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Experiential Learning During Early Childhood Play: Free Play, Problem Solving, and Executive Function

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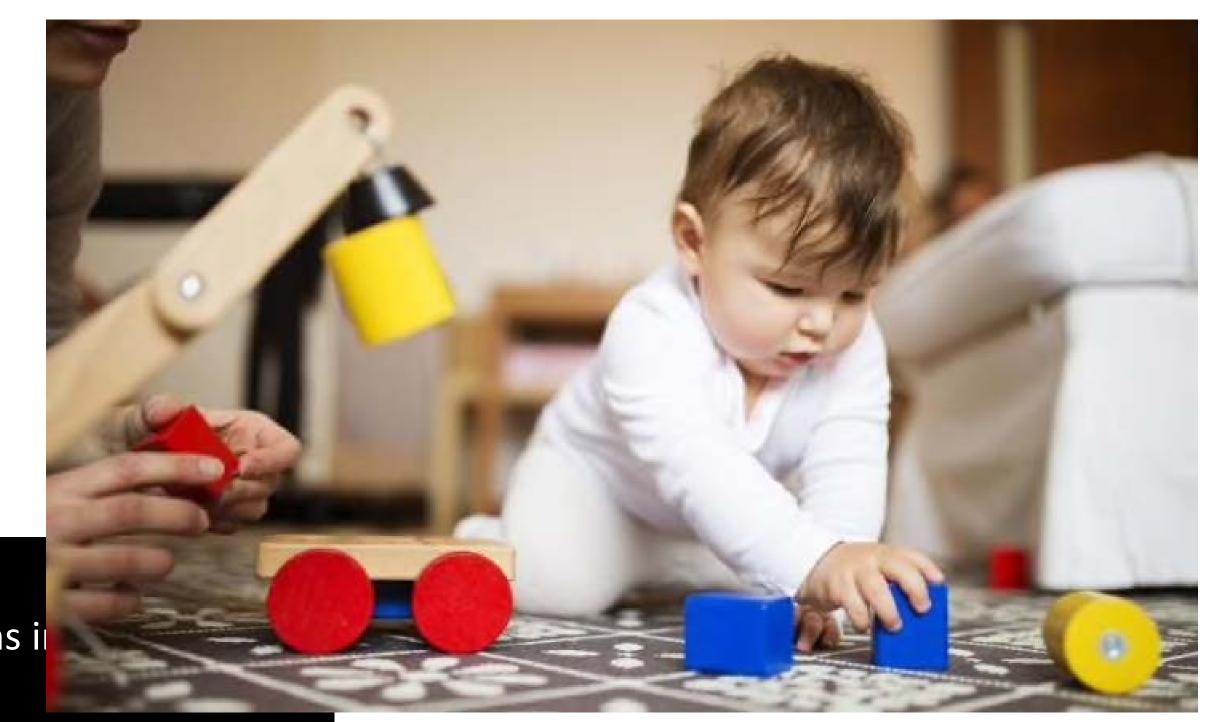
Free Play, Problem Solving, and Executive Fanction

Experiential learning is rooted in free play that encourages problem solving skills through discovery of causal relationships and practice of self-control. During play, children learn to self-regulate their emotional responses by developing appropriate problem-solving techniques when encountering challenges. Moreover, play allows children to experiment through trial and error, observe consequences of their actions, and engage in flexible thinking.^{2,3,4} Planning and implementing sequences of goal-directed actions during play not only facilitates children's problemsolving skills, 1,5 but also involves working memory and planning aptitude, typically associated with higher order executive functions.^{2,5}Thus, play is intrinsically interconnected with

problem solving and executive functioning, though the two elements have distinguishable relevance. Problem solving requires self-regulation, ability to identify an obstacle, projecting an outcome based on previous experiences, and tailoring one's behavior to achieve a goal. Executive functions, on the other hand, utilize the information gathered from both the discoveries made during play and problem solving to integrate higher order cognitive strategies into overseeing challenging life tasks and goaldirected behaviors.^{4,6} Examining the relation between free play and problem solving highlights the impact that early experiential learning has on the development of executive functioning as skills become more refined through practice

A child will naturally engage with toys, objects, and people around them. During the early stages of development, a child can execute decision making processes by crawling toward an object or person. A child will gain information through sensory exploration.

Children learn about the mechanisms in their environment and develop an understanding of social and emotional expectations as they practice interacting with objects around them and observing reactions.



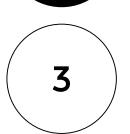
Problem Solving Within Play



FREE PLAY



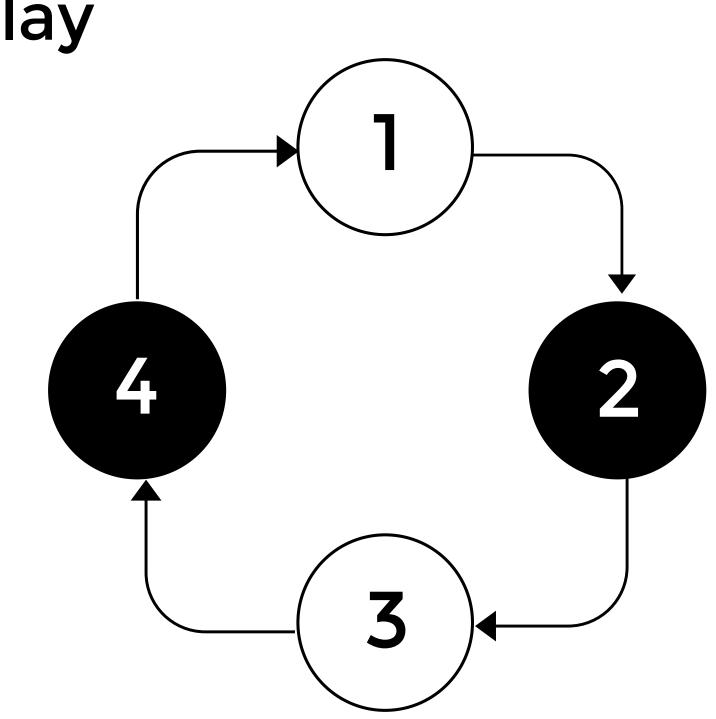
TRIAL AND ERROR



CAUSAL RELATIONSHIPS



FLEXIBLE THINKING



Experiential Learning

Experience

Engagement with the environment and having a tangible experience that can be learned from and stored in working memory and transferred to long term memory.

Observation & Reflection

Recognizing what happened during the experience and relating it to previous experiences with similar or different consequences.

Innovative conceptualization

Comprehending the sequence of events that occurred during the experience and developing a working concept that can be situationally adapted.

Experimentation

Compiling skills gained from experiences and trying an alternate means end approach to goal achievement

REFERENCES

^{!.} Babik, I., Cunha, A. B., Ross, S. M., Logan, S. W., Galloway, J. C., & Lobo, M. A. (2019). Means-end problem solving in infancy: Development, emergence of intentionality, and transfer of knowledge. *Developmental Psychobiology, 61*(2), 191-202. doi:10.1002/dev.21798

^{2.} Golinkoff, R. M., Hirsh-Pasek, K., & Singer, D. G. (2006). Why play = Learning: A challenge for parents and educators. *Play* = Learning: How play motivates and enhances children's cognitive and social-emotional growth, 3-12. doi:10.1093/acprof:oso/9780195304381.003.0001

^{3.} Trawick-Smith, J., & Dziurgot, T. (2011). 'Good-fit' teacher-child play interactions and the subsequent autonomous play of preschool children. Early Childhood Research Quarterly, 26(1), 110-123. doi:10.1016/j.ecresq.2010.04.005

^{4.} Bernier, A., Carlson, S. M., & Whipple, N. (2010). From external regulation to self-regulation: Early parenting precursors of young children's executive functioning. Child Development, 81(1), 326-339. doi:10.1111/j.1467-8624.2009.01397.

^{5.} Berk, L., & Meyers, A. (2013). The role of make-believe play in the development of executive function: Status of research and future directions. *American Journal of Play, 6*(1) 98–107.

^{6.} Blakey, E., Visser, I., & Carroll, D. J. (2015). Different executive functions support different kinds of cognitive flexibility: Evidence from 2-, 3-, and 4-year- olds. *Child Development*, 87(2), 513-526. doi:10.1111/cdev.12468