

Chapter 15

Cultivating Ecological Generosity and Sustainability in Elementary Youth and Student Teachers via Children's Books

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ABSTRACT

Teacher candidates enrolled in a Civic Science for Elementary Schools course at a public university in a Midwestern state developed children's books on ecological diversity and sustainability. The children's books were analyzed qualitatively using constant comparative analyses that involved analyzing each book's images and text for evidence of key themes. Analyses demonstrated children's book creation as an instructional pedagogy and ecological diversity and sustainability as curricular content powerful to enhance ENL student engagement, identification, and learning in a new cultural, linguistic, and ecological setting. Book creation involves narrative and visual explanation of key concepts accessible to ENL learners. Ecological diversity and sustainability are values shared across regions and can enhance ENL student identification with a new school context, while valuing their knowledge funds. The public library emerged as a supportive glocal civic space to build pedagogical bridges among teacher candidates, elementary schools, and the shared community resource of children's books.

INTRODUCTION

Diversity is a vital quality and recognized value across globally local contexts, including many U.S. schools of teacher education identifying with 21st century ideals (Spring, 2017). As teachers and schools of education seeks to cultivate greater understanding and appreciation for diversity, it is also important to cultivate in students a practice of civic *responsibility*, particularly practices that are driven by genuine affect and concern, beyond a mere desire to out-perform classmates or colleagues on standardized tests or other unilateral measurements of value. K-12 education and teacher education are becoming swept

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up in a testing movement taking over teaching and learning in the U.S. and abroad (Spring, 2017). Yet, testing and the testing movement is limited in ability to cultivate appreciation for diversity and responsibility, and may even hinder this.

More is needed for *glocal* societies.

Ecological sustainability is one of many human responsibilities vital to the well-being of all, in both local and global contexts. Elementary education and teacher education are potential spaces for cultivating greater appreciation for and responsibility toward ecological diversity. Research is needed to examine and document the implementation of elementary ecology education, and its ability to shape student identification and engagement in one's civic space. In particular, more needs to be understood about how this vital body of pedagogical work is able to engage and connect elementary ENL and other students who may be at risk of classroom and curricular marginalization, as a result of immigrating from other cultures, languages, and regions.

This study explores how the development of children's books may be an effective pedagogical tool to engage elementary students and teacher candidates in exploring and cultivating values and practices for ecological diversity and sustainability, while cultivating language skills.

BACKGROUND

Ecological Diversity and Sustainability

Ecological and human diversity support one another. Rachel Carson's (1962) *Silent Spring*, details countless ways ecological diversity benefits humankind, including micro-contributors, such as bacteria, fungi, and algae, serving as "principle agents of decay, reducing plant and animal residues to their component minerals" (p. 54). Soil microbes are who we can thank for enabling oxidation and reduction of iron, manganese, and sulfur, serving as plant nutrition. In *The Nature Principal: Human Restoration and the End of the Nature-Deficit Disorder*, nature activist and educator, Richard Louv (2011), documents a plethora of ways in which ecology is *generous*, and concludes that human regard for nature is "essential to our physical and spiritual survival" (p. 18). He warns that our current "electronic immersion," indulged without balance, can reduce our ability "to pay attention, to think clearly, to be productive and creative" (p. 24). Research as early as the 1970s, conducted for the U.S. Forest Service, concluded that direct and indirect engagement with nature enhanced mental acuity and helped in recovery from mental fatigue (Kaplan, 1995). Part of this may be attributed to photosynthesis by which light energy is captured in plants and used to convert water, carbon dioxide and minerals into oxygen and organic compounds (Bassham & Lambers, 2018). Oxygen supports mental and physical acuity.

What Happens to a Species That Loses Touch With Its Habitat?

Nature writer, Robert Michael Pyle, raises a significant question, and identifies ways in which our human-nature dependence is essential to the survival of both (Louv, 2011). Moreover, this question is a shared dilemma faced by all cultures, languages, and regions. ENL curricula that engages students in examining ecological diversity and practicing ecological sustainability is affirming this shared responsibility, thus making any ecological region "home" for immigrant students. While ecological diversity varies from region to region, the responsibility to sustain ecological diversity is shared across regions.

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