

# **No More Pencils ... No More Books? Arguing For The Use Of Experiential Learning In Post Secondary Environmental Studies Classroom**

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This paper discusses how experiential learning theory can be linked to more effective teaching in post secondary environmental studies classrooms. The author argues that environmental studies courses in institutions of higher education can be enhanced through experiential learning, and that such an approach to education would better prepare students to address the environmental problems of the new millennium.

The natural and built environments in which humans live are complex and constantly changing. In the face of increasing global environmental degradation, one of the primary roles of environmental studies instructors is to help students understand their relationship to the world, illustrate the role human beings can play in the improvement of environmental quality, and promote sustainable lifestyles. While traditional college and university lectures have served to inform students in the past, most traditional teaching methods have been criticized for failing to promote a full understanding or appreciation of the environment as a whole.

Often those who do comprehend our plight intellectually cannot feel it, and hence they are not moved to do much about it. This is not merely an intellectual failure to recognize our dependence on natural systems, which is fairly easy to come by. It is rather, a deeper failure to join intellect with affection and foster loyalty to particular places, which is to say a failure to bond minds with nature (Orr 1996, 11).

Students may comprehend planetary crises, but few feel obligated to do anything about them. How can environmental studies instructors change students' knowledge, attitudes and skills? Only a drastic paradigm shift will do.

This paper will discuss the concepts of andragogy (the art and science of teaching adults) and experiential learning, illustrating how they can be linked to more effective teaching in university environmental studies classrooms. In this paper I argue that environmental studies courses in institutions of higher education can be enhanced through experiential learning, and that such an approach to education would better prepare students to address the environmental problems of the new millennium.

## **The Andragogical Model And Experiential Learning**

The term andragogy can be traced to 1833 in German literature (Cranton 1992), but was not widely introduced to the academic circles of North America until 1968 by Malcolm Knowles (1977). In the past thirty years, pedagogy has been reshaped to focus on the teaching of children, while andragogy has come to mean the art and science of teaching adults. As a model, andragogy transcends traditional approaches of teaching, focusing on the unique experiences adults bring to their learning environments, the role of self-concept, and the use of self-directed learning theory. Knowles distinguishes between the learning styles of children and adults by listing some underlying assumptions about adult learners including:

- adults have a self-concept as being self-directed learners;
- adults have numerous and varied experiences;
- adults are prepared to learn as a result of being a developmental transition point;
- adults see a clear purpose for learning; and
- adults prefer experiential and task-centred learning. (Knowles 1980)

These assumptions indicate that adults prefer experiential and task-centered learning. This has major implications for university classrooms.

Experiential learning has been described as "a process through which a learner constructs knowledge, skills, and value from direct experiences" (Luckman 1996). The genesis of the movement in North America can be traced to John Dewey in the mid-twentieth century. Dewey, felt that education should be more than a transfer of knowledge from individual to individual, but rather a "continuous process of reconstruction in which there is progressive movement away from immature immediate experience to experience which becomes more pregnant with meaning, more systematic and ordered" (Dewey 1960, xi). Dewey believed that if experience was made conscious, it had the ability to be transformative. For Dewey, every true experience involved the reason, emotions and struggle. "For taking in any vital experience is something more than placing something on the top of consciousness over what was previously known. It involves reconstruction." (Dewey 1960, 157). Dewey believed that for learning to be effective it should shift from the memorization of a body of knowledge to a process of inquisition, knowing and understanding.

This idea of experience in learning becomes very appropriate when discussing the nature of learners who attend institutes of higher education.

There is a distinct shift in emphasis in andragogy away from the transmittal

techniques so prevalent in youth education--the lecture, assigned readings, and canned audio-visual presentation--toward the more participatory experiential techniques (Knowles 1977, 45).

Kolb (1984) contributes by introducing the cycle of learning. Kolb believes that complete learning begins with a concrete experience upon which a learner reflects to find meaning (reflective observation). The learner draws conclusions (abstract conceptualization) through reflection and discourse and finally enters a phase of active experimentation where ideas and conclusions are tested. This process ultimately leads to new experiences and the cycle continues.

While the Kolb model provides a good conceptualization of how experiential learning occurs, it does not provide direction on how to teach in such a manner. Fortunately, many educators have begun to translate the model into frameworks and models for teaching.

Three practical applications of experiential learning for post secondary education are suggested by Lewis and Williams (1994): field-based learning, involving internships and practicum to prepare a student for the working world; prior learning assessment, which allows higher education institutions to acknowledge and grant credit for life experience; and applying experiential learning techniques for personal development. These authors suggest that experiential tools such as role-plays, case studies, journals, and problem-solving exercises could be used to help students critically reflect on what is being learned.

Jernstedt (1995) offers further examples of how experiential learning can be used in classrooms. He suggests that an instructor should introduce a concept and then proceed to ask students to recall personal experiences that might explain the concept just taught. Other experiential methods might include reading novels that highlight the life experiences of others, instructor modeling, and hands-on demonstrations. Additionally, Jernstedt suggests that education does not only have to be confined to the university classroom and recommends field trips, outdoor laboratories, journal writing, and cooperative education experiences as methods to be used outside the formal classroom.

A profound contribution to the literature is by Svinicki and Dixon (1994) who discuss practical ways in which college and university instructors can use Kolb's model through a listing of activities that can be used to facilitate experiences at each part of the cycle. The authors state that concrete experiences could involve fieldwork, academic readings, laboratory experiments, and games. Reflective observation would be achieved through

the writing of journals or group discussion. Abstract conceptualization could occur when students apply and test ideas in papers, projects, and model building. Finally, active experimentation is facilitated through case study, more field and laboratory work, and simulations. This ultimately will lead to the instructor introducing new experiences and the cycle will continue.

## **Implications For The Environmental Studies Classroom**

### *Benefits For Instructors*

Introducing experiential learning into the classroom fundamentally changes the traditional role of the professor from knowledge expert to facilitator of experiences. To use experiential learning in classrooms, professors must shed their didactic cloaks and become participants in the learning process. The educator's role is to ask questions that encourage students along individual learning paths, offer advice and information, and provide relevant experiences for learning. This does not mean that educators lose total control of the classroom or what is being taught. It simply means that instructors enter the classroom with the realization and understanding that students have previous experiences that affect who they are and that can contribute to the learning of others.

Bringing experiential learning into the classroom means that both students and teachers will become active learners. While this is positive and usually cuts the amount of time instructors need to lecture, it does not necessarily mean that course preparation time will decrease. In fact, active learning usually requires more preparation time and more creativity; that is often a difficult choice in today's busy academic environment. Yet active participation in learning seems too important to be quashed by these drawbacks.

### *Benefits For Students*

Jernstedt (1995) discusses a qualitative and quantitative research study in which participants from a post-secondary institute were introduced to experiential learning. These subjects participated in a four-day laboratory that provided a planned experience in a prescribed environment with a focus on learning about nature. In his statistical evaluation of the laboratory, Jernstedt found that individuals who participated in experiential learning activities were significantly more efficient workers and achieved higher grades than those who were taught passively or through highly directed learning.

Research into the use of experiential learning in the university classroom has

shown that student motivation and satisfaction is increased through active participation in learning (Acosta 1991; Cranton 1989; Baslow and Byrne 1993). Cantor (1995) claims that experiential learning activities are natural motivators. This can be seen in terms of a feedback loop. Students participate in an activity that helps link theory and practice. As students begin to understand concepts and apply them, they become excited and motivated to learn, thus spurring on new experiential activities. Walter and Marks (1981) further this argument, stating that the natural tendency of human curiosity is often excited through experiences and that the social nature of experiential learning in the classroom is both satisfying and motivating.

Another benefit of using experience in the classroom is the increased ability of students to transfer salient learning to other settings and situations. One of the fundamental problems of traditional pedagogy is that students are required to memorize isolated pieces of information without understanding its practical application (Cantor 1995). Students who are involved in their learning through experiential techniques are better able to make connections between their education and their daily lives (Cantor 1995; Cranton 1989; Knowles 1977). Experiential education, therefore, promotes the transference of knowledge and skills.

### *Community Benefits*

Perhaps the community as a whole benefits most from bringing experiential learning into the environmental studies classroom. Students who experience the environment behave differently. They may also come to see first-hand that the earth that supports all kinds of life is slowly becoming inhospitable for human beings. It is too easy to keep a scholarly distance from the minute changes in global temperature, the disappearance of species, or the effects of deforestation on our lives.

Institutions of higher education may be able to help in the preservation of the earth and of humanity. While the responsibility for the amelioration of environmental problems does not lie within the hands of one discipline alone, faculties of environmental studies can make a difference by escaping the assignment of passivity which often goes hand in hand with traditional teaching methods, and find new approaches to help students experience the richness of the discipline and the environmental realities of our future.

### **Conclusion**

Experiential learning is a student-centered approach that focuses on process and the development of independent thought. It stresses the relevance of

learning activities to the lives of students and encourages critical reflection. It reinforces the objectives of the discipline of environmental studies, allowing for the development of skills, the acquisition of knowledge, and the growth and maturation of an understanding for the environment.

What value are environmental studies if it does not attempt to change students' perceptions of their place on the earth? As environmentalists and instructors, we are not teaching just for the sake of hearing our own voices. We are teaching to change the world. The way we instruct can have profound implications for the way students behave towards the environment.

Environmental studies are not just about being able to identify trees or toxins in the water. It is about examining the physical and social consequences of human interactions within the biosphere. It is about understanding how individuals shape the environment.

Postsecondary institutions have a responsibility to themselves, their students and to society, to guide individuals and prepare them for the challenges of our environmental future. While this author feels that the responsibility for the amelioration of environmental problems does not lie within the hands of one discipline alone, faculties of environmental studies can make a difference.

How can this be done most effectively? It has been proven that university students who learn through active and experiential learning are more likely to translate their learning into action. Change in the knowledge, skills and attitudes individuals have about the environment is feasible through the modification of teaching styles and curriculum within institutions of higher education. Experiential learning is one tool that can contribute to this new vision. Only when students both understand and experience the natural environment will they be able to adequately address problems and find creative solutions to environmental issues in this new millennium.

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