

Chapter 70

Rooted in Teaching: Does Environmental Socialization Impact Teachers' Interest in Science-Related Topics?

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ABSTRACT

Research in Environmental Socialization (ES) and the impact of significant life experiences suggest that childhood play in outdoor environments shape later adult activities or career interests. Few studies have investigated how childhood experiences influence curricular interests of preservice and inservice teachers. This preliminary study examines what ES factors of teachers raised in rural and/or non-rural environments reveal about their interests in science topics and field-based learning opportunities. Results suggest that teachers growing up in rural areas were slightly less interested than non-rural teachers in field-based learning and expressed less experience with environmental education. Teachers with more ES experiences (e.g., played in the woods, built forts) expressed greater interest in science-related topics than those who had indicated fewer experiences. Rural teachers tended to have more ES experiences than non-rural teachers. The authors discuss how environmental socialization factors influence teacher preference for curricular programs specific to environmental and ecological topics and raise questions about the changing environmental socialization experiences of preservice and novice teachers.

DOI: 10.4018/978-1-4666-7363-2.ch070

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From the earliest years, children are actively engaged in their local surroundings. They explore their surroundings, discover new spaces, and construct personal places where their initial ideas and foundational knowledge are developed. This physical-world socialization begins in the home and over time, extends out into the local community. Each day offers new situations, events, and potential opportunities for furthering the child's understanding of the natural world. Over time, such experiences, combined with their social interactions with peers, family or local experts, contribute to what is known and how this knowledge is to be used (Piaget, 1954; Vygotsky, 1978; Wertsch, 1984).

Our students grow up in varying social communities, or lifeworlds (Lim & Calabrese Barton, 2006)—places where they seek out and interact with resources that enable cultural reproduction. Constructed around the physical, social, and emotional dimensions, an individual's lifeworld is the most basic knowledge-shaping mechanism. Too often, educational researchers take for granted how the context of one's upbringing has influenced her development into an adult social being.

Whether a student's lifeworld includes the sights and sounds of city life or country living, the extent in which knowledge has been learned and the ways in which it has been communicated to others has been shaped by formative interactions within her environment. The role of the teacher then, is to draw from this foundational knowledge, making connections to her prior experiences and interests as a means of developing more complex ideas and understanding. While this constructivist school of thought is prevalent in many teacher education programs, there seems to be an expanding crevasse between the experiences of today's youth and the appropriate pedagogical approaches used to bridge the gap toward understanding.

At present, we live in a day and time in which our nation's youth spend less time investigating and exploring their local surroundings. Richard Louv's (2005) book, *Last Child in the Woods*, describes how changes in our children's daily activities have influenced their connection with nature and the outdoors. Elementary teachers, as well as science teachers, must provide learners with experiences within and knowledge about their local surroundings. Lim and Barton (2006) propose the idea of community science, using lifeworld places as a context for connecting the science of the curriculum to the students' experiences occurring outside of the classroom and in the local community. To preserve the places that shape the knowledge of future generations requires a redirection and reconnection with our natural world.

Over the past two years, we have conducted surveys with pre-service and in-service educators within a six county regional area to assess interest in teaching ecological and environmental topics. Data collected were influential to the development of curricular programs and workshops offered through our university's outdoor education facility. While analyzing the responses by county, we detected patterns between the respondents' area of upbringing and their science topic interests. Upon further examination, we noted that the childhood activities indicated by the respondents seemingly correlated to their preferences in potential programs. In this chapter, we discuss our preliminary findings from the analysis of data and introduce how patterns in environmental socialization experiences may contribute to teachers' curricular choices and interests.

LITERATURE REVIEW

Sense of Place and Place-Identity

Shared among researchers of this study, is our interest in place and the development of a

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