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An Interdisciplinary Curriculum Model for Outdoor Education

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AN INTERDISCIPLINARY CURRICULUM MODEL FOR OUTDOOR EDUCATION

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DEDICATION

In our personal and professional lives, many of us have been blessed by having been tutored and influenced by truly eminent and inspirational educational leaders. The author has been particularly fortunate in having had the opportunity to work with several outstanding educators who, although not directly involved in the completion of the present study, have been a source of inspiration in a sometimes-lonely mission. Therefore, in genuine appreciation, this dissertation is dedicated to the following educators:

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education programs at the University of Regina over the past 15 years.

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Finally, this study is dedicated to the hundreds of students with whom the author has worked over the past two decades. They have truly been among his greatest teachers.

ABSTRACT

The primary purpose of this study was to develop an interdisciplinary curriculum model which would improve the conceptualization of outdoor education by providing a theoretical framework for curriculum development, evaluation, and further research.

In order to create the proposed model, it was necessary to address several related issues. The first phase of the study involved an investigation of current perspectives on outdoor education. Key characteristics and guiding principles were determined to provide a clarification of the substantive structure of this field of study. An analysis and synthesis of the contributions of John Dewey, L. B. Sharp, Julian Smith, and other prominent educators provided the basis for the development of a rationale and philosophical foundation for contemporary outdoor education programs.

The second phase of the study was centered on an examination of curriculum development theory. A set of value orientations derived from an analysis of conventional curriculum designs, coupled with the structural elements of a curriculum model which were formulated by the author, provided the framework for identifying distinctive patterns

with respect to existing outdoor education programs. Based on an analysis of 25 representative school programs from three Canadian provinces and seven U.S.A. states, the following five generic models were identified and described: (1) traditional subject-matter model; (2) thematic/conceptual approach; (3) environmental/ecological studies; (4) adventure pursuits model; and (5) school camping.

The final phase of the study included a detailed description of the proposed interdisciplinary curriculum model for outdoor education. The format used to describe the model was based on the following structural elements of a curriculum model: (1) the definition, purpose, and goals of outdoor education; (2) the underlying value orientation; (3) the nature and scope of content; (4) implementation procedures; and (5) the process of evaluation.

One of the main features of the proposed model centered on a discussion of a unique body of content for outdoor education. Three main content dimensions were defined: (1) specially selected outdoor activities; (2) learning processes; and (3) content derived from academic disciplines.

CHAPTER I

INTRODUCTION

The simplest and most commonly accepted definition of Outdoor Education is ". . . education in, about and for the outdoors" (G. W. Donaldson & L. E. Donaldson 1958, p. 17). Education in the outdoors is self-explanatory, implying that learning occurs in a variety of outdoor settings. Education about the outdoors involves the development of understandings and appreciations about environmental phenomena, including man's relationship to and interdependence with the physical universe. Education for the outdoors involves the acquisition of knowledge, skills, and attitudes which enable the learner to enrich his own life through the wise use of the outdoor environment. According to the Donaldsons, the word for is the "key" in this definition because ". . . it implies a positive and moral approach. It strongly suggests that both the learner and the outdoors are better because of the experience" (p. 17).

One of the fundamental goals of Outdoor Education is to enrich the school curriculum through direct, hands-on outdoor learning activities. The abstract generalizations of a cognitive-oriented instructional approach are

reinforced and enhanced by the concrete instances of experiential education (Dewey 1938; Kolb 1984).

Outdoor Education, as a vehicle of formal and informal educational endeavors, also contributes to the personal development of the individual as well as to the acquisition of social skills for effective interpersonal relationships. In fact, many professional outdoor educators, particularly those associated with resident school camping and adventure education programs, state emphatically that the process of self-actualization is the central goal to be pursued. Wilderness adventure activities, in particular, provide a rich source of opportunities for the attainment of "natural highs" (Glasser 1976) and "peak experiences" (Maslow 195[illegible]. Successful outdoor adventure experiences typically demand the acquisition and application of effective interpersonal skills, such as cooperation, sensitivity toward and respect for the rights and needs of others, effective communication skills, developing and maintaining trust, conflict resolution, and decision-making processes.

Another stated goal of Outdoor Education is to contribute to the development of an environmentally-aware citizenry. This is particularly critical in the wake of our rapidly deteriorating environment. The 1979 Three Mile Island crisis in Pennsylvania and the more recent (1986) Chernobyl nuclear disaster in the Ukraine, the

dwindling supply of non-renewable resources, overpopulation and food shortages in many parts of the world, the torrid pace of urbanization with its attendant problems--among other environmental concerns--are causing us to critically examine where we are headed in the future. As Rene Dubos (1968) prophetically stated, "We cannot long continue the present trend of correcting minor inconveniences and adding trivial comforts to life at the cost of increasing the likelihood of disasters and cheapening the quality of the living experience" (p. 237). Our fragile planet Earth is surely at risk! This stark realization has profound implications for education. Either voluntarily or through necessity, our schools will need to focus more attention toward providing the kinds of learning experiences which will enable all of us, individually and collectively, to cope with the challenges of a rapidly-changing world. Ourdoor Education has the potential to contribute to both quality of life and environmental quality.

Although educators agree that Outdoor Education is a viable and desirable alternative to many traditional school practices, the actual implementation of such programs has not kept pace with the needs of our time. The reasons are diverse: the lack of clarity and sophistication in curriculum development; the inevitable competition with other educational innovations; the lack of adequate teacher preparation; insufficient funding; and, a failure

on the part of professional outdoor educators themselves to clearly articulate the importance of and need for outdoor education programs in the nation's schools. Much remains to be done if the schools are to meet the needs of students in a rapidly-changing world.

Need for the Study

Outdoor Education, as a formal educational movement in North America, is now approaching its mid-century mark. Like other educational innovations, outdoor education evolved through numerous developmental stages, being affected by social, economic, and political influences.

> Over 40 years ago, outdoor education emerged from its chrysalis and became a viable force on the American education scene. It was considered by many prominent educators, such as John Dewey and Earl Kelly, as education for reality and for dealing with real-life situations. It was considered important then, and it is even more important in our modern-day society. It is education that cannot wait, if young and old alike are to take an active role in shaping a quality environment for all forms of life (Rillo 1985, p. vii).

In its relatively brief history, the development of outdoor education has been influenced by three main factors: (1) "camping education" programs which emphasized

recreational experiences and democratic-living skills; (2) curriculum-oriented programs which encouraged the utilization of outdoor resources to enrich traditional subject-matter areas; and (3) environmental education which focused on ecological principles and practices. Thus, contemporary outdoor education programs, like the schools under whose jurisdiction they operate, have become exceedingly proliferated in an attempt to accommodate an increasingly more diverse clientele. In many cases, this approach is rationalized under the guise of being holistic. However, it is one thing to speak of a holistic approach; it is quite another to incorporate the whole spectrum of outdoor learning experiences under the outdoor education umbrella. The end result of this practice has been confusion, vagueness, and a distortion of the central purpose of outdoor education.

There seems to be a clear need to resolve the ambiguity that is currently plaguing outdoor education lest we become mired in a conceptual swamp. The impasse in outdoor education is indicative of the broader educational concerns which have swept the nation during the first half of the 1980s. The current plethora of reports from national commissions and task forces, epitomized by A Nation at Risk (1983), attests to the perceived "national crisis" in education. To educational reformers, no time seems more propitious than the present. If outdoor

educators are to productively respond to the reform movement of the 1980s, it is imperative that the existing discrepancy between what our rhetoric promises and what our practice actually reveals be reconciled. The time has come for a reconceptualization of the nature and role of outdoor education as an integral part of the total educational process. The problem is not insurmountable.

There are some encouraging signs on the horizon. Despite fiscal restraint and retrenchment in many areas of education, we seem to be witnessing a resurgence and revitalization of the outdoor education movement. Most regions of the United States and Canada have active state and provincial associations, and membership continues to flourish in the Council on Outdoor Education, an affiliate of the American Alliance for Health, Physical Education, Recreation, and Dance (AAHPERD). In 1987, the 20th annual New York State Outdoor Education Association conference will be co-sponsored with the newly-formed National Coalition of Outdoor Educators. This event is expected to be a significant milestone in the evolution of Outdoor Education.

In view of this perceived renaissance, it is imperative that we critically re-examine and clearly articulate the philosophical foundations and educational role of outdoor education in order to provide direction for both theoreticians and practitioners in the years ahead. The

need to translate the evolving theoretical principles into a functional format or model which would supplement and complement the contemporary school curriculum makes the present study particularly pertinent and timely.

Finally, the undertaking of this study was in large part a response to the challenge issued by van der Smissen (1980), in her assessment of the status of research in outdoor education:

> While one might anticipate that the curriculum articulation studies might make a contribution to educational research or at least utilize educational research methodlogy, a review of many of the studies indicates this is not so. Most of the studies merely identified activities suitable for curriculum areas; . . . . In these studies, . . . there appears to be little depth or conceptual consideration, perhaps because of the extreme emphasis upon operational programs. (p. 117)

Van der Smissen maintains that there should be more strategies based on conceptual rationale rather than operating primarily on "experience-wisdom." She also contends that "there must be more research building upon previous research, rather than each study being isolated, as so much of the research to date has been" (p. 119).

The development of a conceptual framework to serve as a foundation for curriculum development, evaluation and research would make a significant contribution to resolving some of the troublesome issues confronting outdoor education today.

Purpose of the Study

The primary purpose of the study was to design an interdisciplinary curriculum model which would improve the conceptualization of outdoor education by providing a theoretical framework upon which curriculum development, evaluation, and further research could be based. The proposed model would have the capability of supplementing and complementing traditional subject-matter based school curricula.

In order to create a curriculum model that would serve the above-mentioned functions, it was necessary to address the following sub-problems:

1. To determine the key characteristics and guiding principles in order to clarify the substantive structure of the field of outdoor education; and,

2. To determine the structural elements of a curriculum model in order to provide a theoretical framework for: (a) an analysis of existing outdoor education programs, and (b) the design of the proposed interdisciplinary curriculum model.

Delimitations

1. The context in which the term outdoor education was used in this study was delimited to "schooling" as distinguished from the more highly specialized and esoteric programs of other "educational" agencies, such as Boy Scouts, Campfire Girls, church camps, Outward Bound, and Interpretive Nature Centers.

2. Although it is recognized that curriculum theory and instructional theory are inextricably interwoven, the field of study was delimited to the curricular dimension.

3. The development of the interdisciplinary curriculum model was further delimited to structural design. That is, specific curriculum items were not included in the description of the model. However, the set of validation criteria, which was derived from the model, provides the necessary vehicle for the appropriate selection of specific outdoor learning experiences.

4. The study was further delimited to the theoretical dimensions of curriculum design as distinguished from administrative considerations related to the practical implementation of outdoor education programs. For example, no serious attention was paid to financial and staffing aspects although the importance of both is fully recognized.

5. The computerized library searches for this study were delimited to include literature documented under the

main descriptor of ourdoor education, using the following sub-headings: history, philosophy, programs and activities, curriculum design, and interdisciplinary approach. It was assumed that additional references to books and other documents not abstracted in the ERIC system could be traced through the references and bibliographies listed within ERIC. All additional references, acquired through a manual search, were restricted to the holdings of the Chester Fritz Library, University of North Dakota, and the Education Library, University of Regina, Saskatchewan.

Definition of Terms

The title of this study, An Interdisciplinary Curriculum Model for Outdoor Education, implies three distinct definitional ingredients that seem to demand clarification and elaboration. While it is recognized that formal definitions are often restrictive and inadequate, a definition nevertheless does enable one to more clearly identify the role and delineate the limits of the particular process being discussed. Furthermore, although the major terms used in this study are described in detail in their appropriate context, a preliminary explanation of significant terms is offered here to enable the reader to fully understand the meaning of the study and its significance.

Interdisciplinarity and Related Terms

In its adjective form, the term interdisciplinary is often used synonymously, albeit erroneously, with the terms multidisciplinary and crossdisciplinary.

For purposes of this study, interdisciplinarity is viewed as an integrative relationship between or among various disciplines or subject-matter areas, whereas multidisciplinarity (translated as "many disciplines") suggests that the perspectives of separate disciplines are brought separately to bear on the topic/concept at hand. Crossdisciplinarity simply refers to a situation in which a topic has common elements which "cross" traditional subject-matter barriers. Although this distinction may be more subtle and theoretical than functional, it nevertheless points to the problem that continues to plague efforts to develop truly interdisciplinary learning experiences.

D. Tanner and L. N. Tanner (1980) view interdisciplinarity as a process of synthesization, which involves the conceptualization of a whole field of knowledge rather than fragmented, unrelated parts:

> The goal of interdisciplinarity is understanding--getting a grasp of a total field and bridging the gaps among the parts. Synthesis does not mean putting the parts together as one would the ingredients for a cake but

> applying relationships among the parts and subjecting them to generalization. (p. 428)

If an outdoor learning experience were to be truly interdisciplinary, it would rarely be necessary to identify the traditional disciplines by using their noun form. However, it may be appropriate at times to employ the adjective form. For example, we would NOT use the expression "teaching science in the outdoors" nor "teaching art in the outdoors," but could refer to the application of scientific principles or aesthetic perspectives to the concept/topic under consideration.

Curriculum Model

Definitions of curriculum vary greatly, ranging from the frequently cited view that the school curriculum constitutes the totality of experiences of each learner under the influence of the school to the narrower view that depicts curriculum as the formal course of study of the school.

The author of this study interprets the term paradigm as a conceptual blueprint which orients modes of thought and methodology toward substantive problem solving. The more tangible representation (product) of the process takes the form of a functional model or exemplar which, when firmly established and universally accepted, serves as a new paradigm for the development of further models.

For the purposes of this study, a curriculum model refers to the structural design that organizes and synthesizes the values, principles, content, and methodology of a given field of knowledge which, in this particular case, is outdoor education.

Outdoor Education and Related Terminology

Definitions of outdoor education are as varied as those for curriculum, and are subject to similar internal and external forces. Emerging definitions are influenced by the changing philosophical orientations of outdoor educators themselves, changing conceptions of the learner, and the emergence of new forms of knowledge. The major influences that have affected the course of outdoor education were discussed earlier in this chapter. A comparison of contemporary definitions of outdoor education, outdoor recreation, and environmental education reveals a substantial degree of similarity, a feature which will be discussed later in greater detail.

Outdoor education. The author prefers the definition by G. W. Donaldson and L. E. Donaldson (1958): "Outdoor education is education in, about and for the outdoors" (p. 17), with the proviso that such learning contribute to the quality of human life.

Outdoor recreation. In its simplest form, the term outdoor recreation refers to a wide range of outdoor pursuits that occur mainly during leisure time. Ford

(1981) offered the following formal definition: "Outdoor recreation consists of all those leisure experiences in the out-of-doors that are related to the use, understanding, or appreciation of the natural environment or those leisure activities taking place indoors that use natural materials or are concerned with understanding and appreciation of the out-of-doors" (p. 18).

Environmental education. Of the three terms under consideration, environmental education is perhaps the most difficult for which to find a commonly accepted definition. Two separate definitions have been selected from highly-respected sources:

> Environmental education is the process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the interrelatedness among man, his culture and his biophysical surroundings. Environmental education also entails practice in decision-making and self-formulation of a code of behavior about issues concerning environmental quality. (UNESCO 1970).

W. B. Stapp and D. A. Cox (1981) defined environmental education as ". . . a process aimed at developing a world population that is aware of, and concerned about the total environment and its associated problems, and which has the knowledge, attitudes, motivations, commitments

1. Resources in Education (RIE) and Current Index to Journals in Education (CIJE), published by the Education Resources Information Center (ERIC);

2. Dissertation Abstracts International, and University Microfilms International, Ann Arbor, MI;

3. Research in Outdoor Education: Summaries of Doctoral Studies (1983), published by the Council on Outdoor Education, an association of the American Alliance for Health, Physical Education, Recreation, and Dance;

4. Research in Environmental Education: 1971-1980, published by ERIC Clearinghouse for Science, Mathematics and Environmental Education;

5. Journal of Outdoor Education, a publication of Northern Illinois University (a complete collection of JOE, dating back to the pilot edition in the spring of 1966, has been obtained by the author for his personal library);

6. Recognized textbooks in the field of outdoor education, including publications from Canada, Great Britain, and the United States; and,

7. Mimeographed and unpublished reports of outdoor education programs, which were obtained from the original sources.

As a prerequisite to the creation of the proposed interdisciplinary curriculum model for outdoor education, it was necessary to address two important sub-problems.

and skills to work individually and collectively toward solutions of current problems and the prevention of new ones" (p. 4).

Definitions of other terms used in the study are presented in their appropriate context throughout the remaining chapters.

Methodology and Procedure

The methodology used in the study consisted of a combination of descriptive, historical, and creative approaches.

A systematic and comprehensive analysis and synthesis of relevant literature provided the basis for an inductive reasoning approach to the creation of an interdisciplinary curriculum model for outdoor education.

Information derived from library research was processed in much the same manner as qualitative researchers treat transcripts of interviews and verbatim accounts of observations. Summarized notes on readings, direct quotations, photocopied excerpts and articles, and computer printouts of abstracts were coded and systematically indexed according to specific topics germane to the study. References were subjected to both external and internal criticism according to procedures described by Borg and Gall (1979, pp. 383-390).

The main sources from which relevant information was obtained included:

The first phase involved an investigation of key characteristics and guiding principles in order to resolve the current impasse which seems to have developed concerning the nature and scope of outdoor education. Sources from which the key characteristics and principles were derived included major textbooks and relevant research studies as well as actual descriptions of goals and activities of existing programs.

The second sub-problem involved the determination of the structural elements of a generic curriculum model. This was accomplished primarily through an investigation of conflicting conceptions of curriculum as presented by selected curricular theorists as well as widely-recognized outdoor education leaders. The derived set of structural elements provided the basis for a theoretical framework, which facilitated: (a) the categorization and analysis of various emerging outdoor education models, and (b) the subsequent creation of the interdisciplinary curriculum model.

CHAPTER II

LITERATURE REVIEW

The content of this chapter is intended to provide an overview of the background literature considered foundational to the ultimate development of an interdisciplinary curriculum model for outdoor education. It consists primarily of: (1) a survey of related research studies; (2) a review of selected historical/philosophical influences on the evolution of outdoor education; and (3) an analysis and synthesis of contemporary perspectives on outdoor education.

Related Research Studies

A computerized and manual library search of research studies pertaining to the author's selected area of study revealed a surprising dearth of relevant sources. An examination of 115 abstracts contained in Research in Outdoor Education: Summaries of Doctoral Studies (1983) yielded only four studies that specifically addressed the curricular dimension of outdoor education (Broda 1977; Mendence 1979; Modisett 1971; Tisdale 1977). Mendence's (1979) study utilized an interdisciplinary approach to curriculum design but, since it pertained primarily to

teacher education programs, its usefulness was limited in terms of the author's study.

A subsequent confirmation check in Dissertation Abstracts International revealed one additional study related to curriculum development in outdoor education. Simmons' (1982) curriculum and activities model was restricted to outdoor adventure education as it related to the baccalaureate degree in that area and, consequently, had virtually no application to the present study.

An examination of Research in Environmental Education: 1971-1980 (1981), which contains 429 abstracts of dissertations, theses, and journal articles, yielded few additional helpful references. Of the forty-eight abstracts presented under the descriptor "outdoor education," not a single study pertained to curriculum development.

Thus, the author's findings forcibly confirmed the earlier assessment of van der Smissen (1980, p. 117) that very little had been accomplished in this area of research in outdoor education. It became abundantly clear that the present study would be "breaking new ground." It also suggested that there would need to be a heavy reliance on sources from outside the specific topic under investigation.

Historical/Philosophical Influences

While the roots of outdoor education can be traced to the Progressive Education movement of the 1920s and the

"school camping" programs of the 1930s, the term "outdoor education" was rarely used until the 1940s. The event that served as the benchmark for the resident outdoor school as a pattern of outdoor education was the establishment of a year-round school program at the Clear Lake Camp near Battle Creek, Michigan, during the school year of 1940-41 (Smith 1972, p. 27). In 1945 the Michigan State Legislature passed enabling legislation that permitted school districts to own and operate their own outdoor education centers, establishing a model for many other school systems throughout the nation (Ford 1981, p. 28).

The decade of the 1950s was a period of rapid growth as outdoor education programs expanded beyond camp-based settings into schoolyards and a variety of other outdoor settings. It was during this period that previously recreation-oriented camping programs were transformed into school curriculum-oriented programs, and a change in nomenclature accompanied the move. The term camping education was replaced by resident outdoor education which, in turn, gave way to the broader term outdoor education. Another important development was the organization of outdoor workshops for school personnel, and the establishment of an outdoor teacher education program in 1954 at Lorado Taft Campus by Northern Illinois University.

The 1960s decade is often referred to as the "golden age of outdoor education" (Ford 1981, p. 47). With the

impetus of federal funding through the educational grants of the Elementary and Secondary Education Act (ESEA) Title III, outdoor education became a truly national movement. The 1960s also proved to be a fertile time for scholarship, with most of the major publications in the field being produced during this period. Following are some of the major titles: Philosophy of Outdoor Education (1961) and Programs in Outdoor Education (1962) by Freeberg and Taylor; Teaching in the Outdoors (1964) by D. R. Hammerman; Outdoor Education (1963) by Smith, Carlson, Donaldson and Masters; The Role of Outdoor Education (1965) by Gabrielson and Holzer; and Outdoor Education (1967) by Mand. It was also during this decade that graduate programs in outdoor teacher education were established at numerous universities, following the earlier lead set by Northern Illinois University.

The 1970s, heralded as the "decade of environmental awareness," saw the enactment of the National Environmental Education Act in October of 1970 and the subsequent creation of the National Association for Environmental Education. Through intensive and extensive political action, accompanied by an emotional appeal to "save the fragile spaceship earth from annihiliation," the fledgling environmental education movement became a dominant force on the educational scene and, in the wake of its march, drastically altered the course of outdoor education. R. Thomas

Tanner (1970) captured the mood of the movement when he stated:

> Those who assume that some day we will find our iron on Jupiter, our water on Mars, or our tranquility in a distant solar system may be asking their posterity to pay the piper an impossible fee. Like it or not, we are _in_ nature and it would behoove us to act that way; we can never be _over_ nature. We must understand, even more profoundly than did Bacon, that "nature is only to be commanded by obeying her." If we insist upon making a fight of it, we must expect to lose (p. 355).

Many outdoor educators "boarded the environmental education bandwagon," and substantial changes in program content and research emphasis were reflected in the literature of the 1970s and early 1980s. Considerably more emphasis was placed on environmental issues in both the goal statements and activity selection for outdoor education programs. Chavez (1971) made the observation that "Americans seem to go from one massive movement to another. Today the call to action is environmental factors. . . ." Some state and provincial outdoor education organizations reacted to the mood of the times by changing their titles to _outdoor/environmental education_ associations (for example, the "Saskatchewan Outdoor/Environmental Education Association,"

which is now affiliated with the North American Association for Environmental Education rather than the National Council on Outdoor Education of AAHPERD. The age of environmental concern had arrived! Ford (1981) succinctly summed up the impact of the "new movement" when she stated: "Look at the 1970s. This was the decade of a shift from outdoor education to environmental education" (p. 47).

The above-mentioned phases through which the outdoor education movement has evolved reveal at least three distinct forces that have shaped the nature and scope of outdoor education: (1) the influence of "camping education" programs which emphasized recreational experiences and democratic-living skills; (2) curriculum-oriented programs which encouraged the utilization of outdoor resources to enrich traditional subject-matter areas; and (3) environmental education which focused on ecological principles and practices.

There were other important factors which influenced the growth and development of outdoor education. Among the most notable were the contributions of John Dewey, Lloyd Burgess Sharp, and Julian Smith. In addition, Lorado Taft Campus of Northern Illinois University was central to the continued progress of the outdoor education movement, particularly in terms of outdoor teacher education. These contributions are discussed in the following sections.

The Influence of John Dewey

The literature on the historical and philosophical background of outdoor education is replete with references to John Dewey and the progressive education movement. However, while it is generally accepted that the Progressive Education Association, founded in 1919, profoundly affected the whole spectrum of the educational process for at least three decades, the literature provides no convincing evidence that Dewey either personally or directly influenced either the creation or the development of the outdoor education movement. In fact, other than such frequently-cited phrases as "learning by doing" and "learning through first-hand experience," the author was unable to find any substantive references to Dewey's original writings in the outdoor education literature.

Sharp's (1957) reference to Dewey, in the introduction to a special issue of The Bulletin of the National Association of Secondary School Principals, is indicative of the extent to which Dewey's philosophical views are discussed in the outdoor education literature:

> This realistic approach [outdoor education] to education rests squarely upon the well-established and irrefutable principle of "learning by doing."
>
> Scientific research and psychological testing have been going on for many years to

> determine how learning actually takes place. Not only was the Dewey theory of "learning by doing" established as sound; it was also proved that through direct experience, the learning process is faster, what is learned is retained longer, and there is greater appreciation and understanding for those things that are learned at firsthand. (Introduction)

In their widely-acclaimed book Outdoor Education, Smith, Carlson, Donaldson and Masters (1963) make the following reference to Dewey:

> What is now known about the nature of learning has significant implications for outdoor education. Much of the current theory of learning can be traced to the influence of John Dewey's philosophy. While there has been, and still is, controversy over some of his ideas, the importance of direct experience and problem solving persists in the theory of learning and in educational methods. . . . Learning, which includes the acquisition of habits, skills, and appreciations, is a function in the process of doing, undergoing and testing. In all the statements from Thorndike to Dewey to contemporary educational

> philosophies, it is apparent that thinking and doing cannot be separated, that together they form the whole man. (pp. 39-40)

Perhaps the most instructive reference to the relationship of Dewey's ideas with the outdoor education process was made by W. M. Hammerman (1980):

> In The Child and the Curriculum (1902), Dewey advocated that experiences of all kinds should be included in the curriculum. Educators should know how to utilize the child's surroundings--physical, natural, social--in a manner that would result in significant learning experiences. Dewey sought to free the learner and the schools from the traditional educational practices of the time. He worked to unify the apparent separation of school and society, learning and doing, and the child and the curriculum. He believed that if the curriculum were more closely related to the child's daily life in his community, dealing with realistic concerns that were important to him, a natural correlation would take place among the various subject matter areas. (p. xvi)

While one can find other sources that make similar references to the educational philosophy of Dewey, the author was unable to find a major source which devoted

substantial space to an analysis of Dewey's ideas as they relate to the principles and practices of outdoor education. It was this paucity of previous scholarly study that prompted a more thorough investigation of this neglected aspect in the literature. Since the scope of the present study did not permit nor warrant a complete review of all Dewey's writings, which comprise 50 books and approximately 900 articles, the choice of the documents to be examined was necessarily selective. However, it is believed that the salient points have been duly reported.

The significance of Dewey's theories lies not in whether they influenced the outdoor education movement but rather in their potential value in providing a clearer rationale or philosophical basis for today's outdoor education programs. The format used to discuss this notion consists of an analysis of Dewey's relevant educational theories in terms of how they relate to the key characteristics of outdoor education.

Experiential learning and the "progressive" approach. As noted in the preceding quotations, one of Dewey's most significant educational contributions was his development of the theory of experience-based learning, which is at the very heart of outdoor education. Since outdoor activities typically demand an integrative perspective on learning which combines experience, perception, cognition, and behavior, Dewey's views on experiential learning are particularly relevant and applicable to outdoor education.

In Experience and Education (1938), Dewey described the process by which the impulses, feelings, and desires of concrete experience are transformed into higher-order purposeful action:

> The formation of purposes is, then, a rather complex intellectual operation. It involves (1) observation of surrounding conditions; (2) knowledge of what has happened in similar situations in the past, a knowledge obtained partly by recollection and partly from the information, advice, and working of those who have had a wider experience; and (3) judgment which puts together what is observed and what is recalled to see what they signify. A purpose differs from an original impulse and desire through its translation into a plan and method of action based upon foresight of the consequences of acting under given observed conditions in a certain way. . . . The crucial ducational problem is that of procuring the postponement of immediate action upon desire until observation and judgment have intervened. . . . Overemphasis upon activity as an end, instead of upon intelligent activity, leads to identification of freedom with immediate execution of impulses and desires. This identification is

> justified by a confusion of impulse with purpose; although, as has just been said, there is no purpose unless overt action is postponed until there is foresight of the consequences of carrying the impulse into execution--a foresight that is impossible without observation, information, and judgment. (pp. 80-81)

Kolb's graphic portrayal of Dewey's theory of experiential learning is shown in Figure 1, and described as follows:

> We note in his [Dewey's] description of learning . . . the emphasis on learning as a dialectic process integrating experience and concepts, observations, and action. The impulse of experience gives ideas their moving force, and ideas give direction to impulse. Postponement of immediate action is essential for observation and judgment to intervene, and action is essential for achievement of purpose. It is through the integration of these opposing but symbiotically related processes that sophisticated, mature purpose develops from blind impulse. (p. 22)

Although the development of experiential education is generally attributed to Dewey, the learning theories of Kurt Lewin (1951) and Jean Piaget (1970) have significantly contributed to the sophistication which currently

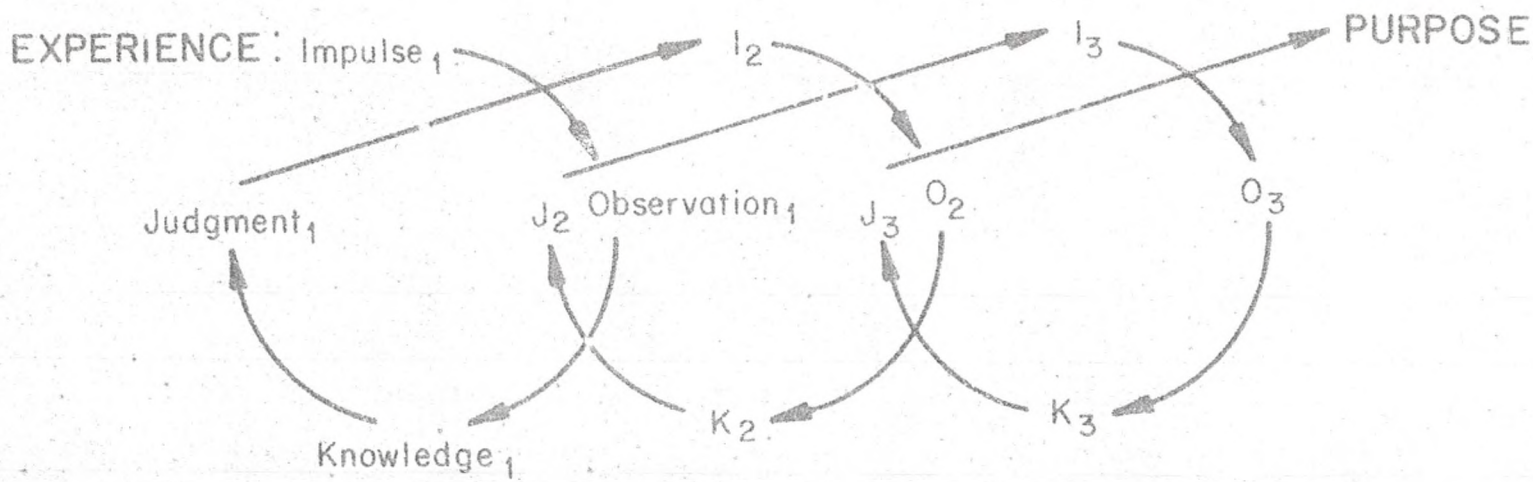

Figure 1. Dewey's Model of Experiential Learning (adapted from Kolb, D.A. (1984). Experiential Learning. Englewood Cliffs, NJ: Prentice-Hall, Inc., p. 23).

characterizes experience-based learning (Kolb 1984, p. 20). Largely because of the intellectual traditions established by Dewey, Lewin and Piaget, experiential education has had a profound effect on education and learning theory throughout much of the world. It has provided educators in immensely diverse educational settings, including the workplace, with the potential to bridge the gap between theory and practice, between the abstract generalization and the concrete instance, and between the cognitive and behavioral domains.

In an attempt to distinguish experience-based learning from traditional educational practices, Dewey (1938) outlined the following characteristics of his "progressive" or "new" approach:

> If one attempts to formulate the philosophy of education implicit in the practices of the newer education, we may, I think, discover certain common principles amid the variety of progressive schools now existing. To imposition from above is opposed expression and cultivation of individuality; to learning from texts and teachers, learning through experience; to acquisition of isolated skills and techniques by drill, is opposed acquisition of them as means of attaining ends which make direct vital appeal; to preparation for a more or less remote future is opposed making the

> most of the opportunities of present life; to static aims and materials is opposed acquaintance with a changing world. . . .
>
> I take it that the fundamental unity of the newer philosophy is found in the idea that there is an intimate and necessary relation between the processes of actual experience and education. (pp. 5-7)

All of the "principles" identified by Dewey--expression and cultivation of individuality; learning through experience; the acquisition of skills as means as well as ends: preparation for present life rather than the remote future; and, adaptation to a changing world--have direct application to the stated goals of outdoor education. In fact, with modifications to reflect the relationship of the outdoors to the learning process, these principles could be defended as the philosophical foundation for outdoor education.

However, Dewey did not overlook the relationship between man and nature in his other writings. It was his belief that experience and learning, and nature and man, were inseparable. His instrumental theory of knowledge suggested that ideas are plans of action which serve as instruments for adjusting the human organism to its environment. In Human Nature and Conduct, Dewey (1922) wrote: ". . . all conduct is interaction between elements of human nature and the environment, natural and social"

(p. 11). Although he referred to the term environment as ". . . whatever conditions interact with personal needs, desires, purposes, and capacities to create the experience which is had" (1938, p. 42), the notion of man's interdependence with the physical universe is embraced by the broader meaning.

In his discussion on experience, Dewey (1938) warned that careful attention must be paid to the selection of positive and constructive learning experiences:

> It is not enough to insist upon the necessity of experience, nor even of activity in experience. Everything depends upon the quality of the experience which is had. The quality of any experience has two aspects. There is an immediate aspect of agreeableness or disagreeableness, and there is its influence upon later experiences. . . . Just as no man lives or dies to himself, so no experience lives and dies to itself. Wholly independent of desire or intent, every experience lives on in further experiences. Hence the central problem of our education based upon experience is to select the kind of present experiences that live fruitfully and creatively in subsequent experiences. (pp. 16-17)

The concluding sentence of the above quotation requires clarification in view of Dewey's previously-quoted statements regarding "opportunities of present life" and "means of attaining ends." These apparent contradictions are illuminated by Dewey's (1938) explanation of his theory of continuity, or the "experiential continuum," which states:

> The principle of continuity in its educational application means . . . that the future has to be taken into account at every stage of the educational process. This idea is easily misunderstood and is badly distorted in traditional education. Its assumption is, that by acquiring certain skills and by learning certain subjects which would be needed later (perhaps in college or perhaps in adult life) pupils are as a matter of course made ready for the needs and circumstances of the future. Now "preparation" is a treacherous idea. (p. 47)

Dewey goes on to say that, while certain experiences should contribute to later experiences of more expansive quality, it is a mistake to assume that the "acquisition of skills in reading and figuring" will in themselves automatically prepare a person for future learning. "The ideal of using the present simply to get ready for the

future contradicts itself. . . . Only by extracting at each present ime the full meaning of each present experience are we prepared for doing the same thing in the future" (1938, p. 51).

Related to the continuity principle of experience is Dewey's conception of "collateral learning," which is now more often called concomitant learning:

> Perhaps the greatest of all pedagogical fallacies is the notion that a person learns only the particular thing he is studying at the time. Collateral learning in the way of formation of enduring attitudes, of likes and dislikes, may be and often is much more important than the spelling lesson or lesson in geography or history that is learned. For these attitudes are fundamentally what count in the future. The most important attitude that can be formed is that of desire to go on learning. (1938, p. 49)

The principle of collateral learning is particularly applicable to outdoor education, in which the complexity and diversity of the environmental setting offer a multitude of opportunities for concomitant learning. For example, it is inconceivable that a child in the mini-environment of a marsh would restrict himself to studying the leaf structure of a certain plant. He would more

likely become aware of the sights and sounds of the setting, the smell of the marshland, and the feel of the dampness; and, his curiosity would probably be aroused to explore further features of the area.

Interdisciplinarity. Interdisciplinarity, as defined in Chapter I of the study, is perhaps the most important characteristic of outdoor learning experiences. Outdoor education is not to be considered as a separate subject area to be squeezed into an already over-crowded, over-compartmentalized curriculum. As an integral part of the total educational process, it is applicable to all traditional subject-matter content, providing an integrative function between and among various disciplines as well as between content and methodology. Dewey's conception of interdisciplinarity, which relates to his principle of continuity of subject matter and methodology, supports the pedagogical approach inherent in outdoor learning.

Dewey vehemently opposed dualism in all forms: content and methodology; product and process; school and society; child and curriculum; nature and experience; experience and thinking. His denunciation of these perceived separations was a recurring theme throughout his writings (as well as providing the titles for several books). Dewey compared the dualism of content and

methodology with the conflicting means of learning in the following statement:

> On the one hand, learning is the sum total of what is known, as that is handed down by books and learned men. It is something eternal, an accumulation of cognitions, as one might store material commodities in a warehouse. Truth exists ready-made somewhere. Study is then the process by which an individual draws on what is in storage. On the other hand, learning means something which the individual does when he studies. It is an active, personally conducted affair. The dualism here is between knowledge as something external, or, as it is often called, objective, and knowing as something internal, subjective, psychical. There is, on one side, a body of truth, ready-made, and, on the other, a ready-made mind equipped with a faculty of knowing. . . . The separation . . . between subject matter and method is the educational equivalent of this dualism. (1916, pp. 389-390)

In Experience and Nature (1958), Dewey argued that the earlier dogmatic intellectualism of science created an unnatural separation of experience and nature:

> The assumption of "intellectualism" goes contrary to the facts of what is primarily experienced. For things are objects to be treated, used, acted upon and with, enjoyed and endured, even more than things to be known. They are things had before they are things cognized. . . . When intellectual experience and its material are taken to be primary, the cord that binds experience and nature is cut. (pp. 21 and 23)

In a similar fashion, Dewey repudiated other forms of dualism in his untiring efforts to bring more unity to the educational process.

Dewey's early attempts to provide for integrated and interdisciplinary learning experiences were reflected in his previously-mentioned advocacy of "collateral learning." As an extension of that notion, he envisioned geography as one means of curriculum synthesis, with geography being conceived as the framework for the study of "the earth as the home of man. . . ." (1916, p. 248). He believed that this approach would rectify the "hodge-podge of unrelated fragments" which characterized traditional methodology.

Various versions of an integrated or interdisciplinary curriculum were introduced into "progressive" schools, such as Lincoln School of Teachers College,

Columbia University, whose curriculum was built on units of work that would ". . . reorganize traditional subject matter into forms taking fuller account of the development of children and the changing needs of adult life" (Cremin 1961, p. 283). Although these programs were generally deemed to be successful, their popularity was challenged by the discipline-centered curriculum reforms of the 1950s and 1960s and, subsequently, by the "social-awareness" movement of the 1970s.

The apparent re-emergence of an interdisciplinary emphasis to curriculum development in the early 1980s is particularly promising for the field of outdoor education. For, if outdoor education is to make any significant impact on the schools of the future, it will require a receptive climate--one that is characterized by interdisciplinarity.

Unique learning environment. Another important characteristic of outdoor education is its unique learning environment (using the term environment to imply the physical setting as well as the sense in which Dewey perceived it), which provides countless opportunities for concrete, hands-on, real-life experiences. Dewey's ideas on experiential learning are particularly relevant here, as revealed in the following statement:

> we cannot overlook the importance for educational purposes of the close and intimate

> acquaintance got with nature at first hand, with real things and materials, with the actual processes of their manipulation, and the knowledge of their social necessities and uses. In all this there was continual training of observation, of ingenuity, constructive imagination, of logical thought, and of the sense of reality acquired through first-hand contact with actualities (1899, p. 8).

Dewey also extolled the virtue of teaching occupational skills, such as woodworking, gardening, cooking, weaving, and mechanics. However, his idea of teaching woodworking, for example, was not to prepare carpenters or cabinet makers but to expose young learners to a different, less linguistic, approach to solving problems. He viewed the contributions of other occupational skills in a similar way, using gardening as an illustration:

> It [gardening] affords an avenue of approach to knowledge of the place farming and horticulture have had in the history of the race and which they occupy in present social organization. Carried on in an environment educationally controlled, they are a means for making a study of the facts of growth, the chemistry of soil, the role of light, air, and moisture, injurious and helpful animal life,

> etc. There is nothing in the elementary study of botany which cannot be introduced in a vital way in connection with caring for the growth of seeds. Instead of the subject matter belonging to a peculiar study called botany, it will then belong to life, and will find, moreover, its natural correlations with the facts of soil, animal life, and human relations. As students grow mature, they will perceive problems of interest which may be pursued for the sake of discovery, independent of the original direct interest in gardening--problems connected with the germination and nutrition of plants, the reproduction of fruits, etc., thus making a transition to deliberate intellectual investigations (1916, p. 235).

Teaching in the outdoors has profound implications for the selection of teaching style. Unlike the lecture approach used by many traditional classroom teachers, outdoor education encourages a self-directed, inquiry approach in which the student assumes the major responsibility for his own learning. Thus, the uniqueness of the environmental setting, rather than the teacher, is the primary determinant of the nature of the content to be studied. Accordingly, the role of the teacher is that of a facilator rather than an instructor.

Problem solving. Paralleling the importance of his ideas on experiential learning, the application of scientific methods to education (in the form of problem-solving) is one of Dewey's most notable contributions. A prevalent criticism of today's schools centers on our lack of commitment to critical thinking. Dewey wrote frequently on the importance of thinking, believing it to be ". . . the method of an educative experience. The essentials of method are therefore identical with the essentials of reflection" (1938, p. 192).

In an earlier book How We Think (1910), written especially for educators, Dewey presented one of his most lucid statements on the structure of reflective experience. He identified the five logical moments or stages of inquiry as follows: "(i) a felt difficulty; (ii) its location and definition; (iii) suggestion of possible solution; (iv) development by reasoning of the bearings of the suggestion; (v) further observation and experiment leading to its acceptance or rejection. . ." (p. 72). Translated into the problem-solving pedagogical approach which is typically used by outdoor educators, the process involves: (1) identifying the problem to be explored; (2) setting hypotheses; (3) determining possible alternatives to the solution of the problem; (4) testing out the alternatives; and (5) generalizing a solution.

Dewey, along with Kilpatrick and other progressive educators, believed that problem-solving was the basis of intellectual activity in relation to subject matter. Problem-solving as a process was perceived as the educational experience which integrated the child and knowledge content. The outdoor learning environment provides a rich opportunity for exploration, experimentation, inquiry, and critical thinking--all essential ingredients of problem-solving.

Motivation. Dewey's theory of interest has been influential in education primarily because it has provided a rationale for those educators who subscribe to a doctrine of permissiveness. However, for the purpose of this study, the theory is important because of its relationship to the meaningful, real-life experiential approach inherent in outdoor education. Since this approach involves self-direction, exploration, and problem-solving, it promotes self-motivation on the part of the learner. Kerlinger (1956) captured the meaning of Dewey's views on interest and motivation in the following interpretation:

> in talking about interest Dewey said that the connection of an object and a topic with an activity having a purpose is the core of the theory of interest in education. In this purpose is interest, and the interest is a prime motivating force in learning. Dewey

> goes on to say that the teacher, in order to arouse and utilize interest, should "discover objects and modes of action which are connected with present powers." Educational material should so fit into the present life of the pupil that his activity is engaged and pursued consistently and continuously. If this is done then there is no need for arbitrary coercive devices and artificial inducements. (pp. 163-164)

Dewey believed that curiosity was an essential ingredient in interest and motivation. His concept of curiosity is described as follows:

> Curiosity is not an accidental isolated possession; it is a necessary consequence of the fact that an experience is a moving, changing thing, involving all kinds of connections with other things. Curiosity is but the tendency to make these connections perceptible. It is the business of educators to supply an environment so that this reaching out of an experience may be fruitfully rewarded and kept continuously active. (1916, p. 245)

In learning outdoors, the natural curiosity of the learner is readily stimulated because of the uniqueness, complexity, and diversity of the setting. It is

relatively easy for the teacher to structure opportunities which arouse the curiosity of young learners, thus motivating them to investigate further meaningful experiences.

Concluding comments. From the foregoing overview, it is understandable that outdoor educators so frequently make reference to John Dewey. However, previous scholarship in the development of a rationale for outdoor education has relied primarily on surveying what professional outdoor educators believed it should be, making only superficial references to Dewey's educational theories. The present study involved a more comprehensive analysis of the relevant writings of Dewey in order to provide a philosophical basis for the inclusion of outdoor education as an integral part of the total educational process. His theories on continuity of subject matter and methodology, problem-solving and reflective experience, interest and motivation, and experiential learning are as valid and relevant today as when they were originally proposed. The author contends that, with appropriate modifications, Dewey's educational theories provide a sound philosophical basis for outdoor education in today's schools.

The L. B. Sharp Story

If any one person could be identified as the "founder" of outdoor education, it would be Lloyd Burgess Sharp (1895-1963).

> L. B. Sharp influenced outdoor education through the camping field. He was a pioneer in the concept of decentralized camping and the holistic method of teaching. To Sharp, camping is a series of purposefully related experiences in real-life situations, hence an educational process. The term "camping education" was accredited to Sharp, who continued to influence the field until his death. (Ford 1981, p. 27)

Sharp's career in camping education began in 1925 with Life Fresh Air Fund of New York which operated what became known nationally as "Life Camps." His work with this organization, during which time he developed the concept of decentralized camping, culminated in his 1930 doctoral dissertation at Teachers College, Columbia University. Rillo (1980) provided the following brief account of the influence Teachers College had on Sharp:

> While at Columbia University, L. B. Sharp had many classes with a group of faculty members known as "The New Educators." This group represented the experimental school of educational philosophy and its members were also known as pragmatists. John Dewey, a foremost pioneer in the area of progressive education, was the pragmatist

> who most influenced L. B. Sharp. William Heard Kilpatrick, Boyd Bode, and Elbert K. Fretwell were among the New Educators who influenced his thinking on how children and youth should learn. (p. 21)

During the decade of the 1930s, an increasing number of schools accepted the value of camping as an educational experience. Thus, the National Camp was established in 1940, under the direction of Sharp, to provide leadership training for the growing number of camps which were adopting an educational emphasis. Wiener (1965) observed that the National Camp brought nationwide recognition to Sharp, whose summer sessions and conferences influenced hundreds of educators:

> Many of them, and others who served as staff members for the children's camps, helped to spread outdoor education widely. Many of the leaders today attribute a good part of their enthusiasm for, and interest in, or their start in, outdoor education to the experiences they had with Sharp. (p. 63)

It was also during this period that Sharp (1943) wrote his famous dictum:

> That which ought and can be taught inside the schoolrooms should there be taught, and that which can best be learned through experience

> dealing directly with native materials and life situations outside the school should there be learned. (pp. 363-364)

In 1953, Sharp became Executive Director of the newly-incorporated Outdoor Education Association. The national office of the association was later moved from New York to the Southern Illinois University campus at Carbondale. Sharp continued to influence the development of outdoor education until his death on December 4, 1963.

Rillo (1980) paid the following tribute to Sharp:

> He had been one of the most colorful and dynamic personalities in the field of camping and outdoor education. He had exhibited a singleness of purpose and was completely dedicated to the values of outdoor living and learning for American youth. He was "a voice in the wilderness" when he started his professional career, and he often stood alone in his convictions. Very often these same strong convictions placed him in conflict with others. It has been said that when one stands on principles it can be a very lonely place. There were times when loneliness was a constant companion for L. B. Sharp. In the beginning it was Sharp who was the focal point of the movement; however, his followers have continued

> his work and philosophy even though modern times have necessitated some modifications. (p. 28)

Conrad (1967), professor emeritus of English at Montclair State College, New Jersey, a long-time associate and personal friend of Sharp, summed up his contribution as follows:

> the upshot of all L. B. Sharp's work could be a better adjustment of the environment and atmosphere of learning, or perhaps simply more attention to that element, wherever the classes are conducted. For he only insisted that everything in the educational process should be carried out in its own optimum sphere. Any such adjustments could bring about many improvements in indoor learning. But his work and wisdom surely call for a more frequent and widespread journeying forth from the classroom into the world--which is where all the material is to be found about which we are undertaking to study. (p. 18)

Julian Smith and the Michigan Story

Whereas Sharp has been referred to as the "founder" of outdoor education, Julian Warner Smith is regarded as the "father" of outdoor education because of his

persistent devotion and enlightened leadership in guiding the movement through its formative years.

Smith's professional career in outdoor education parallels the development of the school camping movement in Michigan. He traced the early beginnings of the Michigan story to the mid-1930s when:

> the W. K. Kellogg Foundation built three camps for use in an experimental health program for children. After completion of these experiments, the Foundation made the Clear Lake Camp and staff available to three schools: Lakeview (Battle Creek), Decatur, and Otsego for a year-round school camp. This was undoubtedly the first extensive program on a year-round basis with camping as an integral part of the curriculum of the participating schools. It was the leadership of Hugh B. Masters of the W. W. Kellogg Foundation that was responsible for this significant concept and program of school camping. (Smith 1950, pp. 508-509)

Smith assumed a prominent role in the movement from the beginning. He was principal of Lakeview High School, one of the three schools initiating a year-round program at Clear Lake Camp in 1940. Following an interruption caused by World War II, year-round camping programs once

again flourished. In 1945 the Michigan Legislature enacted a law enabling school districts to acquire camps and operate them as a part of the regular school program, thus giving official sanction and encouragement to schools by state government to explore another new frontier in education. This development served as an effective model for many other school systems throughout the nation.

The following year, 1946, Smith became head of a cooperative project between the Michigan state departments of Public Instruction and Conservation, assisted with funding from the Kellogg Foundation, to promote camping and outdoor education throughout the state. Donaldson (1972) wrote the following account of Smith's influence during the post-war years:

> During the period 1946-1953, Michigan became the nation's undisputed leader in outdoor education programs. Its influence, and Smith's, reached literally over the nation. Publications, workshops, experimental programs, plus thousands of miles of what he now refers to as "circuit riding" over Michigan bore fruit as interest quickened there and from coast to coast. Michigan's continuing leadership in outdoor education bears witness to the solid leadership given during those formative years. (p. 60)

In 1955 Smith became director of the Outdoor Education Project under the American Association for Health, Physical Education and Recreation, a position he held until his death in 1975. It was during this time that he made his influence felt on a national and international scale. Carlson (1980) summed up this era as follows:

> The last twenty years of Dr. Smith's life were devoted primarily to the Outdoor Education Project of the AAHPER. During this time his greatest contributions to outdoor education were made. In his early years his efforts were directed toward promoting school camping and encouraging schools to use the outdoors for educational purposes. In these later years he broadened his concept, as he saw it, to develop the various outdoor related skills as well. He saw the Outdoor Education Project as a large umbrella under which could be included all aspects of learning, understanding, and appreciating the outdoors, and the skills related to its use. He considered outdoor education a means of life enrichment as well as environmental conservation. (p. 31)

The Influence of Lorado Taft Campus

The preceding focus on L. B. Sharp and Julian Smith should not be construed to suggest they were the only

prominent leaders in the development of outdoor education to its present status. There were outdoor educators before, during, and after those two distinguished leaders who themselves left their mark on the field in their own special ways. Some of those "others" became part of the "team" assembled at Lorado Taft Campus, Northern Illinois University (NIU), and exerted their influence primarily through teacher education programs, scholarship and research, and national and international workshops and study tours.

Some of the prominent faculty members at Lorado Taft Campus have already been mentioned: George W. Donaldson, Donald R. Hammerman, and Morris Wiener. It is also interesting to note that all three were involved in the outdoor education programs at Clear Lake Camp in Michigan prior to joining the NIU faculty.

In a commemorative booklet, Milestone 25 (NIU's outdoor teaching education programs--Twenty-five years of pioneering), Peterson and Hammerman (1977) traced the development and accomplishments of Lorado Taft Campus:

> From a beginning of two summer courses in outdoor education offered in 1954, the curriculum has grown to a total of 21 courses today, seven of which were added in the last 12 years.
>
> During the 1976-77 academic year, 165 students were majoring in Outdoor Teacher

Education and in 1976, summer session attendance totaled 339 students. In the past 12 years, the department offered 81 extension courses in 38 communities and in that same period, four foreign study tours and four travel courses were conducted during various summer sessions.

A total of 314 students have completed graduate degrees in the department.

The faculty of nine professors have written or co-authored nine books on outdoor education and published hundreds of articles in professional journals. (p. 7)

The nature of the program offered at Lorado Taft Campus was described as follows:

Basically, the program is an innovative approach to teacher preparation in which clinical experiences in outdoor teacher education occur at the junior, senior, and graduate levels.

But the program involves more than interaction between prospective teachers and faculty members of the Department of Outdoor Teacher Education. Almost every week during the academic year, one or more classes of elementary or middle school students from

> the public schools of northern Illinois come to the campus with their classroom teachers to experience the out-of-doors firsthand.
>
> From the main NIU campus come students majoring in elementary education, physical education or secondary education and their professors to join the public school students and their teachers to form a learning team. The team is led by the outdoor education professor who is permanently stationed at the field campus. (Peterson & Hammerman 1977, p. 5)

The influence that Lorado Taft Campus has exerted on the development of outdoor education in North America is truly impressive. It has been estimated that approximately 2,000 prospective teachers and more than 3,000 public school students participate in outdoor experiences at Taft Campus each year. Lorado Taft Campus has also had an impact on the development of outdoor education in Canada, particularly in the provinces of Saskatchewan, Manitoba, and Ontario, where many NIU graduates have assumed leadership roles. In addition, Taft faculty members have taught courses in these provinces, and have been keynote speakers for several national and provincial conferences.

Contemporary Perspectives on Outdoor Education

Due to the absence of an adequate, universally accepted theoretical framework, the conceptualization of outdoor education is still in the process of evolving into professional sophistication.

Tracing its modern roots to the era of the "progressive education" movement of the 1920s, outdoor education first emerged as a viable educational innovation in the 1930s in the form of camping education. During its steady growth over the next two decades, the movement responded to the curriculum-oriented influence of the school, and assumed the term resident outdoor education. In the decade of the 1960s, referred to as the "golden age of outdoor education," the movement gained professional maturity and the term outdoor education came into regular usage in the rapidly-growing body of professional literature. With the advent of the 1970s, the impact of the environmental education movement added a new dimension to outdoor education.

The above-mentioned factors--the camping education foundation, the curriculum-oriented school influence, and the concern over environmental issues--profoundly affected the way in which outdoor education has been perceived from one era to the next, leading to the current impasse which is plaguing the field at the mid-point of the 1980s.

Another troublesome problem in gaining a clearer understanding of the nature and scope of outdoor education is its prevalent confusion with the terms outdoor recreation and environmental education. The situation is further complicated by periodic reference to other related programs such as Outdoor Adventure Education, Outdoor Physical Education, and Outward Bound. Thus, the relationship between outdoor education and the growing array of related programs takes on the geometric form of a complex epicycloidal arrangement with outdoor education represented by the "fixed" circle.

The Venn diagram in Figure 2 depicts the relationship of the three major fields under consideration, namely, outdoor education, outdoor recreation, and environmental education. The dark area illustrates that there is a common core among the three fields, while the areas marked with diagonal lines show the existence of a relationship between each pair of constructs. The diagram also indicates that each field has a distinctive body of content independent of the others. Although often used synonymously, or sometimes in a hyphenated form, there are some clear differences in the three fields. Some of these distinctions are identified in the following analysis.

It has been generally perceived that there is a close relationship between outdoor education and environmental education. However, upon closer analysis, it would

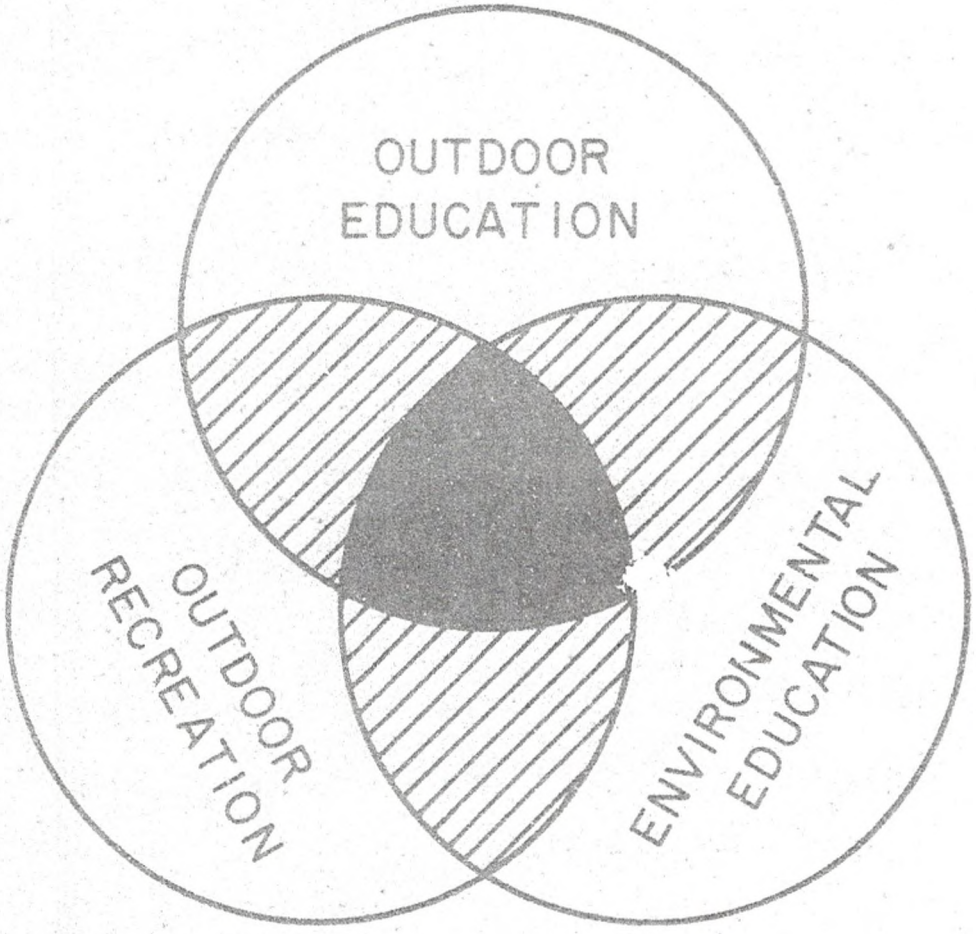

Figure 2. Relationships between Outdoor Education, Outdoor Recreation, and Environmental Education, showing commonalities and distinctiveness.

appear that there are more commonalities between outdoor education and outdoor recreation than between outdoor education and environmental education. This conclusion is based primarily on an examination of the central purposes of each field of study. Whereas the focus of environmental education is clearly on the preservation and maintenance of environmental quality, the main purpose of outdoor education and outdoor recreation is to contribute to the quality of human life. Outdoor education utilizes outdoor resources to enhance human growth and development through school curriculum enrichment, while outdoor recreation emphasizes the wise use of the outdoors for leisure pursuits. However, both must also be concerned with the development of pertinent knowledge, attitudes, and appreciations related to the outdoor environment if their central purpose is to be fulfilled. To that end, outdoor education and outdoor recreation share a common purpose with environmental education.

Comparison of Outdoor Education and Environmental Education

Miller (1971), writing from her perspective as a consultant for the Elementary and Secondary Education Act (Title III), Michigan State Department of Education, stated that several problems had arisen because of the misunderstanding of the terms environmental education and outdoor education. Her main concern was the misuse

of the terms to identify education programs for funding purposes. She attempted to provide clarification of the two movements by comparing their focus, structure, pattern of curriculum development, and teaching-learning resources.

Regarding focus, Miller observed that a "means-end" notion could be applied, insomuch as outdoor education utilized the physical environment as a "means" to improve the lives of children, whereas environmental educators were concerned about the preservation and improvement of the environment as the "end " Her second distinction dealt with content:

> environmental education refers to a reorganization, re-emphasis, or new emphasis of content in several already established curricular areas (which may be taught in both indoor and outdoor settings); outdoor education refers to a setting for learning and whatever specific learning experiences in all curricular areas are taught and learned there. (p. 2)

A third difference was in the approach to curriculum development. She maintained that the impetus for the inclusion of environmental education in school programs came largely from "external" sources, such as state and national governmental-agency officials, scientists, ecologists, and natural resources personnel. On the other

hand, ". . . outdoor education has been a movement from within the education profession, originated and developed by professional educators" (p. 2).

In her final distinction, Miller claimed that teaching-learning resources advocated by environmental educators included an emphasis on printed materials, films, and other audio-visual aids to be used primarily in the classroom, while outdoor education ". . . has always been predominantly concerned that boys and girls and their teachers have real-life, direct and concrete learning experiences in the outdoors . . ." (p. 2).

Although the distinctions presented by Miller may not be universally accepted today, they do provide a valuable basis for comparing the two fields of study.

Toward a Contemporary Definition

The importance of a definition, in the author's view, lies in its ability to accurately characterize the construct under consideration and to delineate its boundaries so that more meaningful discussion can occur. Outdoor education is less difficult to describe than to precisely define. This is not surprising when one considers the diversity of the field and the multitude of factors that have shaped its development. Perhaps the most effective approach to arrive at a satisfactory definition is through an examination of the key characteristics of

outdoor education as identified by both theoreticians and practitioners.

Passmore (1972), during a sabbatical leave from the University of Toronto, conducted a nationwide study in Canada to determine the "state of the art" regarding outdoor education. Traveling extensively throughout the 10 provinces, he studied existing programs, held interviews with outdoor educators and related professionals, and attended several workshops and conferences. Based on his observations, Passmore concluded that Canadians held the following "beliefs" about outdoor education:

> Outdoor education can:
>
> Offer meaningful learning situations which should be an important part of every child's education.
>
> Provide an opportunity for direct learning experiences which can enrich the school curriculum in all subject areas.
>
> Stimulate students' curiosity and permit them to discover the excitement and satisfaction of learning out-of-doors.
>
> Enable pupils to develop new interests and skills which can provide a basis for a lifetime of creative living.
>
> Help them discover the important relationship that can and should exist between classroom instruction and outdoor learning.

> Give them a much broader knowledge of ecological principles and their relationship to our quality of life.
>
> Provide excellent opportunities to examine through personal experiences many of our present social and cultural values.
>
> Help pupils to develop a better understanding of themselves, their teachers, and their total education. (p. 14)

In a comprehensive study of the main components of outdoor education, Lewis (1975) formulated a set of "principles" based on 17 concepts extracted from the professional literature and subsequently validated by qualified educators. He defined concepts as ". . . generalizations which have been formed from particular statements made by authorities in the field." The author has condensed and reorganized Lewis' 17 concepts into the following statements:

(1) outdoor education is a method of education;

(2) outdoor education is not a separate subject area in the school curriculum, but is applicable to all traditional disciplines;

(3) outdoor activities enhance the NEA's 1938 statement of educational goals, i.e., self-realization, human relationships, economic efficiency, and civil responsibility;

(4) outdoor education activities are conducted in the outdoors as distinguished from indoor settings;

(5) children learn best through an experiential approach;

(6) outdoor education contributes to creative teaching approaches, thus making learning more enjoyable and meaingful; and,

(7) urbanization and modern living have increased the need for children to have experiences related to an understanding of environmental phenomena and the worthy use of leisure.

From his list of 17 concepts, Lewis derived the following definition:

> Outdoor education is a direct, simple method of learning that extends the curriculum to the out-of-doors for the purpose of learning. It is based on the discovery approach to learning and it appeals to the use of the senses--audio, visual, taste, touch and smell--for observation and perception. (1975, p. 9)

Sharp's (1957) definition of outdoor education is an elaboration of his earlier (1943) dictum:

> Outdoor Education is a common sense method of learning. It is natural; it is plain, direct and simple. The principal thesis which underlines the implications of outdoor education for

all subject matter, in all areas of study, and at all levels is:

> That which can best be learned inside the classroom should be learned there.
>
> That which can best be learned in the out-of-doors through direct experience, dealing with native materials and life situations, should there be learned. (p. ii)

In their classic textbook Outdoor Education (1963), Smith, Carlson, Donaldson and Masters stated:

> Outdoor education is a means of curriculum enrichment through experiences in and for the outdoors. It is not a separate discipline with prescribed objectives like science and mathematics; it is simply a learning climate which offers opportunities for direct laboratory experiences in identifying and resolving real-life problems, for acquiring skills with which to enjoy a lifetime of creative living, for attaining concepts and insights about human and natural resources, and for getting us back in touch with those aspects of living where our roots were once firmly established. (p. 19)

Rillo's (1972) definition is not unlike those already quoted, but he does make specific reference to the inter-disciplinary nature of outdoor education:

> Outdoor education has been defined as a method, a process, a climate or setting where certain basic concepts, skills, attitudes, values, and appreciations are allowed to develop in the most favorable learning conditions and in a most effective and efficient manner. It is interdisciplinary in its approach and cuts across all curriculum areas. (p. 122)

Britain's National Association for Outdoor Education succinctly defines outdoor education as ". . . a means of approaching educational objectives through guided direct experience in the environment, using its resources as learning materials" (Parker & Meldrum 1973, p. 10).

With the proviso that the central purpose of outdoor education (i.e., its contribution to quality of life) be clearly articulated, the author subscribes to the simplicity of George and Louise Donaldson's view that "Outdoor education is education in, about and for the outdoors" (1958, p. 17). However, paradoxically, it is in its simplicity wherein both the strengths and weaknesses of the definition lie. To the layman, it is vague, but generally acceptable; to the professional, it is an invitation for unbridled interpretation.

Because the "Donaldson definition" comprises three discrete elements, the problem arises as to whether it should be interpreted conjunctively or disjunctively.

For the definition to be acceptable in a disjunctive sense, the presence of any one of the three elements would be sufficient to define the field of study. Used in a conjunctive sense, the definition would require that all three elements be present for learning experiences to be truly classified as outdoor education. While it is unlikely that the former interpretation would be widely accepted, the conjunctive use of the definition is not without fault. There would appear to be a need for further clarification of at least one of the components, namely, in the outdoors. For the purpose of this study, the author adopted the more literal translation of in the outdoors to distinguish it from other out-of-classroom experiences which may include such activities as field trips to a museum, art gallery, factory, or fire hall.

Goals of Outdoor Education

It is axiomatic that the purpose and goals established for outdoor education should be consistent with the general goals of the total educational process. Goals are derived from and dependent upon three main sources: (1) the nature of the individual learner; (2) the societal setting and the cultural heritage; and (3) the structure of knowledge (subject-matter content). While none of these factors remains static over time, most traditional disciplines within the school curriculum have been able to articulate goal statements consistent with the ongoing

evolution of their fields of study. On the other hand, although outdoor education has responded to the needs of the learner and to societal expectations, it has not dealt adequately with its content structure. This has created a serious problem in developing goal statements. Furthermore, since there is no universally accepted definition, the task of articulating goals becomes even more difficult. However, through persistent efforts over a long period of time, outdoor educators seem to have arrived at a general consensus on several goals.

Fitzpatrick (1968) developed a set of goal statements by first researching the professional literature, then submitting the derived list to outdoor educators and other professionals for their ranking. On the basis of his study, Fitzpatrick proposed the following goals as representative of the field:

1. To help realize, through outdoor education, the full potential of the individual toward optimum development of the mind, body, and spirit.
2. To utilize fully and constructively resources beyond the classroom as a stimulus for learning and a means of curriculum enrichment.
3. To develop awareness, appreciation, and understanding of the natural environment and man's relation to it.

4. To help the individual become self-reliant in the outdoors.
5. To develop knowledges [sic], skills, attitudes, and appreciations for the wise use of leisure time.
6. To promote democratic human relations and procedures through outdoor learning and group living experiences.
7. To help the individual become more civic-minded through the utilization of resources within the community, state, nation, and world.
8. To contribute to the vocational efficiency of the individual by providing purposeful work experiences beyond the classroom.
9. To permit an atmosphere conducive to the aesthetic development of the individual. (pp. 49-50)

Goal 4 from the above list was ranked "significant," goal 8 was "optional," and the remaining seven goals were considered "highly significant."

As one would have expected, the goals identified by Fitzpatrick are similar to the "beliefs" listed by Passmore (1972) and to the "principles" derived by Lewis (1975). Furthermore, at least some of these goals were reflected in each of the programs which were investigated by the author of the present study.

The problem of determining objectives, which are the planned attainable and measurable outcomes of a specific program, is vastly more difficult than identifying generic goals. Since the uniqueness of the outdoor setting (the key characteristic of outdoor education) varies immensely across the nation, local and regional resources, needs, and interests will be critical determinants in establishing specific program objectives.

The Content-Methodology Issue

Outdoor education has not been left untouched by the curriculum-instruction dualistic doctrine which has persistently plagued the broader educational process.

With the possible exception of the Canadian (Passmore 1972) and British (Parker & Meldrum 1973) interpretations, outdoor education was viewed as a method, without subject matter content of its own, in virtually all of the sources consulted for this study. The following quotations are indicative of this perspective:

> Outdoor education is a method of education. (Freeberg 1961, p. 11)
>
> Outdoor education is a direct, simple method of learning. . . . (Lewis 1975, p. 9)
>
> It is not a separate discipline with prescribed objectives like science and mathematics. . . . (Smith et al. 1963, p. 19)

> It should not be considered a separate subject, department, or curriculum area.
> (Rillo 1972, p. 122)

The long-held and widely-accepted view that outdoor education is essentially a method would appear to demand a critical re-examination in light of the perceived resurgence of this field of study, accompanied by an acceleration of research in "teaching" during the past decade. In their comprehensive work Models of Teaching (1980), Joyce and Weil discuss a diverse array of teaching styles, in various environmental settings, but nowhere is there mention of an outdoor education method. Within the framework used by Joyce and Weil, one can identify such teaching models as nondirective teaching, inductive reasoning, synetics, problem-solving and inquiry, group investigation, and many others. In this sense, for outdoor education to qualify as a method of education it would have to possess a teaching style uniquely specific to the field of study. In actual practice, outdoor education utilizes a number of methods, with particular emphasis on experiential learning, guided discovery and inquiry, problem-solving and reflective thinking, and multisensory awareness approaches. From this perspective, the characterization of outdoor education as a method appears to be erroneous.

The notion that outdoor education has no content of its own seems equally suspect. For example, there seems

to be an inherent contradiction in Kilo's (1965) assertion that outdoor education ". . . is not a separate subject in itself, but rather includes content from several areas of the curriculum--content that is best learned outside the classroom" (p. 7). The fact that outdoor education does include content from a variety of sources is not unlike many other learning experiences (in particular, thematic teaching units) which teachers plan for their students.

Whether the content of outdoor education is derived from other disciplines, or whether it has content of its own, is a moot point. The fact remains that there are learning experiences which are specific to outdoor education, supporting the notion that it is an entity in its own right. Thus, one could conclude that outdoor education incorporates both content and methodology, and any designation of either/or would be counter-productive.

Quite apart from the content-methodology issue, it seems important to note that it is the uniqueness of the learning environment, rather than the curriculum guide or teacher's methodology, which ultimately determines the nature of the learning experience had by the student. Blackman (1972), a curriculum specialist who is not identified as a professional outdoor educator, warned against the perceived tendency of merely extending to the outdoors those learnings which begin in the classroom setting:

> We don't use the outdoors as a narrowly conceived laboratory where we can isolate a part of the world--and examine it outside--to supplement learning started within. To me this robs the outdoors of its uniqueness--its unity. And it restricts us to the starting point of a learning experience which can be initiated in an essentially artificial setting. (p. 217)

Blackman was equally concerned about the practice of restricting outdoor experiences to the perceived requirements of the prescribed "in-the-classroom" curriculum:

> the notion of fitting within may be a limiting concept itself--for it may block us from considering new and appropriate goals not possible to achieve "within" the usual building-housed program, but quite possible once one moves "outside." (p. 219)

Concluding Comments

The preceding section was focused upon contemporary perspectives on outdoor education through an analysis of characteristics, goals, and definition. While many issues remain to be addressed, there are clear indications that an improved understanding of this field of study is emerging.

Parker and Meldrum (1973) predicted that progress toward an improved conceptualization of outdoor education is imminent:

> There are signs that the objectives of outdoor education are becoming clearer, that its content is no longer vague, and an examination of the historical developments of environmental studies and outdoor pursuits indicates a relevant structure is emerging. (p. 27)

The notion that "a relevant structure is emerging" is foundational to the author's proposed interdisciplinary curriculum model for outdoor education.

CHAPTER III

EMERGING OUTDOOR EDUCATION MODELS

Formulating or designing a curriculum model is a complex process. It is beset with a wide range of dynamic, fluctuating factors: changes in the conception of knowledge, changes in the needs of the learner, and changes in societal needs and expectations. Moreover, the shifting conceptual and methodological boundaries of curriculum theory have further frustrated the process. Regarding the status of curriculum theory, McCutcheon (1982) observed, "We're in an exploratory era about theory building . . ." (p. 18).

The process of creating an interdisciplinary curriculum model for outdoor education inherits the additional difficulty of not having an adequate theoretical framework upon which to build. Efforts to identify outdoor education curriculum models are a recent phenomenon, and have not been documented in the professional literature.

A primary focus of this chapter, then, is some of the fundamental factors which are essential to the development of the proposed model. Included in the discussion are: (1) pertinent curriculum terminology; (2) conflicting

conceptions of curriculum; and (2) an emerging spectrum of outdoor education models.

Review of Curriculum Terminology

There has been considerable debate, but no substantive agreement, among curricularists regarding the meaning of curriculum and its related terminology. Beauchamp (1982) stated: "The fact is that the curriculum field suffers severely from definitional problems associated with the identification of and meanings to be associated with basic constructs and concepts in the field" (p. 24).

Curriculum

Definitions of curriculum vary greatly, ranging from the frequently cited view that the school curriculum constitutes the totality of experiences of each learner under the influence of the school to the narrower view that depicts curriculum as the formal course of study of the school.

The definitions of curriculum offered in Good's 1973 edition of the Dictionary of Education are illustrative of the range of interpretations:

> (1) a systematic group of courses or sequences of subjects required for graduation or certification in a major field of study, for example, social studies curriculum, physical

> education curriculum; (2) a general overall plan of the content or specific materials of instruction that the school should offer the student by way of qualifying him for graduation or certification for entrance into a professional or a vocational field; (2) a group of courses and planned experiences which a student has under the guidance of the school or college; may refer to what is intended, as planned courses and other activities or intended opportunities or experiences, or to what was actualized for the learner, as in actual educational treatment or all experiences of the learner under the direction of the school. (p. 157)

The importance of common agreement on the definition of curriculum also remains unresolved. Huebner (1976) contended that progress in the curriculum field would be enhanced by removing some of the "ambiguity" and "lack of precision" that characterizes the terminology (p. 156). On the other hand, Kuhn (1970) argued that conceptual progress is not derived from agreement on definition (pp. 160-161). Tanner and Tanner (1980) supported Kuhn's position in the following statement:

> The question of definition will be seen as irrelevant when the various conflicting and self-doubting schools of thought achieve consensus regarding their past and present accomplishments. Such consensus is the basis for a paradigm or set of paradigms essential for making a concerted attack on problem solutions, and thereby advancing knowledge in the field. (p. 65)

Curriculum Paradigm

Kuhn (1970) described a paradigm as the constellation of beliefs, values, and techniques which are shared by a community of scholars and used by that group as exemplars for solving problems related to their field of study (pp. 175-180). The author of this study interprets the term paradigm as a conceptual blueprint which orients modes of thought and methodology toward substantive problem solving which, in this instance, pertains to the field of outdoor education.

Perhaps the most widely-accepted curriculum paradigm used today is the original "Tyler Rationale," which posed the following four fundamental questions related to curriculum analysis and development:

1. What educational purposes should the school seek to attain?

2. What educational experiences can be provided that are likely to attain these purposes?
3. How can these educational experiences be effectively organized?
4. How can we determine whether these purposes are being attained? (Tyler 1949, p. 1)

Taba (1962) reorganized Tyler's four basic questions into a seven-step sequence:

Step 1: Diagnosis of needs
Step 2: Formulation of objectives
Step 3: Selection of content
Step 4: Organization of content
Step 5: Selection of learning experiences
Step 6: Organization of learning experiences
Step 7: Determination of what to evaluate and of the ways and means of doing it.
(p. 12)

Tanner and Tanner (1980) warned against interpreting these paradigms as purely linear sequences. The application of this type of step-by-step paradigm must recognize the educational situation, whether explicit or implicit, which already exists.

> If there is any starting point, it derives from that situation and should be focused on a diagnosis of the problems arising from that situation. The diagnosis involves evaluation from

> the very start, and evaluation should be continuous and not merely a final step. In other words, a four-step or seven-step sequence may be suitably logical for analytical purposes, but in the real world of curriculum development, the processes must be treated in ecological relationship.
>
> In essence, then, the four functions in curriculum development (identifying objectives, selecting the means for the attainment of these objectives, organizing these means, and evaluating the outcomes) are interdependent functions rather than rigidly sequential steps. (p. 85)

The author's interpretation of the curriculum paradigm proposed by Tyler and Taba is shown in Figure 3. Although the model is presented in linear form, the interdependence and cyclical nature of the various components must be recognized. Furthermore, while the goals of education are based on sources from the societal setting, the nature of the learner, and the structure of knowledge (subject-matter), the progress toward achievement of the goals will influence the original sources and may necessitate the rearticulation of goals. The diagram also illustrates the interrelatedness of curriculum and instruction. Finally, the outcomes which result from continuous

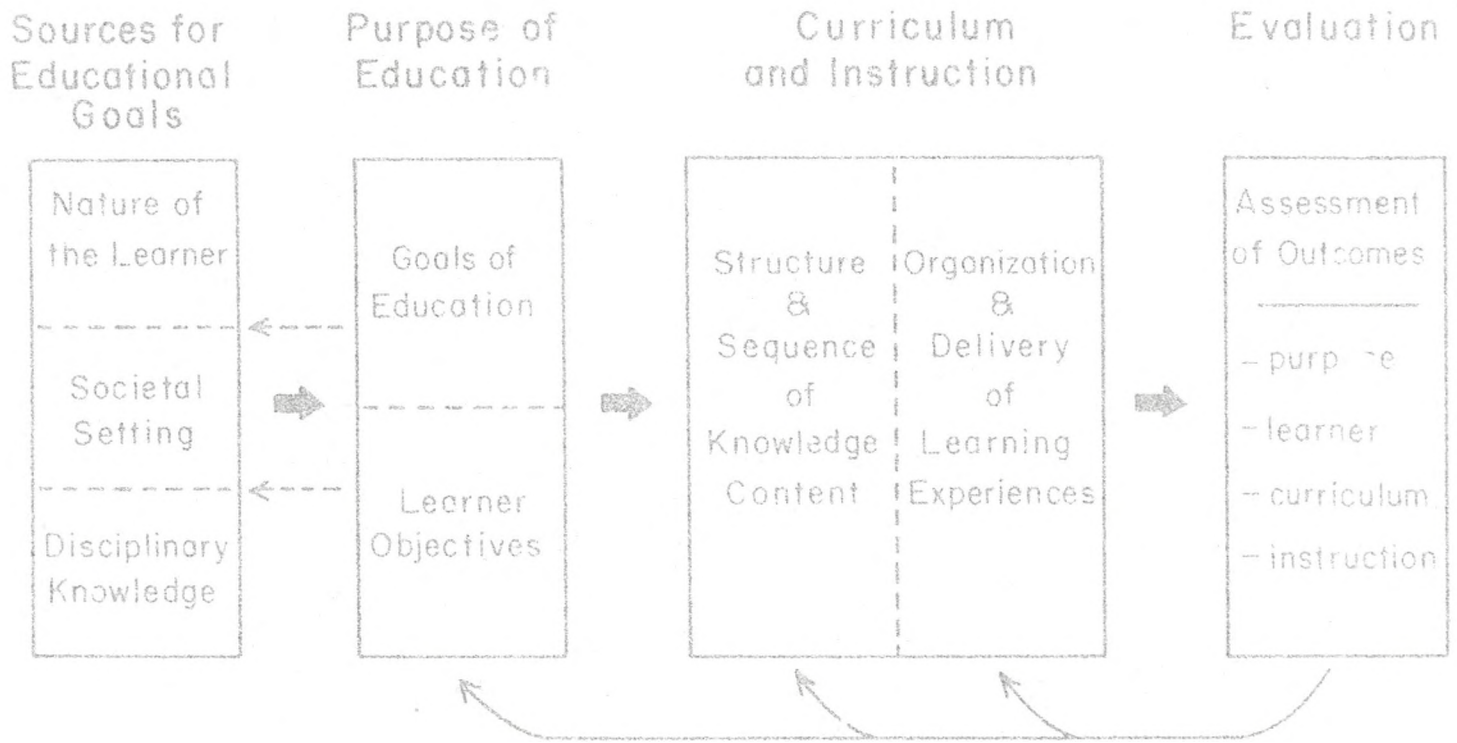

Figure 3. A Model of the Curriculum Development Process

evaluative procedures will inevitably demand further revision and development of the other components.

Curriculum Model

Whereas the term paradigm has been described as a theoretical or conceptual blueprint, the term model is the more tangible, functional representation (product) of the process. Therefore, a curriculum model refers to the structural design that organizes and syrthesizes the values, principles, content, and methodology of a given field of knowledge, which in this particular case, is outdoor education.

Vallance (1982) offered the following distinction between a theory and a model:

> They [models] more simply portray a situation (or a class of situations) by identifying its major elements and locating them in relation to one another. A model is, in this view, more static than a theory, for it describes relative states rather than a change process. It seems to function more to help us to see what the practical reality includes than to try to explain why or what to expect from it. . . . Models seek rather to describe, clarify, order our perceptions about, and help us to see more clearly the forces and conditions affecting curriculum decisions. (p. 6)

Curriculum model is one of those commonly used educational terms for which there are multiple meanings. Identifying the structural elements of a model is even more difficult than describing the meaning of the term. In discussing the notion of a conceptual model, Sztompka (1974) identified "no less than 33 terms" signifying the same metascientific concept, but was unable to provide a consensus on specific structural components (pp. 25-26).

Jewett and Bain (1985) offered the following explanation of the components of a curriculum model:

> A curriculum model includes several elements: clarification of its value base (beliefs and goals); identification of the conceptual framework used to define the elements of the curriculum; and a description of the program design that addresses questions of scope, structure, sequence, and instructional process. (pp. 80-81)

In a more definitive statement, Klein (1983) identified the following nine specific curriculum elements: "goals and objectives, materials, content, learning activities, teaching strategies, evaluation, grouping, time, and space" (p. 200).

An analysis and synthesis of the above references, plus other sources, resulted in the author's formulation of the following structural elements of a curriculum model:

1. Definition, purpose, and goals (based on the key characteristics of the program under consideration).

2. Value orientation (derived from an identifiable historical/philosophical basis, and the perspectives of authoritative proponents of that particular program).

3. Nature of the content (derived from the actual description of a representative program, including the scope and sequence of selected learning activities).

4. Implementation procedures (related to the mechanism by which the program is operationalized and incorporated into the total school curriculum, including instructional strategies).

5. Evaluation procedures (related to progress toward the achievement of program goals, student performance, relevance of learning activities, and effectiveness of instructional strategies).

This structural framework provided a useful guideline for the examination of emerging outdoor education models. Moreover, it served as the basis for the creation of the interdisciplinary curriculum model which is described in Chapter IV.

Conflicting Conceptions of Curriculum

Diversity and change seem to represent the one unmistakable constant in any serious discussion of curriculum. There appear to be as many different perspectives as there are theoreticians and practitioners who write

about and function within this area of the educational process. Eisner and Vallance (1974) made the following observation about this perplexing dilemma:

> Controversy in educational discourse most often reflects a basic conflict in priorities concerning the form and content of curriculum and the goals toward which schools should strive; the intensity of the conflict and the apparent difficulty in resolving it can most often be traced to a failure to recognize conflicting conceptions of curriculum. (pp. 1-2)

Tanner and Tanner (1980) identified some of the different perceptions which have characterized the evolving conceptualization of curriculum:

> During the early decades of the twentieth century, the long-standing conception of curriculum as the cumulative tradition of organized knowledge came to be challenged. Although many educators continue to hold to this conception, others have conceived of curriculum variously as (1) modes of thought, (2) race experience, (3) guided experience, (4) a planned lea ning environment, (5) cognitive/affective content and process, (6) an instructional plan, (7) instructional ends or

> outcomes, and (8) a technological system of production. The wide differences in these definitions reflect differences in the vantage points from which curriculum is studied, conflicting educational philosophies, changing societal influences and demands on education, and the enormous difficulty in seeking to define such a complex concept, which, like knowledge itself, is limited only by the boundaries and tools of thought. (p. 42)

Eisner and Vallance (1974) organized the various conceptions of curriculum into five categories which are based on value orientations as distinguished from those generated by philosophic classifications such as pragmatism, realism, and idealism. Their five orientations to curriculum include: (1) curriculum as the development of cognitive processes, primarily concerned with the refinement of intellectual operations; (2) curriculum as technology, which conceptualizes the function of curriculum as essentially one of finding efficient means to a set of predefined, nonproblematic ends; (3) self-actualization, or curriculum as consummatory experience, focusing sharply on content; (4) curriculum for social reconstruction relevance, emphasizing the role of education and curriculum content within the larger social context, stressing societal needs over individual needs; and (5)

curriculum as academic rationalism, primarily concerned with enabling the young to acquire the tools to participate in cultural tradition and with providing access to the greatest ideas and objects that man has created (pp. 5-14).

Saylor and Alexander (1974) described five sets of curriculum designs, each of which has a special focus: (1) special competencies design, which is characterized by specific, sequential, and demonstrable learnings of tasks, activities or skills to be performed by the student; (2) disciplines/subjects approach, which emphasizes the relative orderliness of the structure of a discipline, and is undoubtedly the most dominant conception of curriculum; (3) social problems approach, which is based on social functions or persistent life problems; (4) process skills focus, in which the emphasis is on learning processes rather than fixed structures of knowledge; and (5) individual needs and interests design, which involves the learner as a full partner in the teaching/learning process. (pp. 198-240)

The above synopsis reveals that the changing conceptions of curriculum are based on how curriculum theorists perceive the respective roles of the learner, the societal setting, and the "structure of knowledge" (subject-matter content). It also indicates that value orientations or basic underlying assumptions regarding

curricula cannot be considered static, nor universally accepted. Regarding the development of value-free curriculum models, Jewett and Bain (1985) stated:

> Educators have come full circle from the traditional position of attempting to develop value-free curriculum models. For over fifty years we sought objectivity in the scientific approach to curriculum development. But this approach was never value-free; its particular value position was simply implicit. Today we must recognize the importance of making values explicit in curriculum work. (pp. 24-25)

For the purposes of this study, four different value orientations were identified as relevant for the categorization of existing outdoor education programs. The four orientations, described briefly in the following paragraphs, include: (1) "structure of knowledge"; (2) social reconstruction; (3) learning processes; and (4) self-actualization.

Structure of Knowledge

The mastery of subject matter continues to be the dominant orientation in curriculum design. It has been argued that the mastery of important knowledge, as represented in established disciplines, provides the "best" foundation for the "best" education for all citizens

(King & Brownell 1966). The fullest impact of this perspective was felt during the 1950s and 1960s when massive curriculum reform projects, particularly in mathematics and the natural sciences, were subsidized by federal agencies and private foundations.

Saylor and Alexander (1974) observed that the most persistent and influential argument supporting a subject-based curriculum organization was for educational convenience:

> since knowledge is organized into disciplines which can be used or adapted as school subjects, the easiest way to set a school curriculum . . . is to use these subjects, providing a matching instructional organization and student progress system. Selecting and teaching subject matter and testing student knowledge thereof is the process, and it is argued that this can be readily implemented by knowledgeable teachers, organization into classes, and written tests. (pp. 207-208)

Jewett and Bain (1985) added another perspective to the continued support for discipline-based curricula:

> The recent focus on "back to the basics" is another reflection of the disciplinary mastery orientation. Those who choose to evaluate

> schools in terms of demonstrated student competence in reading, writing, and mathematics skills are asserting the need for mastery of basic fundamentals as the first step in achieving competence in those disciplines selected as most worthwhile. (p. 25)

Saylor and Alexander (1974) posited that: "Probably the chief limitation of the subjects design, however well planned and implemented, is the lack of direct relation of the organized subject matter to the problems and interests of the learner" (p. 213).

Social Reconstruction

Social reconstructionists view the school as an agent for social change, and the role of education as being relevant to both the student's interests and society's needs. Eisner and Vallance (1974) described this orientation as follows:

> With this orientation there is a strong emphasis on the role of education and curriculum content within the larger social context. Social reconstructionists typically stress societal needs over individual needs; the overall goals of education are dealt with in terms of total experience, rather than using the immediate processes which they imply.

> Social reform and responsibility to the future of society are primary. . . .
>
> An approach in which social values, and often political positions, are clearly stated, social reconstructionism demands that schools recognize and respond to their role as a bridge between what is and what might be, between the real and the ideal. It is the traditional view of schooling as the bootstrap by which society can change itself. (pp. 10-11)

Many social reconstructionists believe that the curriculum should be based on the persistent functions, areas, or life situations in man's existence as a social being. One of the leading exponents of the social activities design was Stratemeyer (1957) who, along with her associates, advocated a curriculum based on the concept of "persistent life situations." They proposed a curriculum in which:

> the <u>content</u> and <u>organization</u> of learning experiences are determined by the experiences of learners as they deal with everyday concerns and the persistent life situations which are a part of them (these situations of everyday living take the place of

> "subjects" and the varied other ways of focusing the curriculum). (pp. 116-117)

While Stratemeyer and her associates insisted that the curriculum should grow out of the concerns and interests of learners, Smith, Stanley, and Shores (1957) argued that the curriculum should grow out of the needs of society.

A more radical wing of the reconstruction orientation is represented by the writings of Illich (1971), Reimer (1971), and Scriven (1972), each proposing to revolutionalize the educational and social systems of the day. While such drastic calls for reform did not seriously influence school curricula, they nevertheless demonstrated the extent to which some social reconstructionists were prepared to go in curriculum reform.

Learning Processes

Learning processes must be distinguished from those specific performance skills which are the intended outcomes of competency-based training programs, such as the design described by Saylor and Alexander (1974):

> In a competency-based design, the desired performances are stipulated as behavioral or performance objectives or competencies, learning activities are planned to achieve each objective, and the learner's performance is checked as a basis for his moving from one

> objective to another. Thus, in typing instruction the learner must demonstrate his knowledge of the keyboard before he moves to mastery of particular typing forms. In golf he learns and shows how to grip the club before he learns and shows how to make particular strokes with it. In social studies he learns how to read a map and demonstrates his competency before he learns about and demonstrates his knowledge of particular geographic locations and relations. Thus, a design based on specific competencies is characterized by specific, sequential, and demonstrable learning of the tasks, activities, or skills which constitute the acts to be learned and performed by students. (pp. 198-199)

The learning processes orientation, as used in this study, refers to "higher-order" process skills, such as: problem-solving, decision-making, valuing, creating, and communicating. From this perspective, the focus is on how we learn rather than what we learn. While these processes are generally regarded as cognitive learning, their relevance to the affective domain is equally important.

Process skills have a direct relationship to life-long learning, as noted by Gardner (1963) in his notion of education for "self-renewal":

> We are moving away from teaching things that readily become outmoded, and toward things that will have the greatest long-term effect on the young person's capacity to understand and perform. Increasing emphasis is being given to instruction in methods of analysis and modes of attack on problems. In many subjects, this means more attention to basic principles, less to applications of immediate "practical" use. In all subjects it means teaching habits of mind that will be useful in new situations--curiosity, open-mindedness, objectivity, respect for evidence and the capacity to think critically. (pp. 22-23)

Some educational theorists view learning processes as more dynamic curriculum elements than the fixed structures of knowledge, and advocate the use of such processes as organizing centers for curriculum design (Berman 1968; Parker & Rubin 1966). Eisner and Vallance (1974) observed that: "The problem of the educator and curriculum specialist . . . is to identify the most salient and efficient intellectual processes through which learning occurs and to provide the setting and structure for their development" (p. 6).

Self-Actualization

Eisner and Vallance (1974) described the self-actualization orientation to curriculum development as follows:

> Strongly and deliberately value saturated, this approach refers to personal purpose and to the need for personal integration, and it views the function of the curriculum as providing personally satisfying consummatory experiences for each individual learner. It is child centered, autonomy and growth oriented, and education is seen as an enabling process that would provide the means to personal liberation and development. (p. 9)

The language of the proponents of self-actualization as a curriculum orientation is interwoven with the language of existentialists and humanistic educators, as reflected in the writings of Maxine Greene (1969, 1971), Abraham Maslow (1968, 1971), and Philip Phenix (1971). The central theme is a conception of education as a liberating, synthesizing, and integrating force in personal growth and development.

Traditionalists view the primary goal of education as transmission of the cultural heritage--passing on the knowledge and skills which enable a person to function appropriately within society. Humanistic educators

perceive education as a vehicle to create a fully integrated person through self-actualization and transcendence.

Greene (1971) described the nature of the traditional school curriculum as follows:

> Curriculum, from the learner's standpoint, ordinarily represents little more than an arrangement of subjects, a structure of socially prescribed knowledge, or a complex system of meanings which may or may not fall within his grasp. Rarely does it signify possibility for him as an existing person, mainly concerned with making sense of his own life-world. Rarely does it promise occasions for ordering the materials of that world, for imposing "configurations" by means of experiences and perspectives made available for personally conducted cognitive action. (p. 253)

In another article, Greene (1969) suggested that there are multiple resources available for discovering oneself, and for becoming an understanding member of the "global village."

> The person who can create himself--choose himself--is the one who can overcome the feeling of nothingness and hopelessness that

> breeds indifference and lack of concern. Once he becomes visible to himself, he may find his vision clearing, he may find that he is transcending himself. He may find self-commitment possible--the commitment to orchestrate himself with the selves of others with whom he can empathize as a fellow-creature confronting the same crucial human problems, moving to the same beat. The sense of self comes first, then the squeeze of the hand, and then, hopefully, identity in its fullest sense--an opening outward to the multifarious world. (p. 446)

Maslow (1971) maintained that humanistic philosophy has generated a new conception of learning, of teaching, and of education:

> Stated simply, such a concept holds that the function of education, the goal of education--the human goal, the humanistic goal, the goal so far as human beings are concerned--is ultimately the "self-actualization" of a person, the becoming fully human, the development of the fullest height that the human species can stand up to or that the particular individual can come to. In a

> less technical way, it is helping the person to become the best that he is able to become. (pp. 168-169)

Unlike many social reconstructionists, proponents of self-actualization do not advocate extensive reform of the discipline-oriented curriculum, but demand that the curriculum be better orchestrated to provide for integrated experiences. Phenix (1971) stated that: "Transcendence is not an invitation to anarchy but to glad obedience to the structures or logos of being. These patterns are the objective norms for knowledge and for conduct, and they are what the various disciplines aim to disclose" (p. 280).

Regarding integrative experiences and wholeness within the curriculum, Phenix proposed that "each specialized mode of investigation be understood in relation to other such modes" (1971, p. 280). He claimed that the truth of any discipline mode is never the whole truth, and that the relationships and complementarities among the various disciplines should be the central focus. "In this sense, the curriculum in the light of transcendence is inter-disciplinary as well as multi-disciplinary" (p. 280).

A Spectrum of Outdoor Education Models

The above-mentioned value orientations which emerged from an analysis of curriculum designs, coupled with the

structural elements of a curriculum model which were formulated by the author, provided the framework for identifying distinctive patterns with respect to existing outdoor education programs. To the knowledge of the investigator, this study represents the first systematic attempt to analyze and categorize the diverse array of outdoor education programs into a logical, meaningful scheme or spectrum according to value orientations.

For the purposes of this exploratory investigation, the author selected 25 representative school programs (see Appendix) from three Canadian provinces and seven U.S.A. states. Diversity was assured not only in terms of geographic representation, but also in terms of the variety of program characteristics and content. Programs from both elementary and secondary schools, as well as school districts, were included. A combination of written documents, verbal descriptions, and personal observations provided the basis for analysis. Based primarily on an examination of the stated goals and content outlines, the author was able to tentatively determine five main categories (hereinafter referred to as "outdoor education models") to which the representative programs could be assigned.

These outdoor education models are generic and, therefore, may not fully nor accurately represent each specific program assigned to that category. Furthermore,

some programs incorporate the features of two or more generic models in varying degrees. To reiterate, the models presented here should not be viewed as prescriptive, with clearly delineated boundaries. While any one model certainly has distinctive features, the characteristics of one model may overlap those of another and, of course, all models will have some features which are common to all.

The five outdoor education models described in this section include: (1) traditional subject-matter model, (2) thematic/conceptual approach, (3) environmental/ecological studies, (4) adventure pursuits model, and (5) school camping.

Traditional Subject-Matter Model

An analysis of the outdoor education programs selected for this study revealed that the subject-matter approach was clearly predominant. This model is consistent with the perspective that the main purpose of outdoor education is to reinforce the subject-matter areas of the traditional school curriculum. Rillo's (1985) statement regarding the correlation of outdoor education with various subjects in the school curriculum is indicative of this approach:

> From plans developed in the classroom, students and teachers embark on an adventure into the outdoor classroom. Through

> experiences gained in the outdoors, students pursue further study back in the classroom. Thus, the outdoor experience grows out of the classroom and leads back to the clas room. (p. 15)

Hug and Wilson (1965) defined outdoor education as ". . . the effective use of the natural environment both to teach those parts of the curriculum that can best be taught outdoors and to vitalize other parts through first-hand experiences" (p. 1). The title of their book, Curriculum Enrichment Outdoors, is a clear indication of their perspective. Following a general discussion on outdoor education and its implementation in the first two chapters, the remainder of the book presents activities that are appropriate for the main subject areas in the school curriculum. Mand's (1967) book follows a similar format, with the addition of chapters on School Camping and School and Community Resources.

Carlson (1972) related outdoor education to education in general, and to the school curriculum in particular:

> When the school assumes the responsibility for an outdoor education program, it also assumes the responsibility of relating it to the school program and to the objectives of education. Outdoor education must be

> concerned with the subject matter that is taught in the classroom. Among its major purposes are to give three-dimensional reality to what is taught in the classroom and to make possible depths of understanding and appreciation that may not be readily achieved indoors. (p. 224)

An extension of the science curriculum at Pontiac Junior High School, Fairview Heights, Illinois, is illustrative of the traditional discipline-based model. Under the leadership of Michael Schneider, science teacher; the school site was developed into an outdoor laboratory, consisting of numerous "learning stations." The outdoor stations included: a windbreak of trees and bushes, an open-field succession area, a pond, a school garden, a geology wall and rocky area, a weather station, and several other instructional areas. Although the primary purpose of the outdoor laboratory was to provide for an extension of the science curriculum, its proponents maintained that it could also be used to teach concepts in language arts, social studies, and mathematics.

Schneider (1982) discussed the merits of the program as follows:

> It provides a learning environment readily accessible to children, teachers, and the community. Its use requires no special

> permit, no long-range plan for transportation, [no] lunch arrangements, and no shifting of class schedules. More important, it is easily accessible for continuous studies, for quick observations, and for individual and group study projects. (p. 1)

Most classroom teachers who subscribe to the subject-matter model tend to view the outdoor learning environment as a laboratory for extending and enriching the concepts which are prescribed by the regular school curriculum. Thus, learning experiences that are planned to occur in the outdoors are generally related to specific disciplinary content, and deliberate plans for interdisciplinarity seem to be the exception rather than the rule. While some teachers encourage the development of such process skills as observing and classifying, problem-solving, critical thinking, and valuing, the acquisition of knowledge and skills related to specific subject matter is the predominant value orientation.

Thematic/Conceptual Approach

The main characteristic of this model lies in its potential for interdisciplinarity, and in its relevance to real-life learning situations. Instructional themes, which incorporate related concepts from several disciplines, are the organizing centers which replace the traditional subject-matter structure.

The thematic/conceptual model extends beyond traditional school offerings without jeopardizing the value and contribution of academic content. Staley (1979) described the thematic approach as ". . . the identification and use of a central theme or topic as the focus for planning a unit of instruction. Organizing and planning units around themes provides many opportunities to integrate disciplines, thus is consistent with the interdisciplinary nature of outdoor education" (p. 21). He proposed four possible theme categories for organizing an instructional unit:

1. Concept themes. Units organized around broad concepts are designed to provide children with the mental structures required to understand and describe the world around them. Some examples of these concepts are change, interaction, energy cycle, death, and birth.

2. Process themes. Process themes are intended to give units a focus on methods of solving problems and making decisions, as well as communicating, guessing, fantasizing, and observing.

3. Persistent problem themes. Persistent problem themes allow children not only to understand and explain possible causes for problems that are persistent in their lives, but also enable children to apply what they know, particularly processes and concepts, to possible solutions to these problems.

4. Natural and man-made phenomenon themes. Units based on these phenomena enable children, through real and direct experiences, to understand and describe the world around them. (p. 21)

Figure 4 illustrates the range of topics and concepts that resulted from a "brainstorming" session which explored the development of an instructional unit based on the theme of "Flying Things" (Staley 1979, pp. 22-35). The title of the theme was "Up, Up, and Away," from which eight major concepts were derived. The main concepts--natural, man-made, space travel, space fantasies, airplanes, history, sports, and wind--were further subdivided into sub-concepts. The scheme also provided for interrelationships among the various concepts and sub-concepts. The procedure culminated in the development of a comprehensive instructional unit, including detailed daily lesson plans.

An embodiment of the thematic approach was the program developed at the Lincoln School of Teachers College, Columbia University. The school was established in 1917, under the principalship of Abraham Flexner, and continued as the "showpiece" of the progressive education movement until its demise in 1948. The main purpose of Flexner's school was "to give children the knowledge they need, and to develop in them the power to handle themselves in our own world" (Bremin 1964, pp. 280-281). Cremin described the program at Lincoln School as follows:

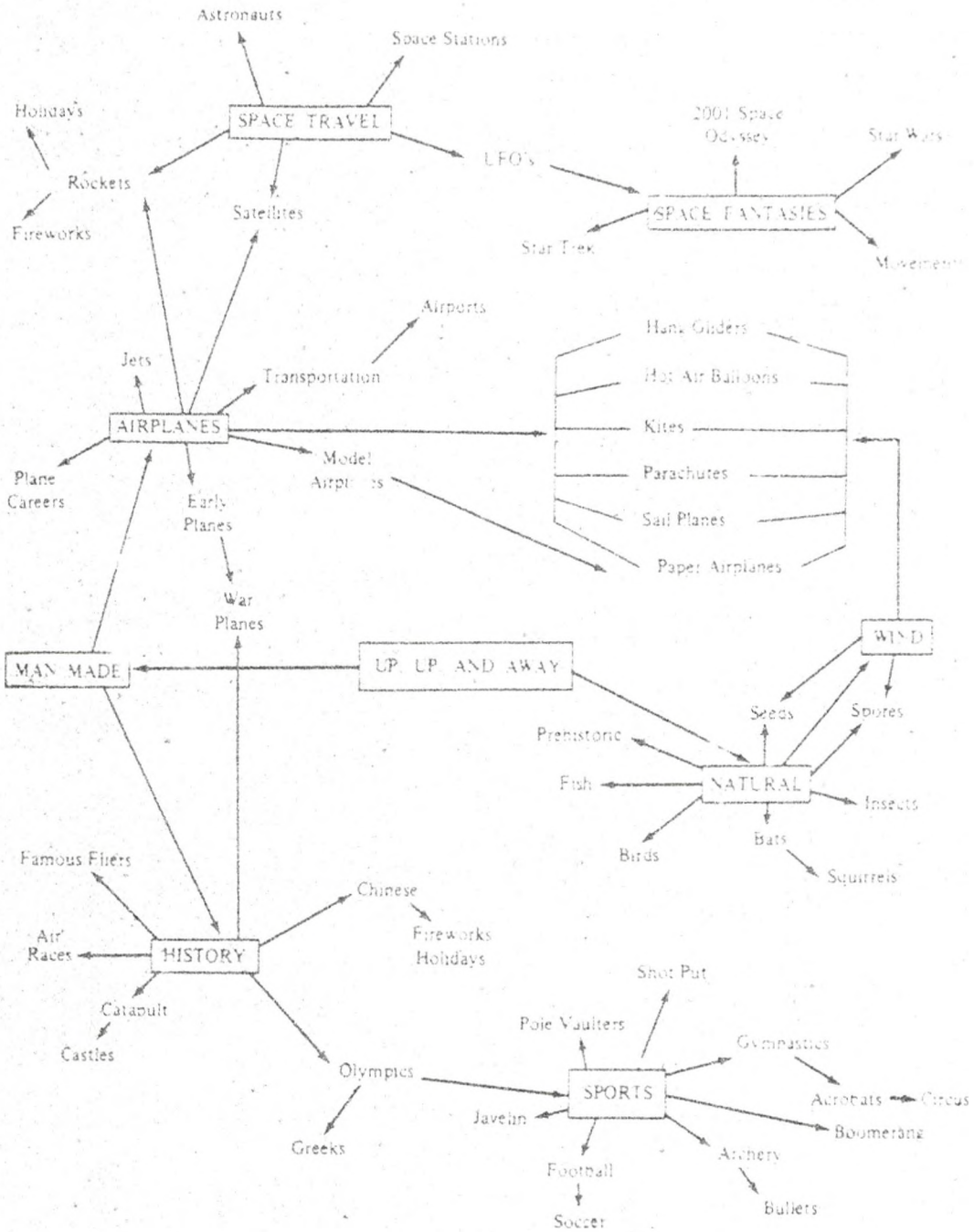

Figure 4. A Thematic Approach to an Instructional Unit on "Flying Things" (reproduced from Stanley, F. A. (1979). Outdoor Education for the Whole Child. Dubuque, Iowa : Kendall/Hunt Publishing Company, p. 26).

What the Lincoln School set out to do was to build a curriculum around "units of work" that would reorganize traditional subject matter into forms taking fuller account of the development of children and the changing needs of adult life. Thus, for example, the first and second grades . . . carried on a study of community life in which they actually built a play city. A third-grade project . . . growing out of the fascinating day-by-day life of the nearby Hudson River, turned into the most celebrated of the Lincoln School units, the one on boats: a study of boats, past and present, of their design, construction, and cargos, and of their place in the history of transportation . . . boats became the entree into history, geography, reading, writing, arithmetic, science, art, and literature. . . .

Each of the units was broadly enough conceived so that different children could concentrate on different aspects depending on their own interests and the teacher's sense of their pedagogical needs; each of the units called for widely diverse student activities; and each of the units sought to deal in depth

with some crucial aspect of contemporary civilization. (p. 283)

Another example of the thematic approach is the "Clay Prospecting Trip," an activity undertaken by student groups from the Regina Public School Board and the University of Regina, Saskatchewan. The project consisted of a three-day excursion to the Dirt Hills and Claybank area in the southern part of the province. One of the main tasks involved digging, packaging, and labeling samples of clay from predetermined sites, which were located by using orienteering and mapping skills. The samples were tested for chemical and physical properties, and then used to create various forms of pottery. After glazing, the objects were "fired" in an outdoor kiln, and the quality of the completed product was checked against the physical and chemical properties of the clay samples, which had been determined earlier.

In addition to the activities centering on "clay prospecting," the students were required to establish and maintain a tent village, to plan menus and cook their own meals outdoors, and to conduct evening campfire programs. Other activities included a tour of the brick plant at Claybank and a visit to the "tepee rings" of a site which had been occupied by Indians at the turn of the century. Specific reference to subject-matter areas was minimal, the emphasis being on the development of

interdisciplinary concepts. Thus, in this single project, numerous concepts from several disciplines were interrelated and incorporated into the broader theme. Other thematic units are based on special events, seasonal topics, and geographical/geological sites.

Environmental/Ecological Studies

The environmental/ecological studies model can be considered as a relatively recent addition to the total spectrum of outdoor education programs. It emerged during the decade of the 1960s in response to a growing national concern over the perceived scarcity of natural resources and the deterioration of the quality of the environment. The term ecology became a household word, and was one of the major issues which characterized the social, political, and educational reform movements of the era.

With the advent of the 1970s, the term environmental education began to be used more frequently, eventually replacing the previous terminology which included ecology and conservation. This development had a profound effect on the nature and scope of outdoor education, as evidenced in both the goal statements and program descriptions in the professional literature.

The Environmental Education Act of 1970 was considered landmark legislation which officially sanctioned

the national commitment reflected in the "new" movement. The Act provided its own definition of environmental education:

> Environmental education is an integrated process which deals with man's interrelationship with his natural and man-made surroundings, including the relation of population growth, pollution, resource allocation and depletion, conservation, technology, and urban and rural planning to the total human environment. . . . Environmental education is intended to promote among citizens the awareness and understanding of the environment, our relationship to it, and the concern and responsible action necessary to assure our survival and to improve the quality of life. (U.S. Department of Health, Education, and Welfare 1971, p. 5)

Environmental education was conceived of as an all-encompassing process, with its central purpose being the preservation and improvement of both the natural and man-made environments.

While much of the early activity of the environment education movement was political in nature, many prominent educators from diverse fields of study became actively involved. Stapp (1971), one of the leading authorities in the movement, advocated that environmental

education should serve as a link between existing subject-matter areas in the school curriculum by using an "inter-disciplinary," problem-solving approach to the study of environmental issues. While educators like Stapp focused on school curricula, some environmentalists found a more compatible home in organizations such as the Sierra Club, the National Audubon Society, and the National Wildlife Federation.

In their widely-accepted publication Environmental Education Activities Manual, now in its fourth edition, Stapp and Cox (1981) proposed that every effort should be exerted to include environmental education in the school curriculum:

> it is imperative that our educational systems develop comprehensive environmental education programs so that our youth and adults will be more sensitive to their environment, better able to recognize environmental problems, more sophisticated in the utilization of problem-solving skills essential to the solution of emerging environmental problems, and more inclined to participate in coping with these problems. People should understand the importance of relating ecological, economic, social, technological, and political

> information when working toward the solution of environmental problems. (p. 5)

In their manual, Stapp and Cox suggested that the content for an environmental education program should comprise five main concepts which are directed toward developing an environmentally literate citizenry:

> Five major environmental education concepts basic to this philosophy are: ecosystem, population, economics and technology, environmental decisions, and environmental ethics. For each of these concepts, specific understandings have been outlined as appropriate for various grade levels (lower elementary, middle elementary, upper elementary, junior high, and senior high). (p. 15)

Perhaps the best known program that illustrates the environmental/ecological studies model is Steve Van Matre's Acclimatization (1972), an educational program developed in the late 1960s at Towering Pines Camp in northern Wisconsin. In another book Sunship Earth (1979), Van Matre defined acclimatization as ". . . a program which helps people of all ages build a sense of relationship--through both feeling and understanding--with the natural world" (p. 5). The goals of Acclimatization are: "(1) To feel at home with the natural world. (2) To be aware of the ecological processes which govern life and to

understand one's role as a part of those processes. (3) To increase both sensory awareness and conceptual understanding of the natural world" (p. 5).

Van Matre described the origin and development of the Acclimatization program as follows:

> Its growth was influenced by numerous insights gleaned from the areas of education and communication, fertilized by the awakening environmental awareness of the times, and favored by the play of sunlight on water, the rich greens and browns and the captivating sounds and smells of a northwoods forest.
>
> The Acclimatization program was created partially out of frustration with the usual identifying-collecting-dissecting-testing approaches to nature. It was molded by people who were excited about kids and learning and life itself, who liked to laugh, but who took their work seriously, who wanted to open up new doors of perception for their learners. These people knew they were embarking on a new journey, but had none of the trappings of status or tradition to weigh them down. A buoyancy, a lightness of spirit, carried them along. (1979, pp. 5-6)

The methodology of Acclimatization includes four basic components: (1) sharpening the senses, (2) building concepts, (3) providing opportunities for solitude, and (4) emphasizing the importance of the mechanics of learning. The content of the program is organized around seven major ecological concepts: energy flow, cycles, diversity, community, interrelationships, change, and adaptation (Van Matre 1979, pp. 6, 12).

A recently-developed program that is gaining popularity is Outlook, an environmental education instructional package developed jointly by the Iowa Department of Public Instruction, the Iowa Natural Heritage Foundation, and the University of Northern Iowa. The program comprises eleven topics/issue spheres, which are interrelated with six underlying ecological themes. Two major goals are presented in the Outlook program: "breadth of coverage of the rapidly developing environmental education field and presentation of materials in a manner that takes students from the awareness level through problem resolution" (1983, introduction).

Adventure Pursuits Model

The roots of the adventure pursuits model can be traced to the establishment of Outward Bound, an adventure-based educational program that emerged during the aftermath of World War II. Under the leadership of Kurt Hahn, Outward Bound schools were established

throughout Europe in the 1950s, and were subsequently introduced into the U.S.A. in the early 1960s. In 1986, Outward Bound (USA) celebrated its 25th anniversary, with five schools now located in Colorado, Maine, Minnesota, North Carolina, and Oregon.

Parker and Meldrum (1973) outlined the origin and purpose of Outward Bound as follows:

> Outward Bound courses were established to expose young people to a variety of experiences which would render them less vulnerable in times of hardship. They stemmed from the knowledge that young men were dying during the war through strain and physical hardship whilst older men were surviving, and in a way, continuation of the training given during the war could be justified in the light of increasing industrialization, technology and desk-bound education and work after the war had ended. (pp. 15-16)

The principle of character training through exposure to an unfamiliar and hostile environment continues to characterize Outward Bound programs, which are now operated world-wide. The following statement is indicative of the Outward Bound philosophy: 'The raising of personal performance, won through the surmounting of individual difficulties by discipline and endurance, is

of profound moral significance as well as physical. Individual effort to surpass one's own achievement, no less than co-operation and team work, is altogether to be encouraged" (cited in Parker & Meldrum 1973, pp. 47-48).

Whereas the environmental/ecological studies model grew out of an effort to enrich the school science curriculum, the adventure pursuits model evolved primarily through the efforts of physical educators. Parker and Meldrum (1973) observed that: "For many years, and in particular since the middle 1950s, physical educationalists have been moving inexorably towards a wider acceptance of outdoor activities as an integral part of the physical education provision in Britain" (p. 39).

Siedentop (1976) described the impact of adventure-based education on American physical education programs:

> Perhaps the most important programmatic innovation in physical education during the past decade is the current emphasis on outdoor pursuits. Not since lifetime sports were added to the traditional offerings of gymnastics and team games has the general physical education curriculum been so radically altered. It is difficult to pinpoint accurately the specific reasons why outdoor pursuits have been so well received by students in physical education and the public in general. Perhaps the "silent spring" and the "vanishing

> wilderness" themes that have awakened the conscience of a nation to the need for protecting our environment have also rekindled an interest in the out-of-doors as a setting for sport and leisure activity. (p. 179)

As further testimony to the increased emphasis on outdoor adventure pursuits, the May/June 1986 issue of the Journal of Physical Education, Recreation, and Dance devoted a special section to "Outdoor Adventure Activity Programs," which included six articles. In the introductory article, Ewert stated:

> If one defines outdoor adventure as an activity, usually performed in a natural setting, which contains elements of real or apparent danger, in which the outcome while often uncertain can be influenced by the actions of the individual and circumstance, the reasons for the popularity and effectiveness as an educational tool become apparent. . . .
>
> These activities and their benefits are in tune with a growing trend in our society to seek noncompetitive, personal growth activities in a small group context. . . . In addition, these potential benefits correspond to those goals of most physical education programs--the development of physical

fitness, motor abilities, mental abilities, and social-emotional abilities. (pp. 56-57)

Project Adventure, Inc., established in 1971 in the Hamilton-Wenham Regional High School at Hamilton, MA, typifies the adventure pursuits model. Project Adventure, based in part on the principles of Outward Bound, was created as a year-long physical education curriculum and a series of "interdisciplinary" and experiential academic curricula. Since then, "Project Adventure" has become a generic term to describe an experiential learning program using a Challenge Ropes Course, initiative problems, and a philosophy of group cooperation and individual challenge.

Rohnke (1986), the leading contemporary spokesman for this innovative program, identified the following goals of Project Adventure: (1) to increase the participant's sense of personal confidence; (2) to increase mutual support within a group; (3) to develop an increased level of agility and physical coordination; and (4) to develop an increased joy in one's physical self and in being with others (p. 69). Rohnke's book Cowstails and Cobras (1977) has been adopted as the "textbook" for Project Adventure.

The Nipissing Board of Education in North Bay, Ontario, conducts an outdoor education program which is focused on "High Risk Activities." The program includes

a wide range of outdoor experiences, such as: canoeing, rock-climbing, cross-country skiing, overnight camping, and extended excursions. A high risk activity is defined as "an activity taking place in an outdoor environment in which the perceived risk of accident is higher than in everyday life." In order to minimize the accident risk, the Board has prepared an 85-page Manual of Policy and Procedures Criteria for High Risk Activities. Strict adherence to the manual is expected of all teachers who conduct outdoor learning experiences.

Although most adventure education programs are largely based on and justified by their contribution to the psychomotor domain, many state that their ultimate goal is to provide for personal and social growth. For example, the "underlying educational philosophy" of the co-educational outdoor adventure course offered at Lake Forest High School in Illinois is ". . . to stimulate personal growth, interpersonal effectiveness, and the discovery of one's relationship to the environment" (Atwell 1977, p. 1).

Resident School Camping

The oldest, and perhaps still the most popular, outdoor education model is resident school camping. School camping programs range from overnight experiences to extended periods of time, up to three weeks in duration, from school-owned sites to privately-operated agency

camps, and from discipline-based studies to high-risk, adventure experiences. Smith (1972) viewed the potential of the camping experience as follows:

> This is one of the most sensational and effective forms of outdoor education and offers extensive opportunities for learnings centered around social living, healthful living, work experiences, outdoor skills and interests, and the application of many of the school's educational objectives and purposes. On school time and as a regular part of the curriculum, the outdoor school serves to motivate and vitalize learning and contributes greatly to the development of good human relationships, better understanding between students and teachers, and opportunities for democratic living. The outdoor school thus achieves a greater dimension by combining outdoor learning with active participation in problem-solving in a "child's community." The potentials for learning, aptly termed "teachable moments," in such settings are rich and almost limitless. (p. 31)

Donaldson (1952), in one of the first major publications on school camping, described the appeal of camping in the following statement:

> camping is not, as some have claimed, one of the newest educational experiences. It is much older than schools as they are known today. It is simply a return, in selected part, to a kind of experience in which for thousands of years children grew up.
>
> Simplicity of living is the key characteristic of camping. Thousands of Americans, overstimulated by the hectic life of the modern world, creep away to the woods each year to allow simple living to repair ravaged bodies and minds. That it appeals to thousands more who cannot, for one reason or another, go camping is beyond doubt. Backyard tents, huts, and tree shelters offer eloquent, though mute, testimony that the desire is there, and that the appeal to the youth of the land is particularly strong. Adults usually camp in order to fish, hunt, or bathe, but kids camp just to camp. That way of living is in itself attractive enough. (p. 8)

It would appear that today, 35 years later, Donaldson's views are as relevant and applicable as when they were first expressed.

The objectives of resident school camping suggested by Smith, Carlson, Donaldson, and Masters (1972) are

representative of the goal statements of most curriculum-based camping programs:

1. Experiencing democratic and social living.
2. Learning to live happily and healthfully out-of-doors.
3. Understanding the physical environment and man's relationship to it.
4. Learning to appreciate natural resources and how to use them wisely.
5. Providing direct learning situations, including purposeful work experiences, where many of the skills and attitudes developed in the classroom may be applied.
6. Initiating and completing effective teaching processes in pupil-teacher planned experiences. (p. 123)

The Human Relations Youth Adventure Camp (HRYAC), founded in 1974, is an example of a program which has extended the "democratic and social living" objective into the humanistic education realm, where the emphasis is on building a positive self-concept, self-respect, and respect for others.

Clifford Knapp, the camp director, described the origin and basic assumptions of HRYAC as follows:

> For three weeks in August, twenty-four boys and girls ages eleven to fourteen came

> together in a primitive setting in New York. They lived in tents, and shared the responsibilities of group living. The only building was a one-room log cabin and later a three-room building.
>
> Some of our basic assumptions were: (1) Everyone has the ability to relate to others with love and caring; (2) everyone has a zest for life which is sometimes hidden, but is always there; (3) everybody knows what is good for them and they can learn to trust their inner wisdom; (4) staff who have strong interpersonal skills will help campers develop theirs, too; and (5) campers learn to act maturely by being given opportunities to control much of their own lives. (cited in Knapp & Goodman 1981, p. 183).

In a personal statement, which was included in his daily journal of HRYAC activities, Knapp outlined his philosophy of camping:

> I believe that kids are persons with many of the same rights as adults. They deserve to be heard, to direct their lives in most areas, to speak out for what they like as well as against what they don't like, to structure their time and to share in

> responsibilities of everyday living. Camp purposes should focus upon human growth about self and others and nature awareness and knowledge. Campers ought to be placed in environments which encourage decision making and self-reliance whenever possible. Taking responsibility for themselves is a gradual process and should be increased with each day spent in camp. Cooperation among all members of the community should be stressed and structured. Competition in which there is a winner and loser should be underplayed. Activities can be structured so that all people win. Rewards for excellence in skills should be largely the pleasure and knowledge one gains from doing the activity. Choice within a structure should be encouraged. The camp should be run like a community--with all pulling together cooperatively. Everyone can contribute their talents to the task of living and growing together. (cited in Knapp & Goodman 1981, pp. 208-209)

Compared with HRYAC, most resident school camping program appear to be more curriculum-oriented, such as the sixth-grade outdoor education program operated by the Board of Education, San Diego City Schools in

California. Fox (1966) described the emphasis of the San Diego school camping program as follows:

> In general, a district's program includes not only the experiences at camp, but also the related pre-camp and post-camp experiences in the classroom. The point of view of the advisory committee is that "outdoor education must contribute more to the school program than a week of outstanding experiences and learnings at camp. The great potential of outdoor education will not be fully realized until the impact of the increased interest and understanding associated with the first-hand experience is brought to bear directly upon the classroom program of instruction. The outdoor education program can charge the classroom program with vitality and the pupils and teachers with enthusiasm that will result in an upgrading of instruction." (p. 1)

The San Diego program includes a wide range of curriculum-based activities, such as learning experiences in natural sciences, conservation practices, work-related projects, social living, arts and crafts, music, physical education, and outdoor living.

Resident school camping, as depicted in the preceding discussion, incorporates a wide range of learning experiences, many of which are included in other models. In fact, some educators have viewed resident school camping as the one single model that encompassed the whole spectrum of outdoor education. However, that notion has been dispelled by the more recent emphasis on environmental issues and adventure pursuits.

Concluding comments. Five generic models for outdoor education have been formulated to provide some semblance of organization to the diversity of programs which exist throughout Canada and the United States.

In reality, many ongoing outdoor education programs do not fit neatly into the described models. Local school programs often reflect elements of two or more models. However, a specific emphasis in most programs can be identified, particularly those with "subject-matter," "ecological studies," and "adventure pursuits" orientations. The other two models, the "school camping" and "thematic" approaches, are less distinguishable because of their broader application to the totality of the school curriculum.

The analysis of the selected outdoor education programs and the subsequent classification into generic models provide a foundational background for the development of the interdisciplinary curriculum model which is described in Chapter IV.

CHAPTER IV

AN INTERDISCIPLINARY CURRICULUM MODEL FOR OUTDOOR EDUCATION

In Chapter III, five generic outdoor education models were formulated and critiqued to provide the reader with an understanding of the current status of this field of study. In Chapter IV, the author proposes an alternative model, which is intended to improve the conceptualization of outdoor education by providing a theoretical framework upon which curriculum development, evaluation, and further research can be based. The three-dimensional interdisciplinary curriculum design, shown in Figure 5, illustrates the interrelationships among the three main components of the proposed model: (1) learning processes, (2) subject-matter areas, and (3) outdoor learning experiences. Each of these components is described in detail in later sections of this chapter.

The proposed alternative model is a departure from previous outdoor education curriculum designs in that the structural elements of a curriculum model are identified, a body of content specific to outdoor education is assumed and defined, and that content is reorganized into an interdisciplinary, process-oriented conceptual scheme.

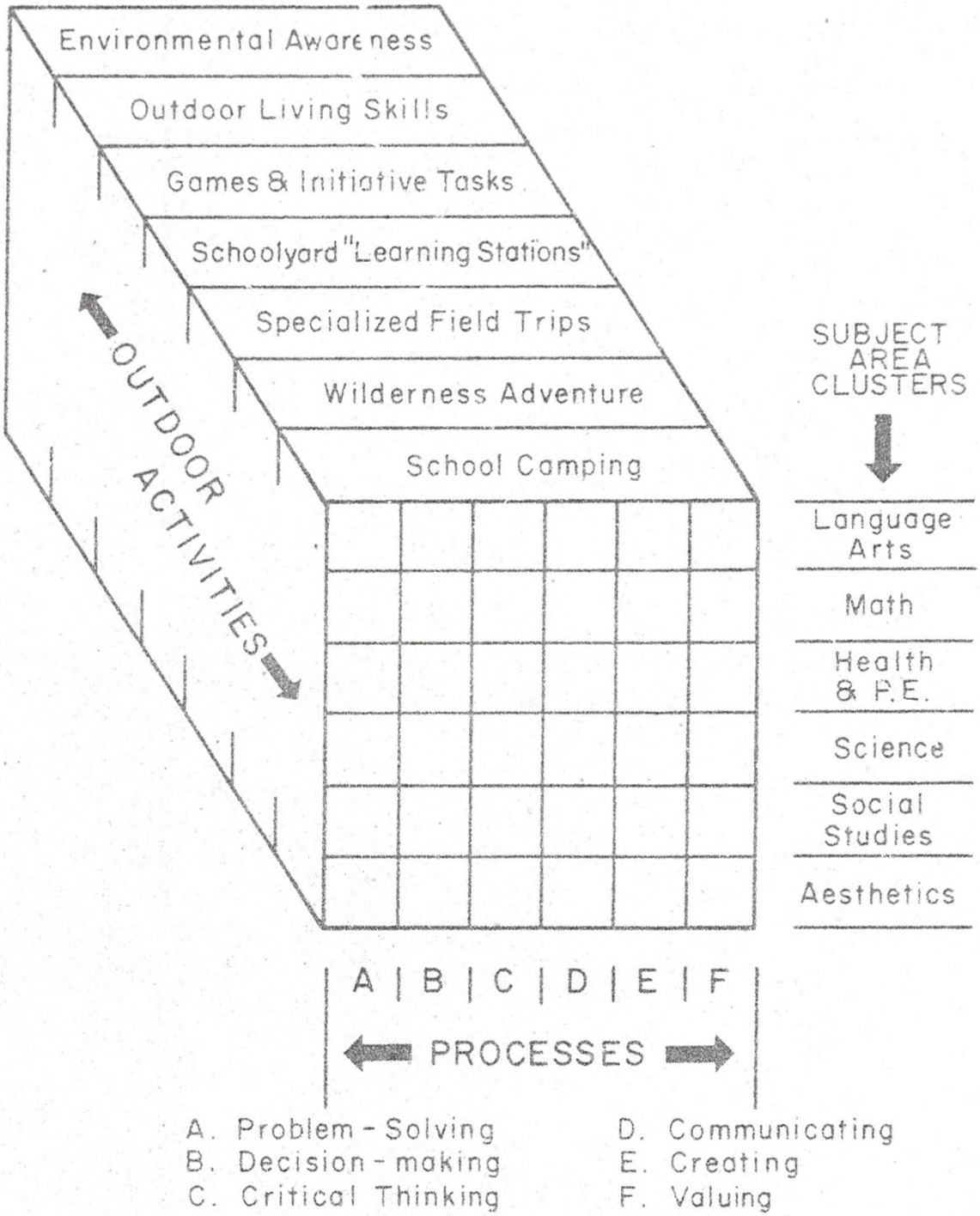

Figure 5. Interdisciplinary, Process – Oriented Curriculum Model for Outdoor Education

Another distinguishing feature of the proposed model, compared with traditional models, is that "learning processes" replace "subject-matter areas" as the organizing centers (structural base). Most important, the interdisciplinary, process-oriented approach provides the mechanism for integration, which is the highest level of the learning experience.

The format used to describe the proposed interdisciplinary curriculum model for outdoor education is based on the structural elements of a curriculum model as presented in Chapter III. Thus, Chapter IV is organized into the following sections: (1) the definition, purpose, and goals of outdoor education; (2) the underlying value orientation; (3) the nature and scope of content; (4) implementation procedures; and (5) the process of evaluation.

Definition, Purpose, Goals

In the development of this interdisciplinary curriculum model, the author adopted the time-tested, simplistic definition which was proposed by Donaldson and Donaldson (1958): "Outdoor education is education in, about and for the outdoors" (p. 17).

In interpreting the above definition, education in the outdoors is self-explanatory, implying that learning occurs in a variety of outdoor settings. Education about the outdoors involves the development of understandings and appreciations about environmental phenomena, including

man's relationship to and interdependence with the physical universe. Education for the outdoors involves the acquisition of knowledge, skills, and attitudes that enable the learner to enrich his own life through the wise use of the outdoor environment. According to the Donaldsons, the word for is the "key" in this definition because ". . . it implies a positive and moral approach. It strongly suggests that both the learner and the outdoors are better because of the experience" (p. 17).

Personal fulfillment is accepted as a universal educational goal which, through its attainment, satisfies the needs and desires of most human beings. The ultimate purpose of outdoor education, as proposed in this model, is to facilitate the participating individual's quest for "self-actualization" (Maslow 1959, 1971), "becoming a person" (Rogers 1961), or the "integrated" personality (Whitehead 1929).

For the purpose of this study, the process of "self-actualization" primarily involves three distinct, but interrelated dimensions: (1) understanding of self, (2) relating positively to others, and (3) living in harmony with the physical environment. This three-fold purpose is readily translated into the main goals of outdoor education.

The author proposes the following generic goals as appropriate for the interdisciplinary outdoor education model:

1. To contribute to the individual's personal growth by developing a positive self-concept and self-respect, a realistic understanding of one's capabilities and limitations, and a personal relationship with the physical environment.

2. To enrich one's quality of life through the acquisition of knowledge, skills, and attitudes related to the wise use of the outdoors for leisure pursuits, creative endeavors, and healthy life-styling.

3. To promote a harmonious relationship with others through outdoor learning experiences which are designed to develop effective interpersonal skills, such as cooperation, sharing, trust, caring, and sensitivity toward and respect for the rights and needs of others.

4. To serve as an integrating mechanism for the various components of outdoor education content, namely, outdoor activities, learning processes, and concepts and skills adapted from traditional disciplines.

The subsequent translation of these general goals into specific program objectives will be determined by the value orientations, among other factors, which influence local curriculum planners. A set of specific objectives can be derived from the recommendations of Fitzpatrick (1968) and Passmore (1972), which were presented in Chapter II.

Value Orientation

> curriculum development is inherently value-laden and, therefore, political; that is, because knowledge is entangled in values, curriculum work inevitably will promote some values at the expense of others. Thus, curriculum developers ought to be explicit about the values they choose to endorse. (Parker 1986, p. 83)

The value orientation underlying the curriculum model proposed in the present study is derived from the tenets of humanistic education. Many of the constructs inherent in outdoor education--self-understanding, self-actualization, interpersonal relations, and man's relationship with the environment--are included in the vocabulary that characterizes humanistic education.

In the 1978 report of the "ASCD Working Group on Humanistic Education," the authors proposed the following definition: "Humanistic Education is a commitment to education and practice in which all facets of the teaching-learning process give major emphasis to the freedom, value, worth, dignity, and integrity of persons" (Combs et al. 1978, p. 9).

Combs and his colleagues suggested the following goals for humanistic education:

Humanistic Education:

1. Accepts the learner's needs and purposes and develops experiences and programs around the unique potentials of the learner.
2. Facilitates self-actualization and strives to develop in all persons a sense of personal adequacy.
3. Fosters acquisition of basic skills necessary for living in a multicultured society, including academic, personal, interpersonal, communicative, and economic proficiency.
4. Personalizes educational decisions and practices. To this end it includes students in the process of their own education via democratic involvement in all levels of implementation.
5. Recognizes the primacy of human feelings and utilizes personal values and perceptions as integral factors in educational processes.
6. Develops a learning climate which nurtures growth through learning environments, perceived by all involved as challenging, understanding, supportive, exciting, and free from threat.
7. Develops in learners genuine concern and respect for the worth of others and skill in conflict resolution. (pp. 9-10)

The similarities between the goals of humanistic education and those proposed by the author for outdoor education are striking.

In describing his own personal experience with humanistic physical education programs, Hellison (1973) placed student self-esteem, self-actualization, and interpersonal relations at the center of the teaching-learning process. Some of the underlying assumptions of his program included:

> Man's major goal in life is to actualize his own potentialities, to become all that he can become, to attain the status of the fully functioning person. . . . How a person feels is more important than what he knows; in fact, how he feels about himself (his self-esteem) and about what he is supposed to be learning will determine whether he will learn anything. . . . No one is better able, at least potentially, than the person himself to determine how he best learns and what is most meaningful for him to learn. (p. 4)

Critics of humanistic education view the concept of self-actualization as lacking in clarity, resulting in an inability to both define and assess program objectives. Combs (1978) recognized this problem in the following statement:

> A major deterrent to the broader adoption of humanistic goals and objectives is the lack of acceptable means for assessing them. This is especially true at the present time when the press for accountability demands clear-cut evidence of accomplishment from schools and teachers. Humanism, like the rest of education, must stand prepared to demonstrate its value when subjected to public scrutiny. (p. 17)

Aspy and Hicks (1978) reported that some progress was being made toward the assessment of the humanistic educational process:

> The realization that humane efforts must be evaluated on a longitudinal basis is somewhat discouraging to both investigators and implementers. All of us would like to discover the "instant cure" with its spontaneous results. Unfortunately, this flies in the face of both the research results and the obvious reality that human growth and development proceeds across time. There does not seem to be any shortcut across the time variable. Despite this difficulty, in the short time we have been doing humanistic research, we have already made sufficient progress to demonstrate

that humanistic objectives can be effectively assessed for research purposes. (p. 30)

There are other signs of progress in the area of evaluation of humanistic education. With the enhanced prestige of phenomenological research, more credibility is being accorded to such subjective devices as case studies, professional opinion, teacher judgment, and self-reporting techniques. In addition, the National Consortium for Humanistic Education has conducted a series of studies which provided "significant support for the belief that humanistic practices not only make our schools more humane places for young people, they also contribute to the achievement of traditional goals like growth of intelligence and the acquisition of cognitive skills" (Aspy & Hicks 1978, p. 38).

The Nature of Content for Outdoor Education

There would appear to be a gross contradiction in the statements made by some outdoor educators. These writers declare that outdoor education has no content of its own, and then proceed to present seemingly endless lists of "outdoor education activities." The discussion in previout sections of this study indicates that there is, indeed, content which is specific to outdoor education. The author contends that not only does outdoor education have an identifiable body of content, but that it can be structured into a logical, meaningful framework.

For purposes of this study, the body of content for outdoor education comprises three main dimensions, or content cores: (1) specially selected outdoor activities; (2) learning processes; and (3) concepts derived from academic disciplines. Each is discussed in the following section.

Categorization of Outdoor Activities

A careful examination of the multitude of outdoor activities described in the literature reveals that there are many learning experiences that are unique to and appropriate for outdoor education. Furthermore, these activities are not found in the prescribed curricula of traditional subject-matter areas. It is the contention of the author that even a preliminary, basic system of classifying the haphazard array of activities would assist teachers in selecting appropriate learning experiences to contribute to the attainment of established educational objectives.

It must be stressed, however, that these activities are not to be considered as the content per se of outdoor education. Rather, the activities represent the "vehicles" through which learning is integrated within and by the learner himself.

The tentative classification scheme proposed in this study is based on two main factors: the commonality of attributes and characteristics of the activities, and

the contribution of the activities to the cognitive, affective, and psychomotor domains of educational goals.

Environmental awareness. Activities in this category are primarily aesthetic, contributing to the development of the affective domain through multi-sensory experiences. The awareness and appreciation of natural phenomena are heightened according to the number of senses used. In turn, outdoor activities can be selected to enhance the effectiveness of the various senses. Since activities in this category are heavily "affect-loaded," they can contribute significantly to the development of positive attitudes and values regarding the natural environment. Cognitive-oriented experiences, including such skills as observation, data collection and classification, can be planned to complement the affective dimension.

Representative learning experiences included in this category are: blindfolded "trust" walks; self-guided nature trails and "scent" trails; writing haiku and "natural history" legends; using "nature" metaphors in creative writing; and discovering and nurturing "nature pets."

The "outdoor learning hierarchy," which was developed by Ford (1981), provides a useful structure for organizing and developing learning experiences which promote knowledge and attitudes related to the physical environment. Activities can be ascribed to a seven-stage hierarchy, which includes: art forms, analogies, sensory awareness,

ecological principles, problem-solving processes, decision-making procedures, and "ekistics" (a philosophy for survival) (pp. 72-109).

Outdoor living and survival skills. The activities included in this category are basically cognitive and psychomotor in nature. They are considered to be essential and foundational learning experiences to enable the student to function effectively and confidently in a sometimes-hostile environment.

These activities are centered on the development of knowledge and skills related to: proper dress, fire-building, outdoor cooking, water acquisition and purification, edible wild plants, "emergency" hunting and fishing, wilderness sanitation, prevention and treatment f field injuries and hypothermia, and wilderness navigation.

Outdoor games and initiative tasks. The main purpose of outdoor games and initiative tasks is to develop group problem-solving techniques and harmonious interpersonal relations, such as cooperation, communication skills, conflict resolution skills, developing and maintaining trust, respect for the rights and needs of others, and leadership skills. Group dynamics are particularly important in providing for safe and satisfying learning experiences in wilderness outings and school camping programs.

Rohnke (1977) described the main features of initiative tasks as follows:

> The outdoor initiative tests . . . give groups of students a series of clearly defined, physical problems. They are designed so that each group must attempt to work out its own solution. This problem-oriented approach can be useful in developing each student's awareness of decision-making, leadership, and obligations of each member within a group. Participants work on the problem in groups in order to take advantage of the combined physical and mental strength of a team. These group problems can also be used to promote a student's sense of his own competence as an individual who can dare to become involved in a group. Finally, they serve to help break down some of the stereotypes which exist so comfortably in so many high schools. (p. 65)

Schoolyard "learning stations." The schoolyard or playground offers countless opportunities for outdoor learning experiences. The most common activity stations include: school gardens, weather stations, bird houses and feeding stations, "mini-environment" centers, soil study plots, miniature ponds, and tree planting projects.

Although the emphasis of outdoor "learning stations" is typically on cognitive learning, some schools have developed challenge ropes courses, "climbing walls," and

initiative task centers, which contribute to the development of both personal and interpersonal skills.

Ford (1981) described some of the benefits to be derived from the utilization of the schoolyard as an outdoor classroom:

> Its use requires no special permit, no time-consuming arrangement for transportation, lunches, and comfort facilities, and no shifting of class schedules. More important, it is immediately available for continuous studies, for the unexpected observation, for supervised individual-study projects, and for capitalizing on the "teachable moment."
>
> Here, through working with natural resources, students learn how their decisions and behavior affect other living things and how people are affected by the way they use soil, water, air, and other living creatures.
>
> By observing, classifying, measuring, analyzing, and interpreting phenomena, children gain not only essential learning skills but also an idea of their own relation to the natural world. As they acquire knowledge and understanding from and about the environment, they also develop some competence in

evaluating alternatives for using and managing resources. (p. 143)

Specialized field trips. Like schoolyard activities, specialized field trips are primarily concerned with cognitive learning. Field trips may be planned as extensions to traditional subject-matter areas, or they may be based on thematic topics that are centered on ecological principles or aesthetic concepts.

Specialized field trips generally consume larger blocks of time than schoolyard activities, but do not require overnight stays. Although the logistical arrangements are more complicated than those involved in school site utilization, some topics can be most effectively studied through specialized field trips. Examples of such trips include: marsh studies, reforestation projects, sanitary landfill sites, farm visits, wildlife sanctuaries, visits to cemeteries and Indian burial grounds, and scenic tours.

Outdoor adventure pursuits. Outdoor adventuring has experienced a phenomenal growth in recent years in both school-based programs and public recreation sectors. Ewert (1986) attributed the increased interest in outdoor adventure activities to ". . . a growing trend in our society to seek noncompetitive, personal growth activities in a small group context" (p. 57).

In an earlier work, Ewert (1985) found that the popularity of adventure activities could be explained through two indices: the contextual base surrounding the activity and socio-economic variables. The contextual base surrounding an activity includes the psycho/sociological, physical, and cognitive requirements pertaining to the activity. Most adventure activities demand a predisposition that is both psychologically and physically amenable to accepting risks. These activities also require a certain level of knowledge and skill to maintain both enjoyment and an acceptable level of safety. The socio-economic variables generally include: population demographics, income patterns, transportation and energy costs, legislative actions, competing interests, and time factors (pp. 4-9).

McAvoy and Dustin (1986) described the main features and benefits of outdoor adventure activities as follows:

> Adventure activities offer a unique opportunity for the participant to become totally and deeply involved. The combination of intense physical, intellectual, and emotional concentration when participating in an activity like rock climbing or whitewater canoeing is a hallmark of adventure activities. Adventure activities require complete concentration of all one's faculties and energies and therein lie the benefits to the participant. . . .

> Testimonies on the benefits of outdoor adventure activities included feelings of freedom; emotional, intellectual, and physical intensity; working with others to accomplish a common goal; increased self-confidence; self-discovery; a relationship with nature; challenge; and a sense of accomplishment from overcoming fear. (p. 67)

Outdoor adventure pursuits typically include activities such as: rock climbing, whitewater canoeing, caving, scuba diving, backpacking and cross-country hiking, "solo" experiences and wilderness survival, and cross-country skiing tours.

Resident school camping. "The "resident outdoor school" is probably the most popular and pervasive form of outdoor education. According to Ford (1981), ". . . 63 percent of 781 school systems surveyed by the National Education Association held one or more outdoor school sessions" in the 1969-1970 school year (p. 188).

School camping covers a wide array of outdoor learning experiences, including many which have been described in the preceding activity categories. Some of the most notable additions include: physical and social recreational skills, arts and crafts using native materials, nature photography, and campfire programs.

The main purpose of school camping is to enable students to experience social and democratic living--an

objective that was included in every set of goal statements examined by the author. Additional objectives ranged from enrichment of the school curriculum to the development of healthy life-styling.

Process as Content

In addition to the above-mentioned outdoor activities, the author contends that learning processes are equally defensible as components of a body of content for outdoor education. Jewett and Bain (1985) maintained that ". . . process skills are, themselves, program content to be learned by students. Students not only need to experience each of the processes, but also need to understand and know how to utilize processes to achieve their purposes" (p. 75).

Learning processes must be distinguished from basic skills, such as reading and writing, computation, manipulation, and movement behaviors. For purposes of this study, learning processes include "higher-order" constructs, such as problem-solving, decision-making, valuing, and creating. From this perspective, the focus is on how we learn rather than what we learn.

In Process as Content, Parker and Rubin (1966) presented an instructive explanation of the meaning of process:

> process--the cluster of diverse procedures which surround the acquisition and utilization

> of knowledge--is, in fact, the highest form of content and the most appropriate base for curriculum change. It is in the teaching of process that we can best portray learning as a perpetual endeavor, and not something which terminates with the end of school. Through process, we can employ knowledge not merely as a composite of information but as a system for learning. (p. 1)

In an attempt to clarify the perceived conflict between content and process, Parker and Rubin stated:

> The crux of the assumed contradiction between content and process lies in the difference between passive and active approaches to learning. Where primary emphasis is upon content, the learner ordinarily functions in a passive mode. He conditions himself to submit to authority. He accepts the proffered gospel, and he neither selects his conclusions nor assesses their validity. . . .
>
> Where the stress is upon process, the assimilation of knowledge is not derogated, but greater importance is attached to the methods of its acquisition and to its subsequent utilization. Therefore, a discrimination must be made between knowing something and

> knowing what it is good for. Knowledge becomes the vehicle rather than the destination. (p. 2)

In perhaps the most comprehensive process-oriented curriculum design, New Priorities in the Curriculum, Berman (1968) proposed a curriculum based on processes that subsume what she sees as desirable in the present structure of the school curriculum and yet extends far beyond. She believed that people are process-oriented beings, meaning that "a person has within his personality elements of dynamism, motion, and responsibility which enable him to live as an adequate and contributing member of the world of which he is a part" (p. 9).

> Customarily, school curricula have given heavier emphasis to what already has happened than what is to come. By emphasizing process skills, persons have the opportunity to plan for the future rather than merely to reflect upon the past. Persons and school programs need to be future-oriented because of the tremendously stepped-up pace of today's and tomorrow's world. It is necessary to get at the essence of human living and understanding. (p. 11)

In a recent article in Education Canada, Haysom (1985) presented the case for an alternative perspective

on the curriculum which would be process-oriented rather than product-oriented. The main features of his proposed alternative are condensed and summarized as follows:

> The curriculum would be primarily concerned with helping students make sense of the world in which they live.
>
> The classroom would become a sense-making place. Its character would change from a place in which knowledge and performed understanding were dispensed to one in which students met to encounter experiences, old and new, and to make sense of them.
>
> Traditional subject boundaries would be no longer sacred. Interdisciplinary inquiry would tend to become the norm rather than the exception, especially in the earlier years at school.
>
> Process skills, the way people go about the process of making sense, would become central to and implicit in all studies. The artificial divide between knowledge and understanding and the process through which it is acquired would be naturally resolved.
>
> The artificial divide between cognitive and affective development would be similarly

> resolved, if making sense is taken to include making sense of one's feelings.
>
> The "basics" would become truly basic. They would become important prerequisites to deepening and extending sense-making. (p. 20)

The author of this study proposes six process skills which would constitute the process dimension of the content core for outdoor education. These six constructs--communicating, problem-solving, critical thinking, decision-making, creating, and valuing--are described briefly in the following paragraphs.

Communicating. Communicating generally refers to modes of expressing one's thoughts, ideas, and feelings. Berman (1968) succinctly stated the importance of effective communication skills:

> One of the strongest needs of man is to be understood--to present himself in such a way that he believes he has communicated clearly to others. Speaking, listening, writing, and utilizing silence appropriately are skills in which common symbols enable man to share his personal meanings. (p. 43)

Berman also suggested that:

> Communication must go beyond the mere dictionary meaning of words to the subtleties of the nondiscursive, the nonverbal, the

> emotion-laden messages. Intense study of this valuable human process is necessary if man is to utilize his aloneness, uniqueness, and means of relating to others in ways which are satisfying to himself and others. (p. 11)

The term communicating, as used in this study, includes the related processes of perceiving and loving. The process of perceiving--the mode of organizing, interpreting, and synthesizing the sensations the organism receives from external and internal stimuli--is related to most other processes, but it is particularly fundamental to communicating. That is, one cannot communicate that which does not exist within the person.

Communicating, in turn, becomes fundamental to loving. ". . . communication involves a union with one's fellows in which personal integrity and a caring for the other units to make possible transactions in which one's own meanings become clearer because of mutual concern each for the other" (Berman 1968, p. 51). The very process of communicating--the sharing and understanding of ideas and feeling--leads to an interdependence of the principals. And, interdependence is one of the cornerstones of loving.

The process of loving is also closely related to two other constructs, namely, caring and sharing, which are sometimes identified as separate processes. In this

study they, too, are considered to be part of the process of communicating.

Problem-solving. The process of problem-solving, as used in current literature, stems largely from Dewey's theory of "reflective thinking," which was discussed in Chapter II. However, whereas the contemporary conception of this process is usually related to learning approaches within specific disciplines, Dewey was referring to social problem solving, which involved an interdisciplinary approach.

Burns and Brooks (1974) viewed problem-solving as a process in which new behavior is acquired through learning to solve a specific problem. Thus, problem-solving ". . . means that the learner acquires some new knowledge, rule, concept, or principle or that some new relationship between previously learned entities is discovered which allows him to demonstrate a terminal behavior that he did not have when he entered the problem-solving situation" (p. 44). They advocated curriculum reforms which would accommodate problem-solving and other related skills:

> Today's living calls for problem-solving skills, concept formation skills, data-processing skills, the ability to make judgments and discriminate, the ability to relate causes to effects, the ability to analyze, the ability to

> summarize, and the ability to form valid conclusions. The cultivation of these general abilities is not and never will be the result of curricula which are solely information oriented. To develop behaviors associated with these abilities requires curricula which are specifically designed to achieve such ends. Curricula must be process oriented if the learners are to develop processing behaviors. (pp. 42-43)

Critical thinking. Although the concepts of problem-solving and critical thinking are often used interchangeably in the literature, for purposes of this study, the two processes have been considered separately. Whereas problem-solving is generally viewed as a precise, deliberate procedure, critical thinking involves higher-order analytical and evaluative operations. According to Siedentop (1976), critical thinking ". . . requires the identification and questioning of assumptions, evaluating the preciseness of definitions, examining the validity of generalizations, separating fact from opinion, and looking for evidence of the statistical and practical significance of experimental data" (p. 6).

Goodlad (1979) reported that:

> preliminary data from A Study of Schooling suggest that "listening to the teacher"

> predominated among students' activities even in the arts and physical education classes. Other studies report teachers telling and questioning as the dominant pedagogical method and low-level cognition (information-getting) as characteristic even of discussion sessions. One wonders about our commitment to thinking in schools and whether we have any grasp of what thinking is. (p. 55)

Wasserman (1978) viewed thinking as a complex and sophisticated cognitive process which involves perception, reasoning, and intuition. According to Wasserman, teachers should help students to develop the power to think, to be unafraid to face new and complex problems, to develop the autonomy to think things through, and to use their own cognitive powers to approach problems with self-assurance and confidence (pp. 9-10).

Decision-making. The decision-making process has many of the attributes which have been ascribed to problem-solving and critical thinking, but it is deemed to be even more complex. Berman (1968) observed:

> Perhaps no human function calls as many of man's essentially human resources into play as decision making, particularly when the consequences are apt to be long in duration, the persons affected many, and the opportunity

> to turn back unlikely. Although most decions which a person makes in his lifetime are not apt to have far-reaching consequences, others may be critical in terms of an individual's own satisfaction and his contribution to others. (p. 101)

Berman maintained that little attention is given to the direct teaching of the decision-making process in school classrooms. She believed that the following steps should be taken:

> If decision making is seen to be an area that merits increased attention, three types of activities should be included in the school program. First, experiences should be designed which give direct experience in making decisions. . . .
>
> After children have had opportunities to make many decisions on their own, they should have help in bringing to the level of awareness some of the factors that enter into the decision making process. Concepts of choice, responsibility, and freedom should be discussed with the child as they relate to his own experiences.
>
> At the third level, children and youth should be exposed to material which is directly

> relative to components of decision making. For example, responsibility should be taught as one of the central foci of education. . . .
>
> Choice making is another aspect of decision which should be available to children through direct experience and through teaching about the process. . . . They need to come to an understanding of how availability, attitudes, the situation, other persons, and values affect their choice making. (pp. 111-112)

Creating. Barron (cited in Klausmeier & Goodwin 1975, p. 308) studied creativity in adults over several years. He found creative thought to be different from the kind that leads to problem solutions that are common to mankind generally. Barron found that, in general, problem-solving was characterized by convergent thinking. On the other hand, creativity--inventing new and better forms for expressing human experiences--required divergent thinking.

Berman (1968) defined creativity as ". . . the total process from the inception of an idea through to a completed product which is aesthetically pleasing or potentially useful, at least to the individual creator" (p. 139).

Torrance (1970) made the following observation regarding creativity and learning:

> The past decade of educational research and development has brought increased recognition to the fact that man fundamentally prefers to learn in creative ways through creative and problem-solving activities. Teachers generally have insisted that it is more economical to learn by authority. It now seems that many important things, though not all, can be learned more effectively and economically in creative ways rather than by authority. It also appears that many persons have especially strong preferences and aptitudes for learning creatively, that they learn a great deal if freed to use their creative thinking abilities, and that they make little educational progress when teachers insist that they learn exclusively by authority. Such ideas open exciting possibilities for better ways of individualizing instruction and educating a larger proportion of people to a higher level. (p. 1)

Berman maintained that teachers must themselves be creative in providing opportunities for children to live creatively. She observed that: "A body of knowledge about creativity is beginning to emerge which should help educators plan activities that develop elements which are

usually associated with the creative process" (1968, p. 151).

> Because life is becoming vastly more complex, the hope of man's retaining humanness in terms of maintaining mastery of his universe depends on how he uses his creative potential. With new media available to today's and tomorrow's schools, education has the opportunity to provide a setting in which children and youth can develop and test their own ideas. With more persons being prepared to work in the classroom in supplementary ways, children can have access to a wider range of persons to help them more fully clarify and identify the problems to which they wish to give attention. The crux of school programs must focus on what is of value and worth to children if creativity is to flourish. (Berman 1968, p. 150)

Synectics (1961), a program designed by Gordon and his associates, is one of the most promising approaches to the development of creativity. Initially designed for industrial organizations, Gordon has since adapted the synectics procedures for use with school children. Joyce and Weil (1980) summed up the main features of synectics as follows:

> Through his belief that the creative process can be communicated and that it can be improved through direct training, Gordon has developed specific instructional techniques. Synectics is applied, however, not only to the development of general creative power but also to the development of creative responses over a variety of subject-matter domains. Gordon clearly believes that the creative energy will enhance learning in these areas. To this end, he emphasizes a social environment that encourages creativity and uses group cohesion to generate energy that enables the participants to function independently in a metaphoric world. (pp. 183-184)

Valuing. Combs (1970) argued that questions related to values, beliefs, feelings, and emotions should be an integral part of the school curriculum. "It is a fascinating thing that the human qualities of love, compassion, concern, caring, responsibility, honor, indignation, and the like are largely left to accident in our schools" (p. 181). Berman (1968) also stressed the importance of teaching values:

> Partially because of the difficulties inherent in the valuing process, we are prone to discuss values at an abstract level, oftentimes

> ignoring the meaning in terms of behaviors a person exhibits or operations which the school should perform. If children and youth are to gain skill in the process of valuing, then teachers must learn the "what" and "how" of dealing with this critical topic. The task is not easy, but the need is imperative. (p. 156)

Krathwohl, Bloom, and Masia (1964) defined valuing as being concerned with the worth or value a student attaches to a particular object, phenomenon, or behavior:

> This abstract concept of worth is in part a result of the individual's own valuing or assessment, but it is much more a social product that has been slowly internalized or accepted and has come to be used by the student as his own criterion of worth.
>
> Behavior categorized at this level is sufficiently consistent and stable to have taken on the characteristics of a belief or an attitude. The learner displays this behavior with sufficient consistency in appropriate situations that he comes to be perceived as holding a value. . . .
>
> An important element of behavior characterized by Valuing is that it is motivated,

> not by the desire to comply or obey, but by the individual's commitment to the underlying value guiding the behavior. (pp. 180-181)

Klausmeier and Goodwin (1975) maintained that attitudes or values could be learned or modified by observing and imitating exemplary models, through classical and operant conditioning, and by intentionally securing, thinking about, and evaluating information (pp. 359-367). They also stated:

> Attitudes, to a greater extent than concepts and psychomotor abilities, are acquired through imitation and conditioning. However, reasoning about behaviors and situations also influences attitudes learning. In this connection, primary groups and reference groups--groups individuals use as a standard against which they compare the adequacy of their behavior--are very important in attitude learning. (p. 382)

Content Adapted from Disciplines

Many outdoor educators have insisted that outdoor education has no content of its own, and that the cumulative knowledge of mankind belongs within the structures of existing disciplines. In the sense of knowledge and skill acquisition, there is some validity to this view. However, there are many concepts and skills that are not

part of disciplinary structures. For example, few of the processes which were described in the preceding section would be considered the prerogative of any one subject-matter area. Furthermore, one would be hard pressed to justify experiences such as survival skills, firebuilding, or "peak experiences' as legitimate constructs of any specific discipline.

In a discussion of the relationship between processes and traditional conceptions of disciplinary content, Parker and Rubin (1966) noted:

> The predominant value of a subject lies not so much in its accumulated information or in its accumulated artifacts, but in its special way of looking at phenomena, in its methods of inquiry, its procedures for utilizing research, and its models for systematic thought. . . .
>
> All disciplines consist of both accumulated information and miscellaneous processes which are used to acquire the information to put it to profitable use. If processes can be taught--taking them as no less basic than the information with which they are associated--the learner will be able to deal with standard information far more intelligently. Most important, the learner will possess the intellectual machinery

> for rational thought which wi.l be useful in other situations. (p. 22)

In addition to contributing to the development of learning processes, outdoor education also has the potential of enhancing and extending many of the concepts and skills inherent in traditional disciplines. Thus, outdoor experiences can serve as "vehicles" for learning both process skills and selected content adapted from subject-matter areas. It is in this sense that L. B. Sharp's frequently cited adage--some things can best be learned outdoors--has its application.

In adapting classroom learning to the outdoors, one must be careful not to restrict the potential of outdoor learning by the imposition of the limitations which characterize the structures of disciplines. One way of providing for this adaptation is to begin with more pervasive goals than normally accompany in-classroom disciplinary learning. Confluent learning experiences are facilitated by the removal of the traditional barriers that separate the various subject-matter areas. Through an interdisciplinary approach, we may become better able to combine the humanness of the human being with the uniqueness of the outdoor environment to attain those high-order processes which contribute to the goal of personal fulfillment, or self-actualization.

Implementation of the Model

Parker and Rubin (1966) warned of the immensity of the task of implementing a process-oriented curriculum but, nevertheless, believed in its potential to improve contemporary schools. They stated:

> Admittedly, a departure from the traditional lines of subject matter organization constitutes a greater revolution than merely infusing the present organization with an emphasis on process. Indeed, it may be too great a revolution for the time. Its logic, however, is pervasive, and should not be dismissed until it has been fairly tried. (p. 61)

One of the major challenges in implementing any alternative curriculum model arises from the traditional notion that the accumulated knowledge of mankind can best be transmitted to the learner through a systematized delivery system which is organized into discrete, self-contained disciplines. While this may be administratively efficient and educationally convenient, the learner is confronted with the problem of having to devise other means of synthesizing and integrating the isolated knowledge and skills into a meaningful unity. This perpetual dilemma seems to indicate that there is a pressing need for an integrative mechanism which could mitigate the fragmentation and isolation of the various components of the school curriculum.

Another problem in curriculum implementation is centered on the degree of compatibility of an alternative model with the value orientations and societal expectations which are predominant in the educational climate at the time. Because of the eclectic nature of the proposed interdisciplinary model for outdoor education, the author contends that it is feasible in a wide range of educational settings. Specifically, the model can be utilized to complement and supplement traditional school curricula, or it can serve as a catalyst for more pervasive curriculum change. Most important, the model can provide the integrating mechanism for making educational experiences more relevant and meaningful for the student.

Feasibility of the Model

Based on the premise that "it only takes one case to prove a possibility," the author has selected a specific educational jurisdiction in which the proposed outdoor education model could be implemented. In view of the current curriculum reform movement in the province of Saskatchewan, coupled with the province's historical record of involvement with outdoor education programs, the interdisciplinary curriculum model which is proposed in this study seems particularly timely and feasible.

In Directions (1984), a report of the Minister's Advisory Committee on Curriculum and Instruction Review, Department of Education, it was recognized that

Saskatchewan's school curriculum was predominantly academic in nature, stressing language and computational skills. One of the Committee's main proposals was for an expansion in the concept of basic skills:

> The core area of studies should continue to encompass mathematics and language arts, but should also include the fine arts, physical education and the social and natural sciences. . . .
>
> The Committee also concluded that the definition of basic skills should include higher-order thinking skills: the ability to anticipate and predict; the ability to acquire, apply and communicate information; and, perhaps most importantly, the skills of analyzing information, developing hypotheses, and probing alternatives in the mastery of problem-solving strategies. (p. 30)

As an outcome of Directions, the Core Curriculum Policy Advisory Committee was established and, subsequently, its recommendations were announced in Program Policy Proposals (1986). The recommended core curriculum comprised two main categories: (1) common essential learnings, and (2) learnings from required areas of study.

> The common essential learnings are grouped under the following headings: communication

> skills, creative and critical thinking, independent learning skills, numerical and quantitative literacy, personal and social skills and values, and technological literacy. The purpose of the common essential learnings is to provide students with generic skills, processes, and values which can be applied in a wide range of settings and situations. (Program Policy Proposals, p. 4)

The required areas of study were organized into the following subject-area clusters: language arts, mathematics, aesthetic education, health education/physical education, science, and social studies.

> Required areas of study should form the framework of the Saskatchewan curriculum. These areas represent the basic "ways of knowing" and experiencing the world. They should provide learnings unique to each area, and should serve as vehicles for attaining the common essential learnings. (p. 14)

The Committee also observed that ". . . curriculum developers are stressing relevance, highlighting the interrelatedness of disciplines, and placing areas of study within a broader context. These commonalities should enable subject area specialists and developers of the common essential learnings to work together on future development of a core curriculum in Saskatchewan" (p. 16).

New curriculum materials are currently being prepared for the common essential learnings as well as for some of the subject-matter areas.

The Committee's proposal for an "adaptive component" in the curriculum is particularly relevant to the present study. "The adaptive component designates time within each course of study to be reserved for adapting the curriculum to meet the needs of the students" (p. 18). It is proposed that 30 percent of the allocated time for each subject area in the provincially-approved curriculum guides be devoted to enrichment activities. The proposal is intended to encourage decision-making by teachers and school boards at the local level in devising innovative programs for their students.

> The purpose of the adaptive component . . . is to allow time for adapting program at the classroom level. This time can be used for reinforcement, enrichment, and extension of the program within the classroom. This time could also be used for additional practical application of learning (additional problem-solving activities, for example) and for mastering essential skills and processes. The adaptive component can provide schools and school divisions with time to include topics or units of interest that will

meet local goals or student needs within an area of study. (p. 19)

It is within this "adaptive component" that the proposed interdisciplinary curriculum model for outdoor education can be most readily implemented.

Application of the Model

In the traditional approach to curriculum design, and the subsequent translation into specific learning experiences for the individual learner, subject-matter areas constitute the structural base (or, organizing centers) for the selection of activities. This approach begins with an analysis of the knowledge and skills necessary for people to function adequately. These elements are then organized into sequences which are consistent with the disciplinary structures. In the process-oriented approach, the learning processes replace the traditional subject areas as the structural base.

Ideally, in the proposed model, the sequence emerges from the individual's needs and interests, which determine the nature of the learning processes to be acquired. Then, relevant knowledge and skills from the subject-matter areas would be selected in terms of their capacity for contributing to the development of the selected processes. The appropriate outdoor activity, which serves as the experiential learning vehicle, would then be selected on the basis of its potential contribution to the

attainment of the predetermined learning processes and disciplinary knowledge and skills.

The practical application of the proposed model may be illustrated, in a general sense, by the following example. The sequence to be followed in planning the learning experience involves: (1) the identification of the learning process to be pursued, (2) the adaptation of concepts and skills from relevant subject-matter areas, and (3) the selection or design of an appropriate outdoor activity to accomplish the desired outcomes. Let us assume that a teacher has selected problem-solving as the organizing center (see "A" of Processes, Figure 5, page 128) for a sequence of learning experiences. Relevant concepts and skills, which are suitable for outdoor learning experiences, are then adapted from appropriate subject-matter areas--mathematics, science, and social studies--(Subject Area Clusters, Figure 5, page 128) to provide an interdisciplinary approach for the development of problem-solving skills. Such discipline-oriented concepts and skills may include: finding and following bearings using a magnetic compass, calculating the magnetic declination, estimating distances, determining elevations and topographical features, and charting the most efficient overland route. The subsequent development and refinement of both the problem-solving process and the disciplinary concepts and skills would be facilitated through the selection of an

appropriate outdoor activity (Outdoor Activities, Figure 5, page 128) which, in this instance, is a specially-designed orienteering course.

In this orienteering activity, the participants are required to use a magnetic compass and topographical map to follow a predetermined course which has been constructed on the school playground or nearby park. The course requires the student to travel overland sequentially from one checkpoint to the next. Some sections will have alternative routes, requiring the student to determine the "best" route to follow. Each checkpoint has a code marker which the participant must record on a scorecard to prove that he has located each station in the proper sequence. Upon completion of the course, the participant is required to determine for himself the accuracy with which he has negotiated the route. This is accomplished through a problem-solving activity referred to as "geometric proofing." The procedure requires the student to construct a scale drawing of the route he followed, using metric measurement for distances and a protractor for the bearings (angles). Thus, the problem-solving process will have been enhanced by the interdisciplinary application of a variety of adapted subject-matter skills through the instructional "vehicle" of orienteering (the selected outdoor education activity).

Another example of the application of the interdisciplinary model involves the organization of learning experiences associated with soapstone carving. In this instance, the teacher has determined to focus on the learning process of creativity. The activities which are described below are an actual component of the Churchill River wilderness canoeing trip conducted during the summer months by the University of Regina. This learning experience requires the use of a wide variety of concepts and skills adapted from the "subject area clusters," including: ecological sensitivity; navigational and canoeing skills, identification of geological formations; testing procedures to determine high-grade soapstone (talc, chlorite, and magnetite); skills in handling tools and other instruments; visualization and imagination. Following the "soapstone prospecting" activity, the participants are provided with an opportunity to create an original soapstone sculpture using a motif of their own choice. This has been found to be an especially valuable creative experience, and the tangible results have been quite remarkable.

Alternative Approaches

There are other schemes through which process skills can be developed. Processes can be taught and learned separately as specialized units of study. In addition, because of the interrelatedness and commonalities among

many of the learning processes, the common element of the various processes can be identified and organized into a broader unit of study. Another scheme would involve the identification of one prevalent process, such as communicating, and the subsequent coordination of other process skills within this central theme. Finally, the various process skills could be incorporated into the content of the traditional subject-matter areas, a system which seems to be favored in the Saskatchewan curriculum proposals. In the reality of the day-to-day classroom operation, it is likely that one of these schemes would probably be more acceptable to classroom teachers than the interdisciplinary approach, which was described earlier.

In Figure 6 an acceptable alternative for implementing the proposed interdisciplinary model for outdoor education is illustrated. This procedure is consistent with prevalent views on how the day-to-day activities of most classrooms are conducted. Hoffman, Young, and Klesius (1981) described the typical manner in which curriculum decisions are made in contemporary classrooms.

> Traditional rhetoric in education pictures curriculum design as proceeding from an examination of learning objectives to the selection of appropriate learning activities. Every teacher knows, however, that what happens in real schools rarely resembles this

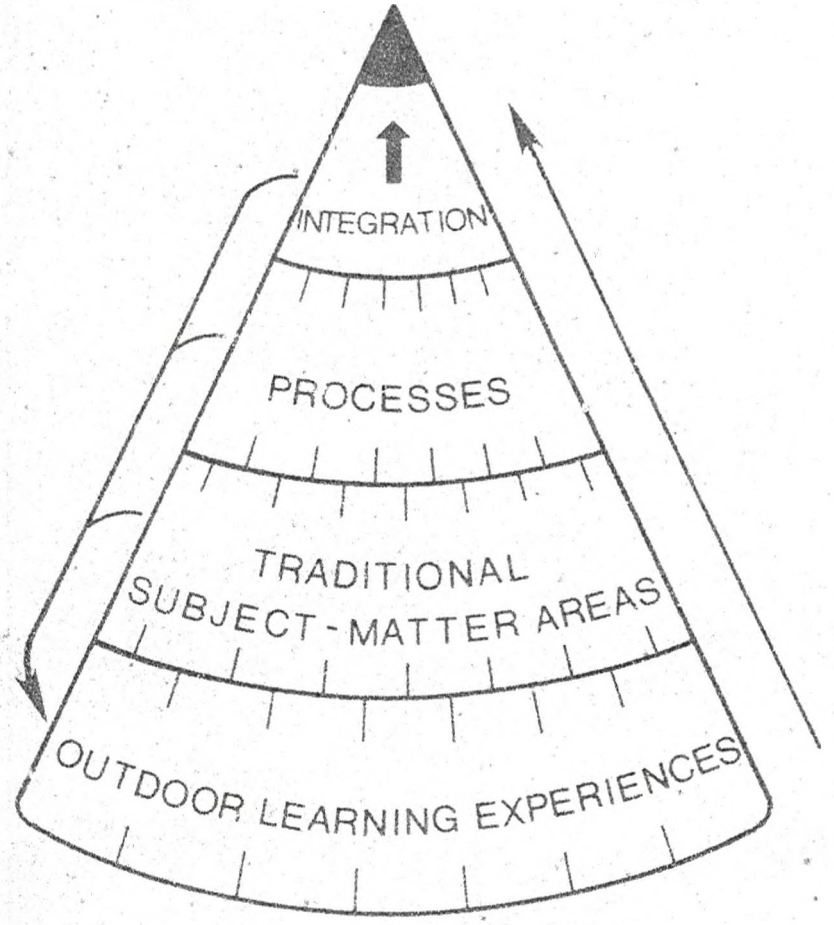

Figure 6. Hierarchical Curriculum Cone Showing Relationshipships of Various Components of the Educational Process (adapted from Tanner, D., & Tanner, L.N. (1980). Curriculum Development (2nd ed.). New York: Macmillan Publishing Co., Inc., p. 480).

> idealized model. This most common sequence of curriculum decisions turns the model on its head. First, activities are identified that are attractive in terms of traditional expectations, that appeal to both students and teachers, and that meet consideration of such constraints as time and resources. Second, with the first step accomplished, the choices of learning activities are rationalized as well as possible by appeal to concomitant learnings that might (or might not) accrue in the process. (p. ix)

Whatever its theoretical shortcomings, the hierarchical curriculum cone (shown in Figure 6) does represent a feasible, practical procedure for interrelating the three main content components of outdoor education. The teaching/learning of process skills can be readily facilitated, provided that the sequential pattern is not interrupted nor terminated after the completion of the outdoor activity or the traditional subject-matter content. In this approach, the teacher would design outdoor activities which have the capability of reinforcing and enriching the selected disciplinary concepts and skills. The subject-matter content, in turn, would be designed in a manner which would contribute to the development of process skills. Most important, the planned sequence of

learning experiences must provide for the ultimate integration of the knowledge, skills, and processes which are the intended outcomes of the educational experience.

Concluding Comments

We can no longer assume that students, by themselves, can effectively integrate the plethora of haphazard, fragmented learnings to which they are exposed daily in contemporary society. A knowledgeable, compassionate teacher who utilizes an interdisciplinary, process-oriented approach to teaching is the best assurance that integration by and within the student will occur. Integration, in the sense of personal fulfillment and self-actualization, is considered by many prominent educators as the highest level of the educational experience. It simply can't be left to chance!

The prophetic words of Berman (1968), published nearly twenty years ago, are as relevant and pertinent today as when they were originally expressed:

> If the schools could but even faintly hear the beat of the drummer of twenty-five years hence, how different the march would be. Instead, the schools oftentimes respond loudly and clearly to the drummer of fifty years past. Not only is the beat of the music from the past, but the melodies appear to be only slightly changed variations on old themes. The sounds of the

future come through, erratic in their beat and dissonant in sound.

> It is the dissonance which must eventually make sense, be the sounds ever so new if education is to help provide opportunities for persons to become contented, contributing members of tomorrow's world. Our hypothesis is that as the school places priority upon developing a setting where children and youth have the opportunity to experience and verbalize the meanings of creating, loving, knowing, organizing and other process skills, they will orchestrate more beautifully the components of tomorrow's world than if they did not have such new priorities established in the curriculum. (pp. 190-191)

Evaluation

Curriculum development, as perceived in the present study, is primarily a process rather than a product. Evaluation is viewed as a critical and integral part of the curriculum development process. This perspective of evaluation suggests that the measurement of student achievement, which often becomes the sole determinant of school effectiveness, is only one of several indicators of how well the educational process is responding to the needs of its clientele. Educational goals, curriculum

content, instructional practices, and the learning environment are essential components of the total evaluative process. In other words, the "ends-means" factory model of schooling, with its gauge for improvement marked off in accountability units of SAT scores and various other subject "achievement" scores, can no longer be viewed as adequate. As Goodlad (1979) so aptly stated, ". . . school grades predict school grades and not much else--not compassion, not good work habits, not vocational success, not social success, not happiness" (p. 63).

Goodlad (1979) suggested that we should view schooling as an "ecological model" rather than as the currently-perceived factory model. He viewed the ecological model as being primarily concerned with ". . . interactions, relationships, and interdependencies within a defined environment" (p. 76). In this approach, evaluation would call for ". . . descriptions, analyses of relationships, and the use of normative standards or criteria of goodness" (p. 77). In contrast, the factory model was seen as being preoccupied with external accountability, which involves ". . . precise delineation of goals to be accomplished, the use of goals to justify means, and measurement of the precisely defined goals" (p. 68).

> The essential differences between the ecological model and the linear ends-means model lie in the way goals are used. In the latter,

> goals are only something to be achieved; they are viewed as "givens" lying outside the system, used to justify what goes on inside the system. In the ecological model, however, while it is recognized that goals have been set outside of the system for the system, these goals are reckoned with as part of the system. (p. 77)

Because qualitative factors in education cannot be readily quantified, evaluation within the ecological model is considerably more complex than in a linear, end-means system. The move for educational accountability has led to the amassing of voluminous "hard" data, but the vital questions regarding relationships and interdependencies within the school environment have been overshadowed by relatively unimportant quantitative by-products.

Schubert (1986) maintained that the product-oriented approach to curriculum improvement is too simplistic and too insensitive. He stated:

> The human being is much more complex than the outcome score on an achievement test can reveal, and the experience of schooling is a curriculum too subtle to represent in charts and graphs. What is needed are forms of evaluation that illuminate curriculum experience. . . .
>
> Emphasis on the diversity, complexity, depth, and subtlety of curriculum experience

> illustrates the need for a democratic orientation to curriculum improvement. This approach not only involves and caters to those most involved at the school and classroom level, it evolves from their work and insight. In other words, instead of experts conceiving of improvements while using minimal input from personnel who are later required to carry out or implement them, improvements themselves are seen to emerge from the experience of persons intimately engaged in situations. Outside or central office experts may be used as consultants, but they are used at the discreation of teachers, building principals, and students who seek their help. (pp. 374-375)

In compliance with this perspective, the present study is limited to selected evaluative measures which can be undertaken at the local level by classroom teachers and others who are directly involved in planning educational experiences for children.

Related Studies

Previous research regarding the evaluation of outdoor education programs includes a diverse range of factors. Most of the studies are quantitative in nature, and deal with specific program outcomes, such as the contribution of outdoor education to the development of

self-concept, academic achievement, and social and physical well-being. Only a few studies are related to the evaluation of the curriculum components which have been addressed in the present study.

Broda (1977) investigated the nature of the selection criteria used by teachers for the development of resident outdoor education curricula. He found that there were no significant differences among the three foundational factors of "learner, society, knowledge" in determining the selection of curriculum content. He concluded that:

> The rather even split between society, knowledge, and learner priority classifications possibly results from the all-encompassing nature of resident outdoor education. The resident outdoor education literature, professional journals, as well as popular articles, strongly stress the wide range of learning experiences that can occur through such programs. It is possible that teachers wanted to "cover all bases" when asked for the reasons underlying their curricula, and therefore tried to mention all three aspects on the questionnaire. The priority ranking for each variable was an attempt to filter out responses that were merely given as final responses to complete the questionnaire, but were not really viewed

> as being important by the teacher. The priority ranking, however, showed a distribution between the three classifications that was even more symmetrical than was the case for the total response percentages. (pp. 99-100)

In an earlier study, McClure (1965) found that learner-based criteria were used 2-1/2 times more often than knowledge-based criteria for selecting curriculum content. Freedle's (1971) investigation of teachers' attitudes toward selected activities in curriculum improvement also revealed a tendency to favor the needs and interests of students.

Tisdale (1977) developed a set of criteria which could be used by school districts to determine the comprehensiveness of their outdoor education programs. The criteria included three broad categories:

1. An outdoor education program should extend the classrcom curriculum.
2. An outdoor education program should enrich the classroom curriculum.
3. An outdoor education program should create new curriculum dimensions. (p. 74)

While the above-mentioned studies provided some valuable insights into teachers' perceptions about the selection procedures for curriculum content, they were of limited value for the purpose of establishing criteria

for the validation of specific outdoor education curriculum items.

Validation of Outdoor Activities

Bloom (1976) maintained that ". . . changes in the school environment can relatively quickly (in a decade) make great changes in the learning of students. In contrast, attempts to make changes in the home and the larger social environment, which are believed to be related to education and learning, are likely to take many decades before major effects would be felt in the schools" (p. 17).

The author contends that the implementation of the proposed interdisciplinary curriculum model for outdoor education represents one of the ways in which positive changes can be made in the contemporary educational process. Because of its humanistic value orientation, it has the potential of making the school a more humane place in which students can progress toward goals of personal fulfillment and self-actualization.

Evaluation techniques for determining the effectiveness of the interdisciplinary outdoor education model will, because of its inherent proximity, have to be consistent with and part of the overall evaluation design for a humanistic, process-oriented school curriculum.

While many of the dimensions of curriculum evaluation require longitudinal consideration, there are some

elements of the proposed model which can be addressed more immediately. One of these elements is the validation of the outdoor activities to be included in the interdisciplinary curriculum. Thus, the author has formulated a set of evaluative criteria which can serve as a guideline for the selection of appropriate outdoor learning experiences.

The following set of criteria is based on the key characteristics of outdoor education as identified in the description of the model:

1. Outdoor activities must comply with the "in, about, and for" elements of the stated definition of outdoor education.

2. Outdoor activities must contribute to the attainment of the main purpose of outdoor education, namely, personal fulfillment and self-actualization. This purpose is accomplished through learning experiences that develop: (a) personal growth in self-concept, self-understanding, and self-respect; (b) social skills, such as cooperation, communication, and respect for the rights and needs of others; and (c) a harmonious relationship with the physical environment, including the wise use of the outdoors for leisure pursuits, creative endeavors, and healthy life-styling.

3. Outdoor activities must contribute to the development of cognitive, affective, and psychomotor domains

of the educational process. This involves the acquisition of disciplinary knowledge and skills, attitudes and values, and motor performance behaviors.

4. Outdoor activities must contribute to one or more of the learning processes: communicating, problem-solving, critical thinking, decision-making, creating, and valuing.

5. Outdoor activities must have an interdisciplinary capability. This is, in addition to reinforcing and extending disciplinary content, an activity must serve as an integrating mechanism for related knowledge and skills from two or more subject-matter areas.

6. Outdoor activities must be feasible. That is, an activity must comply with such logistical factors as time requirements, safety, availability of resources, and the capabilities and desires of students.

In Chapter IV, the author has described the essential components of the proposed interdisciplinary curriculum model for outdoor education. The format for this discussion was based on the structural elements of a curriculum model, which were outlined in Chapter III. It is the author's contention that the proposed model will improve the conceptualization of outdoor education and provide a theoretical framework for further curriculum development and research.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The primary purpose of this study was to develop an interdisciplinary curriculum model which would improve the conceptualization of outdoor education by providing a theoretical framework for curriculum development, evaluation, and further research.

In order to create the proposed model, it was necessary to address several related issues. The first phase of the study involved an investigation of current perspectives on outdoor education. Key characteristics and guiding principles were determined to provide a clarification of the substantive structure of this field of study. A definition and a set of goal statements were proposed in order to resolve the perceived impasse which has developed concerning the nature and scope of outdoor education. A brief historical overview revealed that at least three distinct forces have influenced the evolution of outdoor education: (1) the influence of "camping education" programs which emphasized recreational experiences and democratic-living skills; (2) curriculum-oriented programs which encouraged the utilization of

outdoor resources to enrich traditional subject-matter areas; and (3) the emergence of environmental education which focused on ecological principles and practices. An analysis and synthesis of the contributions of John Dewey, L. B. Sharp, Julian Smith, and other prominent educators provided the basis for the development of a rationale and philosophical foundation for outdoor education.

The second phase of the study was centered on an examination of curriculum development pertaining specifically to the field of outdoor education. A set of value orientations derived from an analysis of conventional curriculum designs, coupled with the structural elements of a curriculum model which were formulated by the author, provided the framework for identifying distinctive patterns with respect to existing outdoor education programs. Based on an analysis of 25 representative school programs from three Canadian provinces and seven U.S.A. states, the following five generic outdoor education models were identified and described: (1) traditional subject-matter model; (2) thematic/conceptual approach; (3) environmental/ecological studies; (4) adventure pursuits model; and (5) school camping.

The final phase of the study included a detailed description of the proposed interdisciplinary curriculum model for outdoor education. The format used to describe

the model was based on the following structural elements of a curriculum model: (1) the definition, purpose, and goals of outdoor education; (2) the underlying value orientation; (3) the nature and scope of content; (4) implementation procedures; and (5) the process of evaluation.

One of the main features of the proposed model is the discussion of a unique body of content for outdoor education. Contrary to the position taken by some outdoor educators, the author of the present study has assumed and defined a body of content specific to outdoor education. Thus, three main content dimensions, or content cores, were presented: (1) specially selected outdoor activities, (2) learning processes, and (3) content derived from academic disciplines.

Conclusions

Based on the findings of this investigation, the following conclusions seem to be justified:

1. The proposed interdisciplinary curriculum model can improve the conceptualization of outdoor education by providing a theoretical framework for curriculum development, evaluation, and further research. Because of the perceived revitalization of the outdoor education movement, it is imperative that the current ambiguity concerning the nature and scope of this field of study be resolved in order to provide a clearer direction for future developments.

2. The author contends that, contrary to traditional perspectives, outdoor education comprises a unique body of content, which includes specially-selected outdoor activities, learning processes, and knowledge and skills adapted from traditional disciplines. Furthermore, it has been demonstrated that this body of content can be readily organized into a meaningful, systematic structure.

3. The interdisciplinary curriculum model has the capability of complementing and supplementing the traditional discipline-based school curriculum in two important ways: (a) because of its interdisciplinary nature, the model can serve as an integrative mechanism for many of the fragmented components of the school curriculum; and (b) because the organizing centers for the model consist of learning processes, it can provide a structure for innovative curriculum planning.

The proposed model is considered as a nexus, albeit an important one, in the dynamic process of curriculum development. Further refinements will be necessary to ensure the continued progress of the outdoor education movement as an integral part of the total educational process.

Recommendations for Further Research

The development of the proposed interdisciplinary curriculum model for outdoor education represents a seminal effort in this area of curriculum design. Having the

characteristics of a prototype, the model will need to be subjected to both practical application and further research.

Some of the questions that have been generated are beyond the scope of this study as determined by the stated delimitations. Therefore, the author proposes the following recommendations for further study:

1. Disciplinary knowledge, which is typically used as the structural basis for curriculum design, can be made more dynamic by integrating it with learning processes. However, since the process-oriented approach to curriculum design has had limited practical application, the feasibility of this approach must continue to undergo critical examination. The diverse array of learning processes must be tested, refined, and clearly articulated.

2. A delineation and articulation of the content components for outdoor education requires further study. A system needs to be devised for the clarification and evaluation of the multitude of existing outdoor activities. The relevance and applicability of each activity to the school curriculum should be established and catalogued.

3. Research studies on the historical/philosophical development of the outdoor education movement seem to have been neglected since the earlier works of Hammerman (1961), Lewis (1968), and Wiener (1965). Studies on the

contributions of contemporary outdoor education leaders would provide fresh perspectives on this field of study. Additional philosophical studies, in particular, are needed to provide a more sophisticated rationale and philosophical foundation for contemporary outdoor education programs.

APPENDICES

APPENDIX A

LIST OF OUTDOOR EDUCATION PROGRAMS

INCLUDED IN ANALYSIS OF SCHOOL PROGRAMS

LIST OF OUTDOOR EDUCATION PROGRAMS

INCLUDED IN ANALYSIS OF SCHOOL PROGRAMS

1. A. E. Peacock High School
   Moose Jaw, Sask.

2. Assiniboia Elementary School
   Assiniboia, Sask.

3. Bert Fox High School
   Fcrt Qu' Appelle, Sask.

4. Bettendorf Middle School
   Bettendorf, Iowa

5. Cairns Junior High School
   North Battleford, Sask.

6. Calgary Catholic School District
   Calgary, Alberta

7. Churchill High School
   LaRonge, Sask.

8. Cleveland Heights Public Schools
   Cleveland Heights, Ohio

9. Glen Elm Elementary School
   Regina, Sask.

10. Hamilton-Wenham Regional High School
    Hamilton, Maryland

11. Human Relations Youth Adventure Camp
    New York (cited in Knapp & Goodman 1981)

12. Immaculate Heart Junior High School
    Estevan, Sask.

13. Imperial Elementary School
    Regina, Sask.

14. Lake Forest High School
    Lake Forest, Illinois

15. Nipissing Board of Education
    North Bay, Ontario

16. Pontiac Junior High School
    Fairview Heights, Illinois

17. Riverview Collegiate
    Moose Jaw, Sask.

18. Rosetown High School
    Rosetown, Sask.

19. Rosthern Junior High School
    Rosthern, Sask.

20. San Diego City Schools
    San Diego, California

21. Shaunavon High School
    Shaunavon, Sask.

22. Thom Collegiate

    Regina, Sask.

23. Towering Pines Camp

    Wisconsin (cited in Van Matre 1979)

24. White City School

    White City, Sask.

25. Yorkton Public School District

    Yorkton, Sask.

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