ECOLOGICAL LITERACY OF CHILDREN IN RURAL VILLAGE TOWARDS ENVIRONMENT LEARNING

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INTRODUCTION

• The everyday life of children takes place in many ways in physical environment.
• There is a need to better understand of the people-environment relationship in order to improve the quality of learning environment. This also explained how the environment can influence children's everyday experiences.
• It is an essential part of the process of creating a child-friendly environment that will offer more meaningful experiences for children through an encouraging engagement and interaction with the environment.
• Natural environment has been a site for children to play with many physical activities (e.g. Wheway, 2015; Fjortoft, 2004), appear to benefit from being outdoor where they able to stimulate actions and perceptions.
• Reconnecting children to interact with the living systems in the natural environment allow them to enrich their thinking and learning as well as a belief that ecology in science may be a particular important domain in early childhood (Worth, 2010).
INTRODUCTION

- Natural environment as potential site that promotes outdoor play and environmental learning for children's ecological literacy.

- The availability of natural environment offers rich in diversity, open-ended laboratory and accessibility to natural elements including plants and animals for interaction, exploration, discovery and experimental (Malone & Tranter, 2003a; Moore, 1997) in constructing knowledge.
  - expanding children's physical and social, cognition and emotion development (e.g. Rios & Menezes, 2017; Malone, 2007; Chawla & Heft, 2002).
  - Potential site for place-based as well as for environmental learning (Malone & Tranter, 2003a) for children to develop ecological literacy.

- Children's learning through play in their everyday landscape play an important component in facilitating the learning process.
WHY ECOLOGICAL LITERACY IS IMPORTANT FOR CHILDREN

• Ecological literacy is important for children because **if we lose NATURE, we will be lost too.**

• Each living creature on the planet can’t survive without water and food and this is something that our children must learn from childhood. Teaching them to take care and respect nature is one of the most important lessons we have to teach them.

• Develop in children a **deep love and solicitude** for their surrounding environment.
Concerns for a severely diminished childhood experience of nature, coupled with alarm for a rapidly diminishing global biodiversity.

Children are received a large portion of knowledge about nature and science in school, strictly bound to school where they learn through abstract learning. Children have been separated from their everyday experience and known as decontextualized.

Children’s literacy is rarely utilised, missing key opportunities to integrate their extensive everyday form in knowing (conception), seeing (perception) and doing (action).

Less attention has given to explore the children’s understanding of matter plants and animals and other physical elements within their immediate environment.
To investigate the ecological literacy of children in rural village and the effects on their competence toward environmental learning
# METHODS

## Data Collection
- Participatory observation
- Focus group interview and discussion
- Autophotography (GPS tracker)
- Drawing (Cognitive map knowledge)

## Approach
Phenomenological study
- Post-positivism
- Constructivism

## Data Analysis
- Descriptive Analysis
- Content Analysis using Nvivo
- GIS based spatial knowledge map on ecological literacy of children on ecosystem
RESULTS

Category of environmental features encountered in children's drawings

- Animals: 24.5%
- Plants: 23.7%
- Topography: 19.5%
- Climate: 16.2%
- Human Activity: 5.8%
- Vehicles: 0.2%

Children's Understanding of Nature based on Spaces from drawings

- Home garden: 8%
- Pond: 18%
- 2nd forest: 29%
- Farm: 21%
- Ditch: 11%
- River: 4%
- Open field: 16%
- Orchard: 19%

Important to relate their understanding with ecosystem

PRODUCERS (Autotrophs)
- Trees, grass, flowers, ferns, shrubs, palms

CONSUMERS (Heterotrophs)
- Squirrel, Ants, Bees, Birds

DECOMPOSERS (Detritivores)
- Bacteria, Snails, Earthworms, Fungi

E.g. about Living component
CONCLUSION

1. Sensory experiences
2. Diversity and appreciation of nature
3. Biological knowledge and environmental understanding

- The findings suggest that the context of everyday landscape has **become as an extension** for children to develop their literacy on ecological systems and support their actions; **physically, cognitively and socially**.

- The children perceived the everyday landscape as
  - an open-ended laboratory because there are no boundaries.
  - as a place for them to have sense of control to discover their own knowledge.

- Nevertheless, everyday landscape elucidates the **importance of ideational resources** for the initiation of learning activities, thus, lead to ecological literacy.
Thank you