

Flourishing in Nature

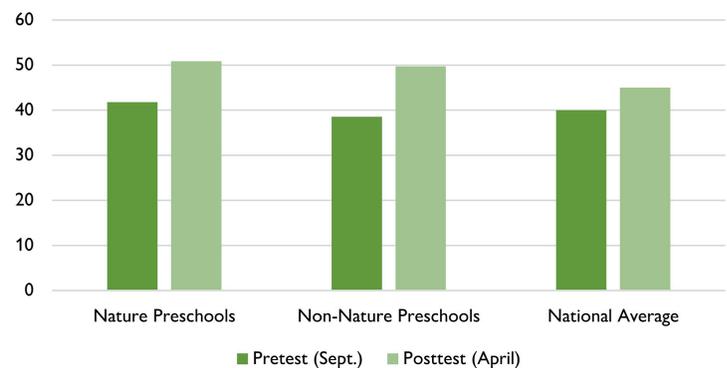
Investigating the Impact of Nature Preschools on Young Children's Executive Function Skills

Overview. Executive function skills (EFS) are the attention-regulation skills that allow conscious planning and the ability to work towards goals. Based on the findings of recent brain imaging studies, executive function skills are comprised of a set of subskills: working memory, cognitive flexibility, and inhibitory control. Executive function skills are critical, as they are the foundation for learning and school achievement, and are relied upon throughout life. The purpose of this study was to quantitatively investigate the influence of nature preschools on EFS through the use of the Minnesota Executive Function Scale instrument. Participants in this 2017-2018 study included 78 children from four nature preschools and 44 children from two non-nature preschools.



Image Credit: Little Barnyard Preschool, MN

Comparison of Growth in Executive Function Skills



Results. Results suggest significant executive function skill growth ($p < .001$) among the nature preschool participants, which was similar to the significant EFS growth in the non-nature preschool participants. Based on national norms, this significant growth in both the nature and non-nature preschoolers (a gain of approximately 10 points) is greater than what would be expected from cognitive maturation in typically developing children (a gain of about four to five points).

Conclusion. Nature and non-nature preschool participants in this exploratory study developed executive function skills at similar rates. While further studies are needed, this study suggests children who attend nature preschools will be as prepared for successful school experiences as their peers, helping alleviate parents' concerns about school readiness. Beyond the school readiness context, these findings provide another opportunity for thinking about nature preschools' contribution to a more sustainable future through supporting skill development that in time can be drawn upon for environmental problem solving and decision making.

