

A Day Hike Designed to Promote Environmental Literacy

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Abstract

This paper introduces a theoretical framework and practical means of teaching environmental literacy through the explanation of a structured day hike experience with university students along the Bruce Trail in the Niagara Region of Ontario, Canada. Environmental literacy is about deeply knowing the details and histories of particular settings and has become increasingly popular for directing outdoor and environmental education experiences. However, what it means to be environmentally literate is a topic for debate and is often difficult to articulate and describe to those who are unfamiliar with the term. Stables (1998) described an environmental literacy framework that is useful for teaching different ways of learning about and experiencing natural environments. Stables' framework was based upon functional, cultural, and critical elements, which coalesce to create a holistic approach to understanding environmental literacy. The purpose of this article is to describe an interactive approach for teaching environmental literacy by using a theoretical framework as a guide for practice.

KEYWORDS: Environmental literacy, outdoor education, environmental education

The topic of environmental literacy has become increasingly popular in outdoor recreation theory and practice as a means to foster person-place relationships (Curthoys & Cuthbertson, 2002). Environmental literacy can be used as an approach to outdoor and environmental education, which actively engages learners with multiple processes and histories of a particular setting (Stables & Bishop, 2001). Stables (1998) described a utilitarian approach that can be used to teach environmental literacy through identifying functional, cultural, and critical ways of learning about natural environments. Functional literacy is one's ability to interpret objective information such as identifying the name of a specific tree and knowing if the tree is native to a specific region. Understandings of cultural literacy focus on human histories and the different roles of people within a particular setting over time. Critical literacy is the ability of a person to define and understand his or her relationship to a particular setting and to recognize what practices and behaviors protect that relationship and the environment.

Stables (1998) proceeded to theorize that these environmental literacies are interdependent and can work reciprocally to help others more fully know, learn, and experience natural landscapes. While there are some limitations to such a framework, its practical applications to outdoor related professions are valuable. In particular, it can be used as an advantageous teaching framework when facilitating experiences in and out of the classroom that aspire to expose students to multiple ways of understanding natural environments. It should be noted that this article focuses on aspects of a hike involved with promoting environmental literacy and does not cover aspects such as trip planning or risk management procedures.

Preparation for Day Hike Experience

The day hike described here is suggested as an interactive method for teaching students about environmental literacy through the use of Stables' (1998) framework. This hike was facilitated during a semester-long course on environmental literacy. Prior to the hike, students had been given a presentation on Stables' theory, completed readings related to functional, cultural, and critical environmental literacy, and conducted research on the natural history of the Niagara Region. Students also had many opportunities to discuss the concepts in detail and apply them during in-class meetings. The hike was comprised of multiple components with an overarching purpose to provide students with an opportunity to put environmental literacy theory into practice.

Structure of Day Hike and Learning Activities

The hike took place on the Bruce Trail along the Niagara Escarpment in Southern Ontario. The Bruce Trail is the longest marked trail in Canada and sits within an internationally protected biosphere reserve. This particular section of the trail is near Brock University with a variety of interest points including diverse flora and fauna and interpretive sites. Additionally, private and public land ownership affects the nature of the trail landscape, which ranges from pristine woods to modern water treatment facilities. Students were supplied with field guides to help

with the identification of local flora, fauna, and geologic history and were asked to carry their class journals.

The first two hours of the hike served as an introduction to functional elements of the forest setting with the purpose of providing students with a scientific understanding of the landscape. During this time, students freely chose how to interact with the land and were encouraged to observe their surroundings and take note of what they were attracted to within the natural environment. Some students remarked that they were inclined to touch the bark of a particular tree, others focused on the changing colors of leaves, and some gravitated toward the remnants of limestone cliffs. After this introduction, small student groups taught short lessons on flora, fauna, and the history of the Bruce Trail. Supplemental instruction about the history of the trail and its flora and fauna was provided by the course professor with the help of a graduate assistant. Overall, functional literacy elements provided an objective view of the landscape from which cultural and critical literacy could unfold (Stables, 1998).

The day's focus turned to cultural literacy, or the human history of the area, as the group moved down the trail and arrived at a small interpretive center around lunchtime. The interpretive center was an old mill that had been constructed from local limestone and was dependent on hydro power from a nearby creek. Students had the option to go on a self-guided or a structured interpretive tour of the site. The history of people's relationships to the setting was made explicit through signage and volunteer interpreters. Students were asked to take notes in their journals about aspects of cultural literacy they found most interesting at the mill. During lunch, an informal discussion about the site and cultural literacy was facilitated by the instructors. During this discussion, students were asked to refer to their notes to connect elements of functional literacy to newly discovered information about human history and involvement with the site. The goal of the discussion was to clearly link functional and cultural elements and to prime students to begin thinking about our final element, critical environmental literacy.

On the return hike to campus, the final goal was to expose students to aspects of critical literacy thereby encouraging an even more creative and personal interpretation of the landscape. Students and instructors continued to explore elements of the setting along the trail. A detour was planned to a section of creek close to the interpretive center near the bottom of a waterfall, which was part of the ecosystem that generated power for the mill. Additionally, these waters provided nourishment for the flora and fauna of the unique forest environment that housed the trail where we spent the day hiking. Despite the natural beauty, the area was clearly impacted by evidence of litter and refuse. A brief discussion took place at the waterfall about how different environmental processes and human use simultaneously complemented and caused tension between each other. Students were then asked to think about environmental literacy as a melting pot of particular environmental elements, histories, and meanings attached to a particular site. To conclude the discussion, students were asked to think about the meanings they connected to the setting and how those meanings had potential implications,

positive and negative, for the natural environment. Before departing, students and instructors packed out five bags of trash and an old bicycle.

The day ended on the trail near campus with a longer group discussion and debriefing. Each student articulated a high point and a low point from the day and related them to an aspect of environmental literacy from prior readings and discussions. Comments included affinities toward the interpretive center, a special discovery in the forest, and/or feelings of pride related to the group's clean up of a particular area. The discussion included outdoor recreation resource use issues specific to the region, issues related to environmental degradation, and the group experience as a whole. Students discussed those moments where they felt the most connected to the setting and were asked to relate those ideas to our discussion. Students described environmental literacy on their own terms and were encouraged to recognize and value other points of view within the functional-cultural-critical framework.

Outcomes

The purpose of the described hike was for students to experience ways of becoming environmentally literate on a personal level. The group discussion at the end of the day gave students a chance to explain in their words the personal meanings the environment held. Furthermore, the day hike provided an experiential framework for the class to refer to during the remainder of the semester. Finally, students were encouraged to take responsibility for their own—as well as others'—learning and to make sense of the day from their own perspectives.

Considerations and Variations

The functional, cultural, and critical literacies framework can be applied to a variety of learning activities and settings. The day hike described in this article provided one example of how to use this theory in practice. Many other variations could exist such as facilitating the experience in a shorter time span, leading students through similar activities in a more urban setting, or simply using the framework to guide classroom discussions. The activities described could also be made appropriate for different age groups. Additionally, the use of an interpretive center could have been replaced by building cultural interpretive activities into the day's events at different points on the trail. Overall, the functional-cultural-critical framework can hopefully serve to expose others to the many ways of "reading" the natural environment as well as providing an intentional way to help others make connections between those readings (Stables, 1998).

Furthermore, it should be noted that the hike took place close to the university where students attended classes. Students were familiar with this environment and had established relationships with it over the course of their university experiences. Researchers and theorists suggest that learning about one's "home place" is often the most effective way to promote pro-environmental behaviors and critical thinking with regard to a specific environment (Berry, 1993; Curthoys & Cuthbertson, 2002). This familiarity with the setting appeared to be an important

aspect of group discussions as students commented frequently about their feelings of closeness to the university and surrounding region.

Additionally, these activities were intentionally facilitated in a semi-structured fashion. Some of the students chose to write about them extensively in their semester journal assignments, while others referred to the experience consistently in subsequent classroom discussions. For students new to the idea of environmental literacy, this activity afforded them an experience and language to use in future learning and expanded their understanding of the history and particulars of the region where they attended school. This new context proved useful for related learning activities for the remainder of the semester.

Generally, students who participated on the day hike were receptive to the ideas presented and commented that the experience was valuable for understanding class content. Students commented that the experience provided a way to get to know their peers in a less formal environment. This seemed to help create an open environment to discuss more controversial issues related to environmental literacy later in the semester.

In summary, the use of Stables' (1998) functional-cultural-critical framework proved useful for designing a day hike to promote environmental literacy. A thorough review of interpretive strategies that use environmental and ecological literacy principles can be found in Curthoys and Cuthbertson (2002). Approaches to environmental learning like the one described in this article can hopefully help students to broaden their understandings of human-nature relations and give them some of the tools necessary to help others become environmentally literate citizens.

References

- Berry, W. (1993). *Sex, economy, freedom, and community*. New York: Pantheon.
- Curthoys, L. P., & Cuthbertson, B. (2002). Listening to the landscape: Interpretive planning for ecological literacy. *Canadian Journal of Environmental Education*, 7(2), 224-239.
- Stables, A. (1998). Environmental literacy: Functional, cultural, critical. The case of the SCAA guidelines. *Environmental Education Research*, 4(2), 155-164.
- Stables, A., & Bishop, K. (2001). Weak and strong conceptions of environmental literacy: Implications for environmental education. *Environmental Education Research*, 7(1), 89-97.