

Abstract

Child–Nature-Based Experiences in Urban Preschools: A Comparative Analysis of Intervention Using User Participation Design †

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Regular exposure to natural environments significantly supports children’s holistic learning and overall health and well-being. Despite these documented benefits, the role of architectural design and the built environment in urban preschools, particularly in fostering spatial and temporal conditions conducive to child–nature experience, remains underexplored and inconsistently applied. This study presents a comparative analysis of nature-based experience (NBE) interventions in urban preschool settings, with a focus on participatory design approaches as a methodological framework. The objective is to explore how participatory design can enhance the impact of NBE interventions on preschoolers, informed by a systematic literature review and case-based evaluation, in setting up an architectural research methodological protocol. A six-stage circular participatory design process was developed and implemented involving stakeholders, including parents, teachers, and children. The data collection protocol will integrate mixed-method approaches using observational mapping, design assessment tools, and pre/post-behavioral user engagement scales to evaluate the spatial, cognitive, and emotional responses of children within and beyond preschool boundaries. This research brings novelty and practicality to measuring the child–nature-based experiences that capture important evidence: exposure to natural elements and the environment depends on its physical proximity, creating new habitats, biodiversity, cognitive ecology, relationships with space, and art-led dialog among children within and outside school settings.



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