Fertile Ground: The Impact of the Natural Learning Environment on the Social/Emotional Development of Students with Autism and/or Sensory Processing Disorder

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Natural Learning Environments and the Social-Emotional Development of Students with Sensory Challenges

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Introduction

• Students spend approximately 15% of their lives inside the classroom.

• Students with ASD/SPD experience difficulty with processing sensory stimuli from the traditional classroom environment. (Baranek, Foster, & Berkson, 1997; Brown & Dunn, 2010)

• Least Restrictive Environment was introduced with I.D.E.A. to encourage mainstreaming and integration with neurotypical peers (equality rather than equity). (Individuals with Disabilities Education Act, 2004)

• If the traditional classroom is a source of sensory dysfunction, a natural learning environment may reduce sensory distress.

RESEARCH QUESTION:
What is the affect of a natural learning environment on the social behavior, communication, and participation of seven students with Autism (ASD) and/or Sensory Processing Disorder (SPD) at a non-public school in Northern California?
Review of Literature

Themes discovered through the literature:

• **Sensory Processing Challenges in the Classroom**
  - Negative social and academic impact
  (Ashburner, Ziviani, & Rodger, 2008; Hilton et al. 2010)

• **Least Restrictive Environment**
  - Emphasis on mainstreaming in traditional classrooms
  (71 Fed. Reg. 46587)

• **Nature Deficit Disorder**
  - Exposure to nature is essential for healthy human development
  (Louv, 2005; Louv, 2008)

**Gap in Literature:**
Little to no research with regard to a natural learning environment (in an educational context) specifically for students with sensory challenges.
The Study

- Students participated in the regular school day in beach, meadow, and forest environments
- Mixed Methods: Direct observation, surveys: Qualitative Behavioral data collection: Quantitative
- Parent Surveys
- Paraprofessional/Teacher Surveys
- Student surveys

Transformative Approach: desire to transform how students with ASD/SPD access their education
Findings

• **Regulation of Sensory Input**
  - decrease of maladaptive behaviors
  - agency over sensory input/output

• **Less Restrictive Environment**
  - academic performance improvement

• **Social-Emotional Well-being**
  - increased communication
  - increased self-efficacy and advocacy
Conclusion

Roles students play in their sensory experience:

**Sensory seeker/avoider**: avoiding harmful stimuli and seeking coping mechanisms

**Sensory receiver/explorer**: receiving natural and subtle stimuli and exploring ways to interact with the stimuli

Students should be provided with a learning environment which promotes equity and that provides student agency over their sensory experience.

**Limitations of Study**: sample size and population, access to outdoor space
Questions?

Thank you very much!