

Land-Based Learning Centers: A Multi-Generational Educational Approach to Promoting On-Farm Sustainable Agriculture

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Introduction

Michigan State University's Upper Peninsula Research and Extension Center developed land-based learning centers cooperatively with local farmers implementing sustainable agricultural practices.

Methods

Teams consisting of a secondary school teacher, farmer, and Extension educator facilitated student learning to offer a solution to an identified, on-farm sustainability issue.

Progress

Project topics:

- Spotted Wing Drosophila and Native Pollinators in Highbush Blueberry Production
- Choosing a Farm-Scale Compost System
- Curbing Deer Depredation of Field Crops
- Designing 3-D Printed Slug Traps
- Hayfield Practices and Soil Health
- Direct-Market Potential of Deacon Calves
- Marketing CSA in Rural Areas

People:

- 7 teachers working with 7 farms
- 14 agriculture professionals
- 181 students developing projects

Discussion

Teachers articulated the authenticity and problem-based nature of the learning experiences as assets for students.

Preliminary Evidence

- Knowledge of Extension increased.
- Awareness of agriculture increased; specifically, awareness of the steps involved in growing food.
- Hands-on learning opportunities increased.
- Interest in agricultural careers has increased.

We are conducting research on student learning outcomes associated with the project.

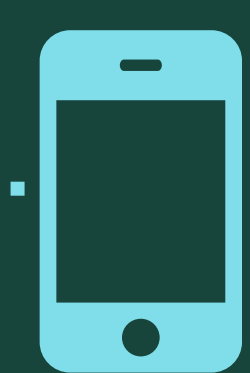
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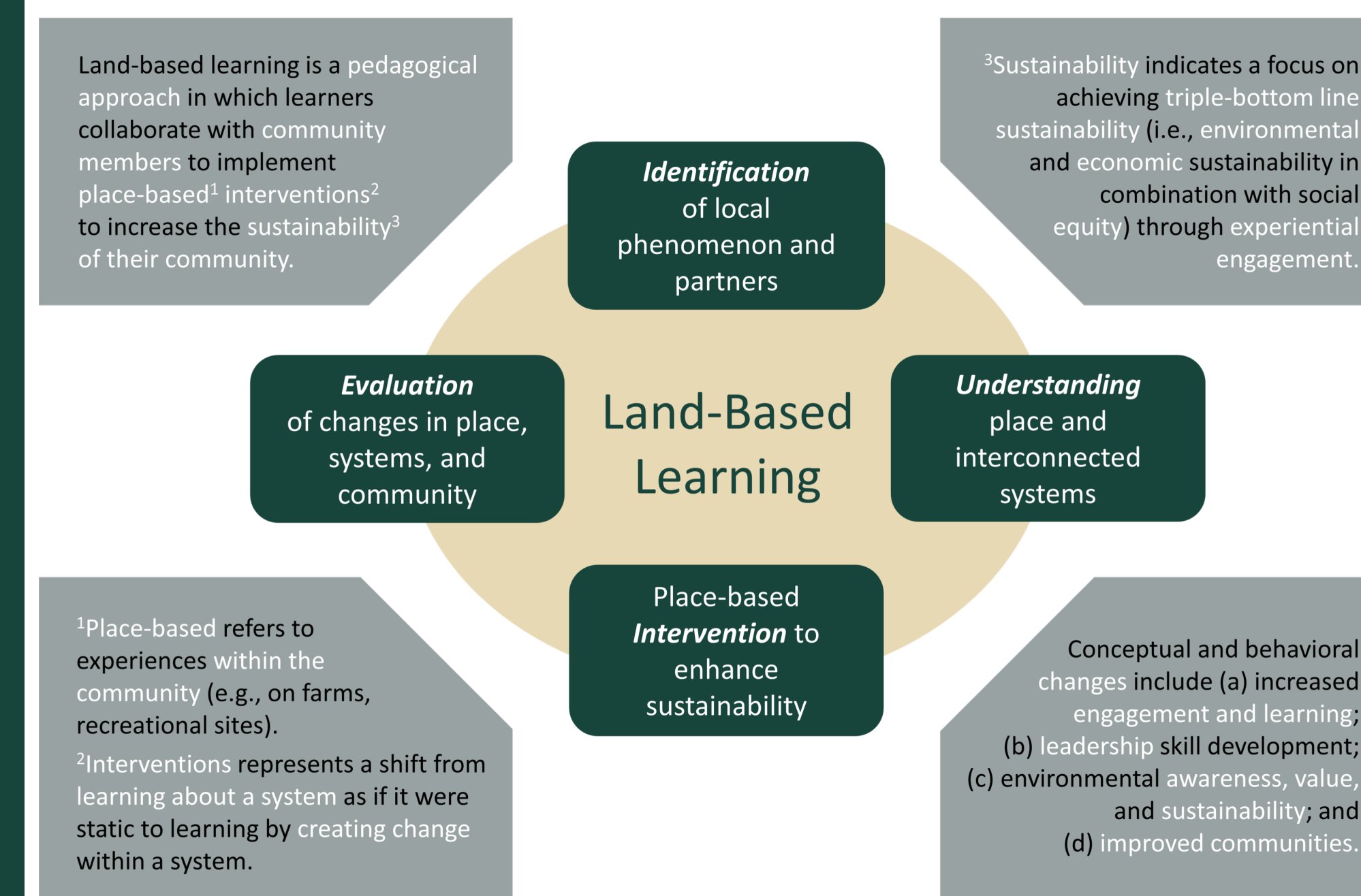
Land-based learning represents an innovative way of engaging learners in sustainable agriculture



Take a picture for more
information and to visit the
project web site

<https://www.msunorthfarm.org/land-based-learning-centers.html>

#studentsUPonthefarm



Healthy Soil Hayfield Project
Superior Central High School
Log Cabin Livestock
MSU Extension – Alger County

- 1. Identification:** Teacher approached farmer about integrating on-farm soil health initiatives while teaching soil science. Students from Tim Bliss' classes worked with farmers Ben and Denise Bartlett to develop best practices for hay fields too remote from the farm to be grazed.
- 2. Understanding:** Farmer visited classroom to offer introduction to hay production in terms of inputs, cost, and profitability. Students visited farm to learn about soil food web. Conversations between farmer and students centered on profitability of different approaches to growing hay and measurement of soil health in relation to yield.
- 3. Intervention:** With help from Extension Educator Jim Isleib, students designed replicated trials to test treatments in relation to yield, farm profitability, and soil health: urea, composted manure, cover crop, mulching with cut hay, and control plots. Plots were monitored over the summer by student interns.
- 4. Evaluation:** 96% of students indicated that, as a result of this project, they knew more about sustainable agriculture, potential careers in agriculture, and the relationship between soil and plants.

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