

Environment in Education: A Pragmatic Look

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THE environmental health of our nation's people is of increasing concern to all aware citizens.

People in all walks of life are showing interest in environmental information. Pollution, rats, and garbage are not prejudiced . . . people of all ages, races, socioeconomic backgrounds, and locations are directly affected.

It has been erroneously thought that only inner city locations are affected by rats, roaches, and air and water pollution. People in the suburbs, despite indications which point toward the movement to the suburbs of every inner city health hazard, have long felt protected by an "environmental curtain." Unfortunately, this has only offered them a false sense of security.

Environmentalists and educators are, consequently, sensing the need to include environmental learnings in the total curriculum. Not only does environmental education acquaint students with existing conditions, it also should be designed to give young people an active participatory role in ongoing environmental betterment programs and projects.

The thrust we care to make here is in the direction of administrative (and teacher) commitment to environmental curriculum development. This would involve the following:

1. A planned, progressive curriculum featuring ongoing environmental education learnings and activities
2. The direct and immediate applicability of conceptual learnings to the daily lives of students
3. Environmental curriculum development in consultation with environmentalists working in the field
4. The integration of all environmental spheres, each in relationship to the others, for broad environmental understanding.

Too often we have seen well-intentioned but feeble attempts in environmental education by those ill-prepared to conduct such programs. Young people are stimulated by the problems they see and then almost immediately frustrated by their inability to respond to those problems within most curriculums.

Consequently, it is essential that a systematized curriculum be developed. Such a curriculum should include environmental perceptions developed in a progressively complex nature, with concepts and activities expanded in a horizontal learning manner as

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well as in a vertical plane. In order to assure that these concepts and activities are technically accurate, applicable, and reflective of the home-neighborhood-community environment, technical assistance should be sought from public health departments, environmental agencies, and other professionals working in the environmental field. Too often curriculums are developed without appropriate assistance and, unfortunately, do not lend themselves to practical application. A relationship such as we are suggesting between the educational institution in a community and the professionals working in that community would lend balance and reality to an academic curriculum design.

The development of depth understanding of environmental interrelationships and the action that such understanding generally prompts necessitate a decided commitment on the part of a school system to incorporate such teachings into the curriculum. Mere exposure through an occasional half-hour assembly program does not satisfy this commitment.

Learning experiences relating to environmental health education are endless, limited only by the imagination and creativity of teachers and students. One of the real values of an environmental education curriculum is its ability to couple or link many traditional subject areas with current, very pertinent units of study. Ideally, an environmental program should be integrated within the various established curriculum areas. The units and areas of study emanating from the subjects of health, social studies, science, reading, current events, etc., all lend themselves to such integration.

Social studies units from such areas as consumer education, conservation, human resources, and modern urban problems would lend themselves to initiating discussion of the environmental health status of the community. The ongoing study of current events would obviously provide a meaningful introduction to this program, as well.

The science curriculum lends itself as another introductory point to an environmental health study through such areas as community health and sanitation, living

things in their environment, seasonal changes, personal health and safety, pollution control, the decay process, and through a study of bacteria-caused infectious diseases.

An environmental health study would also be applicable to a health education and family-living curriculum. Studies of health practices, food and nutrition, disease prevention and control, family and community health, safety and first aid, heredity vs. environment, etc., all would be good points of introduction for this material.

Notice should be taken of the manner in which concepts such as "pollution" are handled. Activities pertaining to various forms of pollution should be interspersed throughout the curriculum. We believe that this is a more integrated way of gaining an understanding of the environment rather than singly to cover one form of pollution after another without showing relationships existing between them. After a cursory study is taken, then more in-depth involvement can follow in each pollution form.

1. For example, it is important for students to realize that open burning, be it done by a factory burning its wastes or by individuals burning their leaves, pollutes the air. If the open burning is done on a stream bank, a contribution will be made toward polluting the water, as well. Consequently, this is why solid waste disposal sites are regulated and licensed. In this way, citizen concern and governmental legislation protect the air from being further polluted as a result of burning and the water from being contaminated by leachate (chemical and/or bacteriological pollution of the water table due to drainage from a contaminated source).

2. Another example of an environmental interrelationship can be illustrated by trucks and cars which pollute the air due to faulty exhaust systems and motors in poor condition. In addition, these vehicles contribute to noise pollution through improper muffler design, road speed, and tire design.

3. Food spoilage, the solid waste problem, air pollution, rat and insect infestation, disease potential, etc., become very definitely interrelated when one follows the path a food item takes from the food processor to the garbage disposal site.

4. A jet airplane contributes to noise pollution. When many jet airplanes continuously go into and out of one particular place, such as an airport, not only is the noise decibel level raised for that vicinity but collectively the exhaust fumes emitted from the jet planes contribute substantially to lowering the air quality of the airport locale.

Thus, it is vital that in an environmental curriculum we treat the concept of "pollution" as a general condition comprising many interrelated parts. These various facets can then be researched in depth, but the overall "umbrella concept" of pollution or environmental decay should never be lost. In too many programs, the teaching is done in very narrow, segmented spheres and basic understandings are lost.

It is hoped that the philosophy set forth here represents the underlying concepts and basic environmental recognition essential to any environmental education program. Applying problem-solving and research techniques to any of the specific areas would then yield specific understandings of the general concepts involved.

Another point to be stressed is that in an environmental education program, emphasis must be placed upon the student and the change which he and his classmates themselves can effect. It is pure folly to think that true environmental change comes about by attacking "the giants" and not "the dwarfs." Individuals can improve conditions existing within their own grasp. A mammoth industrial complex or utility often becomes a target for citizens who wish to bring about environmental improvement. Such efforts are praiseworthy only if these citizens are also applying their philosophies at home, at school, at work, in their everyday living. Otherwise such efforts, however sincere they may be, are often little more than contributions of sweeping environmental faddism. Once interest in the project drops off, prospects of lasting environmental improvement also are dropped.

Consequently, as educators and environmentalists, we must try to encourage young people to improve environmental quality by altering their own living habits. For example, a single individual can affect a serious

environmental problem through an act as mundane as storing his garbage in a satisfactory manner! This individual can help to minimize an entire neighborhood rat problem by taking such positive action and encouraging his neighbors to follow his example. However unglamorous such projects are as compared with those attacking "the giants," real environmental change comes from the collective efforts of individuals altering their own living habits. These efforts, together with legislative and enforcement measures, are those forces which will improve the quality of our environmental health.

We suggest, therefore, that activities lean strongly upon those which promote student attitudinal and behavioral change at home and at school in the local community. It is within this area of participation, be the involvement in rat control, noise abatement, consumer protection, or air pollution, that students in concert with their family, friends, neighbors, merchants, community workers, and elected officials can directly improve environmental quality and witness the changes that they, in cooperation with others, have helped to bring about.

Thus, the value of such an environmental curriculum, developed by a consortium of educators and environmentalists, lies in its ability to have relevance to the existing school curriculum as well as to the daily lives of students. This becomes a viable and meaningful effort when, as these young people mature and become part of the active community, these ideas, concepts, behavioral patterns, and energies can continue to be channeled constructively. Many environmental improvement dreams of today could then be brought to fruition while potential environmental problems may well be identified and forestalled.

Consequently, although the payoff for our educational efforts may yet be a few years hence, it is our hope that we will be educating more informed citizens who will prove the cost-benefit worthwhile by addressing themselves to a more healthful and comfortable environment while, at the same time, making the education of today relevant and exciting. □

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