

**The Role of Educational Play in Children's Learning and Development:
An Authentic Illustration from Constructing a Swimming Pool during a School Holiday**

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Abstract

Educational experts assert that educational play is a powerful tool for helping children develop effectively (Henniger, 2005). However, many teachers and parents question the importance of play, believing that play is a frivolous break between more serious learning tasks. The *Head Start Early Learning Outcomes Framework* (Administration for Children & Families, 2015) sets goals for children’s development in the following domains: approaches to learning, social and emotional development, language and literacy, cognition that includes mathematics and science, and physical development. These developmental goals can be used by early childhood educators as objectives to plan instruction. The purpose of this paper was to illustrate the role of play in children’s learning and development by taking an authentic example of childhood play during a school holiday – construction of a swimming pool – and illustrating how it met developmental goals in every domain of development identified by the *Head Start Early Learning Outcomes Framework*.

Introduction

On a school holiday, five young children attempted to build a swimming pool in the back of the compound. Their swimming pool consisted of a hole about two feet square and six inches deep. The children used sticks and spoons to dig out the hole. A collection of jerry cans, water bottles, and cans filled with water from the borehole were on standby to fill their swimming pool with water once they had finished digging it out. As they were digging their swimming pool, the children sorted the rocks and dirt into separate piles. While playing, they decided to start a business to sell the rocks and dirt, and had appointed a manager from among them to oversee the sales.

To a casual observer, these children might appear to be wasting their holiday on an activity that only dirtied their clothes. However, this playtime spent building a swimming pool was actually a very powerful learning opportunity that fostered their learning and development in many different ways. This paper will first describe the domains of development in early childhood, and then explain the *Head Start Early Learning Outcomes*

Framework (Administration for Children & Families, 2015), which outlines goals for learning and development for young children. These goals are designed to enable early childhood educators to plan effective learning experiences that foster holistic development in young children. Next, the paper will explain how the swimming pool construction activity described above fostered developmental goals in each domain of development outlined by the *Framework*. Finally, the paper will conclude that educational play can be powerful learning opportunity in early childhood classrooms that is just as, if not more effective than direct instruction.

Development in Early Childhood

The early years are a critical time for learning and development (Committee on Early Childhood Pedagogy, 2000; Nigerian Educational Research and Development Council, 2007). According to developmental psychologists, children are developing in many different domains, including the physical, social, cognitive, and emotional domains (Boyd & Bee, 2009). Physical development includes changes in the size and shape of the body, as well as motor, or movement skills. Learning to walk and jump as well as the ability to hold and use a pencil are examples of physical development. Social development involves the ability to develop and sustain relationships with other people. As such, social development includes skills such as cooperation and empathy. Cognitive development includes knowledge, thinking, memory, problem solving, and other intellectual skills. Developing skills and knowledge in language, literacy, mathematics, and science all are parts of cognitive development. Emotional development involves the ability to understand and regulate one's emotions. Learning to manage anger and frustration without hitting other children is an example of emotional development.

Children's development is holistic in that development in one area influences development in another area. As such, the learning environment for young children must

nurture learning in all areas of development, not just language, literacy, mathematics, and science within the cognitive domain. Therefore, early childhood education must provide learning opportunities that allow children to develop skills in all domains, including the physical, social, emotional, and cognitive domains (Committee on Early Childhood Pedagogy, 2000).

Head Start Early Learning Outcomes

Head Start is a federally funded program in the United States that was developed to give children from low socioeconomic backgrounds a “head start” in training for primary school (Morrison, 2006). Head Start provides comprehensive nursery education and other support services for children and their families before they enter first grade (primary one). One objective of Head Start is to enhance children’s growth and development. Even though Head Start is designed to support the development of children living in poverty, its nature as a federal program means that its policies and guidelines are used as a model for other early childhood programs in the United States.

In order to help early childhood educators within Head Start plan effective learning experiences that foster holistic development among young children, the Administration for Children & Families (2015) developed the *Head Start Early Learning Outcomes Framework* based on empirical research about child development, particularly the domains of development identified above. The *Framework* is structured around five domains: approaches to learning; social and emotional development; language and literacy; cognition; and perceptual, motor, and physical development. Each domain is then divided into sub-domains that represent components of development within the domain. For example, the cognition domain is sub-divided into mathematics development and scientific reasoning. Under each sub-domain, the *Framework* sets goals for skills and concepts that young children should learn in early childhood education programs. The *Framework* also provides more precise

indicators of particular skills that children should master at specific ages that can be used by early childhood educators as learning objectives for specific lessons. The *Framework* provides goals and indicators for children's development from birth through five years of age. However, this paper focuses on the goals for children's development in each of the five domains for preschoolers, between the ages of three to five years.

Educational Play in Child Development

Educational experts assert that play is a very powerful tool for helping children develop effectively (Henniger, 2005). In fact, Vygotsky goes so far as to say that play "is a leading factor in development" (1978, p. 101). Play contributes to cognitive, social, physical, and emotional development, as well as fosters language and literacy skills and creativity. Cognitively, play enables young children to solve problems and develop abstract thinking. A young girl pretending she is a mother separates herself from her true situation of being a young girl, thus developing abstract thinking, and then uses her problem solving skills to imagine how she would sooth a "crying" baby doll. Socially, young children are able to take the perspective of others when they are playing different roles, which decreases egocentrism. For example, the young girl is able to take her mother's perspective when she is acting as a mother. As children are playing with each other, they are also practicing their listening and speaking skills, which are the foundation of language and literacy skills. Children playing football are practicing their fine and gross motor skills. When an incident happens that the child believes is unfair on the football pitch, he learns how to master his emotions, and when he does well, he feels a sense of pride and accomplishment, both of which foster emotional development. Whenever children engage in imaginary situations, they are practicing their creativity.

The quality of the environment that a child grows up in has a powerful impact on their development (Committee on Early Childhood Pedagogy, 2000). Few would dispute the

importance of high quality early childhood education in promoting development and learning among young children. (For the benefits of high quality early childhood education, see Camilli, Vargas, Ryan, & Barnett, 2010; Gorey, 2001). Even though educational experts encourage educational play as a key component of a good environment that fosters young children's development, many, including both teachers and parents, question the role of play in young children's development. Many parents and teachers believe that play is frivolous or something for children to do to burn their energy after engaging in more serious learning tasks (Henniger, 2005). Therefore, there is a wide gap between the advice of educational experts who assert that play is beneficial for young children's development, and the beliefs and practices of many early childhood teachers and parents, who prefer more formal instructional practices to foster learning and development.

The purpose of this paper is to describe the role of educational play in fostering young children's development using the illustration of the swimming pool construction playtime described in the Introduction. Each of the five developmental domains from the *Head Start Framework* will be taken separately. After the domain is described, then an explanation will be made of how the swimming pool construction playtime fostered skill development and learning in that domain.

Role of Educational Play in Learning and Development

Approaches to Learning

The first domain in the *Framework* is Approaches to Learning. Because of the unique atmosphere of a school classroom, certain skills are necessary for children to succeed in formal education. For example, children need to learn how to focus their attention on the teacher and apply self-control to avoid distractions. These types of skills fall under the domain of Approaches to Learning, defined as the emotional, behavioral, and cognitive self-regulation skills necessary to acquire knowledge, learn new skills, and set and achieve goals

(Administration for Children & Families, 2015). Self-regulation enables children to regulate their own behavior and emotions. For example, emotional self-regulation enables a child to control his emotions so he does not burst into tears when he is offended, whereas behavioral self-regulation enables a child to stop herself from hitting a child she is angry with. Cognitive self-regulation skills include the ability to focus attention for extended periods of time as well as the ability to hold multiple pieces of information in mind at the same time.

The Approaches to Learning domain has four sub-domains: emotional and behavioral self-regulation, cognitive self-regulation, initiative and curiosity, and creativity. When building the swimming pool, the children were demonstrating success in the emotional and behavioral self-regulation goal of *managing actions, words, and behavior with increasing independence*. Without adult supervision, the children practiced self-regulation skills as they set the goal of building a swimming pool, made plans to achieve the goal, and then persevered with their plans. Within the cognitive self-regulation sub-domain, two goals were accomplished: *child maintains focus and sustains attention with minimal adult support* as well as *child persists in tasks*. The children worked on their swimming pool for at least three hours on one day, and continued their efforts on the next day. Because the children began the task by themselves, they demonstrated progress towards the goal *child demonstrates initiative and independence* under the sub-domain of initiative and curiosity. Finally, through the business that the children created to sell their materials, children achieved the goal of *using imagination in play and interactions with others* under the creativity domain.

Social and Emotional Development

Social development is the ability to develop and sustain meaningful relationships with others (Administration for Children & Families, 2015). In the *Framework*, social development is divided into the two sub-domains of relationships with adults and relationships with other children. Emotional development is the child's ability to recognize, manage, and express their own emotions as well as the ability to appropriately respond to

others' emotions. Emotional development is divided into the two sub-domains of emotional functioning and sense of identity and belonging. Through the swimming pool play, the children were practicing all three developmental goals for fostering relationships with other children: *child engages in and maintains positive interactions with other children, child engages in cooperative play with other children, and child uses basic problem solving skills to resolve conflicts with other children*. As the children encountered problems in the construction of their swimming pool, such as not having the right tools, they worked together to resolve the conflicts and plan a way forward.

Under the sub-domain of sense of identity and belonging, the children met the goal of *expresses confidence in own skills and positive feelings about self*. When I arrived at the children's house, the children proudly described their swimming pool and the strategies they used to build the swimming pool, which demonstrates their confidence and positive feelings about themselves and their skills.

Language and Literacy

Language is the ability to listen and understand language as well as the ability to use language to communicate (Administration for Children & Families, 2015). Language development begins even before birth as babies listen to the sounds in their environment. Literacy is defined as the ability to interpret text and use text to communicate information to others (Henniger, 2005). Children also begin developing literacy skills very early in life, starting from infancy (Snow, Burns, & Griffin, 1998). Even though young children may not be able to read print, they are developing foundational skills that will prepare them to read in the future. These are called emergent literacy skills, formally defined as the skills, knowledge, and attitudes that are developed before conventional forms of reading (Whitehurst & Lonigan, 1998). Emergent literacy skills include an interest in reading, learning about print concepts such as reading text from left to right (Tompkins, 2011),

identifying letters of the alphabet, and oral language skills such as vocabulary and telling narratives (Whitehurst & Lonigan, 1998). Strong oral language skills are essential for children to learn to read (Roskos, Tabors, & Lenhart, 2009). The swimming pool play gave children ample opportunities to practice listening and speaking to each other, which was developing their oral language skills and providing a strong foundation for future literacy development.

In the *Framework*, Language is divided into the following sub-domains: attending and understanding language, communicating and speaking, and vocabulary. Literacy is divided into the following sub-domains: phonological awareness, print and alphabet knowledge, comprehension and text structure, writing. Through the conversations that the children had amongst themselves as they were playing, the children met all seven Language goals ranging from *attending to communication and language from others* to *understanding and using a wide variety of words for a variety of purposes*. The children even practiced their emergent literacy skills under the literacy sub-domain of comprehension and text structure as they narrated the story of how their swimming pool was conceived and developed to me. This achieved the goal of *child demonstrates an understanding of narrative structure through storytelling and retelling*.

Cognition

The Cognitive domain consists of the two sub-domains of basic mathematical skills and scientific reasoning in the *Framework* (Administration for Children & Families, 2015). Young children should be developing basic mathematical concepts such as numbers and quantities, the relationships between quantities including adding and taking away, shapes, measurement, classification, and patterns. Scientific reasoning includes skills necessary to engage in scientific investigation about the natural world, such as making observations and describing objects, as well as developing problem solving abilities. In the Head Start

Framework, mathematics development has three sub-domains: counting and cardinality, operations and algebraic thinking, and geometry and space. When playing in the swimming pool, the children met the goal of *understanding the relationship between numbers and quantities* as they compared the sizes of their piles of dirt to determine which pile of dirt was larger. As the children measured water and dirt using the different sized bottles and cans around the swimming pool, they were practicing the goal of *measuring objects by their various attributes using standard and non-standard measurement* under the sub-domain of operations and algebraic thinking. Under the sub-domain of geometry and spatial sense, the children met the goal of *exploring the positions of objects in space* as they described the position of objects in the swimming pool. For example, one child said, “Hand me the bottle in front of the swimming pool.”

Scientific reasoning has two sub-domains: scientific inquiry and reasoning and problem solving. As children were sorting the soil into separate piles of dirt and rocks, they met the goal of *comparing and categorizing observable phenomena* under the scientific inquiry sub-domain. They also met all three goals under the sub-domain of reasoning and problem solving: *asking a question, gathering information, and making predictions; planning and conducting investigations and experiments; and analysing results, drawing conclusions, and communicating results*. The process of making a swimming pool was, at the heart, a scientific experiment. They asked the question of whether they could build a swimming pool, they made predictions of what would happen when they poured water into the swimming pool, planned and conducted their experiment, and they communicated the results of their experiment with myself and their parents.

Physical Development

The physical development domain includes three sub-domains: gross motor skills; fine motor skills; and health, safety, and nutrition (Administration for Children & Families,

2015). Gross motor skills are large movements, such as running and jumping. Fine motor skills require the use of smaller muscles to move, such as manipulating small objects and using tools. Health, safety, and nutrition includes knowledge and use of healthy practices. Under the fine motor domain, the children met the goal of *demonstrating increasing control, strength, and coordination of small muscles* by digging in the dirt with the spoons and sticks to dig the swimming pool. Under the health, safety, and nutrition domain, the children practiced the goal of *demonstrating personal hygiene and self-care skills* by washing with soap and water to remove the dirt before they went inside to take lunch.

Recommendations

The purpose of this paper was to illustrate the role of educational play in young children's learning and development by taking an authentic example of play and illustrating how it fostered developmental goals in every domain according to the *Head Start Early Learning Outcomes Framework* (Administration for Children & Families, 2015). This paper demonstrated how only one instance of educational play met many diverse developmental goals for young children. Therefore, the following recommendations are made.

- Early childhood education programs should incorporate extended periods of educational play into the daily classroom timetable.
- Parents should allow their children to have extended periods of uninterrupted time to engage in play.
- Teachers and parents should be educated about the role of play in fostering children's learning and development to help them overcome their outdated beliefs about play as being a frivolous and unnecessary activity for children.

Conclusion

In the four hours that the children were engaged in the educational playtime of constructing a swimming pool, they practiced many important skills from every domain of

development identified by the *Head Start Early Learning Outcomes Framework* (Administration for Children & Families, 2015). Given the same four hours in a typical nursery school in Nigeria, it is unlikely that these children would have practiced nearly as many skills as they did while engaged in educational play. Play fosters children's development in every domain, including cognitive, physical, social, and emotional development. As the demand for early childhood care and educational programs increases (Nigerian Educational Research and Development Council, 2007), it is important that teachers, parents, and caregivers understand the powerful role that play has in young children's development.

References

- Administration for Children & Families. (2015). *Head Start early learning outcomes framework*. Washington, DC: U.S. Department of Health and Human Services. Retrieved from <https://eclkc.ohs.acf.hhs.gov/hslc/hs/sr/approach/pdf/ohs-framework.pdf>
- Boyd, D., & Bee, H. (2009). *Lifespan development* (5th ed.). Boston: Pearson Education.
- Camilli, G., Vargas, S., Ryan, S., & Barnett, W. S. (2010). Meta-analysis of the effects of early education interventions on cognitive and social development. *Teachers College Record*, 112, 579-620.
- Committee on Early Childhood Pedagogy. (2000). *Eager to learn: Educating our preschoolers*. Washington, DC: National Academy Press.
- Gorey, K. M. (2001). Early childhood education: A meta-analytic affirmation of the short- and long-term benefits of educational opportunity. *School Psychology Quarterly*, 16, 9-30.
- Henniger, M. L. (2005). *Teaching young children: An introduction* (3rd ed.). Upper Saddle River, NJ: Pearson Education.
- Morrison, G. S. (2006). *Fundamentals of early childhood education* (4th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Nigerian Educational Research and Development Council. (2007). *National early childhood curriculum for ages 0-5 years*. Lagos: Author.
- Roskos, K.A., Tabors, P.O., & Lenhart, L.A. (2009). *Oral language and early literacy in preschool: Talking, reading and writing*. Newark, DE: International reading Association.

- Snow, C. E., Burns, M. S., & Griffin, P. (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.
- Tompkins, G. E. (2011). *Literacy in the early grades* (3rd ed.). Boston: Pearson Education Inc.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Whitehurst, G. J. & Lonigan, C. J. (1998). Child development and emergent literacy. *Child Development*, 69, 848-872.