STAGES of ENV. LEARNING

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The Ladder of Environmental Learning

by Simon Priest

If the outdoors is approached with an "against" attitude, there will always be a loser: either the people will lose and be injured by nature in the process, or nature will lose and be injured by the people. This article is concerned with educating people so that they may co-exist harmoniously with nature.

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Adventure educators have a primary responsibility to assist their students to learn about interpersonal relationships (how people interact in groups — leadership, trust, cooperation, communication, problem solving, etc.) and intrapersonal relationships (how people regard themselves — self-concept, independence, confidence, skill, experience, etc.). These are the main goals of adventure education.

Typically, these goals are achieved by meeting and overcoming challenges generated by encountering perceived risks in the outdoors. These challenges are not a competition of people against nature, but rather of people against self and with nature. If the outdoors is approached with an "against" attitude, there will always be a loser: either the people will lose and be injured by nature in the process, or nature will lose and be injured by the people. Neither competitive scenario is desireable. Adventure educators prefer that people and nature co-exist in harmony and that neither suffers at the expense of the other.

Nonetheless, accidents to people and damage to the environment do occur. As a result, adventure educators have a secondary duty to participants' safety and a tertiary duty to protect the environment. This article is concerned mostly with the latter responsibility: educating the people so that they may co-exist harmoniously with nature. The Ladder of Environmental Learning is a model the author has used successfully to prepare outdoor leaders with the skills to teach others about nature and how to care for it.

The model consists of nine steps organized into three phases: **receptivity, recognition, and response**. The first phase involves creating a **receptive** learner. In the second phase, that learner comes to **recognize** certain knowledge about the environment. Lastly, in the third phase, the learner **responds** to new knowledge by changing personal values and thus behaving differently. Consider the example of littering in the outdoors. In the three phases, the learner first becomes open-minded to the idea of not littering in the out-of-doors, then learns about the influence litter has on the outdoor environment, and finally makes the commitment not to litter at all in outdoor areas. The model progression is simple enough: first one must want to change (be receptive), second one must have a reason to change (be recognitive), and third one must have a chance to change (be responsive).

Continuing with the common example of litter, a close examination of each step of the ladder helps to clarify the process and suggest some strategies educators can use to enable changes.

OPPORTUNITY: To provide students with the opportunity to learn, the educator must set reasonable learning objectives within the grasp of learner and must visit the actual learning environment with students as often as possible. For example, to have opportunity to learn about litter, teach with a progression of concepts in mind and examine litter in the local hills.

INTEREST: To motivate students for learning, the educator must demonstrate the application of that learning to real life situations and must model appropriate behavior as the environment dictates. For example, to be interested in litter, teach how litter influences the students as they walk through local hills and pick up any litter observed along the trail.

ABILITY: To make students able to learn, the educator must sensitize them in advance of visiting a local environment and must care for their basic needs. To be able to learn about litter; discuss litter at length in the classroom before going to the hills and properly outfit, clothe, rest, feed and water the students for a trip to the hills.

AWARENESS: To raise awareness in the students about an environment, the educator should encourage them to use all their senses and should employ techniques of sensory deprivation to enhance some senses. For example, to be aware of litter in the hills, have students touch, smell, taste, look at, listen to, and think about litter all around them and occassionally blindfold them in order to force them to use senses other than sight.

APPRECIATION: To help the students gain appreciation for an environment, the educator should allow time

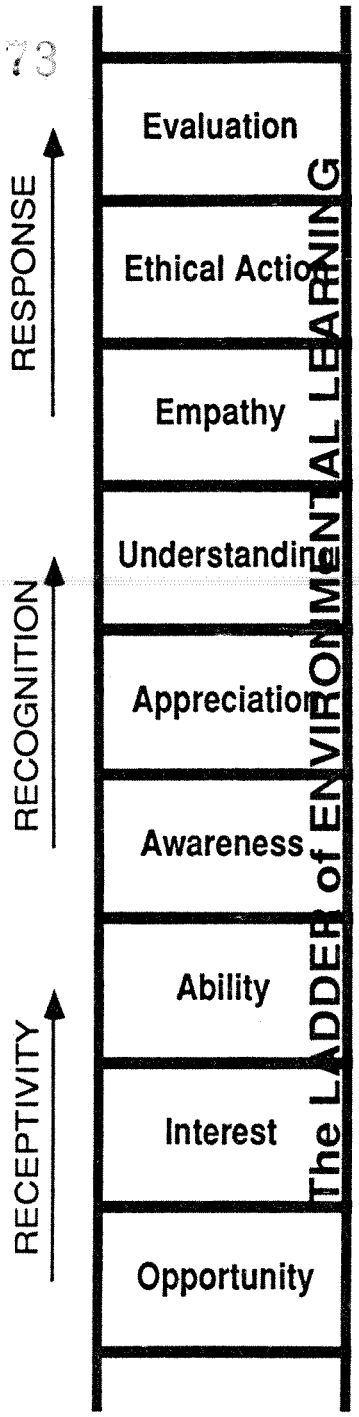
Environmental Understanding

for personal contemplation away from the group and should hold discussions about environmental importance other than the economic. For example, to appreciate litter in the hills, provide solo time and suggest themes to ponder such as: naturalness, beauty, solitude, rejuvenation, play, freedom, fragility, wilderness, etc.

UNDERSTANDING: To assist students in better understanding an environment, the educator should lecture on the biological and sociological concepts of that environment and should discuss ecosystemic relationships (interdependence within an ecosystem) and ekistic relationships (mutual influence between people and nature) inherent in that environment. For example, to understand litter in the hills, lecture on the effect litter has on hungry animals, on growing plants and on other natural resources, or discuss the biodegredation of litter, the impact people have on the hills, and in turn, the influence those impacted hills have on the quality of people's lives.

EMPATHY: To enable students to become truly empathetic (not just sympathetic) with an environment, the educator may choose to actually place the students "in the shoes" of the environment and may choose to anthropomorphize certain components of an environment. It is not enough merely to imagine; direct and purposeful experience is the key to learning! For empathy in the litter example, have the students lie down and pour litter all over them, have students role play plants, animals and natural resources coming into contact with litter, or have students pick up enough litter to fill a huge garbage bag, then take the litter home and sort through it!

ETHICAL ACTION: To facilitate students taking ethical action for the benefit of an environment, the educator may employ values inculcation, clarification and analysis techniques and may wish to consider the moral reasoning stage of the students. Again, it is not enough to merely see values-oriented behaviors preached and modelled by teachers; students need to hold and affirm those values as their own! For ethical action in the litter example, have students list the types of litter they have collected, have them independently label each type of litter as good, bad and ugly, then have them discuss their choices with other students and modify their choices in light of those made by others. Teachers who understand the level of moral reasoning which their students express, stand to be more successful by teaching to that level. For example, lower moral reasoners who are heteronomic (act as told to avoid punishment and to gain rewards), or who are selfish (interested in helping others only if there is some profit for them), are not likely to understand the universal principles of higher moral reasoning (where the rights of all the people are protected and the needs of the many outweigh the needs of the few).



EVALUATION: To properly evaluate whether learning has taken place, the educator may guide reflection on the earlier steps up the ladder, thus debriefing the students' experiences as they take place and may also provide students with the chance to affirm their actions by getting involved in an experiential service learning project. For evaluation of the litter example, have students share their feelings often, allow students time to discuss their opinions, and make students aware of community litter programs which they may join and/or contribute to.

One final example serves to pull the steps and phases together. A group of school children were learning about the Scottish Highlands. Their teacher wished the students to be receptive to environmental issues associated with the Scottish Highlands, to recognize the importance of these concerns to the Scottish Highlands, and to respond to some of these problem with solutions which are personally valued and affirmed. The teacher's opinions on the issues were of no consequence and thus, authoritarian judgements on the part of the teacher were avoided.

To begin, the teacher set learning objectives which followed a reasonable progression of concepts and appeared to be in tune with the ladder. In the classroom, the teacher talked about the Scottish Highlands, and prepared the students for a field trip to visit them. Waterproof and warm clothing was issued to all students. Everyone brought a lunch, drink, and extra snack. Time was planned for rest breaks on the trail and to visit the local facilities at the trailhead. On the trail, the teacher talked about the importance of the area to the local economy, about such industries as tree farming, and about the importance of learning about the Scottish Highlands for making future decisions. Additionally, the teacher took care to clearly demonstrate (by model behavior) the needs to avoid "short cutting" which might erode new trails, to avoid picking the last of the wildflowers, and to avoid dropping any litter along the way.

At the top of one knoll, the teacher stopped the group and had them sit quietly among the heath watching,

to the wind blow across the meadow. After a while, the students quietly put on their blindfolds and continued with the exercise. Deprived of the spectacular view, they later related how many more sounds they heard, scents they smelled, and things they felt. Several commented on how being blindfolded increased their sensory awareness. Next, the teacher instructed the students to temporarily place a yard of string randomly on the ground and then to get down on their hands and knees and crawl along with their nose closely following the string. Afterwards, students talked excitedly about the objects and colours they had never seen before.

During their solo time away from their peers, each student sat quietly alone and pondered their feelings about this new and unique place called the Scottish Highlands. Each student thought of what the area meant to them personally and how important it might be to others. When the group reconvened, the students spoke of feeling stronger with nature, they talked of insignificance alongside the mountains and the valleys, and they mentioned emotions of beauty, re-creation, pleasure, and joy.

The teacher chaired a discussion on the biology of the local ecosystems and the sociology of different uses people made of the Scottish Highlands. The group identified the sun as the ultimate source of energy, they built a life web of all the plants and animals which were interdependent in the Scottish Highlands (using themselves as examples of the producers, consumers and decomposers), and then hypothesized what might happen if one organism became extinct and was removed from the web. They brainstormed a list of as many different uses they could think of for the Scottish Highlands. They suggested the impact that each use might have on the local area, local economy, and the quality of life for the local people.

Toward the end of the day, the students collaborated on skits in small groups, and presented their works collectively in a class play. Their roles as various organisms in the ecosystem and as people visiting the Scottish Highlands, plus the behaviors they performed, showed a true empathy for the environment they had spent the day learning about.

board, wearing dark sunglasses and a hardhat, came over the hill and walked past the group to the top of the next hill. From the other side of the hill, the person was joined by two others with surveying equipment. They immediately set about surveying the local hills. Encouraged by their teacher (who knew the truth of the matter), some of the more curious students went over to the next hill and visited with the surveyors. Returning with distrought looks, the students recounted how the surveyors had described a plan to build a new motorway across the Scottish Highlands!

In reality, the teacher had purposely manufactured this situation with a thought to clarifying the students' values about the local area. Without disclosing this reality, the teacher seized the opportunity to enter into a values analysis exercise with the group. Faced with the value-laden dilemma of whether to build a new motorway, the students set about organizing an inquiry guided by their teacher. They began by listing all the conflicting behaviors and opinions surrounding the issue. To these opinions, they assigned values they believed were the underlying cause of the behaviors they had noted. Rather than view the issue as a conflict of opinion, they chose to view it as a conflict of values, and by analysing the values associated with either side of the issue, they felt they could arrive at a reasonable resolution.

Each student identified their personal value position on the issue and then shared that position with their peers. The opportunity to view, perceive, and interpret the range of others' values permited each student to clarify personal ones in the context of those shared by others. Lastly, the students were confronted by a need to solve this problem. They considered all possible alternatives and probable consequences and reached a consensus decision which the group felt was acceptable. A committee was struck to present the solution to the surveyors, who in turn said they were not sure how the idea would be received by their superiors, but would do their best to support it back at the home office.

Throughout the exercise, the teacher fought to keep ideas alive, played Devil's Advocate, and avoided presenting personal opinion which

times, the teacher found it necessary to point out incongruities between the values the students purported to hold and the behaviors they exhibited.

At the end of the day, the teacher disclosed the truth in a sensitive manner, and led a processing session aimed at assessing the influence that each learning experience had on the students. They reflected on the events of the day and shared feelings about what they had been totally immersed in. The teacher transferred the learning that had arisen from the earlier debriefing to future situations the students might encounter, and applied closure to the day by giving them a list of conservation agencies working to maintain the integrity of the Scottish Highlands. Over the next month several students commented that they had written for more information, a few had taken out membership, and one had convinced parents to become involved!

Consider the Ladder of Environmental Learning once more. Adventure educators know that, in order to preserve a local climbing area or local whitewater rapid as a teaching resource, those with the decision making power have to be receptive to the idea of preservation, recognize the need for preservation, and be responsive to that need. One missing rung on the ladder, means a skipped step and a weaker link in the chain to reach informed problem solving. ❐

THIS IS A PIECE ABOUT TEACHING SEQUENCES AND VARIOUS WAYS TO MAKE THE STUDENT RECEPTIVE. IT DOES NOT ADDRESS THE DEVELOPMENTAL STAGES OF THE PARTICIPANT.

STAGES OCCUR IN VARIOUS WAYS:

I. TEACHING PROGRESSION

II. PARTICIPANT COMPETENCY

III. PARTICIPANT DEVELOPMENT (MORE Psychological/Interpersonal)