

THE COGNITIVE PLAY BEHAVIOR AFFORDANCES OF NATURAL AND MANUFACTURED ELEMENTS WITHIN OUTDOOR PRESCHOOL SETTINGS

ZAMANI, ZAHRA

PhD candidate, College of Design, 200 Pullen Road, NCSU, 27695, zzamani@ncsu.edu

MOORE, ROBIN

Professor of landscape architecture, College of Design, 200 Pullen Road, NCSU, 27695, robin_moore@ncsu.edu

1 ABSTRACT

Considering the significance of natural environments for children's mental and physical development, outdoor preschool settings can be critical resources in providing chances for daily contact with nature. Based on Gibson, affordances are functional properties of the environment that suggest specific behavioral options to individuals. Through the application of affordance theory, this study aimed to explore how the physical environment features of two outdoor learning environments composed of a variety of manufactured and natural settings, can afford cognitive play behavior of children. Additionally, the research intended to extend knowledge relating to the association of naturally designed outdoor preschool settings and children's cognitive play behavior. Through behavior mapping of 62, four-to-five year old children, 471 data points were collected. The results revealed the significance of natural elements in affording all five types of cognitive play behaviors. Natural loose elements had considerable potentiality in affording constructive, dramatic and exploratory play behaviors. In contrast, manufactured fixed elements mostly afforded one type of cognitive play behavior: functional. Exploratory play was the least afforded type of behavior within both outdoor preschool setting which suggests the increase of implementing natural features affording discovery and engaging play opportunities. The results of this study points out the reconsideration of implementing manufactured fixed elements that mostly afford a one-dimensional cognitive function for children. The findings also accentuate the importance of integrating natural elements that can be shaped, explored, and experimented by children in outdoor preschool settings, while providing them daily opportunities to acknowledge nature and develop a sense of stewardship.

1.1 Keywords

affordance, outdoor learning environment, cognitive play behavior, natural elements, manufactured elements