

RESEARCH-TO-PRACTICE BRIEF

Embracing Fire as a Loose Part in Early Childhood Education

Carla Gull (Hawai'i Academy of Arts and Science) | **Suzanne Levenson Goldstein** (University of Phoenix) | **Tricia Rosengarten** (University of Phoenix)

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The Challenge / Problem Statement

Gasp!?! Fire as a loose part? Simon Nicholson (1971), who coined the term “loose parts,” states that “children love to interact with variables, such as materials and shapes; smells and other physical phenomena, such as electricity, magnetism and gravity; media such as gases and fluids; sounds, music, and motion; chemical interactions, cooking and fire; and other people, and animals, plants, words, concepts and ideas. With all these things, all children love to play, experiment, discover, and invent and have fun” (p. 30). Yet, in almost any modern early childhood setting, mentioning fire as an interactive learning experience prompts an immediate, audible gasp.

In today's highly regulated educational settings, children are rarely permitted to explore or discover the natural world through fire. However, with the right safety parameters, the learning possibilities are wide. This research study examined how early childhood educators view, implement, and manage fire as a constructive, experimental loose part.

Research Approach, Participants, & Settings

Research Methodology	Online mixed-methods survey distributed via convenience sampling on social media platforms.
Participant Criteria	290 qualifying educators working in the United States, aged 21+, caring for children ages 2–8, who regularly spend instructional time outdoors in nature.
Sample Demographics	Predominantly female teachers working with children aged 3–5 within established nature-based schools or outdoor classrooms.
Outdoor Exposure	Most cohorts spend 10–15 hours weekly in natural environments, encompassing educators who both currently allow or prohibit fire engagement.

Key Research Findings

How is fire considered a loose part? Primary interactions focus on campfires, pretend dramatic fire play, and using leftover charcoal for mark making. One participant highlighted that fire functions as an ultimate open-ended medium:

“Fire is as open-ended as the simple stick. The stick is at once a sword, a building material, and a paddle for magic potions; so too the fire is the means of culinary metamorphosis, a destructive engine, and a center of community so powerful it often goes without saying.”

Safety and Incident Profiles: Respondents used a gradual approach to fire safety, including establishing safety parameters and practicing safety parameters around a fire, and practicing how to put out a fire. Minor burns or eye irritation were noted in some cases; however, most participants reported no injuries. Experienced programs noted establishing robust staff-led risk/benefit evaluations effectively counteracted operational safety anxieties.

Best Practices: Best practices include supervision of fire area, practicing safety and fire protocol, encouraging “walking feet” for children and adults alike, designating area for fire, having accessible first aid kit, using a fire safety circle, and thoroughly putting out the fire.

Recommendations for Practice

- Develop a rationale for why fire play should be used in your setting.
- Understand the developmental, local, and environmental issues around fire and limit fire as needed, depending on local environmental needs.
- Create, implement, and follow safety guidelines that address all policies, procedures, and concerns. Have conversations about safety parameters and how the program meets and exceeds safety standards, without eliminating flame around fire. Do the work to have hard conversations.
- Develop training that informs, demonstrates, and evaluates the use of fire play activities for teachers and staff.
- Use benefit/risk assessments for the program with continual assessment of risky play in the setting.
- Seek parental buy-in by communicating and educating parents on the benefits of fire play.
- Adapt fire safety to the developmental needs of children.

Action Steps for Educators: If inspired, try your own fire play with a loose parts mindset. Following typical safety protocol, give yourself freedom to experiment with mark making with charcoal, mixing charcoal ink, grab a candle and matches to make your own wax art, or try making your own mini fire. As educators, we need to take the time for play, experimentation, and exploration—fire can be a perfect option to embrace both risky and loose parts play!

Professional Resources

Loose Parts Nature Play Podcast: 'Embracing Fire as a Loose Part' | [Loose Parts Nature Play](#)

Fire Engineers: Book and Resource List | [IJECEE \(2025\), 12\(2\)](#)

References

Nicholson, S. (1971). How not to cheat children - The theory of loose parts. *Landscape Architecture*, 62, 30-34.