Teaching Toward Compassion: Environmental Values Education for Secondary Students

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Research has established that gifted children often develop deep sensitivities to world issues and injustices at an early age (Piechowski, 1997; Silverman, 1993). Once provided with information, they become more intensely interested in and concerned with current environmental problems (Clark, 1992; Cullingford, 1996). Although ecology is usually part of the secondary public school curriculum, the subject is often taught in rote fashion (deBettencourt & McCrea, 2000). This article discusses why and how the moral development and affective needs of gifted students at the secondary level could be more appropriately addressed through a holistic approach to environmental studies and suggests some additional strategies that allow gifted students to advance their interest in ecological issues despite—or in deference to—the scheduling constraints imposed by the regular curriculum.

One of the well-known characteristics of the gifted is their acute sense of justice. Gifted children are questioners, keen observers, logical thinkers. They will notice inequities, unfairness, double standards, and will question instances and experiences of that sort with passion. Often, they feel helpless and powerless to make an impact, and they suffer deeply from this. They worry about the injustices of the world. They worry about peace, about the bomb, about their futures, about the environment, about all the problems they encounter.

—A. Roeper (1988, p. 12)

Fortunately for gifted students, environmental education has become an established course of study in most public and private school systems. In a survey of 1,505 secondary level teachers conducted by deBettencourt and McCrea (2000), 61% said they included environmental topics in their curriculum. In fact, starting in the first grade, students are expected to understand basic ecological concepts in order to meet the requirements for their grade levels at the end of the school year. The Web page for the Environmental Literacy Council (2002) tells us that “Environmental sciences have become an integral part of the K–12 curriculum. . . . our relationship with nature [is] shaped by environmental actions” (¶ 3). Unfortunately for gifted public school students, the educational setting rarely accommodates their intense fascination with learning (Ward, 1985). deBettencourt and McCrea’s survey also revealed that due to time limitations, 90% of teachers at all grade levels, including the 61% mentioned above, taught environmental topics through discussion only. In a typical public school scenario, two interesting conditions often exist simultaneously. One is that concepts are repeated and reinforced multiple times at the most fundamental levels, slowing the pace of learning for “quick learners” who become bored. The other is that because time is of the essence in matters of curriculum coverage, a hurried presentation of the material is a common occurrence. Through discussions with other teachers and personal experience, it seems that both conditions can have detrimental effects.
First—and most importantly—conceptual connections are never made. Students are initially taught each idea in isolation from the other, especially when an emphasis is placed on learning the appropriate vocabulary. For instance, the term ecology may be defined, and examples may be given. However, when the time comes to define natural resources or extinction, the connection between these terms—which is essentially their relationship to the first term—is left for the students to discover. There simply is no time for the kind of discussion that would pull these concepts together. This strategic failure is particularly ironic in light of the fact that ecology is a science of connections.

In addition, because instructors may feel the need to move quickly through the chapters in their science texts and the curriculum is often presented in an “overview” fashion, students may place a higher value on the assessment of their learning rather than the learning itself. They will be satisfied with the limited information they receive and the grade that presumably represents their comprehension of this information. But, a deeper conceptual understanding has not been achieved.

Gifted students in a regular classroom are often left with an uncomfortable lack of closure regarding issues that deeply affect them. They may feel the need to go beyond the preliminary learning. They understand that ecological concepts are central to the larger issues impacting their futures, and they do not have the opportunity to address these issues. They are dissatisfied with the agendas of instructors who promote a lack of interest by delivering transitory and superficial information. These students want to know more; the idea of an environment in danger, that deeply affects them. They may feel the need to go front their fears. It might also allow them to internalize the message that there is a time and place for expressing strong feelings and, therefore, they have “permission” to react the way they do (Silverman, 1993).

The Nature of Values and Beliefs

Answers to the question of how we can most effectively provide older gifted learners with the opportunity to address their deeper interests in world issues and, in particular, the state of the environment cannot be offered unless we first have a clear understanding of the nature of our value and belief systems. Even before this, a brief clarification should be made regarding the difference between values and morals. If a value is a personal belief that an individual or society considers to be worthwhile, then a moral is the particular code of conduct used to demonstrate that belief.

Rokeach (1976) defined a belief as a simple proposition, inferred from an observation, that begins with the phrase “I believe that. . . .” A belief can be perceived as either true or false, but more significant is the effect it will have on the believer. For instance, it is likely that if one believes that wood storks are endangered, this belief will have greater influence than the fact that wood storks can fly, although both of these are descriptive. A prescriptive belief, such as “Wood storks should be protected,” will also have greater impact. Beliefs are formed and retained very early in a child’s life. Later on in his or her development, a child will maintain a group of beliefs that focus on one particular object or situation; this will lead to the formation of an attitude.

Attitudes take beliefs to the next level because they contain elements of emotion and potential behavior (Caduto, 1985). For example, an attitude would be that letters should be sent to government officials, urging them to protect the clear cutting of rain forests. Some underlying beliefs that support this attitude are that government officials can get things done, that protecting rainforests will protect fragile habitats, and that it is our duty as citizens of the planet to act on behalf of rainforests and their wildlife.

The sum total of a person’s beliefs and attitudes creates a belief system the formation of which is an ongoing, life-long process. A belief system is subject to continuous revision as a person’s socialization style changes.

When a person’s lifestyle begins to reflect an adherence to a set of very closely aligned attitudes, he or she is said to have incorporated a value system (Hennessy, 1979). Values are convictions that a certain level or mode of conduct is personally or socially preferable to the opposing one. The converging nature of the belief/attitude/value system means that by the time a child reaches adulthood, he or she may have thousands of beliefs, hundreds of attitudes, and only a few dozen values. Rokeach (1976) found that there are significant and consistent differences in value orientation among different segments of American society. The socialization process determines our values almost from the moment of birth, and our place in society has a great influence upon our beliefs. Well-informed individuals participating in a recycling program, for example, have a very different set of values than the less informed who don’t—or won’t—recycle. Some of the “components” of society responsible for the proliferation of an individual’s value system include the parents and the home environment,
Environmental Values Education and Gifted Students

Almost all young people have an innate enthusiasm for studying natural systems. But, environmental education is particularly important for students in secondary gifted programs; it has a “built-in” potential for addressing the greater commitment to and fascination with global concerns that these students demonstrate, often at an earlier age than the general population. In addition, it allows these students to make use of their enhanced critical thinking skills by introducing elements of point/counterpoint (Winocur & Maurer, 1991). Furthermore, gifted secondary students who have greater proficiency in mathematics and probability—subjects that at first seem removed from ethical consideration—often find that these skills are a convenient vehicle for further understanding of environmental problems (Lemin, Potts, & Welsford, 1994).

Gifted students are good futuristic thinkers and are therefore more keenly aware of the implications of negative environmental change in their own futures and the lives of their predecessors. Tannenbaum (1975) observed the perceived need gifted students have for a “closer link between the intellect and the conscience” (p. 22). Environmental education provides these students with an outlet for their intensified perceptions and their tendency toward divergent ways of thinking (Lovecky, 1993). Moreover, gifted students are frequently characterized by their strong sensitivities (Silverman, 1993). They are both passionate in that they are endowed with great depth of feeling, and compassionate in that they are committed to alleviating suffering in the lives of all living things. They often have greater levels of empathy; they can imagine what others are feeling to the point where those feelings are transferred to their personal experience. These emotions remain strong even indirectly through outside observation, reading written material, or discussion. As a result, these students often develop a strong sense of moral commitment to righting the wrongs and correcting the injustices that befall all citizens of the planet. Their high sensitivities direct them to work toward the singular goal of creating “an alliance with the universe” (Lovecky, p. 39). But, dedication to this goal at such a young age can bring on strong feelings of helplessness and confusion as students struggle to make sense of the senseless.

Holistic Education and the Confluent Model

In 1984, Michael Caduto was among a small group of researchers who provided educators with guidelines for helping students deal more effectively with their feelings about global environmental problems. The philosophy behind his “holistic program” (Caduto, 1985, p. 5) in environmental values education is simple: Values are an essential and legitimate part of any learning experience.
Environmental education is laden with implicit value statements at the outset; students walk into a classroom having been instilled with values during every stage of development. If these moral attitudes are ignored in favor of lessons based solely on the giving of information—which Caduto believed would be nearly impossible—we would be denying highly reactive gifted students the opportunity to come to terms with their feelings about their relationship to the natural world. We would also be denying them a chance to consider alternatives to the issues that make them uncomfortable and to arrive at a potential solution as a form of closure.

Caduto (1985) used the word holistic to describe that aspect of his program in which values and actions would work together toward individual self-fulfillment. This, he felt, would ultimately lead to a population of caring, action-oriented people who would be “able and willing to look beyond their own lives and to work for the welfare of society and the environment” (p. ix). A holistically based program such as this allows gifted students to find real-world applications for an unusually strong set of convictions. It allows them to more fully explore their compassionate, unselfish sides and to develop a sense of ethics that will eventually characterize them as socially responsible young adults.

Similarly, the confluent model of moral education (Vare, 1979) is a teaching strategy that is closely aligned with the philosophy of holistic education; the needs of gifted secondary students are compatible with the concept of moral autonomy upon which the model is based. In essence, the confluent model proposes that cognitive and affective education are inseparable, and that the primary goal is to educate the whole person—the thinking and the feeling person. Thus, there is compelling justification for its use in light of the gifted child’s greater need for emotional and cognitive fulfillment.

No other teaching strategies rely as much on the student’s commitment to an internal system of moral ideals as do the holistic and confluent models. Other valuing strategies, if used alone, force students to be guided primarily by the instructor’s belief system, which, parenthetically, gives greater credence to parental arguments against values education.

In contrast to progressive education, in which values take on an ambiguous quality as students are left to explore a broad range of feelings in any manner they wish, holistically based education uses guided inquiry and logical judgment as a means of promoting autonomous thinking (Caduto, 1985; Vare, 1979). Students are neither restricted to the set of standards imposed by the instructor, nor are they left completely without rules of conduct. Rather, they have an opportunity to develop the skills necessary to make responsible decisions and establish a “dialogue of justice” (Kohlberg, 1981, p. 47) according to a unique set of ethical principles.

The Role of the Teacher

The teacher has an especially important role in promoting the metacognitive skills of gifted students early in their quest for global understanding. An exploration of values is an opportunity to increase students’ awareness of their own sense of morality and that of others. Providing a classroom atmosphere that is conducive to an analysis—or reinforcement—of value systems is the first step in helping students feel confident enough to risk openly expressing their views (Hersh & Paolitto, 1979). Teachers can ensure that this will happen by being aware of the group dynamics of the class when asking questions and eliciting responses from individuals, encouraging students to listen to one another even if they do not agree with what is said, guiding a discussion in which issues are challenged and individuals are not attacked, and dealing with inappropriate responses in a positive way.

Teachers should remember that they are teaching values clarification skills, not the values themselves. They should therefore resist the urge to make judgments about which values are better or worse. They must instead act as facilitators of the process, encouraging participants to follow through with developing ideas, as mediators of disputes arising from differing viewpoints, and as assessors of their students’ progress with analyses (Lemin et al., 1994).

Above all, students should acquire a perception of their instructor as a caring individual who is dedicated to promoting self-growth. The teacher must also be comfortable with the “skill” of taking on the perspective of individual students. If the teacher fails to understand the reasoning behind a student’s point of view, then each might question the other’s ability to listen, which could result in a communications breakdown.

Sometimes, even if the teacher has clearly indicated that environmental values education is part of the gifted curriculum, parents will often “discover” after the fact that their child is involved in ethical discussion and will ask for an explanation. At this point, the teacher may have to play the role of arbitrator. The concern is, of course, that the child is being indoctrinated with the moral principles of the teacher, which may differ from those of the child’s family members. Parents deserve and expect information that allows them to distinguish between indoctrination...
Preparing the Soil: Instructional Strategies and Delivery Methods

In *Silent Spring*, her hallmark book for raising environmental consciousness, Rachel Carson (1962) wrote,

> The years of early childhood are the time to prepare the soil. Once the emotions have been aroused—a sense of the beautiful, the excitement of the new, a feeling of sympathy, pity, admiration, or love—then we wish for knowledge about the object of our emotional response. Once found, it has lasting meaning. (p. 7)

“Preparing the soil” for elementary-level environmental education usually focuses on examining the implications of actions that do and do not address the common good (Cullingford, 1996). For example, littering has a degree of visibility that other problems such as global warming and ozone depletion do not have. This makes it a good topic for beginning a discussion about pollution with elementary students. However, for the secondary level gifted student, teaching strategies can focus on enhancing self-awareness of individual beliefs about littering and applying one’s value system toward solutions that could be beneficial to society and nature (Milbrath, 1996).

There are several effective ways to provide secondary gifted students with opportunities to explore their responses to global environmental issues more fully and deeply. One way is through a resource model in which students from a single grade level can be pulled out of their regular classes for 40 minutes to an hour of environmental enrichment activity each day. This delivery method has one important advantage: Because students are at similar levels of moral and cognitive development, it is possible to design a unit of environmental study with far greater breadth and depth (Hersh & Paolitto, 1979), which in turn provides an opportunity for these students to make use of their advanced value systems and affective behaviors. In addition, the smaller size of a pull-out resource group allows teachers to interact more often with students and to focus more fully on their needs.

Another teaching method that has been particularly effective for middle and high school gifted students is in-class facilitation or collaboration (Tomlinson, 1999). In this situation, identified gifted students remain in their regular classes for one of the following reasons: a gifted program instructor is providing enrichment activities on-site; this instructor has been conferring with the regular classroom teacher prior to the delivery of the week’s lessons so that the regular classroom teacher can provide gifted students with advanced content or an opportunity for further study; or the gifted program instructor has assigned independent projects that require further research into one or more topics that are minimally addressed in the regular classroom. In one or all of these cases, the students meet with the gifted program instructor for briefings and periodic evaluations.

Personal experience has indicated that this method has several advantages. First, it removes the disruptive component of a pull-out program. By assigning values clarification exercises and assessments, gifted program teachers can still respond to the affective aspect of student. Also, it has the support of most teachers who feel comfortable with the idea that all of their students will be benefitting from lessons that were once reserved only for the identified gifted population. Finally, academically oriented middle and high school students are more willing to buy into a gifted program format that dispels their concerns about missing information given in the regular classroom.

However, one disadvantage of the collaborative delivery model is that it may not allow for daily contact with students, or there may be only brief contact periods. If meeting times are too quick and sporadic, there may be a loss of the consistently supportive atmosphere that students need to feel secure with their responses.

Another more informal method of exposing gifted students to environmental values education is through an extracurricular ecology club. As with any after-school program, infrequent meeting times and student absences can disturb the “flow” of the learning experience. But, clubs are a powerful medium for applying student values to community and world issues. Ideally, an ecology club includes many students who have not been identified as gifted, but this does not diminish its beneficial role for the identified gifted. In fact, the outcome of various club activities should reflect the value system of all club members who will provide each other with the moral support needed to accomplish some highly-focused objectives. For instance, an implied goal of all ecology clubs would be to promote a deeper understanding, respect, and compassion for living things. There are literally hundreds of ways to apply the set of values that incorporates this philosophy,
from “adopting” a member of an endangered species, to
planting trees or making a donation to a rain forest relief
effort. Although it is possible to do this as part of a gifted
program curriculum, the setting of an ecology club unifies
individual values and gives the intended goal greater focus
and impact. It is assumed that the outcome reflects the
value systems of all club members who will work together
toward the resolution of environmental problems.

A common ethical goal can also be the focus of a group
of students who meet for the express purpose of analyzing
and describing solutions to difficult problems. The Future
Problem Solving Program, developed by E. Paul Torrance
(Torrance & Torrance, 1981), takes participants through a
six-step process that will ultimately lead them to one “best
solution” to a potentially large-scale societal problem. The
competitive aspect of the program requires that topics for
discussion change each year, but a noncompetitive version
could be utilized for an intensive look at several environ-
mental issues. As with the formation of ecology club goals,
the aim is to arrive at an answer that will reflect the moral
standing of the team as a whole. Individual team mem-
bers may not be consciously aware that their own ethical
principles are guiding the choices they make; this provides
the instructor with a perfect opportunity to approach the
problem-solving process by way of the holistic/confluent
model so that students can acknowledge that a combina-
tion of critical thinking and affective attitudes have played
a role in forming a solution.

Conclusion

If environmental education is to become one vehicle,
among others, for developing the moral character of sec-
ondary gifted students, it must be much more than an
exercise in pedantic teaching. It must move beyond sci-
entific content superimposed upon cognitive skill develop-
ment. It requires that the gifted program teacher or
facilitator make a commitment to providing the setting
and the “moment in time” during which these students
can fully—and freely—express their confusion or sadness,
their hopefulness, and their strong desire to understand
the uncomfortable realities posed by a troubled world. An
environmental values program at the secondary level offers
a chance for students to synthesize new ways of think-
ing, or analyze and reevaluate beliefs about their place in
the natural world. In accordance with the strategies sug-
gested by holistic and confluent education, students can
prepare themselves for a future of good decision-making
by arming themselves with a basic understanding of the
way the world works and acknowledging that good envi-
ronmental choices are most often the result of good value
judgments and a compassionate nature. Lester Milbrath
(1996) makes this point quite clearly in his book, Learning
to Think Environmentally: While There is Still Time:

We must change the way we think as quickly as
possible. We need to clarify our values and adopt
new priorities. In the process, we should clarify
our responsibilities, so that people see their part
of the overall task as well as the necessity to do
their share. All of us must learn to think system-
atically, holistically, integratively, and in a futures
mode. We should strive for reflective conscious-
ness. [We must] affirm love, or caring for others,
as a primary value. [We must] love not only those
near and dear, but those in other lands, future
generations, and other species. (p. 47)

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**Appendix**

**A Partial Resource List for Teaching Environmental Values Education**


This is a comprehensive “green teaching” resource for educators of upper elementary and middle school students. It contains student-friendly ideas and practical projects from educators across North America, covering a vast array of environmental topics.


The author addresses impediments to the development of rigorous programs in environmental education. The history of environmental activism is also discussed. Palmer draws on her own experience and research, as well as the testimony of 15 other educators, to provide an integrated model for planning environmental education programs of the future.


The authors provide practical ideas for establishing a whole-school environmental education plan, including strategies to motivate faculty members who implement it. Teachers will also find practical ideas for planning and assessing environmental education lessons.


The premise of this book is that there is a distinction between educating students to simply “protect the environment” and educating them in such a way that they will develop an enduring compassion for Earth and its life. Therefore, it focuses more strongly on the affective dimension of environmentalism. This book offers a plan for developing an Earth Education program, which includes a series of creative immersion exercises for students.