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Increased Child Initiated Activity in Child-Centered Learning Environments

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LEARNING ENVIRONMENTS**

Increased Child Initiated Activity in Child-Centered Learning Environments

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ED 590 Research and Complete Capstone

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Abstract

Child-initiated activity in child-centered learning environments benefits the development of the whole child. Current research lends evidence that the early relationships and experiences of a child directly impact learning success (Nitecki, 2017; Fyffe et al., 2022). The indoor and outdoor environment are positioned as places for learning providing freedom and space to support health and well-being (Maynard et al., 2013). Classrooms have largely removed free play to address academic standards and high-stakes testing (Pistrova & Slutsky, 2018). This has been demonstrated by the implementation of scripted curriculum, the removal of toys such as unit blocks that foster creativity and imagination, and the reduced incorporation of pretend play (Pistorova & Slutsky, 2018; Cohen and Emmons, 2017). Self-directed play and everyday experience within the environment have contributed to the development of intrinsic motivation which thereby supports a desire to learn. The studies examined in this paper present active opportunities for free or unstructured play initiated by the child and structured play supported by adults that led to higher-level thinking and reflective dialogue. Results of the research exhibit that support of development of the whole child begins with responsive, attuned adults. In a stimulating environment, meaningful play experiences initiated by the child and centered on interest supported social, emotional, cognitive, and physical development.

Keywords: whole-child, metacognition, self-regulation, executive function skills, active play

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Chapter One: The Early Learning Environment

Child-centered educational environments view young children as competent capable learners (Lang et al., 2017). There is a balance between child-initiated and teacher-directed activity (Copple & Bredekamp, 2009; Miller & Almon, 2009) which has supported the socioemotional development of the child and executive function skills (Mohan et al., 2022). These skills have been foundational to the long-term academic success sought after by educational systems (Center, 2011). Promoting the advancement of quality programming in early childhood begins with building positive relationships with parents as first teachers and ensuring access to learning environments rich with opportunities for hands-on developmentally appropriate activity. The early relationships and experiences of a child in the home and the classroom have a direct impact on learning success over the lifespan. According to Heidemann & Hewitt (2010), theorist Lev Vygotsky sought to meet children at the individual skill level and provide support to meet challenges within the Zone of Proximal Development. Piaget emphasized the stages of the cognitive development of a child and increased understanding through interaction with the surrounding environment (Heidemann & Hewitt, 2010). Constructivist ideals have recognized learning as an active exchange in which peer-to-peer interaction is essential (isbe.net).

Topic and Scope of the Research

In the classroom, young children have been inundated with teacher-directed activities (Pyle & Danniels, 2017). A lack of autonomy and choice has led to inattentiveness and mistaken behaviors (Miller & Almon, 2009) and such practices inhibit children as active learners (Mohan et al., 2022). In support of optimal development, self-directed play and active experiences within the environment were found to contribute to the development of intrinsic motivation, necessary

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for learning success (Fyffe et al., 2022). Robson and Rowe (2012) found that children were most likely to try out new ideas, hypothesize, analyze ideas, persist in a task, and complete challenges when they initiated the activity. Maynard et al. (2013) found that children demonstrated personal interest through the initiation of interaction and often centered on the environment. Sau et al. (2020) found that the physical environment surrounding the classroom such as the landscape and garden contributed to building the child-centered environment. As stated by Mohan et al. (2022), play is necessary for the school setting because it ensures the social-emotional and cognitive development of young children. The research of Maynard et al. (2013) supported this by finding that outdoor play and constructive play both spark ingenuity in young children as found that natural environments prompt children to notice and wonder. By scaffolding make-believe play to help children reach its maturity, educators positively impact the development of play and early academic skill (Bodrova, 2008). Robson and Rowe (2012) found that reflective dialogue was beneficial in the speculation of why an idea or strategy worked successfully or not. Fyffe et al. (2022) found that children were well prepared to enter the Kindergarten classroom after having spent three or more years in a play-based early learning center where children were encouraged to explore and construct knowledge. Miller & Almon (2009) stated that the combination of child-initiated play with focused playful learning derived greater lifelong benefits than direct teaching.

Importance of the Topic in Education

Initiating play has motivated children to participate and put more complex skills to use (Pyle and Danniels, 2017). The occurrence of peer play has also positively supported involvement and enjoyment (Robson & Rowe, 2012) as executive function skills are strengthened, benefiting long-term academic outcomes. Children also acquire emergent literacy and math skills by exploring through pretend play based on their experiences (Norling & Lillvist,

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2016). The brain develops and grows as connections form and strengthen. Bodrova & Leong (2019) assert that within make-believe play children practice feeling different emotions while controlling the situation so that resolutions to a social dilemma can be tried without social penalty. According to Nicholson et al. (2016), the social-emotional skills learned in Kindergarten through child-initiated play are the strongest predictors of adult success in completing education, being employed, maintaining mental health, and avoiding adverse behavioral outcomes. Early childhood educators have supported the development of young children by utilizing developmentally appropriate practices to meet the child at the current skill level and challenged them to progress in a rich learning environment both indoors and out. Maynard et al. (2013) found that outdoor play enabled children to experience the freedom to move and explore resulting in positive attitudes toward learning, involvement in deeper play, decreased frustration, and increased opportunity to accept risks.

Definition of Terms

Child-Initiated: activity is begun by the child in an environment that allows time and space for choice. Children initiate, plan, and select activities, and adults participate as guides or collaborators. Child-initiated learning activity involves cognitive, social, and physical learning through discovery, critical thinking about the experience, and reflective dialogue. Adults share control with the child.

SAGE Reference - The SAGE Encyclopedia of Contemporary Early Childhood"

<https://sk.sagepub.com/reference/the-sage-encyclopedia-of-contemporary-early-childhoodeducation/i2481.xml>. <https://dx.doi.org/10.4135/9781483340333>

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Child-Centered Learning Environment: a space organized to naturally encourage student exploration based on interest. Student work is displayed while in progress enabling the child opportunity for reflection.

The Compass School (2015). "A Child-Centered Classroom Environment "

<https://www.thecompassschool.com/blog/child-centered-classroom-environment/>.

Whole Child: a unique learner encompassing interrelated domains such as cognitive, physical, behavioral, social, and emotional. Michigan Department of Education (MDE) states "The whole child lives within multiple and interconnected environments including home, school, and community."

Michigan Department of Education (2022). Whole Child.

<https://www.michigan.gov/mde/resources/michigan-top-10-strategic-educationplan/definitions/whole-child>

Self-Regulation: a process of the brain to be able to recognize and control emotions and behaviors according to the demands within a given situation. It is having the skill to resist highly emotional reactions to upsetting environmental stimuli, calming down when upset, being flexible to change, and handling frustration without an outburst.

NAPA Center. (2022). "8 Self-Regulation Strategies for Kids "

<https://napacenter.org/selfregulation/>.

Metacognition: the act of thinking about the process of one's thinking. Metacognition can also involve planning, monitoring progress toward a learning goal and evaluation of the outcome.

"Metacognition | Teaching + Learning Lab - Massachusetts Institute of"

<https://tll.mit.edu/teaching-resources/how-people-learn/metacognition/>.

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The current research was analyzed through a logical sequence to examine evidence of whole child learning:

Responsive Early Relationships

Socioemotional Development

Cognitive Development

Child-Centered Educational Environment

Social Interaction through Active Play

Children Take the Lead with Interest

Outdoor Environment Influence on Outcomes

Self-Regulation and Metacognition

Self-Directed Play and Reflective Dialogue

Developmentally Appropriate Practices

Restoration of Active Play Based Learning

Conclusion

In conclusion, analysis and synthesis of current research has been completed to examine the guiding question, “How can increased opportunity for child-initiated activity support the development of the whole child?” As it has become more understood that the child must possess the ability to self-regulate for effective learning, preschool and Kindergarten programs have discovered the need to focus on the development of socio-emotional skills along with academics (Pistorova & Slutsky, 2018). In light of early childhood theories, philosophies, and current research in the field regarding best practices, the future of programming and practice in early education regarding the increased opportunity for child-initiated activity considers that children are active learners that benefit from taking the lead with support. The following chapter presents

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research involving aspects of home, school, and community that provide learning experiences that impact the development of the whole child.

Chapter Two: Literature Review

Quality play involves the mind and body, benefitting the whole child through the connection of play, development, and learning (Pistrova & Slutsky, 2018). In the early childhood classroom, the role of the educator is rooted in knowledge of developmentally appropriate practices, implementation of intentional planning, and opportunities for rich play and learning. All social aspects that form the identity of a child have been considered (Sau et al., 2020) and the tools, materials, and experiences to actively learn, communicate, and express concern for one another are provided to strengthen development across all domains (Sau et al., 2020). The earliest relationships established in the home impact the skill level of the child and subsequent inhibitions (Laforett & Mendez, 2017).

Responsive Early Relationships

Play is the context for early learning (Samuelsson and Carlsson, 2008; Copple & Bredekamp, 2009). As the domains of development are interrelated, play provides an ideal opportunity to build developmental skills simultaneously (Copple & Bredekamp, 2009). The Center on the Developing Child (2011) asserted that the early environment in which children live places its signature on the genes that make up the blueprint for executive function development, making a lasting impact. A positive environment with attuned caregivers that provide time and space for play has been considered crucial to healthy development and learning from the start (Center, 2011). Laforett & Mendez (2017) found that children who engaged in play less before entering the preschool setting also lacked the associated social-emotional skills and had less experience interacting with peers during play.

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Socioemotional Development

In a child-centered mixed methods study with a sample of 236 families, 38 percent of children were classified as secure with both mother and father, 26 percent were secure with mother and insecure with father, and 21 percent were insecure with both parents. Williams and Berthelsen (2017) found that with the mother often as primary caregiver, there is time to spend together building a stronger bond of influence each day. Williams and Berthelsen (2017) focused on self-regulation as emotional and attentional regulation, examining the impact of parenting and early self-regulation on prosocial behavior at the start of formal schooling. In the examination of the role of environmental and neurobiological factors on development of prosocial behaviors, Williams & Berthelsen (2017) found that parental hostility attributed to poorer emotional and attentional regulation and data showed this to be stronger for maternal hostility versus paternal. Maternal and paternal warmth was found positively associated with prosocial skills at six to seven years through pathways of attentional regulation (Williams & Berthelsen, 2017). Higher levels of parental hostility related to lower levels of emotional regulation and poor prosocial skills at six to seven years suggesting potential for less optimal socioemotional developmental outcome (Williams & Berthelsen, 2017). Williams & Berthelsen (2017) state that children with strong self-regulatory abilities are more likely to have the ability to care for others. Prosocial behavior or helping others has been found supported by encouraging young children to talk about their feelings and learn about emotions. Emotional capacity enabled the child to manage emotional state and return to calm. Attentional control is exercised by the child to persist at a task and switch focus of attention within a situation. Williams and Berthelsen (2017) found that responsive care by parents and adult caregivers supports the development of early self-regulation and enables children to benefit from learning experiences in the home and at school.

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The qualitative eight-month Nitecki (2017) study focused on the relational benefits of looping on attachment for young children, ages zero to five. Three teachers and 18 parents at Millcreek School which followed the Montessori model of multi-age grouping and looping. Participants were interviewed to determine personal perceptions of experience as education partners. In addition, 48 classroom observations and 12 family events were studied. Looping or continuity of care has supported young children whose social-emotional foundation was being built through attachment with parents and caregivers. Nitecki (2017) found a positive correlation between looping and the bond of attachment as less time was spent with social-emotional adjustment and developmental assessment each year. This also positively supported time spent learning and classroom behavior (Nitecki, 2017). Strong relationships were formed between teachers and parents, teachers and students, and among child peers (Nitecki, 2017). The teacher is required to keep lessons fresh and creative (Nitecki, 2017) which supports building a child-centered learning environment (Sau et al., 2020). Children received extended learning opportunity in a trusted environment. Williams and Berthelsen (2017) found that responsive caregiving by parents and adults in early childhood education programs supported the development of early self-regulation which supported learning ability.

Cognitive Development

Laforett & Mendez (2017) sought to examine how type of home learning activities impact math and literacy gains in order to identify possible ways to reduce early learning achievement gaps. A diverse sample of 307 preschool students, age four, were given a pre-language assessment and consenting parents completed a family characteristic survey. The effect of socioeconomic status (SES), parent level of education and their relationships with the occurrence of constrained activities such as teaching letter knowledge and counting, or

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unconstrained activities such as storybook reading, playing math and literacy games were examined; parents. In this study, Laforett & Menez (2017) found occurrence of constrained activity in math and literacy did not vary by parent education level. Families were more likely to engage in language and literacy activities which increased receptive vocabulary (Laforett & Mendez, 2017). Low SES parents were found to view reading aloud to their child as entertainment versus a learning experience. No relationship was found between constrained activity and academic gains in math and literacy. However, such gains were best supported by unconstrained activities that provided for more one-to-one support and interaction that children could not be provided in preschool classrooms (Laforett & Mendez, 2017).

Niklas (2017) examined the impact of low-cost intervention activities in literacy and numeracy carried out at home in the third year. A diverse sample of 113 four- to six-year-old preschoolers in Melbourne, Australia participated in ongoing assessment through games and activities over 12 weeks. Parents were surveyed to find the value of math held by parents, the frequency of playing math games with dice, cooking and measuring activities, and teaching of math concepts such as adding to define the home numeracy environment. The home literacy environment was defined by the number of books and children's books in the home, frequency of reading aloud, and library visits. According to Niklas (2017) mathematical language and vocabulary are gained during social interaction within the family system, parents were trained on creating a supportive, high-quality home learning environment, ways to teach principles of counting, and implementation of dialogic reading. The results show that early literacy and numeracy are closely related and are impacted by the quality of the home learning environment. Home numeracy predicted numeracy skills and letter knowledge, while the home literacy environment predicted rhyming and verbal comprehension. Children in homes where English

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was not the background language or with low SES were disadvantaged before the start of school due to poor home literacy environments. Socioeconomic status did not have a significant impact on the home numeracy environment. Niklas (2017) found evidence that families are more likely to engage in literacy activity than numeracy without training to make necessary adjustments for the best child outcomes.

Child-Centered Educational Environment

In a qualitative study of 115 children and 14 managers of Kindergartens in Thai Nguyen City, researchers sought to examine the necessary elements of building a child-centered learning environment through questionnaires and in-depth interviews. The physical environment inside and outside of the classroom and a psychosocial environment from a child-centered perspective were surveyed. Sau et al. (2020) found that a child-centered educational environment consisted of a physical and social environment in which children learn through active play based on the interests, needs, abilities, and strengths of each child. Sau et al. (2020) found that in such an environment the interest of the child was respected, and individual potential was promoted. The perspective of the child was considered as teachers sought to ensure a warm, friendly environment conducive to open communication among all stakeholders. Sau et al. (2020) found that increased excitement for learning was obtained through clearly organized strategy to maintain a clean, safe, beautiful, and diverse environment. In this study, Sau et al. (2020) found that organized materials and toys stored at child eye level were rated highly. Sau et al. (2020) found evidence that children were not as easily able to communicate and show care for the people and things around them because of the large number of children present and the lack of planning by teachers for psychosocial interaction.

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Fyffe et al. (2022) completed a qualitative study with a sample of four five-year-old children entering Kindergarten after having spent three years or more in a Reggio-Emilia inspired play-based learning program. The children in the sample experienced challenges due to COVID-19 shutdowns and remote learning. Data was collected through a series of three one-hour interviews with four mothers and three kindergarten teachers, remote learning field visits, and collection of artifacts over the school year. In review of the feedback, four themes emerged. Children were regarded as learners, explorers, communicators, and empathizers and considered well-prepared for Kindergarten (Fyffe, 2022). Fyffe (2022) suggested that play provided the opportunity for children to apply prior knowledge and develop new understandings as life had become increasingly challenging, preparing them to confidently face the challenge of kindergarten. Findings demonstrated that the children were motivated to learn as personal interest guided learning through inquiry play and exploratory activity (Fyffe, 2022).

In a mixed method study, Van Oers and Duijkers (2013) examined vocabulary learning outcomes in children aged three to eight years in the play-based curriculum (P-school) Developmental Education programs versus teacher-directed task-based (T-school) Piramide curriculum in two urban primary schools of the Netherlands. In T-schools, daily free play was offered, along with independent learning and project work with teachers. According to Van Oers and Duijkers (2013), no teaching took place during play. In P-schools, teachers participated in play by asking questions, presenting problems, and introducing new tools and vocabulary for the children to use in play (Van Oers & Duijkers, 2013). Projects and the associated vocabulary were introduced, and the groups were observed for three weeks. Through pretest and posttest analysis of word use frequency, Van Oers and Duijkers (2013) found evidence that in play-based curriculum children meaningfully developed vocabulary through role play which transcended

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outside of the classroom and developed a richer network of meaning. As the activity progressed based on the interests and questions of the children, the need for interaction increased the application of new words used for expression. Van Oers and Duijkers (2013) opined that learning and playing cannot be separated due to the potentially rich educational context available in sociodramatic play with more capable peers for learning in early childhood education.

Social Interaction through Active Play

The presence of play in the school setting has been found critical for the academic environment, as it has ensured social-emotional and cognitive development in children (Mohan et al. (2022)). As children freely express creativity and imagination within pretend play, adaptation to the school environment is supported while learning readiness and behaviors are enhanced. Mohan et al. (2022) suggested that curriculum along with the expectation for high academic outcomes has lessened time for pretend play in the classroom schedule.

In a cross-sectional study of 48 typically developing preschoolers divided into four age-based groups from 3.5 to 5.6 years, Mohan et al. (2022) observed play in selected classrooms within three schools. Video-recorded observations of free play with objects of child choice and structured toy play with provided toy kits were completed once weekly for four weeks and coded. Mohan et al. (2022) examined the influence of play scenarios, free or guided, on pretend play to establish a baseline for comparison with children exhibiting a delay in pretend play behaviors. According to Mohan et al. (2022), such delay has indicated developmental disorders such as autism and attention deficit hyperactivity disorder. In accordance with current research Mohan et al. (2022) stated free play is not goal oriented as adult-led activity. As lead, the children demonstrated creativity and flexibility in thinking (Mohan et al., 2022). A strong positive correlation between age and Complex Pretend Play (CPP) and a moderate positive

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correlation between Simple Pretend Play highlighted an increase in pretend play complexity with age. Mohan et al. (2022) found that type of play scenario had a significant influence on pretend play skill of preschoolers. Complex pretend play was found to occur most often in older preschoolers aged 4.7 to 5.6 years. Mohan et al. (2022) attributed this to the development of creativity and executive function skills such as cognitive flexibility and working memory which enable the child to stay within the rules of the role during play. Younger preschoolers aged 3.5 to 4.6 years exhibited more simple pretend play. Mohan et al. (2022) shared that structured observation of play has been inhibitive, restricting child exploration of objects and behaviors exhibited by the child. This was supported by Robson and Rowe (2012) findings that in child-initiated activity children were more likely to take risks. Mohan et al. (2022) found that teachers lacked understanding of the benefits of the inclusion of both free and structured play. As children are found to imitate experiences, Heidemann & Hewitt (2010) suggested that guiding the attention of children to various roles of people provided a greater base of background knowledge to expand pretend play.

Children take the Lead with Interest

In a stimulating environment, the teacher has served as a resource for knowledge and enabled the child to lead in a space provided for learning to occur. Inspired by the theory of Vygotsky, Van Oers and Duijkers (2013) stated that the Zone of Proximal Development (ZPD) is found within sociocultural activities that a child imitates. Vygotsky, as cited by Cohen and Emmons (2017), believed that internalization occurs when knowledge moves from the social knowledge level to self-knowledge. Waters & Maynard (2010) stated that natural environments provide opportunities for child interest as well as the potential for children to lead their learning.

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In the ZPD, social interaction and language build understanding for the child (Cohen & Emmons, 2017). Teachers positioned closely can serve as partners as they respond meaningfully to questioning from curious students strengthening cognitive development (Waters & Maynard, 2010). Cohen and Emmons (2017) found that block play facilitated problem-solving and development of language skills. When paired with a peer or with direction from the teacher, higher level thinking and more complex building resulted (Cohen & Emmons, 2017).

Waters & Maynard (2010) examined a sample population of three classes of children aged four to seven years, selected from a large inner-city primary school in Wales. Students and teachers walked to a nearby country park four times throughout the school year. Audio-visual recording, transcription and analysis reveal that time spent in untamed natural outdoor spaces peaked child interest, driving the children to self-led exploration. Through observation, researchers found that children draw the attention of teachers to things considered interesting in the environment. One-third of the interest was drawn to loose parts, land features, and other found objects in the environment. Another third of expressed interest was related to the experience of being in nature. Waters & Maynard (2010) found that children exhibited intrinsic motivation for learning based on the freedom of choice and the gift of time and space to roam.

Pyle and Danniels (2017) utilized qualitative methodology to conduct observation of 15 Ontario Kindergarten classrooms with mandated play-based learning in suburban, large urban, and small urban areas phased over three years. Field notes, photos, and videos focused on the classroom environment, instructional periods, and play periods- whether teacher-led or child-directed. Data collected by audio-recorded teacher interviews revealed the purpose of play, the role of play in learning, and the role of the teacher in play. Two views of play emerged, and researchers grouped the classrooms accordingly. The teachers in six of the classrooms held the

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belief that free play was entirely child-directed without teacher involvement, guidance, or extension of the play. Challenges to free play included meeting mandated curricular standards as teachers shared that concepts such as phonemic awareness and sound play would not naturally occur under the lead of the child. As teacher beliefs positioned the interest of the child as lead to encourage confidence and independence, it was also opined that interference with play would limit the children's control and self-motivation (Pyle & Danniels, 2017; Mohan et al., 2022). Researchers found that 86 percent of the observed play episodes were free play with the most common being block play, playing with toys such as cars, animals, and sensory play with water, sand tables, and play-doh (Pyle and Danniels, 2017).

In nine of the Kindergarten classrooms examined, a balance of academic learning and free play was implemented during 394 play episodes observed. Pyle and Danniels (2017) found 60 percent of play episodes were free play in which children directed the narrative and selected resources. There was little to no teacher involvement and while the most common types of free play were the same, more variation was seen in the types of play observed. According to Pyle and Danniels (2017), teachers supported times of uninterrupted child-led play or free play, along with inquiry play - guiding and extending play by following the lead of the child and expanding on their interests, creating play scenarios together through collaborative play, adding playful elements to learning activities, and learning through games with rules for the children to follow. Pyle and Danniels (2017) found a move beyond the traditional understanding of free play warranted as academic learning was supported by varying the role of the teacher in play. Heidemann & Hewitt (2010) supported this as instrumental in developing mature play skill that enhances executive function and later academic success. Pyle & Danniels (2017) suggested the

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implementation of a child-centered continuum of play that included developmentally appropriate teaching of academic concepts, expanding on the interests of the child.

In a quantitative study of children aged two through 12 years, Cohen and Emmons (2017) investigated the use of spatial language during block play. At Blockspot, a retail play space curated by a certified teacher, 277 episodes of guided play by four to 12-year-olds were recorded. According to Cohen and Emmons (2017), increased teacher-directed learning has led to unit blocks being removed from the classroom thereby also removing access to the observation of communication, experimentation, and construction skill. Cohen and Emmons (2017) noted that preschoolers were instructed on what object to build while older builders were guided to build objects that extended lessons from the classroom. Cohen and Emmons (2017) stated that block play encouraged problem-solving and the development of language skills. According to Cohen and Emmons (2017), higher-level thinking was shown when a child was paired with a peer or received direction from the teacher. However, Cohen and Emmons (2017) realized the need for children to initiate learning while adults supported with questioning and proposed problem-solving to support building new skills. Vygotsky supported this with belief that verbal scaffolding resulted in building higher levels of understanding (Heidemann & Hewitt, 2010). As spatial relations within block play become more complex with age, structures built often featured symmetry and pattern. In the study, 57 percent of utterances were voiced by the eight four- and five-year-old beginner builders. Forty-three percent of utterances were spoken by the six participants that were eight- to 12-year-old after-school builders. Cohen and Emmons (2017) found that greater amounts of spatial words were used by girls than boys.

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Outdoor Environment Influence on Outcomes

Friedrich Froebel, an early childhood pioneer given the moniker “the father of kindergarten”, believed in immersing young children in nature to learn from interaction with nature and community (Smedley & Hoskins, 2020). Through such opportunity, children were able to experience the beauty in natural objects, gaining knowledge of self and feelings. The role of the adult was simply providing guidance while children freely engaged in self-directed explorations through play, which stimulated thoughts and creative ideas (Froebel, 2020).

In the outdoor environment, Maynard et al. (2013) observed that children had improved mood, exhibited attentive focus and concentration during child-led activity. Waters & Maynard (2010) supported the value of a flexible outdoor environment by emphasizing the great potential for positive interaction between child and teacher when the interest of the child, not the adult is reflected. Robson (2012) states that characteristics of intrinsically motivated creative thinkers are exhibited when children choose challenges, tolerate risk, and take joy in complex thinking. Robson (2010) supported this by stating that children being knowledgeable of personal and peer learning, utilizing memory to talk about prior tasks, decision making and problem-solving are important parts of development. Maynard et al. (2013) observed that children asked questions and were seen as strong and capable outdoors. Maynard et al. (2013) found that students were more engaged and interested in taking the lead in child-initiated learning outdoors, as over half of the target students were found to have improvements in achievement. Teacher frame of mind was changed as more personal freedom was felt outside and the children were rendered as achievers. Maynard et al. (2013) also found reasons for positive outcomes were feeling less constrained and more in control with the absence of the negative stigma associated with the classroom. Only a small number of children with the most severe challenges exhibited no

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remarkable differences. Maynard et al. (2013) found that the classroom was attributed to teacher control and heightened constraint on behavior. However, allowing child interest to lead, the outdoors was viewed as a place for learning. Maynard et al. (2013) found that outdoor play enables children to experience freedom to move and explore resulting in positive attitudes toward learning, involvement in deeper play, decreased frustration and increased opportunity to accept risks.

Froebel (2020) believed children should be immersed in nature to learn from interaction with beauty, everyday experience, and knowledge. The need for varying the context for learning was supported by the Robson (2010) finding that social environments influenced child opportunity to display and develop self-regulation and metacognition. Most importantly, children need time to think things through and develop ideas (Robson & Rowe, 2012). Building onto prior knowledge through meaningful interaction with educators occurred when child-initiated activity led to shared thinking (Waters & Maynard, 2010).

Outdoor space inspired curiosity, questions, and the opportunity for children to create order through interaction with the environment. Robson & Rowe (2012) supported this by stating that child-initiated activities were most engaging as children took risks, used imagination and were more flexible in thought. Value could be found in immersing children in natural untamed spaces. Waters & Maynard (2010) maintain that the excitement and joy found in the child's self-initiated outdoor experience attributed to positive long-term educational outcomes as higher-level thinking was stimulated.

In a five-month study, Robson & Rowe (2012) selected a sample of 30 three- to four-year-olds in an English Children's Centre, associated key persons and special needs specialists to evaluate the use of creative thinking. At this center where child-initiated activity was

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emphasized, 52 complete events of child-initiated and adult initiated/led activities were video recorded and analyzed. Artist visits also occurred during the study period. Data gathered by Robson and Rowe (2012) revealed that children engaged in more exploration when given the opportunity to choose the activity. Of the total 693 observed behaviors categorized in exploration, involvement and enjoyment, and persistence 481 behaviors were child-initiated. Robson & Rowe (2012) stated that outdoor play and constructive play among peers supported involvement and enjoyment, sparking ingenuity in young children. Children were more likely to try out new ideas, hypothesize, analyze ideas, persist in a task, and complete challenges when they initiated the activity (Robson & Rowe, 2012). This attentive focus and persistence at a task lend evidence to self-regulatory and metacognitive behavior.

Self-Regulation and Metacognition

According to Robson (2010), there are three main areas of cognitive self-regulation: metacognitive knowledge involving a task and strategies used to achieve a goal; metacognitive regulation including the planning, monitoring, control, and evaluation during an activity; and emotional and motivational regulation which includes ways the child controls the emotional state during an activity. This set of abilities enabled young children to understand and control feelings, interact positively with others and learn independently. Robson (2010) signified that the Vygotskian concept of a child's developmental progress from regulation by others to that of regulation by self consists of motivation and cognition. Through metacognition, a child can think about a personal thought process. Evidence of this was seen in private speech or running commentary when a child participated in play. Robson (2016) stated that self-regulation incorporated high-level mental function through the coordination of memory, analysis, evaluation, synthesis, and planning.

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Self-Directed Play and Reflective Dialogue

In a one-year study, Robson (2010) selected a purposive sample of 12 children (five girls and seven boys) aged three to four years and six practitioners serving as key persons of contact from three London, England early childhood settings - a children's center, a primary school foundation stage unit, and a private workplace nursery. The researcher investigated the child's view of self as thinker and the strategies used in self-directed play. Videotaped play episodes of 12 indoor and outdoor activities including art, free play, constructive play, sand/water play, and imaginative play provide context for what children think, feel, and do during play. Robson (2010) found evidence that planning and monitoring were the most significant self-regulatory behavior to occur as children interact and negotiate with one another during play. Semi-structured interviews administered to record the child's commentary on their actions highlighted self-regulation and metacognition. Reflective dialogue recorded during the audiotaped discussion between children and the associated key person about actions in videotaped play activities allowed insight into self-regulatory and metacognitive behavior not easily observed. According to Robson (2016), intentions and perspectives were revealed through reflective dialogue as children were given time to reflect on knowledge. Significant findings lend evidence to support metacognitive and self-regulatory behavior of planning, evaluation, and control during child-initiated activity occurred at 74 percent. Additionally, during child-initiated activities children were two times more likely to express emotional and motivational regulation than metacognitive knowledge (Robson 2010). As stated by Cohen and Emmons (2017), children need the opportunity to initiate their own learning and adults need to know when to act as a facilitator or guide by intervening, posing questions, or making suggestions. Children most significantly showcased metacognitive knowledge during reflective dialogue at 51 percent (Robson, 2010).

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Observations revealed both verbal and nonverbal expressions of self-regulatory and metacognitive behavior as children demonstrated knowledge about a task, strategies to achieve a goal or communication with others. Private speech or self-talk could be seen as a way for children to support their thinking. Robson (2016) found rates of metacognitive regulation were highest during observations occurring at 1.49 per minute. Emotional and motivational regulation occurred most frequently during activity as children interacted and negotiated with peers during play in observation. Robson & Rowe (2012) observed that exploratory and imaginative play provided the context for creative thinking as children interacted with one another to negotiate rules. As activities took place indoors and outdoors, the children in the present studies viewed recorded observations with key persons to engage in reflective dialogue about their thoughts and feelings during the activity. The opportunity to talk allowed the child to be the expert, giving explanations of actions and associated thoughts or reasoning. Robson (2010) found this assisted with recall and often the reflective dialogue lasted longer than the actual play episode. Through the use of observation and reflective dialogue, children were shown as competent, knowledgeable, and capable of high-level thinking. According to Robson (2010), children were found to enjoy sharing knowledge with adults. Robson and Rowe (2012) found that the presence of an adult encouraged children to use prior knowledge when thinking of ways to accomplish a task or how to use an object.

Robson (2016) sought to find evidence of self-regulation and metacognitive behavior observed in natural settings and given semi-structured interviews. In this 10-month study, a purposive sample of 29 children (10 girls and 19 boys) aged three to four years, the class teacher and nursery nurse of a London state-funded primary school assessed as good by the governing body were selected. Fifty-eight observations consisting of 29 adult initiated/led and 29 child-

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initiated activities were recorded and used to carry out reflective dialogue sessions one week later. The goal of the reflective dialogue was to gather data on the child subjects' thoughts and ideas about the recorded activity. Data was coded based on conversational turns and verbalizations yielding both qualitative and quantitative analysis of 934 units from observations and 1070 units from reflective dialogue. Evidence of self-regulatory and metacognitive behavior was found in the three categories: metacognitive knowledge, metacognitive regulation, and emotional and motivational regulation. Research has shown that the space and psychological freedom enjoyed by students in outdoor child-initiated play also led to relaxed expectations and interpretations of child behavior previously seen as a challenge (Maynard et al.,2013).

According to Robson & Rowe (2012) children engage in speculation and are more likely to engage in new activity when prompted by an adult. During the reflective dialogue, the children commented on personal behavior as well as that of peers. As the children became more familiar with the process of sharing their thinking, rates of frequency increased. Robson (2016) stated that children were more likely to display metacognitive knowledge such as knowledge of persons and strategies in reflective dialogue. Robson (2010) found that reflective dialogue provided opportunity for the child to be heard and understood. Emotional and motivational regulation as well as metacognitive knowledge of persons, tasks and strategies occurred most frequently during reflective dialogue. Robson (2016) found children were more likely to express metacognitive regulation through evaluation of their thinking, as self-talk revealed review of learning and a thoughtful review of strategies used to complete a task. Children were motivated to evaluate and share dialogue including knowledge of persons, tasks, and strategies (Robson, 2016).

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Developmentally Appropriate Practice

The Foundation Phase framework in Wales examined by Maynard et al. (2013) placed emphasis on the Reggio Emilia philosophy of child-initiated hands-on learning through play. Maynard et al. (2013) found that as children interacted with the surrounding environment, the practitioner allowed the interest of the child to guide planning of activities that expanded on the child-led experience. Developmentally Appropriate Practices highlight the need for balanced teacher-led and child-initiated activity to meet the needs of the whole child across developmental domains (Copple & Bredekamp, 2009). Providing nonverbal and verbal opportunities to demonstrate learning enabled intentional observation to authentically assess the level of skill and interest held by each child (Copple & Bredekamp, 2009). Meeting the child at the current level of skill by providing a stimulating environment can help to scaffold to reach the next level of independence. The development of play skill is supported through the response of the teacher changing assumed role in play from stage manager to coplayer (Heideman & Hewitt, 2010). Mohan et al. (2022) found that structured pretend play, with the involvement of an adult asking questions and making suggestions influenced the themes that emerged during free play and therefore needed to be carried out last. Robson (2016) stated that the use of observation and reflective dialogue helped children to be more aware of the learning that had taken place while demonstrating to adults the capability of young children to engage in critical and creative thinking. Cohen and Emmons (2017) found value in spending time to talk with children about learning experienced through play. Robson (2010) also found reflective dialogue offered a natural context for authentic assessment of language skills and understanding of learning.

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Restoration of Active Play Based Learning

Nicholson et al. (2016) stated that one of the most significant reasons for the severe decline in play in early-childhood classrooms was pressure to improve achievement test scores of poor-performing students. In a two-year mixed methods case study of Transitional Kindergarten (TK) teachers in a large and diverse urban public school system, Nicholson et al. (2016) sought to find what teachers moving from a teacher-directed curriculum to a curriculum that included child-initiated play learned in the process of implementation and its challenges. Data was collected through teacher feedback and evaluation and semi-structured interviews. Most significantly, teachers gained the understanding that play is positively associated with healthy child development and future learning success. According to Nicholson et al. (2016), the social emotional skills learned in kindergarten through child-initiated play were the strongest predictors of adult success in completing education, being employed, maintaining mental health, and avoiding adverse behavioral outcomes. Nicholson et al. (2016) found that play is necessary for social-emotional health and well-being.

In a quantitative study of two- and three-year-old children, Sim and Xu (2017) conducted a series of four experiments to examine whether young children could build larger conceptual structures using self-generated evidence. Machines in three categories were presented to ethnically diverse two- and three-year-old children in Sacramento, California. When presented with didactic instruction by the experimenter on how to activate a machine to produce a sound with a corresponding shape or color match block, 69 percent of the children chose the correct block. When presented with a new machine and three new blocks to select from, 75 percent chose the correct block in the second-order generalization test. Sim and Xu (2017) found that two- and three-year-old children could learn first and second-order generalizations with a short

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session of training and instruction. With added familiarization before testing, 79 percent of the two- and three-year-old children activated machines from all categories during free play and 42 percent generated more evidence than in the first experiment. Children performed with accuracy with 71 percent selecting the correct activator in the first-order test, and 75 percent selecting correctly in the second-order test. Children continued to select the shape or color match more often than the included distractor blocks. Based on the findings of the study, Sim and Xu (2017) suggested the capacity of a child to learn from self-generated evidence is correlated to the complexity of the task.

Maynard et al. (2013) used an action-based approach for a one-year study divided into three phases. A purposive sample of eight early-years teachers of four- to seven-year-olds was selected from eight schools in two regions of Wales and 6 pupils were each regarded as underachievers. Through semi-structured interviews in three phases, researchers gathered teacher case studies, field notes, and recordings which were transcribed. The behaviors of the 48 child participants were observed in the classroom and outdoors. Maynard et al. (2013) found 28 of the 48 children showcased positive behavior when participating in child-initiated activity outdoors, as compared with primarily teacher-directed classroom activity. Encouragement of gross motor activity and opportunity for time and space to explore permitted the effects of child-initiated learning to be heightened (Maynard et al., 2013).

Conclusion

In conclusion, current research as examined in this chapter lends evidence that learning led by children is developmentally beneficial. The development of the whole child begins with the earliest relationships and continues throughout the critical early childhood period. Findings supported the belief that children are naturally motivated to understand the world through exploration (Sim and Xu, 2017). Robson (2010) indicated that child-initiated activity at ages

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three and four years supported higher-level thinking through evidence of self-regulation and metacognition. The use of developmentally appropriate practices in a stimulating learning environment, demonstrated that the perspective of the child was valued (Sau et al., 2020). The freedom to lead positioned children as strong and capable learners. Positive relationships with child-initiated activity were exhibited with executive function skills (Robson & Rowe, 2012), emotional and motivational regulation (Maynard et. al, 2013) and problem-solving (Robson, 2016). Everyday experience provided the possibility for the development of self-regulatory behavior and metacognition and as a result, stimulated higher-level thinking and successful learning (Robson, 2010). The following chapter will provide discussion of the importance of child-initiated activity and child-centered learning environments. While there have been many definitions of child-centered, it has been understood as activity that is based on the interest of the child for learning to be meaningful and long-lasting (Pyle & Danniels, 2017). The body of research lends evidence that developmentally appropriate practices positively support the holistic development of the child through the use of interactive, mind-stimulating learning experiences and observation for authentic assessment (Pyle & Danniels, 2017).

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Chapter Three: Discussions, Applications, Future Studies

According to Nicholson et al. (2016), No Child Left Behind legislation led to the creation and implementation of scripted curricula to close the achievement gap in the United States. Unfortunately, this push for academics and the associated pressure placed on teachers and administrators led play to be cast aside (Pistorova & Slutsky, 2018; Pyle & Danniels, 2017; Miller & Almon, 2009). Play has been considered the foundation of children's learning dating back to the days of Plato (427–347 BC) and Aristotle (387–322 BC) (Fyffe, 2022). As early childhood theorists such as Piaget and Vygotsky have supported, the child acts on its environment supported by more experienced persons to build knowledge and understanding (Heidemann & Hewitt, 2010). The research findings demonstrated the positive impact of environments and activities that support the learner during the critical early childhood period with the teacher acting as a guide.

Discussion

In developmentally appropriate learning environments, planning based on the interest of the child supports the necessary balance of child-initiated and teacher-directed activity (Copple & Bredekamp, 2009). Classroom environments intentionally planned to include space for play have been found effective, inviting children's interests and inquiry to guide the curriculum (Pistorova & Slutsky, 2018). Quality programs serve the developmental needs of children by providing age-appropriate, developmentally appropriate, and culturally appropriate activities in a caring environment (Copple & Bredekamp, 2009). Nicholson et al. (2016) found evidence that returning play to classrooms that have been instituting scripted curriculum in pursuit of academic rigor supports improved social-emotional and academic outcomes. While the definition of play can vary among cultures, the combination of structured toy play and free play benefits the

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holistic development of a child (Mohan et al., 2022). Structured toy play leads children to exercise more self-regulation and turn-taking behaviors, while free play leads to creative thinking, and problem-solving through the use of social, cognitive, and communicative skills (Mohan et. al, 2022). The findings support making more time for play to support the attainment of curricular goals through activity that is meaningful to young children. As suggested by Pistorova and Slutsky (2018), the “Four Cs” of communication, collaboration, creativity, and critical thinking have supported meaning-making and building new knowledge.

Applications

For the child-centered environment, the inside and outside of the classroom support the self-regulation, awareness, self-confidence, and understanding of children (Sau et al., 2020). Play as a tool for learning should be respected and valued. The level of teacher education, training on implementation of the pedagogy of play, and preparedness for interaction should reflect this knowledge (Sau et al., 2020). Teaching in the context of play was found both meaningful and productive by teachers that viewed the concepts as supportive (Pyle and Danniels, 2017). Block play should be returned to early childhood classrooms to facilitate expression of creativity, problem-solving, and critical thinking. As Heidemann & Hewitt (2010) state, the educator is responsible to provide the materials and props to spark creativity in children as they engage in play scenarios and provides assistance to scaffold play when necessary. Teachers should be trained on the varying roles that can support student play skills and associated development. Creation of environments that best support optimal learning conditions for young children should be implemented based on research findings. Moreover, the high turnover of staff in early childhood learning and care environments presents an obstacle to supportive concepts such as looping that serve to establish attachment and security. The retention of staff to improve

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outcomes for children should be further explored. Staff well-being directly impacts the well-being of the child. As stated by Nitecki (2017) looping or continued care helps to establish bonds between teacher and child fostering well-being for young children, especially those dealing with trauma. Pyle and Danniels (2017) suggested that teacher training concentrated on child development and early childhood education would help to remove the dichotomy that surrounds play and learning. As sociocultural activities call on authentic engagement, sociodramatic or pretend play should be purposed for the development of social-emotional and cognitive skills. Children gain high rates of oral language and vocabulary development as a result of this play (Van Oers and Duijkers, 2013). Lastly, the practice of observing pretend play behaviors exhibited by preschoolers in the school setting should be implemented for play-based assessment to assist in early intervention for best outcomes (Mohan et al., 2022).

Future Studies

In future studies, the willingness of the teacher to take on the responsibility of varying personal role in play should be considered. Observation and assessment of the play enables the teacher to assess skill level across domains, determine the need for support, and reflect. As home beliefs regarding play and academic learning can impact the child, teacher beliefs should also be explored. The institution of a play-based continuum should be further investigated to determine effectiveness in teaching curricular standards. Implementation of tools such as the Play Checklist (Heidemann and Hewitt, 2010) provides educators with a guideline for representational play, role-playing, social interaction, problem-solving, and engagement with peers. The cognitive impact and transcendence of oral language and vocabulary for young children should be further investigated as the research (Cohen and Emmons, 2017) lends evidence to support the benefit of the restoration of play in highly academic-focused early years classrooms. The return of open-

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ended toys such as unit blocks to foster creativity and imagination, build problem-solving and language skills, and stimulate higher-level thinking (Cohen and Emmons, 2017) should be further explored. Nitecki (2017) suggests that the push for Universal Pre-K in the United States should generate advocacy for looping in light of the impact that trauma and the surrounding environment have been found to have on the developing brain. With shortages in education, overwhelming societal trauma, and the need for active learning to support positive long-term outcomes, the possibility of looping as a solution should be studied.

Conclusion

In conclusion, play calls forth prior knowledge and understanding to enable the child to rise to challenges ahead (Heidemann & Hewitt, 2010). As the research has shown, when young children are provided the time and space to play with a supportive adult there to serve as a guide, it is possible to generate higher order thinking (Sim & Xu, 2017). As stated by Fyffe et al. (2022), play based learning empowers young children to follow individual interests as active learners and collaborate with teachers and peers to co-create and lead learning experiences, fostering a positive approach to learning. Perseverance was found to be a result of the autonomy of pursuing personal interests (Fyffe, 2022). Findings present strong evidence that young children are motivated to understand the world through exploratory behavior that supports learning and goes beyond basic understanding (Sim & Xu, 2017). Viewed as competent and capable learners, young children thrive with increased opportunities for child-initiated learning in child-centered learning environments.

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