

## FRI-C05: Evidence-based Design: Impact of Sensory Play Environments for Children with Developmental Disabilities

Friday, October 20, 2017 1:30 PM - 3:00 PM  
Room: 406

**Title:** Evidence-based Design: Impact of sensory play environments for children with developmental disabilities.

**Overview:**

More than *just play*, children with developmental disorders benefit from strategically designed sensory playgrounds and gardens. This study evaluated the outcomes of outdoor play using a multiple baseline research design. This study provides a research methodology that is excellent for studying many questions within the broad field of landscape architecture.

**Learning Objectives:**

1. Overview research of developmental disorders in the context of a sensory garden/playground.
2. Identify elements of landscape that facilitate self-regulation and social participation contributing to quality life experience.
3. Discuss research findings, beyond playground design, and the broad implications for landscape architecture.

**Presenters:**



Presenter Lucy Jane Miller, Ph.D., OTR *Founder and Director, SPD Foundation and STAR Center*

Founder of the first Sensory Processing Disorder research program, and the world-renown STAR clinical center, Dr. Miller has been investigating and treating SPD since 1972. Studies by Dr. Miller, and colleagues, have helped bring SPD widespread recognition, and her work with families has improved countless lives. Dr. Miller has also developed nine nationally standardized tests to assess and diagnose SPD and other developmental disorders. In 2004, Dr. Miller received the Award of Merit from the American Occupational Therapy Association, the profession's highest honor. In 2005, she was awarded the Martin Luther King Jr. Humanitarian award by the state of Colorado.



**Presenter Greg Miller:** Greg is a landscape architect in Albuquerque, New Mexico. He specializes in the planning, design and implementation of parks and play areas that are fun and exciting for all users. Several of his recent projects have received design awards and serve as inspiration for the development of a city-wide system of greater inclusivity in parks. He recently gave a key-note presentation at the Landscape Structures annual sales meeting on the collaborative design process associated with projects of this type. Greg also teaches the materials and techniques class in the UNM MLA program, and is currently the national president-elect for ASLA.



**Presenter John McConkey:** John serves as Market Research and Insights Manager at Landscape Structures. He brings over 15 years of experience in the healthcare field, and offers a unique perspective on inclusion, health, fitness and children's play on the playground. John researches and tracks societal and industry trends to help create innovative playground design solutions. John develops and delivers IACET and LACES accredited continuing education programs throughout North America and internationally. The focus of his recent programs include universal design and inclusion, designing playgrounds to maximize physical activity, reconnecting children with nature, and environmentally sustainable playground design.

### **Take Aways:**

Attendees will receive a set of "best practices" and strategies for incorporating the benefits of sensory play and inclusive play into a range of public projects. These include a full range of design practices from detail applications to broad site arrangement techniques. The list is fairly defined but loose enough to apply the principles on a case-by-case basis. These principles fit into 5 categories: site context and arrangement, side-by-side play, graduated challenges, mixed materials, and varied scale. Together all these factors comprise a paradigm shift toward creating play environments, not just play areas.

**Updated Course Outline:**

1. Overview of the Research Project
  - a. The need for evidence-based research in landscape design
  - b. Review theoretical issues related to landscape design and playground design as discussed by Messervy (date) and other landscape architects.
  - c. Understand the need for landscape architects and architects to design simply beyond what code and federal legislation (ADA) requires.
  - d. Discuss the development of the sensory garden and sensory playground at STAR Center (Denver, CO)
  - e. Provide the methodology for the study, a noncurrent multi-probe multiple baseline research design, highlighting strengths and limitations of this research method and applicability to questions that landscape architects have.
  
2. Understanding Sensory Processing Disorder (SPD) and other Developmental Disabilities
  - a. Brief definition with videotaped examples of the subtypes of SPD and other prevalent developmental disorders such as Autism and ADHD.
  - b. Examples of treatment of SPD and other developmental disorders in the sensory garden and the sensory playground with an emphasis on specific elements of design that successfully support and enhance the treatment techniques and rehabilitation process.
  
3. Elements of Landscape Design that enhance the quality of experience for the child and family in the outdoor play yards and playgrounds: What the research data has shown about the value of sensory landscape features for all children as well as for treating children with developmental issues including:
  
4. Elements of Playground elements that contribute to quality of experience for the child and family: What the research data has shown about the value of various playground elements
  - a. The moving elements affect joy
  - b. The tactile elements affect body awareness
  - c. The proprioceptive activities affect self-regulation
  - d. The visual elements are cognitive affect knowledge
  - e. The auditory elements affect connecting with others
  
5. Advantages of Qualitative and Multiple Baseline Research designs in developing an evidence base for landscape design and playgrounds
  - a. Brief description of qualitative and/or multiple baseline research designs that would be useful for landscape research
    - i. Non-concurrent designs
    - ii. Multiple probe designs
  - b. Discussion of the research findings from this project goes beyond playground design, and has implications for architecture and landscape architecture in general.
  
6. Discussion and Q and A



**Sources:**

This can be written materials, websites, video, etc..

1. Miller, Lucy J. [\*Sensational Kids: Hope and Help for Children with Sensory Processing Disorder\*](#), Penguin Group, 2006 .Print.
2. Messervy, Julie Moir [\*The Inward Garden: Creating a Place of Beauty and Meaning\*](#), Bunker Hill Publishing, 2007. Print
3. "Sensory Focus Magazine" *Playgrounds: A Natural Occupational Therapy Opportunity*. Spring 2013. Print.
4. Cooper Marcus, C. and Barnes, M. (ed.) *Healing Gardens: Therapeutic Benefits and Design Recommendations*. New York: Wiley and Sons, 1999.

