Gender and Play Context Differences in Preschoolers’ Physical, Social, and Early Engineering Play

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INTRODUCTION

- Unstructured free play with blocks and other “loose parts” is thought by early educators to provide young children with unique opportunities to build positive social relationships, and facilitate early learning, physical development, and cognitive development (Sutton, 2011; Wolfgang et al., 2001).
- Little to no research has explored young children’s engagement and play behaviors with large, easy-to-handle, loose parts and manipulable materials.
- Preschoolers’ physical, social, and “engineering play” behaviors were explored in the traditional outdoor playground, the dramatic play area, and a setting which included the Imagination Playground™ blocks, designed to foster creative and imaginative constructive play (KaBOOM!, 2014).

STUDY GOALS

- Explore preschoolers’ “engineering play,” a recently developed construct that focuses on early design- and construction-related thinking and behavior (Bairaktarova et al., 2011), using the Imagination Playground™ blocks.
- Compare gender differences in preschoolers’ frequencies of physical, social, and engineering play behaviors across three play environments.
- Recommend areas of needed research on the potential educational benefits of engaging play materials, such as large, loose parts, and other available manipulable materials.

METHOD

- **Participants**
  66 preschoolers (ages 3 to 5) from diverse ethnic backgrounds. 37 Head Start children, mostly below the U.S. Poverty Level. 29 university laboratory school children who were of diverse ethnic backgrounds. 37 Head Start children, mostly below the U.S. Poverty Level.
- **Observation Settings**
  - Traditional outdoor playground. Fixed structures, climbers, slides, swings, moveable play pieces, playhouse toys, buckets, tricycles, and wagons.
  - Dramatic play indoor area. House-like furniture, action-figures, dolls, and writing and drawing materials.
  - Imagination Playground™. Indoor or outdoor area. Large, manipulable, loose parts, and attachable pieces.
- **Procedure**
  - Two researchers observed and documented each child’s engagement and play behaviors with large, easy-to-handle, loose parts and manipulable materials.
  - There were no gender differences in most play behaviors, including engineering play. It is possible that boys and girls are equally interested in engineering processes during play in the preschool years. This finding may add to the literature on early gender socialization in education, particularly in light of findings that girls are less interested than boys in STEM-related subjects and careers later in childhood (Villalobos, 2009).
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