

## ECOLOGICAL INTEGRATION AS A VALUE ORIENTATION FOR CURRICULAR DECISION MAKING

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Historically, various educational theories have used ecological themes.<sup>1</sup> The relationship between the human and the natural world is foremost symbiotic. Because human beings are part of nature, their actions influence and are influenced by the natural ecosystem. Experience, knowledge, and the process of growth are all interconnected in an integrative approach to curriculum development.

In the last century, the processes of valuing in the educational milieu have brought many philosophical alternatives to the decision-making forefront. Orientations described in the curriculum literature each reflect a particular theoretical focus: disciplinary mastery,<sup>2</sup> learning process,<sup>3</sup> self-actualization,<sup>4</sup> and social reconstruction.<sup>5</sup> The ecological-integration orientation is yet another identifiable philosophical alternative. It builds from a unique theoretical perspective and offers a concise, coherent philosophical structure for educational decision making.

The purpose of this paper is to clarify the ecological-integration approach to curricular decision making by identifying highlights of the historical development of the ecological perspective, describing the key characteristics of this approach, distinguishing ecological integration from other major value orientations, and illustrating various aspects of the curriculum process from this perspective.

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<sup>1</sup>C. H. Bantock, *Studies in the History of Educational Theory. Volume 1. Artifice and Nature, 1350-1765* (London: George Allen and Unwin, 1980), pp. 33-36.

<sup>2</sup>Jerome S. Bruner, *The Process of Education* (Cambridge, MA: Harvard University Press, 1960); Paul H. Hirst, *Knowledge and the Curriculum* (London: Routledge and Kegan Paul, 1974).

<sup>3</sup>Benjamin S. Bloom, *All Our Children Learning* (New York: McGraw-Hill, 1981); Seymour Papert, *Mindstorms. Children, Computers, and Powerful Ideas* (New York: Basic Books, 1980).

<sup>4</sup>Abraham H. Maslow, "Humanistic Education," *Journal of Humanistic Psychology* 19 (Summer 1979): 13-27; Carl Rogers, "Reaching Person-Centered Issues in Education," *Freedom to Learn*, ed. Carl Rogers (Columbus, OH: Merrill, 1983), pp. 197-221.

<sup>5</sup>Michael W. Apple, *Education and Power* (Boston: Routledge and Kegan Paul, 1982); Henry Giroux, *Ideology, Culture and the Process of Schooling* (Philadelphia: Temple University Press, 1981).

## HISTORICAL BACKGROUND

Several authors have traced the ecological perspective through its historical development in education. Bowen gives an account of ecology's influence on geographical thought, beginning with the ancient Greeks and following through to the present.<sup>6</sup> Worster discusses the role of ecology in present scientific thought.<sup>7</sup> Of interest to educators is Colwell's critique of the ecological emphasis in John Dewey's philosophy of education. Colwell argues that embedded in Dewey's philosophy is an emphasis on "education and life based on mutual cooperation between the human community and the nonhuman biophysical environment."<sup>8</sup> Nature is seen as a ready environment for "human experience, thought, and learning."<sup>9</sup> In *Democracy and Education*, Dewey elaborates on this concept of nature as a model for educational nurturing:

Just as the organs of the organism are a continuous part of the very world in which food materials exist, so the capacities of seeing, hearing, loving, imagining are intrinsically connected with the subject matter of the world. They are more truly ways in which the environment enters into experience and functions there than they are independent acts brought to bear upon things. Experience, in short, is not a combination of mind and world, subject and object, method and subject matter, but is a single continuous interaction of a great diversity of energies.<sup>10</sup>

Thus, the interdependence of mind with nature and mind as an integrated part of nature is developed as a primary environment for learning. Traditional value perspectives that focus on the role of subject matter, the needs of the individual, or the factors influencing societal changes are subsumed within this perspective.<sup>11</sup> For instance, orientations that elaborate and rank the influence of the body of knowledge in curricular decision making play an intricate, yet nondominant, role in Dewey's ecological perspective. The interactions between the individual and the environment are the subject matter of education.<sup>12</sup> In this broad perspective, the individual both initiates and responds

<sup>6</sup>Margarita Bowen, *Empiricism and Geographical Thought* (Cambridge, England: Cambridge University Press, 1980).

<sup>7</sup>Donald Worster, *Nature's Economy* (Cambridge, England: Cambridge University Press, 1980).

<sup>8</sup>Tom Colwell, "The Ecological Perspective in John Dewey's Philosophy of Education," *Educational Theory* 35 (Summer 1985): 256.

<sup>9</sup>*Ibid.*, p. 257.

<sup>10</sup>John Dewey, *Democracy and Education* (New York: Macmillan, 1916), pp. 196-197.

<sup>11</sup>Elliot W. Eisner, *The Educational Imagination* (New York: Macmillan, 1985); Elliot W. Eisner and Elizabeth Vallance, *Conflicting Conceptions of Curriculum* (Berkeley: McCutchan, 1974); Henry A. Giroux, Anthony N. Penna, and William F. Pinar, eds., *Curriculum and Instruction: Alternatives in Education* (Berkeley: McCutchan, 1981); Dorothy Huenecke, "What Is Curriculum Theorizing? What Are Its Implications for Practice?" *Educational Leadership* 39 (April 1982): 290-291; James B. Macdonald, "Theory-Practice and the Hermeneutic Circle," *Journal of Curriculum Theorizing* (Summer 1981): 130-138; John D. McNeil, *Curriculum: A Comprehensive Introduction*, 3rd ed. (Boston: Little, Brown, 1985); Donald E. Orlosky and B. Othanel Smith, *Curriculum Development: Issues and Insights* (Chicago: Rand McNally, 1978).

<sup>12</sup>Tom Colwell, "The Educational Perspective in John Dewey's Philosophy of Education," *Educational Theory* 35 (Summer 1985): 262.

to the educational milieu. Likewise, efforts to foster societal change are evaluated in the perspective of an ecological environment.

#### KEY CHARACTERISTICS OF THE ECOLOGICAL-INTEGRATION ORIENTATION

Ecological integration as a value orientation for curricular decision making is based on the assumption that each individual is a unique holistic being, continuously in the process of becoming, seeking full personal integration in a changing environment. According to this view of curriculum, the individual is a functioning element in the total biosphere. Humankind is understood in its biological relationships with the physical environment and its potential effect on other forms of life. Individual validity or personal integrity depends also on the ability to function effectively as a citizen of a single world. The curriculum is directed toward a sociological ecosystem, as well as a biological ecosphere. The approach emphasizes a future orientation. The ideal is a future human condition that depends on incorporating both biological and sociological balances within a total ecosystem.

The emphasis given to the curriculum's three sources and the program planner's perspective on the subject content, the learner's needs, and society's goals determine value orientations underlying curricular decision making. The ecological-integration approach has four distinguishing characteristics

- the emphasis on the personal search for meaning
- the assumption that individual validity (and thus personal meaning) can be achieved only by integrating the natural and the social environment
- a commitment to a balance between societal needs and individual needs that prefers neither but acknowledges the importance of subject matter in fulfilling both
- a future orientation

The key characteristics of the ecological-integration approach are indicative of its appropriateness for educational theorizing and curriculum development in any field of knowledge. The discovery and creation of meaning is viewed as the central task of education. The common goals of education are individual development, environmental coping, and social interaction. The role of the educator is to analyze the potential sources of meaning in terms of these three goals, to provide a wide range of opportunities, and to respond supportively to the individual's search for meaning.

Personal meaning depends on the establishment of individual integration in the environment. Each individual is an important component of the school organization, a relevant being in the classroom, contributing to the nature and quality of the larger school universe. At the same time, personal meaning for each also depends on the other individuals in the changing classroom groups. The individual is seen as an integral component of the ecosphere,

responding to the environment and at the same time determining, to some degree, the nature of his or her universe. Personal meaning is sought through a heuristic interaction with the environment in a particular place and time.

Persons are viewed as functioning elements in a total ecosystem with environmental dimensions both biological and sociological in nature. The ecology of the natural environment is to be respected and preserved. Humans are but one species living on the planet, human welfare depends on preserving the total ecological balance. A similar interdependency exists with the sociological environment. The world is viewed with a new appreciation of global interdependence. The school is responsible for developing individuals who function effectively as citizens of a single world, whose commitment to human futures goes beyond personal competence, local achievement, and national pride. The curriculum is directed toward the creation of a better world, incorporating both biological balances and sociological benefits in the total ecosystem.

This world requires a curriculum directed toward creative synthesis. It demands, not only the self-actualization of individuals, but their socialization as well—socialization in a positive, creative, responsible, ethical, and self-fulfilling sense. The needs of individuals must be consciously interrelated with the needs of society. Our world needs diversity, plurality, equality, and individual autonomy, but it also needs unity, cooperation, commitment, and a kind of collective excellence possible only if individual opportunity sometimes receives lower priority than the welfare of the larger society. We need scientists, computer technicians, and problem solvers, but we also need artists, philosophers, and humanitarians. The school's challenge is to educate unique persons for self-fulfilling social roles appropriate to their diverse talents.

A curriculum based on a value orientation of ecological integration has a future orientation. Individual education is designed to assist in creating the future. The curriculum is concerned with learning to ask and examine critical questions. Students develop skills for writing alternative scenarios for desired human futures. The curriculum establishes ecological integration by viewing the individual as an integral part of the total environment in his or her particular place and time, it takes the perspective that we can create, to some extent, the nature of the world in which all of us will live.

#### DIFFERENTIATION OF ECOLOGICAL INTEGRATION FROM TRADITIONAL VALUE ORIENTATIONS

Value orientations have emerged to reflect philosophical positions in education. Although few claim to exclude components of the educational process (e.g., the role of the subject matter or needs of the student), in reality the most-valued elements of the curriculum effectively drain resources from other less-valued components. From the ecological-integration perspective, the central task of education is discovering and creating personal meaning by

individually integrating the natural and social environments. Each traditional orientation sets somewhat different educational priorities to achieve goals believed to be central to the mission of education from a specific perspective.

The *disciplinary-mastery* approach structures the curriculum according to the nature of the discipline or the body of knowledge.<sup>13</sup> It focuses on the presentation of academic content to students. In the strictest definition, it limits valid content to the traditional disciplines—the humanities, sciences, and mathematics. Its primary emphasis is subject matter, in contrast to the ecological-integration ideal of balanced concern for societal needs and individual needs through the appropriate use of subject matter.

Social perspectives of the two approaches are also markedly opposed, the disciplinary-mastery curriculum is directed toward preparation for the existing society, but a goal of the ecological-integration curriculum is social change to provide equal opportunity for all while stimulating the development of excellence. The program planner with a disciplinary-mastery orientation relies on logical analyses of key subject-matter concepts to establish sequences of learning activities, but the planner with an ecological-integration orientation structures curriculum experiences with a view toward broadening horizons to support the individual search for personal meaning.

Advocates of the *learning-process*, or educational-technology, orientation emphasize that the process of learning is as important as the content learned.<sup>14</sup> These specialists attempt to separate learning tasks into component parts. Components are then sequenced to reflect and encourage the natural developmental process. Advocates are careful to stress the unique characteristics of the learner and adjust learning experiences to be consistent with the student's current developmental level. The progressions, materials, and procedures selected or designed become instrumental to attaining learning products. Individually prescribed instruction and mastery learning programs organize materials and performance objectives into logically attainable progressions. In most learning-process models, criteria for a successful performance are clearly stated. Although a common criticism of this approach is its technological emphasis, it is frequently tempered with a genuine focus on individual student needs.

A holistic perspective toward the student and a commitment to global societal concerns and the need for social change distinguish the ecological integration from the learning-process approach. According to the learning process approach, individual learning achievements should be functional in a globally interdependent society. Here, the individual is viewed primarily as

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<sup>13</sup>Jerome S. Bruner, *The Process of Education* (Cambridge, MA: Harvard University Press, 1960); Paul H. Hirst, *Knowledge and the Curriculum* (London: Routledge and Kegan Paul, 1974)

<sup>14</sup>Benjamin S. Bloom, *All Our Children Learning* (New York: McGraw-Hill, 1981); Seymour Papert, *Mindstorms. Children, Computers, and Powerful Ideas* (New York: Basic Books, 1980)

a learner. The ecological-integration approach, however, is primarily concerned with developing a fully integrated holistic being.

A third value orientation, *self-actualization*, focuses directly on the student.<sup>15</sup> This approach is sometimes designated as humanistic because self-understanding, autonomy, and personal responsibility, as well as the emotional and physical development of the child, are of primary importance. Curriculums are planned for the student as an individual, not as a member of a homogeneous group. Advocates argue that the primary emphasis should be placed on the child's feelings about self rather than on achievement. In these programs, academic content is the means through which students gain self-knowledge and understanding. Personal growth is a central focus in the self-actualization or humanistic approach. This theme is inherent in the search for individual human potential. Few parameters or artificial boundaries are imposed on the scope of exploration. Under the guidance of the teacher, students' needs and interests determine the dimensionality of the investigation. The curriculum is dynamic, reflecting the vigorous qualities of the growing learner.

Ecological integration incorporates the concept of celebrating the self or fulfilling individual human potential—the hallmark of the self-actualization approach. Further, it goes beyond the traditional humanistic position to a view of the holistic person integrated with his or her particular setting. According to the ecological-integration view, the self-actualization process cannot override the importance of preserving the limited resources of the natural environment, of the needs of other forms of life in a balanced ecosystem, or of the priorities of the local human community or the larger world society.

Advocates of the *social-reconstruction* value orientation challenge students to analyze contemporary issues, ask critical questions, and develop strategies necessary to create a better future.<sup>16</sup> Social reconstructionists are concerned primarily with the social, political, and economic development of society. They view the school as a force to reorganize the social order. Optimists in this group believe they can change society through policies such as racial integration, mainstreaming, and increased emphasis on gender and minority issues. Pessimists see the school as too bureaucratic and plodding to influence significant societal change. Both groups, however, believe students must ask critical questions and develop process-and-product skills necessary to evoke change.<sup>17</sup> Educators who adhere to the social-reconstruction orientation recognize the need to encourage students to think analytically,

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<sup>15</sup>Abraham H. Maslow, "Humanistic Education," *Journal of Humanistic Psychology* 19 (Summer 1979): 13–27, Carl Rogers, "Reaching Person-Centered Issues in Education," *Freedom to Learn*, ed. Carl Rogers (Columbus, OH: Merrill, 1983), pp. 197–221.

<sup>16</sup>Michael W. Apple, *Education and Power* (Boston: Routledge and Kegan Paul, 1982), Henry Giroux, *Ideology, Culture and the Process of Schooling* (Philadelphia: Temple University Press, 1981).

<sup>17</sup>John D. McNeil, *Curriculum. A Comprehensive Introduction*, 3rd ed. (Boston: Little, Brown, 1985).

question critically, and invent strategies for change. In programs designed to address these goals, students engage in problem solving related to group cooperation or the examination of such issues as the compromise of personal integrity to achieve social success. This value orientation is rarely visible in most classes. The transmission of societal values is considered of much greater importance than reconstruction. Although some educators are becoming increasingly aware of implicit racist and sexist structures in their classes, teacher action rather than student examination usually remedies the problems.

Ecological integration as a value orientation overlaps social reconstruction. Planned social change is a necessary strategy. Both views imply educators' deliberate effort to help develop individuals who can create and adapt to change. Both support the pursuit of individual excellence. But the challenge to the curricularist with an ecological-integration perspective is multidimensional. Precedence is accorded neither to societal needs nor to individual needs. Ecological integration supports the need for societal concerns to have high priority, but individuals do not become pawns in the process of social change. The value orientation leans toward developing a unique person whose individual integrity and personal meaning must be established in a globally interdependent society.

Ecological integration as a value orientation, therefore, differs from each of the other orientations discussed (1) in the emphasis placed on each of the curriculum components and (2) in the perspective on one or more of the three sources of the curriculum. In addition, it differs from all four of the approaches discussed in its broader, more encompassing worldview. The ecological-integration position advocates the synthesis needed for developing the symbiotic relationship of the individual in the world through education.

#### CURRICULUM PROCESS FROM AN ECOLOGICAL-INTEGRATION ORIENTATION

Specific examples of carrying out the curriculum process from a perspective of ecological integration may clarify the overall value orientation. Process skills appropriate to sound curriculum development vary according to the planner's underlying value orientation. The pedagogical and evaluative decision making that significantly influences the operational curriculum necessarily reflects the responsible educators' value orientation. An ecological integration approach to curriculum development would lead to genuine changes in typical existing programs in determining goals, in selecting content and instructional strategies, and in evaluating programs.

Goals of a program in which ecological integration is the dominant orientation focus on realizing individual potential and excellence, learning

social responsibility, and developing global perspectives. Curriculum goals in the social studies area might include the following:<sup>18</sup>

- Develop an information base in history and the social sciences that provides a common grounding in society's cultural heritage.
- Promote the desire and the ability to make connections among previously learned and new information.
- Promote an appreciation for new forms of communication and an understanding of the integrated and interrelated nature of all information.
- Provide experiences in learning to communicate with others about the data and interpretations of history and the major social issues confronting the world today.
- Develop an understanding of the nature and operation of the political processes controlling our lives by participating in meaningful civic activities
- Provide a breadth of experiences and diverse opportunities to consider new ideas and global perspectives of geographic, political, economic, and social boundaries.

In physical education, curriculum goals such as the following might be anticipated:<sup>19</sup>

- Promote the "joy of effort" in activities and provide an element of fun and enjoyment through participation in such activities.
- Develop a thorough understanding of the principles of movement and foster a greater awareness of and appreciation for the various aspects of human physical activity.
- Provide differential competitive sports opportunities that consistently challenge the most gifted while motivating full and satisfying participation on the part of the least talented.
- Develop confidence and appreciation of group support by meeting the challenges of survival and of adventure sports in the outdoors.
- Structure group interaction in a way that reduces sexism and racism.
- Create new games and physical recreation activities and discover new possibilities for intercultural communication through dance, sport, and fitness activities.

Goals for a science curriculum developed from the perspective of ecological integration might best be exemplified by referring to the early reports

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<sup>18</sup>For a current overview of the goals of the social studies curriculum, see Donald H. Bragaw and Michael H. Hartoonian, "The Social Studies. The Study of People in Society," *Content of the Curriculum*, 1988 ASCD Yearbook, ed. Ronald S. Brandt (Alexandria, VA: Association for Supervision and Curriculum Development, 1988), pp. 9-29.

<sup>19</sup>Ann E. Jewett and Linda L. Bain, *The Curriculum Process in Physical Education* (Dubuque, IA: William C. Brown, 1985).

of *Project 2061. Education for a Changing Future*.<sup>20</sup> Project 2061 was launched in July 1985 by the American Association for the Advancement of Science; only first-phase draft material has been released so far. It is a group project aimed toward a complete rethinking of the learning outcomes of school science, broadly interpreted to include mathematics and technology as well. Project 2061 formulated a set of guiding principles relating to strategies, scope, emphasis, and criteria in the effort to identify science learning goals for designing science curriculums. The principles listed below help clarify how this value orientation would change the process of determining curriculum goals:

- To reduce the tendency to redistribute all the existing science curriculum content into new categories, learning goals should be expressed conceptually, not as a list of topic headings.
- The content of the school science curriculum should be relevant to (but not necessarily exhaustively representative of) the full spectrum of the sciences.
- The science curriculum should include content relating to technology.
- Science education goals should be defined in a way that encourages frequent curricular crossover between the sciences and the humanities.
- The science curriculum should include content that deals with the role of science in other human affairs.<sup>21</sup>

In curriculums developed from an ecological-integration orientation, the perspective on social change emphasizes group skills, sensitivity to others, acceptance of minority group members and persons with varying value systems, understanding of gender issues, and appreciation of those with disabilities. Classes are organized in heterogeneous groups. Creative activities designed to examine new forms of social interdependence are explored. The total cultural context strongly influences the curriculum, and subject areas are integrated to a much greater extent. The student participates in activities appropriate to a particular time and place, establishing personal validity as a biological and social being in an interdependent ecosystem.

Because the search for meaning is highly personal, the teacher needs an extensive repertoire of instructional strategies. Elementary school teachers use various methods, with an emphasis on discovery styles. Middle school teachers should have opportunities for selecting among alternative educational activities and should be given opportunities for self-direction and personal creativity. Instructional procedures in secondary schools stress individual assessment, personal goal setting, and opportunities for making learning

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<sup>20</sup>F. James Rutherford and Andrew Ahlgren, "Rethinking the Science Curriculum," *Content of the Curriculum*, 1988 ASCD Yearbook, ed. Ronald S. Brandt (Alexandria, VA: Association for Supervision and Curriculum Development, 1988), pp. 75-90.

<sup>21</sup>Ibid., pp. 78-87.

individual and personal. Different styles must be used simultaneously if the right approach is to be selected for the right student at the right time.

Evaluating a curriculum designed with an ecological-intergration orientation requires some combination of the typical performance tests and other more creative approaches. Personal-meaning curriculum models need to rely more heavily on qualitative evaluation than do other models. Many basic educational questions dealing with personal meaning and social significance simply cannot be asked or answered through quantitative methods alone.<sup>22</sup> Evaluation goes beyond the measurement of desired outcomes. Program evaluators employing goal-free models use a variety of techniques.<sup>23</sup> Besides the usual relatively objective measures, indicators of change in learners may include teacher-made devices, interviews, self-evaluation instruments, social distance measures, projective devices, and semantic differential scales.

Since education is an important part of students' lives, the immediate quality of curriculum experiences provided becomes an important focus of program evaluation. Educational experiences should be satisfying encounters that enrich human life independent of long-term consequences. An examination of the process of education is just as important as an evaluation of the products or outcomes.<sup>24</sup> We must determine that the educational experience is involving, exciting, and meaningful to students.<sup>25</sup> It is equally relevant to evaluate instruction in terms of the basic values of justice, equality, and human dignity reflected in the day-to-day interactions between teachers and students. As the curriculum is viewed from moral and aesthetic perspectives, the total quality of the experience assumes an importance far greater than that of the quantity of time on task or measurable student performance.

#### WHAT NEXT?

What are the next steps for those who want to base curriculum practice on a value orientation of ecological integration? Perhaps we should more realistically ask, What are the key questions? The gap is wide, even for a giant step. These are the questions we are asking:

1. Are there new and better ways to facilitate the search for personal meaning? We need to open up more alternatives, particularly total curriculum designs based on a holistic view of individual development. We should give more attention to values, ethics, and creativity in conceptualizing curriculum

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<sup>22</sup>George Willis, ed. *Qualitative Evaluation. Concepts and Cases in Curriculum Criticism* (Berkeley: McCutchan, 1978).

<sup>23</sup>Michael Scriven, "Pros and Cons about Goal-Free Evaluation," *Journal of Educational Evaluation* 2 (December 1972): 73-76.

<sup>24</sup>Elliot W. Eisner, "The Art and Craft of Teaching," *Educational Leadership* 40 (April 1983): 4-13.

<sup>25</sup>Thomas Barone, "Education as Aesthetic Experience: 'Art in Germ,'" *Educational Leadership* 40 (April 1983): 21-26.

designs. We might implement Goodlad's recommendation to allocate a significant portion of curriculum time to individual talent development. Are we ready to take seriously the challenge to foster a learning society at all ages?<sup>26</sup> Berman addresses this issue as one of ten needing re-searching, rethinking, and reordering of priorities:

What kinds of settings best foster opportunities for persons at all ages to grow in their knowing, being, and acting? What opportunities might be provided for persons of various ages, with diverse interests and backgrounds, to be enriched by each other's presence? What knowledge and skills do persons at various stages in their development need to lead full and satisfying lives?<sup>27</sup>

2. Can we create new approaches to program evaluation that will permit us to deal effectively with significant concerns not easily measured? We probably need to evaluate concepts of alternative futures and biotechnology and to assess self-concept, creative abilities, leadership skills, and cooperative behaviors. Many educational goals worthy of our attention do not lend themselves to testing. "That students have the opportunity to get into situations in which . . . significant understandings can take place is more important than that such learning be easily quantified."<sup>28</sup> We probably need to give careful thought to more effectively using goal-free and artistic models of evaluation, possibly, we can create additional alternative program-evaluation models.

3. How can we progress toward the one-world concept? What is the relationship of the local community to the larger world? We might begin to broaden horizons by cooperative curriculum development engaging the concerns, insights, and resources of local school districts, colleges and universities, and state departments of education. Could students internalize concepts of service through school-sponsored fieldwork in the local community and gain understandings and commitments that would ultimately make a difference in achieving greater international understanding? What curriculum learnings in global interdependency might be valuable to a true world citizen?

4. What are we to believe about the future? What kind of future world do we want? What kind of curriculum is likely to influence such a future? Images of the future projected by those who have seriously studied the issues continue to be highly diverse. Nonetheless, "One recurring theme that transcends worldview differences is that human beings, individually and collectively, can influence their future."<sup>29</sup> Hughes concludes a critical analysis of alternatives with the following challenges:

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<sup>26</sup>Norman V. Overly, ed., *Lifelong Learning. A Human Agenda* (Alexandria, VA: Association for Supervision and Curriculum Development, 1979).

<sup>27</sup>Louise M. Berman, "Perspectives and Imperatives. Re-searching, Rethinking, and Reordering Curriculum Priorities," *Journal of Curriculum and Supervision* 1 (Fall 1985): 67

<sup>28</sup>*Ibid.*, p. 68.

<sup>29</sup>Barry B. Hughes, *World Futures. A Critical Analysis of Alternatives* (Baltimore: Johns Hopkins University Press, 1985), p. 183.

Today we recognize and even increasingly understand the transitions before us. Our political, social, and economic institutions have grown powerful in their abilities to influence global development subsystems. . . . We now have more effective choices than ever before. . . . We may not have control over our future, but we have more conscious influence than ever before. It is increasingly up to all of us to examine our value systems and our worldviews and to decide what kind of global future we want.<sup>30</sup>

We believe that curriculum development should be consciously directed toward influencing our world future. We propose that ecological integration is a more appropriate value orientation for curricular decision making.

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<sup>30</sup>*Ibid.*, p. 223.

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