class. This was an adjustment for students, and many had strong opinions about not participating in an activity. Students expressed that it was unfair, boring, and stupid to skip the activity portion of the morning meeting. The researcher observed that students became less agitated as the week progressed. During this week, the researcher observed that students were fidgety in their seats, had less energy, and were less likely to follow directions. The researcher observed that when grouping students for hands-on experiments during week two of the intervention, they were more agitated when they were not grouped with their friends. Students were having a difficult time getting and staying on task. The students crave that time for creativity and fun in their daily schedules. There was an increase in doodling in workbooks, heads down during lessons, and frustration during independent work time. The activity portion of the morning meetings helps

students develop social relationships and connect with one another. The teacher-led activity also gets students out of their seats and problem-solving with their classmates. Evidence from the second week of intervention proved to the researcher how greatly this cohort benefits from play-based learning.

In the third week of implementing this intervention, students returned to the normal teacher-led activities during the morning meetings' activity portion. The students were excited to have the activity portion back in the morning meeting. They were even happy to play games they had gotten bored with. The teacher-led activities are generally games that the class has played before and understands the rules and expectations. These activities require students to practice problem-solving skills to determine who is it or who has the coin. The researcher observed that students were more willing to work with people outside their friend groups in the third week of this intervention. These whole group activities encourage collaboration and reinforce students' social skills. Students were ready to learn after the teacher-led activity portion of the morning meeting. They had minimal issues getting and staying on task. The researcher observed that the structure of the teacher-led activity allowed students to have fun but remain in control. With teacher-led or structured play, there is a set of rules to follow, which is more organized and direct. These group activities help students understand teamwork, follow directions, stay on task, and practice self-regulation. The students develop social skills by engaging in group activities requiring problem-solving. All of the students are working together to achieve one common goal. The researcher observed that many of the sixth graders preferred playing alone or with people they knew. Engaging in whole-group teacher-led activities promotes socialization and helps students develop emotional skills. In the third week of intervention, students were more willing to empathize and show kindness to one another.

Limitations

This action research project had several limitations. In collecting baseline data, the student interest survey (see Appendix A) was sent home for parents and guardians to complete. Of the 45 sixth-graders, 17 surveys were returned. The take-home survey was intended to gain insight into students' interests inside and outside the classroom. Without all of the surveys, the researcher relied heavily on observations. A second limitation was students' knowledge of play-based learning. Many students had little understanding of play-based learning, what it might look like, and how it can benefit them. The researcher held a whole-group discussion to help students understand play-based learning and its many benefits. Another limitation of this action research project was the participation of the sixth graders. The researcher administered a student survey (see Appendix C) for students to express their perceptions, attitudes, and experiences related to play-based learning. The researcher found that many students did not take this survey seriously, which hindered data collection. When asked what subjects are best suited for learning through play, most students said science because that is where they already see hands-on learning. The question was intended to discover what subjects students would like to see more play-based learning. When asked if they remember a specific time they learned something while playing, many students answered games they learned to play. The researcher could have worded this question differently to help students better understand what it was asking. When collecting data from students, it is important to recognize these limitations.

Analysis

In this action research project, the researcher observed the benefits of play-based learning on sixth graders' social, emotional, and cognitive development on their overall growth and well-being. When participating in play-based learning, the sixth graders engaged in collaborative

activities, working on teamwork and communication skills. During weeks one and three, students participated in activities where sometimes they led, and sometimes they followed, promoting the ability to work as a team, take turns, and understand one another's perspectives. These play-based learning activities offered these students a comfortable environment to express themselves freely through play. The researcher observed that play-based learning allows students to relax, have fun, and forget about academic pressures.

Following the implementation of the intervention, students completed a survey (see Appendix D) to express how they felt each week about the changes to morning meetings. The survey consisted of the same two questions for each week of intervention. The researcher saw a substantial change from weeks one and two to week three. It was difficult for students to regain focus after engaging in unstructured play. However, it was also difficult for students to restore focus after engaging in no form of play. The researcher observed that students were more in control of their minds and bodies when they engaged in teacher-led or structured play. During week one, when students were engaging in free play during the morning meetings, the researcher observed students getting bored and not knowing what to do. The researcher observed that by the first week's end, most students choose to engage in a group activity rather than independent free play. To develop social skills, students need to socialize with one another, branch out from their friend groups, and play with new people. Play-based learning encourages students to explore new ideas and be creative. In this action research project, the researcher incorporated play into the learning environment in multiple ways and observed students' social interaction, emotional expression, and cognitive exploration. The researcher observed that many students did not possess the ability to create their own fun and often found themselves bored during free play. The researcher found that students were more social when engaged in play-based learning but

had difficulty refocusing after engaging in free play. The researcher found that students were more empathetic toward others during structured or teacher-led play. The sixth graders were more willing to work in randomized groups after engaging in play-based activities with their friends. That time spent with their friends at the beginning of class allowed students to work with other classmates willingly. The sixth graders thrived in an environment of structured play and could benefit socially, emotionally, and cognitively from play-based learning.

Findings

In this action research project, the researcher found that students enjoy learning through play but need help understanding the lasting benefits. The baseline data collected from this group of sixth-graders in this action research project showed me that this group of students enjoys playing inside, outside, independently, or in a group. The take-home survey provided the researcher with information like what students like to do at home, how they learn best, positive experiences they've had in school, and challenges they've faced (See Appendix A). This student interest take-home survey informed the researcher that many students enjoy playing outdoors. playing sports, playing with friends and family, gaming, and arts and crafts. When asked how their child learns best, most guardians wrote that their child learns best through hands-on experiences and exploration. The Google form survey completed by students provided the researcher with more information on how students learn best. (See Appendix C) When asked if they feel they learn better when playing or doing traditional classroom activities, 75% of students said they feel they learn better through play, and 15.6% said they think they learn better traditionally. A student expressed that play-based learning benefits their learning because "my mind is more focused because I'm active and not just sitting around with a paper and pencil." Many students expressed that play-based learning benefits their learning by helping them to

focus through hands-on activities. When asked how play-based learning helps you develop skills like problem-solving and creativity, many students responded that play-based learning gets you involved and helps you enjoy the work. A student expressed that play-based learning helps them talk to more people. Play-based learning allows students to express and regulate their emotions through actively participating in hands-on activities in the classroom. Play-based learning fosters an innovative and adaptable mindset, enhancing students' ability to develop social, emotional, and cognitive skills. With continued implementation of play-based learning and active reflection on the many benefits, educators can create enriching learning environments encompassing students' cognitive, social, and emotional development.

Discussion

In this action research project, the researcher reviewed five articles on the common themes of educational outcomes, cognitive development, and social development. Through this research, the researcher was able to understand how play-based learning can positively impact students' overall development. Play-based learning caters to the various learning styles and abilities in the classroom. Through this action research project, the researcher implemented an intervention strategy to observe the effects of free play, no play, and teacher-led play on a group of 45 sixth-grade students. Like Danniels and Pyle's article on inclusive play-based learning, the researcher observed that the educational benefits of play-based learning are centered around children's play and the teacher's role. The researcher observed that students had difficulty refocusing and being ready to learn when there was no teacher role in the play. The baseline data collected correlated with the findings from Patton's article *Implementing Play-Based Learning*, which revealed that students are more willing to engage when they are interested in what they are learning. Students are more likely to reach the lesson's learning outcomes when actively involved

in their learning. The researcher observed that students recalled participating in hands-on activities and games versus the typical lecture teaching style.

The researcher discovered that play-based learning enhances cognitive skills by providing an engaging environment where students collaborate to think critically, make decisions, and express themselves. The students expressed that many teacher-led activities during morning meetings required problem-solving skills to determine who it was (see Appendix C). As Taylor and Boyer's findings state, play encourages students to explore new ways of thinking. Through these problem-solving activities, students must change their thinking, work together, and be creative to solve the problem. The researcher observed that many students struggled to find new ways to entertain themselves in the first week of intervention, where they engaged in free play. The students struggled to think creatively. Many students engaged in a whole group activity by the end of the week rather than finding something different to do.

Through play, children have learned to express themselves, listen to others, and interpret social cues (Mabagala, 2016). The researcher observed the social benefits of play-based learning most during week one and week three of the intervention process. As students engaged in free play during week one, it wasn't easy to regain their focus after being free to socialize with their friends in an activity of their choice. However, students showed more empathy towards their classmates during the teacher-led activities in week three. As mentioned above, many students chose to engage in group activities by the end of week one. The researcher observed students asking their classmates to join them in a group game of bingo rather than excluding them. As students learn and play together, they build relationships with one another, where students are all working toward a common goal.

The researcher observed that play-based learning helps students develop empathy. This group of sixth-graders benefited most from whole group teacher-led activities. As Mabagala's article states, teachers promote social interactions during play by asking questions and providing guidance. It is essential to implement activities that require creative thinking and problem-solving. The students get bored participating in the same activities each week. An idea would be to ask students to create activities for the morning meeting. Giving students a choice in play-based learning allows students to contribute to their classroom community. The researcher observed that many students struggled with creating new and fun ways to entertain themselves during free play. Allowing students to develop an activity will enable them to tap into that creative mindset. The researcher observed that these students need to experience boredom to grow educationally, cognitively, and socially. Once students have experienced boredom, they begin to think of new games, new ways of playing known games, and new ways to include more classmates.

Conclusion

Play-based learning enhances students' cognitive, social, and emotional development within an inclusive and supportive classroom environment. These are skills that students will use far beyond the classroom. Many children could not play with other children during the short time of remote learning. Such isolations hindered their ability to play cooperatively. Play-based learning allows students to build these skills in a positive environment with teachers guiding and monitoring them. By exercising their minds through different play behaviors, children can use high-level mental functions (i.e., abstract thinking) to manipulate and monitor thoughts and ideas without direct and immediate reference to the real world (Mabagala, 2016). Properly executed, play-based learning will teach students real-life skills creatively and developmentally

appropriately. Learning presented expressively and engagingly provides students with joyful learning experiences, giving them a thirst for knowledge. Research has found that play-based learning allows students to acquire academic, social, and emotional skills to benefit their future well-being.

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Appendices

Appendix A

Student Interest Take-Home Survey

What does your child like to do at home?

- Dance, sing, listen to K-Pop, and hang out with her chickens
- Video games, outdoor play
- Playing cards, riding his motorcycle, and ice hockey
- Play with his dog and brother, play outside, watch movies, art, play games (electronic and board games), and connect with his friends online
- Gaming, basketball, and soccer
- Play basketball, play video games
- Any outside help (yardwork), sports (football, baseball, basketball), and boy scouts
- Play computer games, oculus, and Nintendo Switch, walk, read, watch TV, and play games
- Soccer, help dad in the garage, and play video games
- Play with legos, watch YouTube, and kick a soccer ball
- Watch crime shows, tend to plants, play with the dogs, and diamond art
- Play outside, hang out with friends, cook
- Sports
- Play with siblings, walk the dogs, help out in the kitchen
- Art, read, watch movies, and ride her bike
- Horseback riding, jumping on the trampoline, and art
- Anything outdoors

How does your child learn best?

- One-on-one help, extra examples, encouragement
- By doing
- Being shown and exploring
- By making it fun! He's super curious but can get bored if it's not engaging. He certainly enjoys DOING!
- One-on-one
- Hands-on, experience, quiet setting, repetition
- When he can make connections to previous knowledge or personal experiences. When he feels successful or receives positive feedback.
- Hands-on, positive feedback, visual
- Being shown a few times with positive reinforcement
- Quieter spaces, positive encouragement
- Hands-on, she focuses better on music playing
- One-on-one help, hands-on
- Interactive, hands-on
- Lots of practice
- By doing, hands-on, exploring
- Following examples, practice
- She learns better with music playing

What are some positive experiences your child has had in school?

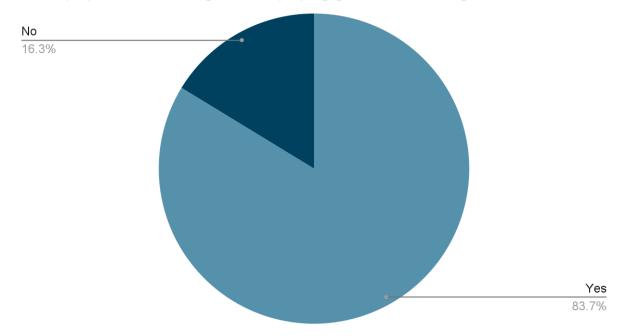
- Band, chorus, enjoys specials, social studies/ science
- He likes learning new ways to do things
- Friends, teachers
- He's made lots of friends and does very well in school
- He enjoys being around other kids
- Progressively betting in academics, made good friends, sports
- He connects well with adults/teachers and enjoys lunch with Mr. O'Leary
- Participates in basketball, chorus, and band, likes to raise money and earn prizes
- Good/patient teachers, fun experiences, good friends
- Teachers always said he is polite, kind to peers, helpful, and follows the rules
- Reward systems, working together in science
- Playing basketball and soccer
- Wellness club, band, and chorus, being around friends
- Participating in sports/ clubs
- Spending time with new friends
- Enjoys social studies/ science, recess
- She has enjoyed playing volleyball with her friends, band, and game club

What are some challenges your child has had in school?

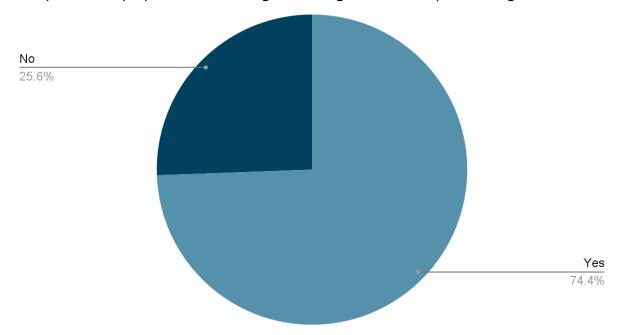
- Trouble paying attention, math
- Focusing
- Depending on the assignment completing work in class
- He can lose interest quickly if he's not engaged. He sometimes needs to be reminded to re-organize his things.
- Last year, there seemed to be a pecking order.
- Difficulty paying attention, especially in large groups with many distractions
- He is very critical of his academic abilities; he has to work hard at school but wishes it was quick and easy.
- Writing
- He feels he learns slower than other children and becomes frustrated quickly.
- There is not enough recess.
- Math She is very hands-on.
- Losing interest in math
- Trouble staying on task and completing homework
- Focusing in class
- Math
- Not being in the same class as her friends
- Chatting too much in class

Appendix B Discussion on Play-Based Learning

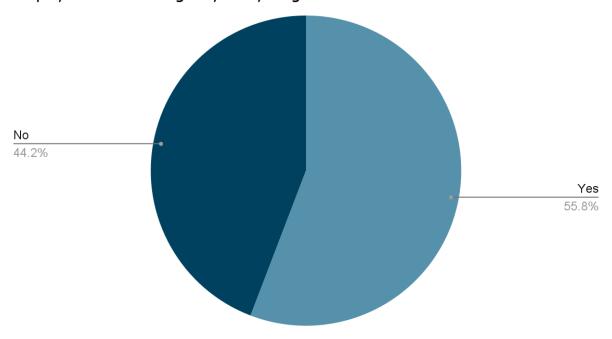




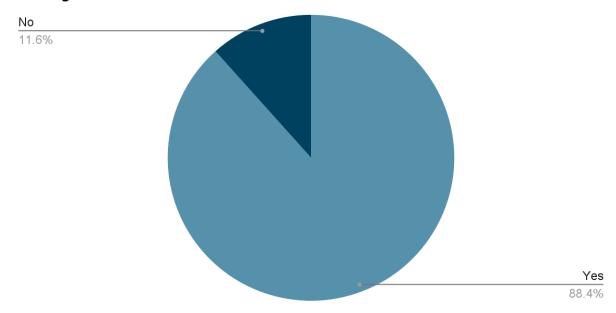
Do you think play-based learning encourages creativity and imagination?



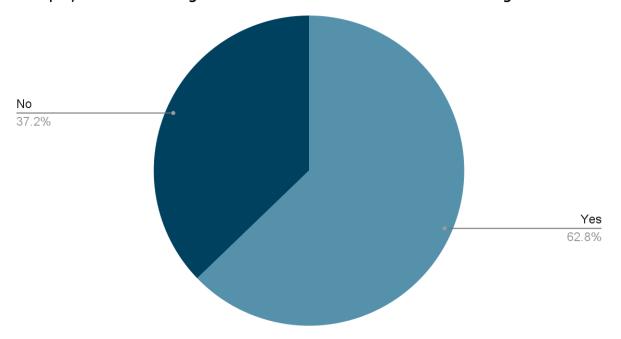
Is play-based learning only for younger kids?



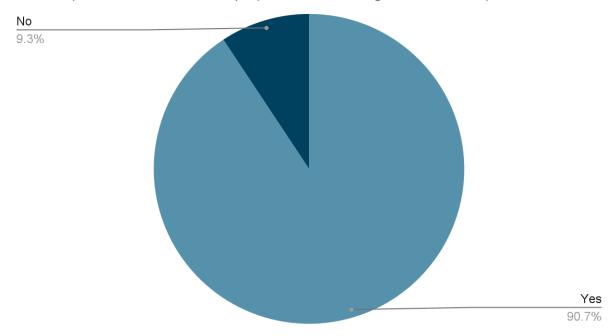
Does play-based learning help us develop important life skills like problem-solving and teamwork?



Can play-based learning be as educational as traditional learning?



Would you like to see more play-based learning activities in your classes?



Appendix C Google Form Survey



Play-Based Learning

Hey, sixth graders! Let's talk about something really cool called play-based learning. You know how when you're playing games, building things, or even just having fun with friends, you're actually learning a lot? That's what play-based learning is all about!

Imagine you're solving a puzzle or building a model. You're not just having fun; you're also using your brain to figure things out, coming up with solutions, and being creative. That's play-based learning in action! It's about using play and fun activities to help us learn new things and better understand the world around us.

For example, think about when you're playing a game with your friends. You might have to strategize, work as a team, and even use math skills without realizing it. Or when you're acting out a scene in a play, you're not just having fun pretending but also learning about storytelling, communication, and expressing yourself.

Play-based learning is a fun way to learn, where you can explore, experiment, and discover new things while having a great time. It's all about using your imagination, curiosity, and creativity to learn in a natural and exciting way.

So, the next time you're playing or having fun, remember that you're not just goofing around—you're also learning and growing in so many fantastic ways through play-based learning!

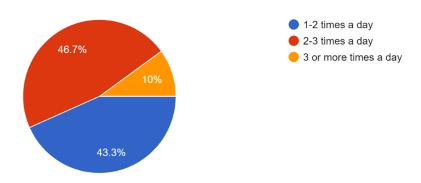
These questions will provide valuable insights into sixth graders' perspectives on play-based learning and its benefits to help students for many years.

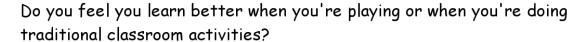
What types of activities do you enjoy the most during school hours?

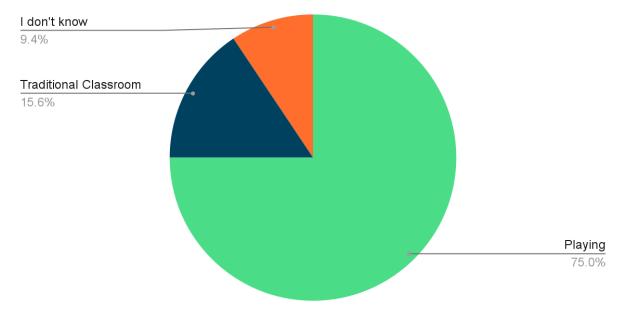
- Play bingo
- Game club and wellness club after school
- Who has the coin? Who killed the robin?
- Soccer, morning meeting
- Recess and playing soccer with the boys
- Reading a book, drawing, morning meetings, science, playing basketball, and chorus
- Morning meeting

- Talking with my friends, art, recess, reading, morning meeting
- Playing outside with my friends
- Morning meeting, recess, P.E., art, music, technology, math, social studies, science, ELA, lunch, band, chorus, after-school activities, and more.
- Talk to my friends, run with my friends, and recess.
- Going outside to play
- Recess, morning meeting, games in reading/math intervention
- Arts and crafts
- Playing outside, football
- Hanging out with friends
- Recess, lunch
- Specials
- I enjoy almost everything in school. Examples: science, social studies, ELA, recess, lunch, band, and specials
- Talking with friends during recess, playing tag, P.E., technology, and art
- Reading, drawing, game club after school
- Recess and specials
- Recess and lunch
- Fun, hands-on stuff
- Recess, wellness club after school
- Recess and talking with friends
- Recess, morning meeting, creating things in technology, playing sports in P.E., and lunch
- P.E. because we get to do sports and physical activities
- Spending time with my friends
- Wellness club after school

How often do you engage in play-based activities during your school day? 30 responses





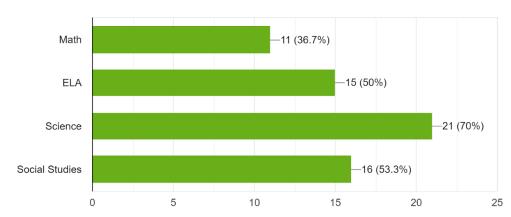


What do you think are the benefits of play-based learning for your overall learning experience?

- I get to learn
- Being ready for hard problems and questions
- You get to play, but you still get to learn, which is good because you get to play
- It helps me focus
- Hands-on helps me learn by communicating with friends and working together
- My mind is more focused because I'm active and not just sitting around with a paper and pencil
- I can focus better on hands-on activities that keep me interested with my ADHD
- I think the benefits are that it will help kids who don't like to learn too much and help them understand it more.
- It could help students who don't understand the question, so if they do a play-based activity, they might understand the question better.
- I think if it is something that is hands-on, I can focus better
- So you can have fun sometimes
- It helps you learn and makes you happier
- It helps with low grades
- It helps you feel safe and calm
- It helps me concentrate on what I'm doing
- You can learn real skills that you'll need later in life. You can interact with the things you are learning about.
- It is more fun

- You can use what you learn in class outside of class
- I think it helps because it helps you to remember and to think about if it was fun or not
- I don't think there are many benefits to play-based learning
- It is more fun, more interactive, and helps you pay attention
- Usually, when it's fun, you will likely want to pay attention more, and it might stick in your brain
- It helps the information stick in my brain better
- It makes me less tired
- It makes me more excited to come to class
- It makes school fun
- It makes learning feel like a game
- I get to spend more time with my friends
- It helps me stay awake
- It makes me happy

In your opinion, what subjects are best suited for learning through play? 30 responses



How do you think play-based learning helps you develop skills like problem-solving and creativity?

- Puzzle games help with problem-solving, like Who Killed the Robin, and art and ELA help when making hands-on creations
- It helps me so that I can problem-solve in real-life
- You can talk with a group and work on communication skills
- It helps when you are drawing and need to learn the basics of drawing
- There can be multiple creative ideas, and this helps you discover them
- It gets you involved and helps you enjoy finding your answer
- I think it helps you use your mind more and more.

- Play-based learning helps me develop important skills because it helps us learn how to draw better, whether it's drawing or coloring activities.
- If we play a game, it will be fun and easier to learn.
- With creativity, your mind grows, and you think about more stuff
- It helps with your problem-solving skills because you are in a group, and maybe someone is good at something you are not good at, and they could teach you how to do it.
- They help me learn how to do more things
- Helps you get stronger
- It helps us learn a little bit about resolving issues
- It helps me because I work better with other people
- It helps me talk to people more
- I think play-based learning helps develop creativity and problem-solving because you can build things using blocks and magnets, leading to a lesson on magnetic fields and gravity.

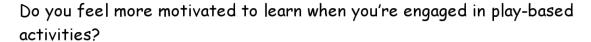
Problem-solving can be input into play because if gravity brings your tower of blocks down, you can teach kids to put more blocks at the base to make a more stable structure to build on.

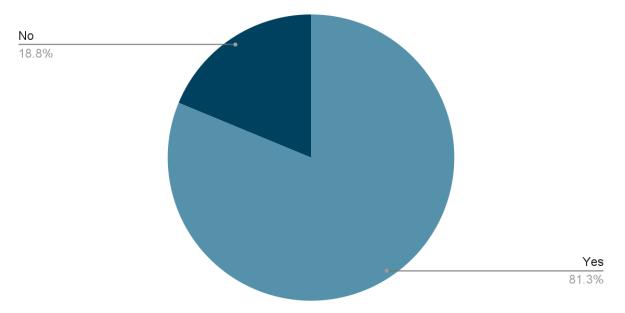
- It develops creativity by letting the students do anything
- You are using your brain for multiple things at a time
- Helps you interact with other people
- In certain games, you can be creative.
- When you play, you will most likely use more creativity than when you are just sitting there and watching the teacher teach.
- If you are building a small Lego house and want to make a fence around the building but don't have one, you have to be creative in deciding what to use for a fence.
- If helps us learn how to use stuff because we do it hands-on.
- It makes me work with new people
- We get to choose what we do
- We had to work together to make the marble mazes
- We have freedom to do what we want to do
- When we play games during morning meetings we have to problem-solve to find out who it is
- You are working together

Do you remember a specific time when you learned something new while playing? What was it?

- During morning meetings, we learn about other people through play.
- I learned how to build a Co2 car in technology
- I learned how to play basketball.
- I learned new things that I could create using noodles, legos, Marconi, and playdoh
- I learned how to strategize playing Connect Four
- I remember that when we were in ELA, we played a Candy Land game, but with ELA questions

- In ELA, we are learning about dinosaurs, and we made our own fossils using noodles and glue.
- I learned about friction, net forces, gravity, and forces while we did hands-on experiments
- At the beginning of the year, I learned how to divide decimals while playing a game Ms. Mauro designed.
- I learned how to give a good handshake during morning meetings and how it will be useful in the future.
- I learned how to multiply decimals while playing the game with Ms. Mauro
- I learned how to stack up a tower using toothpicks
- I learned about the four quadrants of a graph in math class when Mr. Wilson had us all stand up and stand in different quadrants
- I remember in ELA, we played a real-life Candy Land game that was interactive
- We made paper dragons when we learned about the Lunar New Year
- When I was in Montessori, they turned long division into a game
- I learned when I was making the marble maze because I had to try different designs
- I learned that I like playing UNO during game club
- In Math, Ms. Mauro played a game where we rolled dice and had to work together to win
- I learned about forces when Ms. Mauro played tug of war with us
- I learned how to make a balloon rocket
- In ELA, we made fossils out of macaroni and glue
- I learned how to work with other people
- In game club, we worked together to build a tall tower of blocks
- I learned how to multiply decimals with Ms. Mauro's game
- In science, we made a balloon rocket
- I remember in social studies, we put on a play to learn about the Greek Gods and Goddesses
- I learned how to build a marble maze
- I learned about tug of war in science class
- We build things out of play-doh in the morning, sometimes





How do you think play-based learning helps you remember information better?

- Because I want to play the game again.
- I think I remember better when I am playing a game
- -Your brain remembers things better after playing games due to the fact that you want to remember the game you played
- Because sometimes you need to strategize for the games
- I think that play-based learning helps me remember information better because it's easier to do
- Because it will make kids learn faster
- You remember the fun thing you did and what you learned while doing it
- Because you need to know the information to play the game well
- Because I pay attention more when it is fun
- Play-based learning helps me remember better because if I'm catching a ball while saying 12x5=60, I'll remember the next time because of the interaction
- It doesn't; I remember the game and forget what I was supposed to learn.
- It helps me remember information better because I gain a memory from the fun, and then I will remember the learning part.
- It helps because my mind is more active
- It is fun, so you will remember it well
- It helps me because I can remember easily if I work with other people
- Because it's fun
- Yes, because you could remember having fun and can think back on it

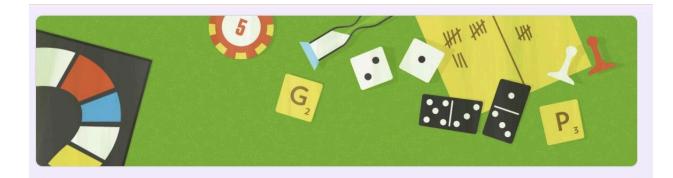
- It helps me remember because it is games, and I remember games, not other things
- It helps the information stay in my mind
- It helps me remember better because then I can focus better on experiences rather than words
- It helps me remember better because it was fun, so I remember what we learned
- I remember playing games with my friends
- It makes my brain work
- I remember things that involve moving around and using my hands
- I am more interested in learning through play, so I pay attention more
- I will want to play the game again
- I think it helps me because I have to think about what I'm doing
- You remember doing things with your hands
- I remember when I have fun in class
- I like playing games, so I will like to learn

What are some examples of play-based activities that you would like to see more of in your classroom?

- Blooket
- Creative things in science like elephant toothpaste and other experiments
- Blooket and ball games
- Real-life board games
- Blooket
- Crafts
- Art, drawing, or dancing
- Games that involve what we are learning
- Group activities
- more free time
- mum ball
- I would like to play more games in math because I think I would learn better
- More games in math
- legos and building experiments
- Building things
- make a time capsule
- more recess, games/drawing, and coloring
- Playing games on our Chromebooks
- Longer morning meetings and more recess every once in a while
- Going outside to learn and using outside materials
- More interactive games that involve the subject
- Making elephant toothpaste
- Make math problems more realistic
- More S.T.E.M. challenges

- More games in math
- More time outside
- Longer morning meetings
- Play-doh every morning
- Blooket
- Math games

Appendix D Intervention Results - Google Forms Survey



Play-Based Learning Intervention Results

Over the last three weeks, we have been changing the activity portion of our morning meetings. Typically, our morning meetings start with a greeting, sharing, and an organized group activity. For the first week of our play-based learning intervention, you were given time for free play during the activity portion of our morning meetings. In the second week, our morning meetings had no activity portion. Finally, our morning meetings returned to normal in the third week with an organized group activity.

Please take a moment to answer these questions about how you felt each week with the changes to morning meetings.

Did you feel in control of yourself and what you were learning during week one (free play)?
O Yes
○ No
Were you able to transition smoothly from the morning meeting to class? *
O Yes
○ No
Did you feel in control of yourself and what you were learning during week * two (no activity)?
O Yes
O No
Were you able to transition smoothly from the morning meeting to class? *
O Yes
○ No

1. Did you feel in control of yourself and what you were learning during week one (free play)?

Yes: 31 No: 12

2. Were you able to transition smoothly from the morning meeting to class?

Yes: 7 No: 36

3. Did you feel in control of yourself and what you were learning during week two (no activity)?

Yes: 17 No: 26

4. Were you able to transition smoothly from the morning meeting to class?

Yes: 22 No: 21

5. Did you feel in control of yourself and what you were learning during week three (organized group activity)?

Yes: 38 No: 5

6. Were you able to transition smoothly from the morning meeting to class?

Yes: 23 No: 20