

The Importance of Play, Particularly Constructive Play, in Public Library Programming

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Adopted by ALSC's Board of Directors, September 10, 2012

Abstract

This white paper addresses the importance of play in the lives of young children. It emphasizes the need for librarians to incorporate periods of play into their library programming because of the direct correlation between play and early literacy skills. Though currently many libraries do include dramatic play in storytime programs, librarians are asked to consider adding periods of constructive play with blocks and bricks. It concludes by emphasizing the importance of constructive play, not only due to its effect on literacy skills and children's future success in reading and writing, but also to increase a library's Science, Technology, Engineering and Mathematics (STEM) educational programming.

Background

Play is vital for early learning. It is not "recess" or a "timeout" from learning, rather it *IS* the way young children learn.

Play can be defined in many ways, but normally three different kinds of play are delineated: (1.) Object Play, also known as exploratory play, from ages 0-2 (2.) Pretend Play, also described as imaginative play, or dramatic play, from ages 3-5 and (3.) Social Play, including Physical Play and Investigative Play, from ages 6-8. Young children, from birth through age eight, go through all three stages in play, with each stage building on the one before. (Jones, 2011.)

The Association for Library Service to Children (ALSC) and Public Library Association's (PLA) joint project "Every Child Ready to Read® 2nd edition" emphasizes the importance of play for the development of early literacy skills. Play is described as one of the best ways children can learn language and literacy skills. (Every Child Ready to Read®, 2011). It is also listed as one of five practices (talking, singing, reading, writing and playing) that are important for parents and caregivers to share regularly with their young children to help them get ready to read.

Through play, young children learn about their world. With this knowledge, they can understand books and stories once they begin to read. The first edition of the “Every Child Ready to Read®” project listed six skills necessary for children to successfully learn how to read and write. They included print awareness, letter knowledge, phonological awareness, vocabulary, narrative skills and print motivation, all of which can be learned through play.

Unfortunately many parents, and even educators, do not appreciate the relevancy of play and how meaningful it is for children. Instead, there is often an increased demand for academics, both at home and at school. Kindergarten skills are being taught in some preschools, and numerous preschools reduce playtime in favor of forced learning, memorization, and drills. Additionally, parents are bombarded with media messages from the time their children are babies about the need to excel, and the value of certain products or enrichment tools to help their own child do so.

Librarians and educators have stressed the importance of brain research showing the importance of the first five years of a child’s life in synapses formation and brain development. Many parents have construed this to mean that they need to push their young child into the early acquisition of academic skills, engaging them in a wide variety of enrichment activities, many of which are not developmentally appropriate during these early years. Emphasis is placed on rote memorization, electronic toys, and computer or video games. Large periods of free open-ended play and guided play often seem unimportant or unnecessary, and not as significant as engaging children in activities that will help them “to get ahead.” Parents in some communities have concerns about safety and violence that force them to limit opportunities for their children to play outside.

Play is so important to optimum child development that it has been recognized by the United Nations High Commission for Human Rights as a *right* of every child. (Ginsburg, American Academy of Pediatrics, 2007). Thus, many pediatricians are emphasizing free play as a healthy and crucial part of childhood.

Position on Play

While playing, children learn about their world, acquire skills necessary for critical thinking, discover how to solve problems, and develop self-confidence. Play encourages healthy brain development while fostering exploration skills, language skills, social skills, physical skills and creativity.

Early childhood programs need to include a content-rich curriculum in which children have opportunities for continual and in-depth learning, including play. (Neuman, 2010)

Libraries have long emphasized pretend (dramatic) play in their programs. Children act out stories; play with puppets, inventing scripts and creating their own dialogue; retell stories with props; perform plays; and engage in reader's theatre.

It is easy to see how dramatic play like this, with its emphasis on oral language use, is beneficial for early literacy skills. Children as storytellers are developing narrative skills, with many possibilities for vocabulary enhancement. Dramatic play also helps improve story comprehension and story recall.

Children's first attempts to read and write frequently occur during play. Studies of early readers reveal that these children have engaged often in dramatic and open-ended play. (Rogers, 1992)

However, research shows the importance of children engaging not only in dramatic play but also constructive play (blocks, LEGO® bricks, Tinkertoy sets, etc.) to develop literacy skills. And although some libraries have provided opportunities for constructive play these are not nearly as widespread as library programming involving dramatic play.

Importance of Constructive Play

Constructive Play can be defined as any activity in which children build and make things, constructing larger objects out of smaller ones, and creating something that remains after the child has finished playing. Common materials include: blocks, bricks such as LEGO and LEGO® DUPLO®, Tinkertoys, Lincoln Logs, and dough. This paper will focus on blocks and bricks, though the word "block" will commonly be used for either blocks or bricks.

Constructive play is most popular for children ages 3-8, though certain brick and construction sets also appeal to much older children. Children under the age of three can also engage in constructive play, typically with soft, squeezable colorful blocks that contain rounded edges for infants; and small, lightweight blocks made of hollow wood or plastic, foam cubes, cardboard blocks, or large press-together bricks for toddlers. Oversize bricks designed for very young children are also available—these are easier for them handle and do not present a choking hazard.

The use of blocks by young children has a long history, with the introduction of alphabet blocks as early as 1693 by John Locke. (Hewitt, 2001). Many well-known educators throughout the years have emphasized block building, including Friedrich Froebel (considered the Father of Kindergarten) and Maria Montessori. Both Froebel and Montessori emphasized specific ways of using block materials, though each also allowed for some creative self-expression. Caroline Pratt introduced unit blocks in the early 1900's. These soon became basic in schools across the U.S., and are still popular today. Unlike Froebel and Montessori, Pratt was a firm believer in free expression, and encouraged open-ended play with blocks. (Pollman, 2010).

Children go through various stages of development when playing with blocks. Though no single progression has been accepted as definitive, the one described most often in the literature is by H. Johnson. His chapter "The Art of Blockbuilding" in *The Block Book*, published by the National Association for the Education of Young Children, identifies seven stages of block building. (Hirsch, 1996). Ages for the stages has been delineated by Pollman (2010).

1. Carrying (blocks carried, not used for construction; young children around age 2)
2. Stacking (horizontal or vertical stacking; beginning around age 3)
3. Bridging (children create a bridge using two blocks to support a third; also around age 3)
4. Enclosure (blocks enclose a space; around age 4)
5. Patterns and Symmetry (balanced structures, decorative or symmetrical patterns; ages 4 & 5)
6. Early Representational (name structure during or after construction; age 4 ½)
7. Later Representational (announce name before building begins, often use props for dramatic play; age 5)

What are the advantages of block play for children? Here are just a few benefits: provides open-ended play; allows free expression; increases the use of fine and large motor skills; develops hand-eye coordination; provides possibilities for collaboration and teamwork (social skills); creates feelings of competence and self-confidence; allows negotiation and resolution of conflicts; provides many scenarios for problem-solving; produces gains in visual/spatial understanding; stimulates imagination and creativity; creates opportunities for dramatic play; increases language and vocabulary; fosters early literacy skills; and improves math and science skills. When building, children are engaging in dramatic play, exploratory play *AND* constructive play.

Constructive Play in Library Programming

Because block play is so important for children from a young age, libraries can engage children in constructive play during programming scheduled for some of its youngest patrons.

For the purposes of this paper, we are going to look at two strengths of block and brick building that warrant consideration for public libraries:

1. Effects on Literacy
2. STEM (Science, Technology, Engineering and Mathematics) education programming at the Library.

Effects on Literacy

We often tend to think children are primarily learning mathematical skills while playing with blocks. However, numerous studies have shown the positive effects of block and brick play on early literacy. Skills and abilities developed through block play are essential for success in reading and writing.

One major effect is on language and vocabulary learning. Children are deciding what to build and selecting different sizes and shapes of blocks, but also are communicating with their peers and with adults. They often discuss their plans for building, and are eager to describe what they have built. With librarian or adult help, new vocabulary can be increased. (Example: "I see you have built a ramp/incline.") Children also learn new words from one another while playing, or when looking at books on buildings or structures.

In addition, dramatic play often grows out of constructive play, which leads to increased oral language production while the child is role-playing. The value of oral language creation by children through dramatic play with blocks was documented by Isbell and Raines (1991). Their research study compared language production in two areas – a block center versus a housekeeping center, often considered an area that cultivates rich language. Their results found that the block center produced a greater amount of higher quality oral language than the housekeeping center. The children playing with blocks had greater verbal fluency (spoke more words), used more complete sentences, and generated more vocabulary diversity (total number of different words used). The researchers concluded that playing with blocks should be considered vital to the promotion of children's oral language development.

Maximizing the Impact on Early Literacy

How can librarians increase literacy experiences when children are playing with blocks or bricks?

Specifically, librarians can add literacy props and appropriate books to their program area. Neuman and Roskos (1990) recommend three criteria when selecting literacy props for inclusion in play settings: “authenticity, utility and appropriateness.” The props added should be items from the real world that have a function in daily life and that are appropriate for the age and stage of development.

What items could be added in library programs when children are engaged in block or brick play to increase children’s literacy experiences? Informational books related to buildings, construction, architecture or house plans, or fiction books on related subjects or themes, can be displayed or briefly booktalked. Props can include paper of various sizes and colors, cardstock, post-it pads, colored pencils, markers, crayons, masking tape and scissors. Paper can be used to add architectural details such as doors and windows. If structures are displayed, children can label them, and also write their name on a card next to their construction. Adults can also take pictures of their buildings, have children write a story about it, or how they built it, thus encouraging writing skills, also an early literacy skill. In storytime programs, children can recreate a character from the story or something that was mentioned in the book and then describe it to other children or adults. Even when children are helping to put blocks away they can return different sizes, shapes or types of blocks/bricks to storage containers that are labeled with a description. Research indicates that when children play in print-enriched surroundings, they often learn to read play-related print. (Neuman & Roskos, 1993).

What are some other ways librarians can add to the constructive play experience? First, as with art activities offered in libraries, librarians should emphasize the process rather than the product. Children should be allowed to be creative and feel good about their work. Never should an adult say to any child, “I like your building!” This sets up a competitive atmosphere by praising one child’s unique abilities. This also can put undue pressure on children to perform rather than enjoying the process itself. Librarians can ask, “What kinds of blocks do you like to use?” or “Have you ever seen a building like the one you are making? Where? How is yours different?” Don’t ask “What is it?” or other questions that require only a one-word response (and could be offensive if the child thinks what they have made is evident). Instead ask, “Tell me about your building” or “What is happening here?” With this question, the child has more opportunities to use oral language, explaining what they are building and how they built it. It can also engage a child in storytelling! Finally, models made by adults should not be displayed, nor

should children be forced to copy a building project in a book or display. Remember – creative free expression is best!

There are two other documented ways that constructive play with blocks and bricks contributes directly to early literacy skills. Block play requires both visual discrimination and interpretation abstract symbols. When children are choosing blocks, analyzing the size and shape they want to use, they are engaging in visual discrimination. They also use visual discrimination when sorting blocks by size and shape or returning them to bins that are labeled—perhaps with photos of the blocks so children can determine which bins are the correct ones. These same visual discrimination skills are needed to distinguish similar letter and word formations during the reading process. (Stroud, 1995). Having repeated experiences looking at and comparing different sizes and shapes of blocks helps children later when they are comparing different letters of the alphabet and then figuring out how various combinations of letters make up words. Language is based on patterns, and activities such as block building that include patterning and visual discrimination reinforces pre-reading skills.

When children are building with blocks, they are often trying to replicate things they have seen in the real world or in books or photographs. Their building blocks then represent another object, becoming abstract symbols for that object they are trying to depict. Letters and words in text are also symbols, representing different objects or concepts. So when children play with blocks and bricks, it directly helps them with the pre-reading skill of understanding that abstract symbols (letters) on a page mean something. The letters and words are symbols used for names of objects. (Owocki, 1999).

STEM Education Programming at Libraries

In 2007, then President Bush signed the “America Competes Act” (America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science), which was reauthorized in 2010. As a result of the law, the U.S. government and public schools have increased their emphasis on STEM (Science, Technology, Engineering, and Math) education. More and more libraries are asking what role they can play in STEM education, particularly since there is often grant funding related to programming that connects to STEM subjects. Over the past several years, library programming related to this national STEM movement has increased, either through the creation of new programs, or by incorporating STEM principles into existing programs. (One of the most common programs offered by children’s services librarians are LEGO Clubs or LEGO building programs. See

http://www.ala.org/alsc/importance_of_play] and articles listed in the Resources section below under “Programming with Blocks and Bricks.”)

By adding STEM programming, libraries can enhance their image in the community, particularly with schools, where partnerships are always crucial, and also among educators and informed parents aware of current educational emphasis and concerns.

Block and brick play are natural activities for increasing children’s mathematical and science skills. In fact, children who love to create complex block constructions are often have strong math abilities. What mathematical skills can children learn from block and brick play? Children can learn shapes, sizes, colors with bricks), fractions, and classification. Children are measuring (visually) lengths, widths, and heights, are comparing surface volumes, and are visualizing how they can fit the pieces together. These same abilities are used later when studying algebra, geometry or calculus in middle school or high school.

Children who have a high interest in playing with bricks or blocks have also been shown to have very strong spatial skills. If a child displays spatial aptitude in the early years, they continue to exhibit these types of reasoning skills throughout their academic careers. (Pollman, 2010). A study by Wolfgang, Stannard, and Jones (2001) found that children’s block play in preschool is a predictor of mathematics achievement in middle and high school, which can be seen as early as seventh grade on standardized tests of mathematics skills. Thus, by incorporating more play with block-building activities from a young age, children will have more opportunities to increase their spatial literacy.

What other skills are children learning besides math? Block play is a great introduction to architecture and engineering. In fact, children with strong spatial skills are often drawn later in life to these professions, or other technological fields.

For these reasons, libraries that wish to incorporate programs related to STEM would do well to incorporate block and brick play.

Conclusions

Librarians should find more ways to include periods of play in their library programming. It is important to first understand children’s stages of development and what types of play are good for certain ages or

stages. Publications by the National Association for the Education of Young Children are good to consult for help in this area.

We can make play a more important part of library programming by having materials available for children to immerse themselves in both dramatic and constructive play.

Dramatic play is a natural addition to storytime programs and is beneficial for children's early literacy skills, including increased language interactions.

In addition, librarians should consider ways they can include more constructive play with blocks and bricks, since this type of play also develops early literacy skills, and can also help librarians emphasize STEM programming.

Not all families can afford to buy blocks and bricks for their children. The library is an excellent place to provide families of lower socioeconomic status with block and brick play experiences.

Librarians need to remember that children will learn more if they have opportunities for creative free expression. We can occasionally model but should not direct play. We can also provide books or other library materials that correspond to the play experiences being offered.

Finally, as librarians we need to communicate to parents, library staff, and community leaders the value of play in young children's lives.

Several Sources for Blocks and Bricks:

<http://www.communityplaythings.com> (*Community Playthings*)

www.discountsschoolsupply.com (*Discount School Supply*)

www.drdrewsblocks.com/ (*Dr. Drew's Discovery Blocks*)

www.educoncepts.com (*Educational Concepts*)

www.lakeshorelearning.com (*Lakeshore Learning*)

www.learningthings.com (*Learning Things, Inc.*)

www.lego.com/ (*LEGO®*)

<http://duplolego.com> (*LEGO® DUPLO®*)

<http://www.melissaanddoug.com> (Melissa and Doug)

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PLAY (IN GENERAL)

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