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An investigation of outdoor adventure leadership and programming preparation in physical education baccalaureate degree programs

Uhlendorf, Karen Jane, Ed.D.

The University of North Carolina at Greensboro, 1988

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AN INVESTIGATION OF OUTDOOR ADVENTURE LEADERSHIP AND PROGRAMMING PREPARATION IN PHYSICAL EDUCATION BACCALAUREATE DEGREE PROGRAMS

by

Karen Jane Uhlendorf

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

Greensboro
1988

Approved by

Rosemary McGee

Dissertation Adviser

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

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November 3, 1988
Date of Acceptance by Committee

November 3, 1988
Date of Final Oral Examination

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The nature and scope of outdoor adventure leadership and programming preparation for physical education majors was investigated. A nationwide survey (Phase I) found that 184 (44.2%) institutions offered outdoor adventure leadership and programming courses to physical education majors. A mean of 6.7 semester hours, almost equally divided between theory/methods and activity, were offered.

Phase II examined the development of 148 outdoor adventure leadership and programming competencies in 12 institutions with significant outdoor adventure components. Characteristics of the institutions, physical education programs, and outdoor adventure components were described. These institutions offered a mean of 23.6 semester hours in 13.2 predominantly elective activity-oriented courses. An average of 38 (21.2%) physical education majors were enrolled annually in outdoor adventure courses. A mean of 2.8 faculty members, specializing in two or more adventure areas, taught the courses. At least half the institutions offered backpacking, canoeing, climbing/rappelling, cross-country skiing, cycling, SCUBA, orienteering, outdoor education, leadership, outdoor adventure education, and supervised leadership experiences.

The median competency-development score was 4.00 on a five-point Likert scale. Only 2.0% of the competencies

were undeveloped. The most-developed competencies were primarily leadership, first aid/safety, and outdoor skills. A majority of the least-developed competencies were counseling and program planning skills. Two-thirds of the competencies were developed in outdoor adventure-specific courses; the rest, in physical education and other courses. Lectures, discussions, reading/written assignments, skill practice, student leadership experiences, and short-duration trips were prevalent development experiences.

Obstacles to further competency development were duplication in other courses, low priority given to competencies, and insufficient time, money, and faculty expertise. Suggestions for further development included adding specific topics or courses and making existing courses requirements. Institutions whose competencies were more developed generally were larger, offered and required majors to take more outdoor adventure courses and semester hours, involved a greater proportion of physical education majors in those courses, and began offering courses earlier than the remaining institutions.

An outdoor adventure leadership and programming preparation model for physical education teacher certification majors was proposed. Outlined were two required courses and a 13-semester-hour option in outdoor adventure.

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CHAPTER I

INTRODUCTION

Outdoor adventure activities such as rock climbing, mountaineering, white-water canoeing, and extended wilderness excursions gradually are becoming part of elementary and secondary school physical education curricula across the United States (Darst & Armstrong, 1980; Ewert, 1986; Gaudiano, 1980; Moore, 1986; Rohnke, 1986). Sometimes called outdoor pursuits, high-risk activities, wilderness survival training, or challenge sports, as well as a wide range of other names, outdoor adventure activities have become increasingly popular in education, recreation, and other human services. As the inclusion of outdoor adventure activities has grown, so has the concern for the quality of the leadership and safety of those programs (Buell, 1981; Cousineau, 1977/1978; Darst & Armstrong, 1980; Ford & Blanchard, 1985; Johanson, 1984; McAvoy, 1978; Priest, 1987a; Simmons, 1982). In turn, the professional preparation and qualifications of those who lead outdoor programs have become topics of major interest.

> A widely recognized need to prepare teachers to lead outdoor education experiences has dominated the thinking of outdoor educators since the 1950's. It continued to be a leading concern with the rapid rise in teaching positions and newcomers to the field in the 1960's. The 1970's saw another spurt in interest in preparing teachers for the rapidly emerging

> environmental education movement. Similar concerns have been expressed by advocates of adventure activities. (Vogl, 1977, p. 2)

Simmons (1982) noted that those seeking to employ highly qualified outdoor adventure educators may have difficulty identifying colleges and universities offering bona fide degrees in outdoor adventure education. A survey conducted by the AAHPER Council on Outdoor Education in 1974 identified institutions in only three states and Canada which offered specific certification in outdoor education (Lewis, 1977), a field much broader than, but generally encompassing, outdoor adventure education. Gaudiano (1980) claimed that this finding reflected the paucity of properly prepared professionals ready to conduct outdoor adventure activities successfully and safely. Bachert's directory of programs in outdoor education (1977) listed only 10 institutions providing limited courses in skills which are highly related to outdoor adventure leadership and programming, such as outdoor wilderness leadership, survival, backpacking, rock and mountain climbing, orienteering, flat- and white-water canoeing, SCUBA, winter camping, cross-country skiing, and spelunking.

In more recent years, many colleges and universities have added outdoor or wilderness-related courses to the curricula in various academic units. Hendee and Roggenbuck (1984) identified 417 colleges and universities which

offered wilderness-related courses. It should be noted, however, that these courses were conducted by a variety of departments or programs and that, while related to education in and about wilderness, these were not necessarily courses designed to prepare one for outdoor adventure leadership and programming in the context of elementary and secondary school physical education. Hence, the present study sought to identify and describe physical education baccalaureate degree programs across the United States in which preparation for outdoor adventure leadership and programming was a component.

An exploration of recent trends in recreational and educational uses of adventurous outdoor activities emphasizes the significance to the contemporary physical educator of leadership competency in this area. The history and tradition of the United States is filled with adventure and outdoor living. The nation's early character was forged in the outdoors; learning to cope in a wilderness environment is part of the American heritage. Today, adventure has all but disappeared from normal daily living in this country. We have entered an era of relative freedom from the survival concerns of our ancestors, and natural adventures have become increasingly difficult to find.

In this country in recent years, however, there has been a resurgence of the pioneering spirit and a rapid

growth of participation in activities in the outdoors. Many of these outdoor pursuits include those of a risky, challenging, or adventurous nature such as rock climbing, mountaineering, white-water canoeing, and extended wilderness excursions. For example, Appalachian Trail Conference records indicate that in 1970 only 10 individuals reported that they had hiked the entire length of the trail between Maine and Georgia; in contrast, 10 years later, 118 hikers documented completion of the 2,000-mile trek (Ford & Blanchard, 1985). Statistics for travel on the Colorado River through the Grand Canyon indicate similar exponential growth trends. In 1965, 547 people ran this stretch of the river. By 1970, this number grew to almost 10,000, and only two years later this figure swelled to over 16,000 (Ford & Blanchard, 1985).

Observers of this phenomena have speculated about factors which have rekindled nationwide interest in outdoor adventure activity. Wilson (1977) suggested that the dramatic growth of outdoor sports between the mid-1960s and mid-1970s may have signaled, among other things, widespread dissatisfaction with the excessive technology and urbanization of modern American life. To some individuals, participation in wilderness activity was reminiscent of the world of this nation's founders--a return to a simpler, yet more rugged and self-sufficient way of living--and it presented an escape from the increasing mechanization and

tensions of fast-paced contemporary life.

The rapid proliferation of recreational outdoor activities during the last two decades was further encouraged by an increasing interest in and appreciation of the natural environment typified by Earth Day, the ecological awareness-raising celebration of the early seventies. Since 1970, membership in major environmental organizations has increased three- to fourfold (Hendee, 1984), and wilderness advocacy has resulted in the establishment and growth of the 80-million-acre National Wilderness Preservation System (Hendee & Roggenbuck, 1984). Wilderness has been viewed as the "consummate classroom for ecological awareness" (Hendee, 1985, p. 2), and much of this wilderness is being used by individuals engaging in outdoor adventure activities. Progen (1979) noted:

> The current ecological movement to save the natural environment from an affluent and overproductive society indicates a modern concern for nature as well as its great appeal expressed by increasing numbers of people seeking sports activities away from the cities and gymnasiums and in natural settings. (p. 237)

The 1960s and 1970s also were characterized by individuals engaging in a personal search for a sense of self (Wilson, 1977). In this quest for "personal integration, synthesis, and transcendence of limitations" (Jewett, 1985, p. 42), many individuals have turned to physical activity, particularly outdoor adventure activities.

> Perhaps risk sports have become increasingly popular because they seem to integrate participants with the universe. Reported evidence indicates that regular participation in risk sports makes persons more efficient, creative, and productive, perhaps because these sports share not only risk, but . . . the sense of boundaries crossed, limitations transcended, and perceptions gained. (Jewett, 1985, p. 43)

Indeed, the literature is replete with studies illustrating the vast potential of outdoor adventure activity to positively influence a variety of self-attributes such as self-concept, self-image, self-esteem, self-confidence, self-awareness, and the like (Ewert, 1983; Godfrey, 1974; Iida, 1975; Matthews, 1976; Pollack, 1976; Shore, 1977).

The educational value of adventurous activity in the outdoors has been recognized by a number of organizations across the nation, most notably Outward Bound and its school-based adaptation, Project Adventure. While the philosophic roots of adventure education may be found in the works of Rousseau, Dewey, Kilpatrick, and others (Carlson & Lewis, 1974; Hammerman & Hammerman, 1973; Rillo, 1984), it is Outward Bound that has given contemporary impetus to the use of adventure in educational settings (Hammerman, 1985; Kalisch, 1979).

Outward Bound, originally founded in Europe, opened its first school in the United States in 1962. The growth of such programs has been extraordinary; Outward Bound currently averages 14,000 participants annually (Wade, 1986b). There are now five Outward Bound schools in this

country, and hundreds of other commercial organizations also offer outdoor adventure experiences.

Perhaps the most well-known school adventure program with a physical education component is Project Adventure. In 1971, Project Adventure was created in a Massachusetts school system by several faculty members who had previous experience with Outward Bound. They proposed the application of Outward Bound educational concepts to public education. This organization has created, implemented, and disseminated an adventure physical education curriculum for secondary schools. Today, Project Adventure has regional offices in the Northeast and Southeast, and it is involved in over 800 adopter programs nationwide (Rohnke, 1986).

A number of physical educators have supported the inclusion of outdoor adventure activities in present and future physical education curricula. Jewett (1977) described likely curricular trends in secondary school physical education in the coming years and indicated that risk sports such as rock climbing, sky diving, skiing, skin diving, and hang gliding might receive greater emphasis. Several other physical educators (Bucher, 1983; Nixon & Jewett, 1980) have noted similar trends in the secondary school curriculum for the 1980s and beyond. Robinson (1980) described a movement toward physical education curricula for the secondary schools that emphasizes risk taking, survival, and self-sufficiency.

Along with disciplinary, social interaction, personalized, lifetime activities, and social reordering styles, outdoor education or adventure programming has been described by Taylor (1980) as one of the contemporary styles of physical education curriculum for secondary schools. This style provides excitement and adventure for students through activities that range from low risk to high risk. Among outdoor pursuits included by Taylor in this curriculum style are canoeing, hiking, rock climbing, camping, and skiing.

In suggesting directions for future physical education curriculum, Evaul (1980) gave examples of units organized around such key outdoor adventure concepts as cooperation and courage. These units would focus on experiences in which groups are given problems to solve and in which individuals are faced with progressively more risky activities designed to increase confidence gradually. Problem solving and risk taking designed to promote confidence development are common to both Outward Bound and Project Adventure experiences.

More and more, the literature pertaining to physical education curricula makes reference to the use of outdoor adventure experiences in the schools. Siedentop (1980) devoted an entire chapter of a recent introductory physical education text to the topic of wilderness sports and outdoor pursuits. In another physical education text,

Willgoose (1984) cited the recent movement to institute a modified Outward Bound experience as a part of physical education in many schools.

While school adventure programming was promoted originally and continues to be most predominant in secondary schools, Moore (1986) noted that this area of activity also is being implemented successfully at the elementary school level. The high level of active participation regardless of skill level and the probability for success in challenging situations as well as the noncompetitive atmosphere of adventure activities add desirable characteristics to an elementary school physical education curriculum (Siedentop, Herkowitz, & Rink, 1984).

In a rejoinder to recent education analyses which have excluded physical education, Heitmann (1984) spotlighted high-risk sports as a logical curricular addition in a physical education back-to-basics movement. Noting a need for "a more encompassing curriculum which demonstrates both the structure of the discipline and the utilitarian and recreational integration of skills and knowledge" (p. 25), Heitmann suggested challenging outdoor adventure activities as possibilities for filling the void. She pointed to the strong connections between elements of high-risk sports and the skills, attitudes, and knowledge necessary to cope with daily life risks (e.g., escaping from a fire, falling safely, and water-immersion emergencies). Additionally,

"with the media coverage and availability of high-risk sports, physical education curriculum should provide students with fundamental skills and understanding, should they participate in [these activities] in out of school time or in later years" (Heitmann, 1984, p. 26).

Predictions regarding the impact of this innovative addition to physical education also extend to the preparation of and future employment possibilities for professionals in physical education. Siedentop described the future physical educator as "an entirely new breed of physical educator . . . concerned with wilderness sports, outdoor pursuits, and the environment" (1980, p. 282). He predicted an emerging job market as schools provide more programming in outdoor education. In a recent feature series in the Journal of Physical Education, Recreation, and Dance highlighting outdoor adventure activity programs, Ewert noted that "the demand for physical educators who have expertise in the outdoor adventure activities has grown in response to student and societal interest, providing a potential market for trained outdoor adventure educators" (1986, p. 57).

Yet, despite the growing support from a number of professionals and curriculum specialists for adding outdoor adventure activities to the school physical education offerings, it is a notion that has not been embraced fully by many other physical educators. Whether outdoor

adventure activities have a place in physical education was raised as a topic for debate in the November/December 1986 Journal of Physical Education, Recreation, and Dance "Issues" column.

Reasons often cited for a reluctance to include outdoor adventure experiences in school programs are the high risk and potential dangers that seem to be inherent in many of the activities (Gaudiano, 1980). Indeed, encounters with Nature often produce tragic and irreversible consequences. A particularly pointed example is the May 1986 tragedy involving a high school group on Oregon's Mt. Hood in which 9 of 13 climbers died and survivors suffered severe physical trauma (Morganthau & Raine, 1986; "The search," 1986; Trippett, 1986).

Considering the recent national focus on liability litigation and the high costs of liability insurance coverage (Marlow, 1986), it is no wonder that there has been some foot-dragging in the area of implementing adventure programming in school physical education.

> One of the most unfortunate circumstances which has arisen because of the ogre of liability is that any activity which appears to have some element of physical risk and mental courage is not permitted by many of our schools . . . in conducting both formal and extracurricular programs. (van der Smissen, 1975, p. 12)

Interestingly, it is not necessarily the activities themselves that are dangerous but the way in which the activities are conducted. Approximately 80% of allegations

in lawsuits in the outdoor field are related to inadequate supervision (Marlow, 1986). Most injuries incurred during adventure activities have been shown to be the result of inadequate safety precautions or poor judgment on the part of the instructors (Higgins, 1981; Storms, 1979). Those programs, though, which are properly planned, carefully supervised and conducted by qualified, trained personnel rarely have been found responsible in legal judgments concerning personal injury (Frakt, 1978; Rankin, 1978).

Betty van der Smissen, a noted expert on the issues of legal liability in school and municipal programs, has stated that "as far as the basic principles of negligence are concerned, there is no difference between an adventure activity and any other activity being conducted. The very same principles for safely conducting such activities apply to all types of activities" (1975, p. 12). Foremost among the basic principles of safe conduct of activities is that the teacher or leader must be a reasonable and prudent professional, "an educated and experienced programmer with the knowledge and skills common to members of the profession" (Rankin, 1977, p. 67).

Given the growing involvement of Americans in adventurous recreational activity outdoors--the skills and habits of which might reasonably be acquired in elementary and secondary schools--and given the strong support of the physical education profession for the inclusion of

adventure programs in elementary and secondary school curricula, there appears to be a need for preservice preparation of physical education teachers in outdoor adventure activity leadership and program development. Moreover, in light of the concern for the safe conduct of these activities, there is a need for that preparation to include the skills, knowledge, and attitudes considered important by other members of the profession.

The present investigation attempted to determine the extent to which the outdoor adventure leadership and programming preparation in physical education baccalaureate degree programs included the skills, knowledge, and attitudes considered important by outdoor adventure education professionals. Buell (1981) identified 235 outdoor adventure leadership competencies for both experienced and entry-level professionals. These were rated as to importance by 120 outdoor adventure educators who were equally divided among three categories: (a) directors/administrators of programs, (b) leaders/instructors of groups, and (c) educators/trainers of leaders. The 153 competencies rated important and essential for entry-level outdoor adventure leaders in Buell's research (Appendix A) provided the framework in the present study for examining outdoor adventure leadership and programming preparation offered to preservice physical education majors across the United States.

Statement of the Problem

The purpose of this investigation was to examine the preparation for outdoor adventure leadership and programming offered in physical education baccalaureate degree programs across the United States in order to answer the following questions:

1. Which colleges and universities in the United States included in their physical education baccalaureate degree program a component in outdoor adventure leadership and programming?
   a. How many institutions in each district of the American Alliance for Health, Physical Education, Recreation, and Dance offered to physical education majors one or more courses in outdoor adventure leadership and programming?
   b. Which colleges offered to physical education majors a significant component in outdoor adventure leadership and programming?

2. What were the characteristics of the institutions offering significant components in outdoor adventure leadership and programming to physical education majors? Specifically:
   a. What were the enrollments of the institutions?
   b. Were the institutions state-supported or private?
   c. In which districts of the American Alliance for

Health, Physical Education, Recreation, and Dance were the institutions located?

3. What were the characteristics of the physical education baccalaureate degree programs offering significant components in outdoor adventure leadership and programming to physical education majors? Specifically:
   a. What were the titles of the academic units administering the physical education baccalaureate degree programs?
   b. How many students were enrolled in the physical education baccalaureate degree programs?
   c. How many full-time and part-time faculty members taught in the physical education baccalaureate degree programs?

4. What were the characteristics of the outdoor adventure leadership and programming components? Specifically:
   a. For how many years had the outdoor adventure components been offered to physical education majors?
   b. How many physical education majors were enrolled in the outdoor adventure component?
   c. How were the outdoor adventure components structured? Were they offered as (1) options,

concentrations, tracks, or specialty areas within the physical education major; (2) minors; (3) individual courses; or (4) any other structures?

d. How many full-time and part-time faculty members were involved in teaching the outdoor adventure components? What were their faculty ranks and terminal degrees? In which areas of outdoor adventure did they specialize?

e. How many courses were offered in outdoor adventure leadership and programming? How many semester hours of credit were granted for the courses? What was the main format of the courses (theory/methods or activity)? Were the courses required or optional? What was the number of contact hours per course? What were the titles of these courses?

f. What types of areas or sites were used for outdoor adventure course experiences and what was the approximate one-way travel distance to each from campus?

5. Which of Buell's (1981) essential and important outdoor adventure leadership competencies for the entry-level professional were developed by curricular experiences within the physical education degree programs?

a. On a five-point Likert scale ranging from 1 (minimally developed) to 5 (highly developed), to what degree was each competency category developed by the curriculum? To what degree was each competency developed? Which competencies were developed to the greatest extent (median rating of 4.5 or more) and to the least extent (median rating of 3.0 or less)? Which competencies were not developed at all?

b. What percentage of the competencies in each competency category were developed by each of the following types of courses:

   (1) outdoor adventure-specific courses?

   (2) other physical education courses?

   (3) non-outdoor adventure/non-physical education courses?

c. Which of the following types of experiences were used in the development of each competency category?

   (1) lecture

   (2) discussion/seminar

   (3) skill demonstration

   (4) reading/written assignments

   (5) hands-on skill practice

   (6) day trips

   (7) overnight/weekend trips

(8) three- to seven-day trips

(9) one- to three-week trips

(10) longer than three-week trips

(11) supervised student leadership experience, practicum, or internship

(12) other types of experiences as specified by respondent

d. Did the respondents believe that it was possible, in their curricula, to increase the development of competencies which were not developed at all or which were rated low on the development scale (that is, rated 1 or 2)? If so, what suggestions were made for coursework or experiences to further develop each of those competencies? If not, what were the perceived obstacles to further development?

6. Which characteristics of the institutions, physical education programs, and outdoor adventure components distinguished high-development institutions (schools with overall competency-development medians of 3.5 or greater) from low-development institutions (schools with overall competency-development medians less than 3.5)?

Definition of Terms

The following terms are defined as they were used in this study:

Competency development. The degree to which a specific competency was addressed through curricular experiences in physical education courses. For the purposes of this study, competency development was measured on a five-point Likert scale ranging between 1 and 5, where the end points were labeled "minimally developed" and "highly developed," respectively. These end-point levels of competency development were defined as follows:

a. minimally developed: The competency was introduced briefly in no more than one course.

b. highly developed: The competency received a considerable amount of emphasis in coursework experiences. It was a major topic in one or more courses.

Another option was that the competency was not developed at all through planned coursework experiences.

Entry-level outdoor adventure leader. Buell has defined this individual as a

> specifically trained person whose Outdoor Adventure knowledge, skills and behaviors are developed to the degree that the leader can assume responsibility for program leadership in an agency or organization. The entry-level professional will most often perform his/her leadership functions under the guidance and direction of other professionals with higher levels of competency and experience. (1981, p. 8)

Outdoor adventure activity. Those activities which take place in a natural land or water environment, involving nonmotorized and nonanimal means of travel, and which may include elements of real or perceived risk. Such activites may include, but are not limited to, hiking, backpacking, bouldering, rock climbing, ropes courses, mountaineering, orienteering, cross-country skiing, primitive camping, canoeing, rafting, kayaking, caving, snowshoeing, and wilderness survival. Excluded from this definition are activities such as car camping, motor boating, horseback riding, and dog sledding. Also excluded for the purposes of this study are aerial activities such as hang gliding and parachuting.

Outdoor adventure education. The presentation of opportunities for personal growth through physiologically, psychologically, and sociologically challenging experiences in the natural environment. Additionally, it is a process occurring in the outdoors "whereby learning takes place through direct experience and includes methods and a setting that are generally unfamiliar and exciting to the pupil" (Baker, 1976, p. 19). Typically, outdoor adventure education employs small group living and travel in wilderness settings, and challenging outdoor activities are utilized to achieve individual and group growth.

Outdoor adventure leadership. The act of assuming responsibility for the learning and welfare of participants involved in outdoor adventure activities.

Outdoor adventure leadership competency. A statement of knowledge, skill, behavior, and/or attitude deemed essential or important by outdoor adventure professionals for successful performance in the role of entry-level outdoor adventure leader as determined by Buell's 1981 study. Furthermore, as defined by Buell, an essential competency is that which is "an absolutely indispensable competency that each prudent professional should possess and demonstrate," and an important competency is "a substantially significant competency potentially necessary for one to function as a prudent professional" (1981, p. 8).

Outdoor adventure programming. The act of planning, implementing, and evaluating a sequence of outdoor adventure activities.

Physical education. "That field whose body of knowledge focuses upon and is derived from the study of human movement, exercise, sport, and the curricular practices and methods of teaching this subject matter in a . . . school setting" (Husman, Clark, & Kelley, 1981, p. 55).

As applied to names of college and university departments of physical education, this definition is

understood also to include titles such as sport studies, sport science, kinesiology, and human movement.

Preservice physical educator. A person engaging in an undergraduate professional preparation program in teaching physical education which culminates in a baccalaureate degree from an institution of higher education.

Scope of the Study

Only institutions offering outdoor adventure leadership and programming preparation to students enrolled in a physical education baccalaureate degree program were considered in this study. While it was recognized that such preparation was frequently offered in other academic majors, such as Recreation and Leisure Studies, this exploration was restricted to opportunities available to physical education majors.

This investigation occurred in two phases: (a) the identification of institutions with one or more outdoor adventure leadership and programming courses in their physical education baccalaureate degree programs and (b) the in-depth exploration of the outdoor adventure curricula of the institutions with significant components identified in the first phase.

Institutions included in the initial phase of the study were limited to colleges and universities in the

United States which offered baccalaureate degrees in physical education as identified by one or more of the following sources: (a) The College Blue Book: Degrees Offered by College and Subject (1985), (b) Directory of Undergraduate Physical Education Programs (1982), (c) Index of Majors 1984-85 (1984), (d) Peterson's Annual Guides/ Undergraduate Study: Guide to Four-Year Colleges 1986 (Lehman & Suber, 1985), and (e) Physical Education Gold Book: Directory of Physical Educators in Higher Education 1982-84 (1982).

The institutions surveyed in the second phase of the study were identified in one of three ways: (a) they responded affirmatively to the initial questionnaire, (b) they were identified by other respondents, or (c) they were identified by a college-catalog search. These sources indicated that each institution offered in the physical education baccalaureate degree program at least nine semester hours (or 15 quarter hours) of coursework in preparation for outdoor leadership and programming.

Some doubts were raised during the data-collection process about the accuracy and completeness of the information obtained from both postcard responses and the college catalogs. In an attempt to identify as many programs as possible containing the curriculum area of focus in this investigation, several institutions whose postcard replies or college catalogs indicated fewer than

nine semester hours of outdoor adventure courses were included in the Phase II pool of respondents. These institutions' responses or catalogs indicated a possibility that a significant component of preparation in the outdoor adventure area existed.

Assumptions Underlying the Study

Several assumptions underlying this study have not been examined in the present investigation.

1. Outdoor adventure education currently is taught and has received support for continuation in contemporary and future school physical education programs; therefore, physical education teachers need to know how to lead and conduct programs in outdoor adventure education in elementary and secondary schools. Consequently, preparation for outdoor adventure leadership and programming can be considered a valid part of the curriculum for preservice physical educators.

2. The survey methods used have identified physical education baccalaureate degree programs in the United States which include preparation for outdoor adventure leadership and programming in the curriculum.

3. The Phase II survey respondents accurately portrayed the curricular offerings in outdoor adventure leadership and programming at their institutions.

4. The validity and reliability established for Buell's 1981 competency listing lend validity and reliability to the survey tool used in the present study which is based upon that work.

Limitations

Several factors may have influenced or limited the accuracy of the results of this investigation. The findings of the study should be interpreted with consideration of the following points.

1. The questionnaires were reviewed by the researcher's doctoral advisory committee and a panel of pilot respondents and were revised to reflect the reviewers' suggestions. However, the term "outdoor adventure" is comprehensive and applies to a wide variety of learning experiences which occur under a multitude of conditions. Although the term was defined for questionnaire respondents, their interpretations may have varied, particularly since it is still a relatively new area of involvement for many physical educators. A spot check of Phase I postcard responses against college catalog information revealed some disparities. In the second phase of the investigation, telephone or written followup was used to help clarify ambiguous or unclear responses, but not every participant was reached.

2. College catalog data were taken at face value. However, since the catalog collection used (Career Guidance Foundation, 1986) contained catalogs up to four years old, the information may have been inaccurate or out of date. The interpretation of course offerings during the college catalog search was limited by the amount of description provided in the catalogs.

Significance of the Study

Although physical educators have demonstrated a considerable interest in adding outdoor adventure activities to school physical education curricula in recent years, until now the preparation of physical education teachers in this area has been virtually unexplored. The results of this study portray the nature and scope of the preparation for outdoor adventure leadership and programming offered to preservice physical education teachers nationwide. This study also has identified 12 institutions having comprehensive offerings in preparation for outdoor adventure leadership and programming in the physical education baccalaureate degree program.

Practices of institutions with significant offerings in outdoor adventure leadership and programming for physical education majors have been closely examined in the current investigation. The information produced by this study has the potential to influence decisions regarding

the design and evaluation of teacher preparation curricula in physical education. Survey respondents may be prompted to engage in ongoing analysis and development of the outdoor adventure leadership and programming components in their own programs as a result of their involvement in the study. Teacher trainers at institutions where no such curriculum component presently exists should be able to use information produced by this investigation to make decisions about expanding their own programs to include outdoor adventure leadership and programming.

Outdoor adventure experiences conducted by individuals without an adequate background in outdoor adventure leadership and programming can lack potency and relevance. Inadequate leadership in outdoor settings can have serious and possibly life-threatening consequences. Adding outdoor adventure leadership and programming to physical education teacher preparation programs which do not include this area in the curriculum and further enhancing components which currently do exist may have the long-range effects of improving both the quality and safety of school outdoor adventure programs in physical education.

The current investigation represents only an initial effort to wed substantial bodies of knowledge about both outdoor adventure leadership competency and physical education teacher preparation. Much remains to be explored in this merger.

CHAPTER II

REVIEW OF LITERATURE

Selected literature pertinent to this investigation was reviewed and is presented in this chapter. The items selected for review furnished background information for the investigation, aided in the design of the research, and provided valuable insights into the interpretation of the results of the research.

Since materials specifically related to outdoor adventure leadership and programming in physical education professional preparation are virtually nonexistent, the review focuses on several constituent topics. These include both general literature and research reports on outdoor adventure leadership competency, certification, and preparation. Additionally, research on outdoor leadership training models, courses and college curricula, the effects of outdoor leadership training, and other pertinent studies of outdoor adventure leadership are presented. Similar research on professional preparation curricula in physical education and outdoor education was also examined and is reported in this chapter.

General Literature About Outdoor Adventure Leadership

Overview of Outdoor Adventure Leadership Concerns

Interest and participation in outdoor adventure activity have grown in recent decades in this country, and much attention has been centered on the leadership of groups engaging in wilderness experiences. As was highlighted in the introduction to Chapter I, there currently is great concern regarding the preparation and qualifications of outdoor leaders. According to Paul Petzoldt, considered by some to be the father of modern outdoor leadership training, a high-ranking park ranger voiced this very concern in a letter to him:

> It has been my opinion for the past few years that the tremendous increase in outdoor use and education has resulted in a decline in the quality of instruction in these areas. I don't believe that there have been enough knowledgeable, experienced instructors available to fill teaching positions. The majority of them are ignorant and poorly prepared to use the back country. (Petzoldt, 1981, p. 21)

According to MacRea (1976), poor outdoor leadership has impact in four areas: (a) participant health and safety, (b) participant psychological well-being, (c) environmental harm, and (d) governmental restrictive regulation due to overuse and abuse of the wilderness.

In the earlier days of outdoor wilderness programming, anyone who was fortunate enough to have survived an outing

was able to claim leadership ability. In 1976, Metcalfe wrote:

> Unfortunately, everyone known to have been involved in adventurous activities is considered an expert by those who have not. Even worse, some of these "experts" do not realize that they are not as experienced as they should be to lead some activities. (p. 32)

Ford and Blanchard (1985) expressed concern over the "great danger in underestimating the minimum qualifications of leaders. The wrong match of leader and program can result in dissatisfactions among participants, or even in their injury or death" (p. 9).

School programs utilizing outdoor adventure experiences face many problems, not the least of which is providing qualified instructors.

> Staffing would seem to be the major issue. . . . The teacher must be skilled and experienced in the outdoors and have the ability to exercise good judgment and handle an unexpected emergency. This is not the type of course that just anyone could pick-up to fill his/her teaching load. (Ongena, 1981, p. 16)

Gass (1983) echoed the need for properly prepared leaders with regard to implementing outdoor adventure experiences within physical education programs. He noted that a "prospective instructor cannot even attempt to run a course like this without the proper training. It's just too physically dangerous as well as difficult to teach" (p. 37).

Outdoor Leadership Skills

What are the skills expected of an outdoor adventure leader? A number of individuals and organizations have attempted to answer that question.

Descriptions of outdoor leaders. Paul Petzoldt's popular and respected handbook of wilderness skills (1974) has served as the model for leadership knowledge and behavior for the National Outdoor Leadership School, which he founded in 1965. Knowledge of the outdoors, technical ability, and actual experience in combination with good judgment are the qualities of leadership identified in this guide. Additionally, Petzoldt wrote that the leader should display unselfishness, sympathy, understanding, tolerance, a sense of humor and the ability to laugh at oneself, realism, an ability to anticipate dangers or problems and their possible solutions, ability to instruct in techniques and conservation, honesty, a certain degree of intelligence, a pleasing personality and appearance, dependability, and punctuality (Petzoldt, 1974).

In 1977, the Yosemite Institute hosted a workshop at which a number of outdoor agencies were represented. The discussion centered on identifying guidelines for the education and training of wilderness leaders. The qualifications for outdoor leaders identified during this meeting were the following:

1. Age - legal adult

2. Working knowledge of core skills (e.g., toolcraft, ropecraft, health and safety, cookery, map and compass, gear and shelter, environmental awareness, group leadership)

3. Organizing skills - pretrip and during the trip, including alternate plans

4. Working knowledge of the "Wilderness Ethic"

5. Trip leadership qualities (communication skills, character, teaching skills)

6. Physically able to perform effectively including stress/pressure situations

7. Possess "horse sense" under stress or in emergency

8. Working knowledge of mountain medicine, emergency first aid, search and rescue, preventive health and safety planning

9. Working knowledge of mode of travel to be used (canoe, backpack, raft, etc.)

10. Specialized skills as required for the trip (rock climbing, snow camping, spelunking, desert skills) (Cummings & Lieurance, 1977, p. 9)

The role of the instructor in the Outward Bound educational process was explored by Kalisch (1979). He described the instructor's role as a mixture of skill trainer, program designer, translator, group facilitator, and one-to-one counselor. As such, the outdoor leader must wear many hats and possess a wide variety of skills.

Darst and Armstrong (1980) offered the following list to be used in the selection of outdoor adventure leaders:

1. Ability to work with people in outdoor and stressful situations

2. Decision-making skills
3. Ability to communicate
4. At least 21 years of age
5. Expedition experience for extended periods of time
6. Demonstrated successful teaching experience
7. Broad life experiences
8. High level of skills in the activities the program is offering
9. Leadership skills
10. Willingness to make a strong commitment to the success of the program (p. 31)

Ford and Blanchard (1985) desired to see in an outdoor pursuit leader enthusiasm, practical ability in the activity, experience, judgment, appreciation of the outdoors, and enjoyment of the outdoors. Additionally, the leader should display

> friendliness, maturity, sense of humor; knowledge of weather, hazards, environmental issues, and practice; knowledge of people's physical and psychological needs and how to meet those needs; first aid, search-and-rescue techniques, group control; and teaching and leading ability. (p. 216)

Internal standards. A number of organizations involved in outdoor adventure programming have developed their own internal sets of standards and guidelines for their leaders. These include not only large national or regional organizations such as Outward Bound, National Outdoor Leadership School, and Appalachian Mountain Club, but also smaller, more local groups (Brenner & Nichols,

1981; Hale, 1979; Hansen, 1977; MacDonald, 1979; OPCAN 1984; Robertson, 1980; Smith & Baker, 1980; and Wade, 1976).

For example, the instructor's handbook of the North Carolina Outward Bound School (Holmes & Holmes, 1982) described various skills and knowledge needed by leaders of NCOBS programs; among them were the following:

1. skills instruction methods, including knowledge of learning principles
2. counseling techniques
3. skills in listening and giving feedback
4. problem solving
5. group dynamics and stages of group development
6. safety skills, including search-and-rescue and accident emergency procedures
7. a variety of outdoor skills (for example, bicycling, campcraft, caving, ecology, expeditions, first aid, initiatives, map and compass, river crossings, rock climbing, ropes course, and whitewater activities)

National efforts. Some efforts to delineate acceptable standards for outdoor leadership have been made on a nationwide scale. The American Camping Association (ACA), in their manual outlining standards for camps, identified competencies for leaders of tripping, travel camping, and what they call Controlled Physical Risk Activities. Tripping and travel camping may include, among other activities, such Controlled Physical Risk Activities as bicycling, mountain climbing, rappelling, and rafting.

The ACA standards specify that the following competencies of leaders must be evaluated before they take charge of each Controlled Physical Risk Activity:

1. Ability to work with the types of participants involved in the activity.

2. Ability to identify and manage environmental and other hazards related to the activity.

3. Ability to apply emergency health care procedures related to the activity and the participants. (ACA, 1984, p. 34)

ACA-approved trip leaders are expected to (a) be at least 19 years of age, (b) possess documented skills, (c) have endorsements/observations of good judgment and the ability to assume leadership independently, and (d) have experience in leading trips of similar size, duration, and mode of travel. Additionally, the ACA standards recommend that trip leaders possess the necessary knowledge and skills related to the specific activity, geography, climate, and health and accident procedures to enable them to handle emergency situations.

The Association for Experiential Education (AEE), incorporated in 1976, is a group of individuals and organizations expressing a concern for quality, safety, and conservation in adventure programming. Sensing the need to identify common practices in the outdoor adventure field, the AEE membership voted in 1980 to develop program standards and guidelines. The product of this effort, Accepted Peer Practices in Adventure Programming

(Johanson, 1984), detailed a list of ideal basic qualifications for instructors in any adventure programming area. These fall under the major categories of (a) first aid, emergency procedures, and safety; (b) group facilitation and leadership; (c) environmental ethics; (d) weather; and (e) orienteering and navigation. Specific qualifications are also recommended for leadership of each of the 22 land activities, 10 aquatic activities, and one aerial activity addressed.

Judgment. Judgment has been cited by numerous individuals as one of the most essential but also one of the most difficult-to-define attributes of an effective and safety-conscious outdoor adventure leader (Ford & Blanchard, 1985; Yerkes, 1984).

> It is easy to assess the competencies of a trip leader in terms of core skills such as canoe handling, firebuilding, and the like. But it is far more difficult to assess the leader's ability to make mature judgments about health, safety, group behavior, and other problem areas. (MacRea, 1976, p. 10)

Paul Petzoldt, the first Chief Instructor at the Colorado Outward Bound School and founder of both the National Outdoor Leadership School and the Wilderness Education Association, developed an outdoor leadership scheme, outlined in The Wilderness Handbook (1974), which is built around the central core of judgment. Petzoldt stated that "a talent for judgment can be taught" (1974, p. 147).

The Council of Outdoor Educators of Ontario in Canada supported a project by Rogers which resulted in the widely used leadership development manual Leading to Share, Sharing to Lead (1979). According to Rogers, objective judgment is a fundamental and essential attribute of an outdoor leader.

The development, documentation, and evaluation of judgment and decision-making abilities of outdoor leaders is currently under investigation by Cain at the University of Minnesota. Preliminary findings indicate that the panel of 25 North American experts believes that judgment can be developed in outdoor leaders and that "a variety of methods, activities, and groups for the leader to work with is the key to such development" (Priest, 1987a, p. 38).

Soft skills. In addition to the many "hard," or technical, skills outdoor leaders should possess--skills such as rock climbing, kayaking, or backpacking--a number of "soft" skills are needed. Training in social, psychological, and communications skills is an area where outdoor leaders are lacking (Cashel, 1987). According to Bankie, Bankie, McInnes, Oelslager, and Phipps (1983) the outdoor leader should have "a certain knowledge of interpersonal relationships and techniques to promote group and individual harmony" (p. 5). They identified eight psychological theories and counseling strategies considered essential to leadership of groups in the outdoors,

including (a) Reality Therapy, (b) Rational-Emotive Therapy, (c) Gestalt Therapy, (d) Behavioral Counseling, (e) Person-Centered Therapy, (f) Transactional Analysis, (g) Human Potential Theory, and (h) Assertion-Structured Therapy. Outdoor leaders should be familiar with all of these because different groups in different situations may require different strategies.

Certification of Outdoor Adventure Leaders

Out of the concern for quality outdoor adventure leadership has arisen the notion of certifying leaders. As early as 1974, it was suggested that outdoor leadership certification was inevitable (NOLS, 1974). Ewert (1985) indicated that two expected changes in outdoor adventure by the year 2000 are the professionalization of outdoor leadership and the certification and/or licensing of outdoor leaders. Certification has yet to become a reality in the United States.

What is very real in the United States and elsewhere around the world is the continuing controversy surrounding the certification of outdoor adventure leaders and disagreement over the types of training programs used to prepare leaders for that certification. Questions most often raised center on who should do the certifying, what the outdoor leaders should be certified to do, and whether there can ever be one national standard organization that

would certify backcountry trip leaders (Cockrell & LaFollette, 1985). There are both strong support and opposition to the notion of outdoor leadership certification.

Support for certification. In an early paper on adventure programming, Metcalfe (1976) described the fundamental problem of identifying qualified leaders:

> Staffing a program with qualified people is a major problem. Until a good leadership certification program is devised, it will remain so. If it is assumed that each small group should have an instructor who is a certified teacher; [is] skilled in first aid, water safety, outdoor skills, and nature study; knows the history of the area; knows weather, nutrition, survival techniques, equipment repair, and rescue techniques; has the ability to conserve the area being used; and has judgment and maturity, we are assuming a great deal. When, in addition to the above, we have to add qualifications for particularly hazardous activities, such as climbing, caving, scuba, etc., and the ability to handle groups well, under all conditions, the population that can be drawn from becomes small indeed and to a great degree economically unfeasible. (pp. 33-34)

Those in support of certification programs cite as their reasons a desire to (a) protect people by increasing awareness of wilderness hazards and preventing accidents, (b) protect the environment, and (c) lower liability insurance rates (Cockrell & LaFollette, 1985; Levesque, 1981; Swiderski, 1985; Yerkes, 1985; Young, 1985). Rollins (1983) noted that proponents also claim that certification serves to ensure the quality of the experience, motivates leaders to achieve high standards, and provides some support for leaders in liability cases. Another strength

of certification is that it can provide a means to communicate to the employer the qualifications of the leader applicant (Sakofs, 1979).

Darst and Armstrong (1980) considered it desirable for staff members to become certified in all areas that provide and require certification. Such areas include American Red Cross First Aid, Life Saving, and Water Safety Instructor and American Heart Association Cardiopulmonary Resuscitation. Other areas offering certification which might apply to a specific program are SCUBA diving, small craft, and boating. Darst and Armstrong cautioned against using certifications as the sole criteria for staff selection. Hunt (1985) asserted that while a certificate does not ensure that an instructor acts safely, it does make more sense to hire instructors who have been certified as knowing safe practices than to employ someone whose knowledge of safe practices is not known. Nonetheless, Hunt cautioned against equating being certified with being safe.

Opposition to certification. Certification of outdoor leaders has its opponents. They claim that (a) outdoor leadership cannot be taught or be objectively measured, (b) there are too many inconsistencies in certification programs to ensure standard levels of competency, and (c) certification programs are costly in terms of money and time which would prevent many skilled

leaders from completing the certification process (Green, 1982; Yerkes, 1985). Because of the diverse activities and skills required of outdoor leaders, some fear that a certification system would have to be structured so broadly that it would lose its effectiveness (Swiderski, 1985).

> Perhaps a more significant limiting factor for certification schemes is that the task of establishing standards which apply to all the various population groups worked with in the outdoors and in the various geographic areas of this country is a daunting one. No one set of standards . . . could possibly cover the broad range of outdoor activities currently undertaken. (Wade, 1986a, p. 2)

Others reject certification on philosophical grounds. These opponents claim that it is "a move towards crippling the freedom and spontaneity which has allowed outdoor education to evolve into a broad multidisciplinary approach to learning" (Sakofs, 1979, p. 35).

Levesque (1981) pointed out that certification could produce leaders who look good on paper, but who have little practical experience. Since certification courses are time-consuming and costly, they must be brief, and many programs simply test proficiency and provide only limited training, if any at all (Rollins, 1983).

Teschner and Wolter (1984) expressed a concern that the most often used standards for the hiring, training, and professional development of staff in experiential education programs are <u>minimum</u> rather than <u>ideal</u> competencies. The arguments against using minimum competencies in this

way are these:

1. It necessitates a means of agreeing on achievement of minimum competence, but the easiest skills to measure are often the most trivial.

2. Adhering rigidly to designated minimum competencies may foster a "black box checklist" perspective on the hiring process (p. 15).

3. It may foster an attitude that no development is necessary past the minimum in competence.

4. While it may be valuable for hiring and preservice training of outdoor leaders, it is less suitable for inservice training and supervision.

Finding it more useful to focus on ideal rather than minimum competencies, Teschner and Wolter proposed an alternative model based on five broad categories of ideal outdoor leadership characteristics and qualifications: (a) personal characteristics, (b) experience, (c) skills, (d) theoretical knowledge, and (e) certificates. Personal characteristics were considered the most significant of these, while certificates of competence (e.g., college degrees; American Red Cross First Aid, Cardiopulmonary Resuscitation, Advanced Lifesaving, Water Safety Instructor, or Basic Canoeing; or safe driving record) were deemed the least important. In contrast, certifications, theoretical knowledge, and skills were considered easier to achieve in time-limited training programs than were experience and personal characteristics.

Exisiting certification programs. There are a number of examples of outdoor leadership development and

certification programs both in our own country and abroad. Great Britain's Mountain Leadership Training Board (MLTB) originally offered training and certification in mountain leadership in the early 1960s. Although it no longer certifies leaders, the MLTB continues to provide preparation and assessment of leaders. "The Mountain-walking Leader Summer Qualification Scheme consists of a week long training course, one year of logged experience, and assessment at an approved mountain center" (Priest, 1987b, p. 12).

The British scheme served as the model for the development of similar systems in Australia. Mountain and Bushwalking Leadership certification programs are offered in three of seven Australian states; the first of these was initiated in Victoria in 1969 (Priest, 1985). Prospective applicants undergo an initial appraisal of technical and safety skills and are refused acceptance until any deficiencies are remedied through additional experience or outside training. Once accepted, candidates attend a week-long training session followed by a one- to two-year training period with a wide variety of groups in many different settings under the advisorship of an exerienced leader. These experiences are recorded in a logbook which is periodically reviewed. Finally, the candidate is recommended by the advisor for advancement to the assessment stage, where the candidate leads first a

four-day and then a one-week excursion while accompanied by a panel of assessors. Upon successful completion of these rigorous tests, the candidate is granted a leadership certificate (Priest, 1987b).

Canada does not have a nationally recognized outdoor leadership certification program. There are, however, various specialized certification programs offered by organizations such as the Canadian Yachting Association, Canadian Association of Nordic Ski Instructors, and Ontario Recreational Canoeing Association (Rollins, 1983). A number of programs exist which do not grant certificates, such as the Nova Scotia Outdoor Leadership Development Program, and outdoor education programs at several Canadian colleges and universities offer some outdoor leadership preparation (Priest, 1987b).

Likewise, in the United States, there are a number of organizations offering certification in one or more outdoor leadership skill areas. For example, certification may be obtained from the American Professional Mountain Guide Association, American Canoe Association, and American National Red Cross first aid and aquatic programs (Raiola, 1985). There is not, however, one universally accepted certifying body to validate the leadership skills of an individual in all environments and all activities coast to coast. In spite of the monumental difficulty of accomplishing such a task, some inroads along these lines

have been made. The Wilderness Education Association represents one effort to establish a nationally accepted certifying program for outdoor leadership.

Paul Petzoldt, first Chief Instructor of the Colorado Outward Bound School and subsequent founder of the National Outdoor Leadership School, gave impetus to the creation of the Wilderness Education Association (WEA) in 1978. The WEA's National Standard Program for Outdoor Leadership Certification "is the culmination of years of observation, experience, and trial and error testing to determine an appropriate format and curriculum for the educational training and certification of outdoor leaders/educators" (Cain, 1985, p. 54). The WEA program is described further in the next section.

Outdoor Leadership Preparation

Programs. A number of avenues currently exist for developing outdoor leadership skills. Outward Bound, the National Outdoor Leadership School, the Wilderness Education Association, the American Camping Association, and Project Adventure are among the nationally recognized programs (Darst & Armstrong, 1980; Gass, 1983; McAvoy, 1978; Yerkes, 1984). Various other organizations providing certain aspects of outdoor leadership training may be added to that list, such as private outing clubs, the Sierra Club, the Mountaineers, various search-and-rescue

organizations, college outing clubs, mountain guide schools, survival education schools, resident outdoor centers, community agencies such as the YMCA, scouting organizations, school systems, municipal park and recreation departments, and college and university programs (McAvoy, 1978).

Paul Petzoldt (1975) described how, when he was Chief Instructor at the Colorado Outward Bound School in 1964, he was "shocked into the realization that nobody had really trained outdoorsmen in America" (p. 3). To that end, he created the National Outdoor Leadership School (NOLS) the following year. NOLS courses run up to 16 weeks in length, and students may receive college credit. A wide variety of wilderness, mountaineering, sea kayaking, and skiing experiences both in the United States and abroad are offered in which outdoorsmanship may be learned along with biology, zoology, ecology, and the like (Simer & Sullivan, 1983). The primary focus, however, is in teaching the judgment, skills, and knowledge necessary to experience the outdoors safely and comfortably, without harming the environment (Petzoldt, 1981).

The Wilderness Education Association (WEA), founded by Petzoldt and others in 1978, is another organization which prepares individuals for outdoor leadership. In an effort to reduce injuries, searches, and deaths and to provide a basic nationwide curriculum for leadership in the

wilderness, the WEA's National Standard Program for Outdoor Leadership Certification was developed (WEA, 1987). The curriculum stresses leadership, judgment, conservation, and sound expedition behavior practices through experiential teaching/learning situations. The National Standard Program is a college-level curriculum taught in realistic field environments. The curriculum elements are interwoven in an educational sequence consisting of instructor demonstration and explanation, followed by student practice and student-instructor discussion and synthesis with prior instruction.

The 18-point curriculum includes the following topics:

1. judgment/decision making
2. leadership
3. expedition behavior
4. group process and communication skills
5. environmental ethics
6. basic camping skills
7. rations
8. equipment
9. clothing
10. health and sanitation
11. travel techniques
12. navigation
13. weather
14. first aid and emergency procedures; survival
15. natural and cultural history
16. specialized mode of travel/adventure activity
17. trip planning
18. evaluation (Cain, 1985, p. 60)

If the student satisfactorily completes the five-week course, an outdoor leadership certificate is awarded. A certified graduate of the National Standard Curriculum is able to:

1. teach others how to use and enjoy the wilderness with minimum impact
2. safely lead others in the wild outdoors
3. exercise good judgment in a variety of outdoor environments and conditions
4. demonstrate a basic standard of outdoor knowledge and experience (WEA, 1987, p. 3)

Forms of preparation. Frequently, certain aspects of outdoor leadership can be taught in classroom settings. For example, Ewert and Hollenhorst (1984) developed an outdoor leadership training simulator which can be used indoors to cultivate judgment skills in the wilderness leader. Using a variety of scenarios in conjunction with control-team input, audience observation and feedback, and an assortment of props designed to enhance realism, the simulator was designed "to augment, not replace field experience" (p. 2). McAvoy (1978) stated that "any effective leadership program must consist of a combination of classroom and field experiences since it is impossible to develop adequate outdoor decision making abilities in a classroom setting alone" (p. 19). Indeed, the large majority of outdoor leadership preparation programs utilize primarily field experiences to develop leadership skills.

The length of time required to complete an outdoor leadership training program varies greatly; programs vary in duration from weekend workshops to months-long

expeditions. A number of leadership development schemes, such as the one proposed by Rogers in Leading to Share, Sharing to Lead (1979) and the Australian Mountain and Bushwalking Leadership programs (Priest, 1985), incorporate an apprenticeship period lasting one to two years, during which time leadership experiences are recorded in a logbook. March (1985) expressed a belief that "leadership development is a long term process with many facets involving the use of theory courses, laboratory situations, training and assessment courses, logged experience, and adequately supervised internships" (p. 47).

Rogers (1979) described an open-ended leadership development process:

> The development process passes through several stages--some which may be completed in less than a week or have parts of the stage completed in two or three days, others which will extend beyond a year. It is not a process which can be speeded up and "finished" though a mini-course--it cannot be manufactured or mass produced. The time required for maturation of a leader varies from person to person--and indeed, while it has a beginning, it may not have an end. (p. 22)

Research on Outdoor Adventure Leadership

There has been a growing volume of research on outdoor adventure leadership since the mid-1970s. While no studies were found that directly addressed outdoor adventure leadership and programming preparation for the preservice physical educator, a number of investigations related to the topic were identified. The outdoor leadership studies

primarily targeted certification of leaders, outdoor leadership competency, development of training models and curricula, and the effects of leadership training.

Outdoor Leadership Certification

In one of the earliest investigations of outdoor pursuit leader certification, Senosk (1977) surveyed 148 administrative heads of outdoor pursuit organizations and programs in the United States. Her findings showed that at the time of the study:

1. 71.1% had no certification or licensing system in effect for their leaders.
2. 60.4% of those without a certification system had no future plans for using one.
3. 60.1% opposed a uniform certification/licensing system.

Those who favored certification did so because they felt it would provide better leaders, protect participants, and result in fewer participant accidents. Among the reasons for opposition to certification of outdoor leaders were that no need was demonstrated in the administrators' programs and the system being used by those programs to ensure leader quality presented no problems.

Guidelines recommended for establishing a certification system for outdoor leaders in the future included making available a variety of experiences, training opportunities such as workshops and clinics, and standardized training materials to aid in the acquisition

of skills necessary to become certified. Also recommended were that leaders obtain separate certification for each activity they will be leading and that those doing the evaluation and credentialing have a strong background in the areas they are certifying.

Cousineau (1977/1978) conducted a landmark study to identify the functional principles for the development of a certification system for outdoor adventure educators in the Province of Ontario, Canada. Using a three-round Delphi questionnaire, 97 practitioner members of the Council of Outdoor Educators of Ontario (COEO) and 16 nonmember experts rated on a six-point scale of importance 47 fundamental, competency, and operational principles derived from a review of the literature. Following the third round of the questionnaire, 36 principles were considered important, 4 were deemed less important, 2 were rejected, and 5 were found to be controversial.

Overall, 76% of COEO members polled in a preliminary survey indicated that they were in favor of a voluntary certification system to improve safety and quality of outdoor adventure experiences. The results of the Delphi survey indicated that the respondents recognized that a number of components make up competency; that some of these can be evaluated objectively, while others need to be evaluated subjectively; and that, for certification, minimum standards would have to be met in each area of

competency. Furthermore, they agreed upon these areas of outdoor adventure competency:

1. Recognized level of achievement in specific outdoor skills.

2. Successful completion of courses and/or workshops in outdoor skills.

3. Amount of experience as a participant and as a leader in other areas of education or recreation.

4. Desirable personality traits for outdoor adventure leadership.

5. Minimum age.

6. Physical fitness.

7. Skill in wilderness first aid, life saving, and rescue techniques.

8. Skill in aquatic life saving. (Cousineau, 1977/1978, p. 155)

The respondents rejected college or university preparation alone as sufficient training for the outdoor leader. Instead, they agreed that a variety of experiences should provide the background for leadership competency.

Outdoor Leadership Competency

Following the early studies of outdoor leadership certification, attention turned more specifically to the identification of the competencies needed by outdoor adventure leaders. Buell (1981) conducted an investigation to identify and prioritize selected outdoor adventure leadership skill, knowledge, and behavior competencies for both the entry level and the experienced level of

professional performance. From an extensive search of print and nonprint materials, he compiled a list of 235 competencies grouped into 12 categories:

1. Philosophical, historical, and theoretical foundations
2. Outdoor leadership and instructorship
3. Counseling, human service, and human development
4. Program planning and development
5. Outdoor skills and abilities
6. Environmental awareness, understanding, and action
7. First aid and safety
8. Administration and supervision
9. Facilities, equipment, and supplies
10. Professionalism
11. Evaluation and assessment
12. Trends and issues

These competencies were rated on a four-point scale of importance by 120 professionals who were equally divided among three categories of involvement with outdoor adventure programs. They were either leaders/instructors of programs, educators/trainers of leaders, or directors/supervisers of adventure programs. For the experienced outdoor adventure leader, 60 competencies were rated essential, and 133 were appraised as important. For the entry-level outdoor leader, 8 competencies were considered essential, and 145 were deemed important to have. No competencies in the trends and issues category were considered important or essential for the entry-level outdoor adventure leader.

Two first aid and safety competencies, one outdoor skills and abilities competency, and five leadership and instructorship competencies comprised the essential

grouping for entry-level leaders. A wide variety of outdoor skills were included among the most important competencies for beginning outdoor leaders. In order of importance, these included

1. first aid and safety
2. physical fitness
3. personal and group equipment
4. water safety procedures
5. hiking and trail techniques
6. campcraft
7. expedition behavior
8. food preparation
9. navigation and route planning
10. on-the-trail activities
11. search and rescue
12. environmental awareness
13. survival
14. ropecraft
15. weather
16. automobile and van use
17. physiology and nutrition
18. special mode of travel
19. toolcraft

According to this study, the top nine outing sports or modes of travel in which entry-level leaders should possess skills are backpacking, hiking and walking, orienteering, survival, rock climbing, flatwater canoeing, mountaineering, cross-country skiing, and bouldering. Buell's findings also indicated that entry-level outdoor adventure leaders should be prepared to lead experiences in backcountry wilderness areas, mountain areas, and flatwater areas. In addition, the neophyte leader should be most able to conduct programs based in educational institutions involving adolescents in short-term residential experiences of two to four days using group-building activities.

Buell made a recommendation for further study in this area. Particularly, he noted that competencies such as those identified in his study should serve as the basis for programs to prepare outdoor adventure leaders, especially those at an entry level of experience. "Now that a body of knowledge, skills, and behaviors exists, there is a demand to develop effective training programs" (Buell, 1981, p. 175).

Outdoor leadership competencies for land-based outdoor pursuits in the western region of the United States were identified by Swiderski (1981). A review of the literature, input from outdoor leadership specialists, personal experience of the researcher, and adaptation of competency-based teacher education manuals, plus a review by Park and Forest Service personnel and pilot study subjects produced a list of 50 competencies. These were rated on a six-point scale of importance by 148 outdoor leaders, administrators, and educators.

A total of 34 competencies were rated extremely important and mandatory for outdoor leaders of land-based outdoor pursuits. Another 14 were considered moderately important, and a final 2 competencies were deemed unimportant. The 10 top-rated competencies were these:

1. Exercise good judgment and common sense while performing duties as a leader under stress and pressure.

2. Handle situations which pose potential safety problems.

3. Foresee and be prepared for situations which pose potential safety problems.

4. Prevent illness or injury, but if either occurs, recognize and apply proper procedures and controls to stabilize or improve the person's condition.

5. Teach causes, prevention, symptoms, and physiological effects of environmentally related injuries and illness which may include but not be limited to hypothermia, frostbite, heat exhaustion, heat stroke, high altitude, and fluid intake.

6. Follow a personal ethic which displays sensitivity and concern for the wilderness, reflected in everyday practices consistent with accepted and sound environmental values.

7. Generate respect, interest, humor, enthusiasm, confidence, and commitment through actions, feelings, and demonstrations.

8. Demonstrate minimum-impact off-trail campsite selection and differentiate between low- and high-impact areas.

9. Recognize and assess own limitations, plan group activities accordingly, and seek to improve abilities.

10. Recognize the indicators of potential physiological and psychological problems. (Swiderski, 1981, p. 107)

Significant differences were found to exist between the ratings of subjects from different regions in (a) snow/ice techniques, (b) off-trail route finding, (c) reading map and compass, (d) proper equipment and clothing selection and care, (e) and snow shelter construction. Swiderski recommended that the 34 extremely important

competencies and the 14 moderately important competencies be incorporated into training programs and instructional curricula.

In another study of entry-level outdoor leadership competencies, Cosgrove (1984) identified from a review of literature 53 skill competencies and 46 personal and professional qualities for outdoor leaders in wilderness adventure programs. The skill competencies were divided among three categories: (a) technical skills, (b) human relations skills, and (c) philosophical understanding. Further, they were classified as (a) minimally acceptable, (b) ideally acceptable, and/or (c) program- or situation-specific. This list of competencies and professional qualities was mailed to a panel of eight outdoor professionals for review prior to a telephone interview.

Following the review by seven of the professionals, nine technical skills, one human relations skill, and two personal qualities were added to the original list. Several items were clarified, and minimal, ideal, or situation/program-specific classifications of some items were changed. Cosgrove concluded that there was a lack of consensus on the competencies an entry-level outdoor leader should have and whether those competencies are minimally acceptable, ideal, or situation/program specific.

This study also investigated the preemployment instructional time requirements for attaining competency.

Cosgrove found that a 16-week time frame for field experiences was considered optimal, but that an additional 16-week prerequisite time period was desirable. This time frame is well-suited to most college- or university-related programs. Along with this, he discovered that the established wilderness adventure programs typically utilize both experiential and traditional classroom learning situations. Cosgrove recommended that private organizations as well as colleges and universities use this list of competencies as a basis for developing outdoor leadership training curricula. He suggested utilizing two 16-week segments in which the first segment focuses on human relations skills and philosophical understandings, and the second segment concentrates on the technical skills while reinforcing and interrelating the learnings of the initial segment.

Outdoor Leadership Training Models

A recent focus of the research on outdoor adventure leadership has been on the development and explication of models of training and preparation. In an introspective philosophic inquiry, Medrick (1985) presented an alternative to the widely held belief that wilderness leaders need only be trained in skills and specific technical knowledge. Medrick, developing the image of a wilderness leader within the context of the current social

and ecological situation, asserted that the outdoor leader must be trained not only in outdoor skills and wilderness travel techniques but also in communication and group-dynamics skills, forms of human movement, and the metaphoric potential of experiences in the outdoors.

Within this framework, Medrick presented a model for such training which had evolved and been in use for 11 years by Outdoor Leadership Training Seminars (OLTS), based in Colorado. He claimed that neither short-term programs (5 to 10 days) nor long-term, full-time, residential programs are as effective as five- to eight-month nonresidential programs such as those used by OLTS. The training model encompassed the elements of (a) development of community among participants, (b) development of an ongoing commitment to defining goals and exploring expectations, (c) development of effective communication, (d) introduction to different behavioral models and intervention tactics, (e) and development and practice of personal leadership.

Broad outdoor skills and program-management topics included in the model were (a) wilderness skills and travel; (b) first aid, rescue, evacuation, and outdoor survival; (c) rock climbing; (d) alpine mountaineering; (e) snow and ice climbing; (f) ski touring and ski mountaineering; (g) downhill skiing; and (h) white-water sports. Also included in the model were general education

and counseling skills such as (a) communication and counseling approaches; (b) group process and group leadership; (c) problem solving, decision making, and conflict resolution; (d) body awareness and movement/ centering processes; (e) visualization, imaging, and mental rehearsal; (f) sports psychology; and (g) humanistic/ transpersonal perspectives of growth and learning.

The time frame used for the training seminars consisted of three 10-week sessions. Weekly two- to six-hour meetings on topics such as yoga, tai chi, centering, small-group encounter, communications, group process, educational theory, organization and logistics of trip planning, and first aid provided an undergirding for training in the various outdoor skill areas addressed through one- to seven-day field experiences and expeditions. Medrick acknowledged that though this seemed to be an optimal schedule for acquiring outdoor leadership skills, other time frames might be explored, including either a two- or four-year undergraduate degree program.

Participants in six Wilderness Education Association (WEA) courses served as subjects in an assessment by Phipps (1986) of a systematic model for teaching leadership in expedition settings. In a case study with comparison groups using a pre- and post-test design, a systematic approach to teaching outdoor leadership using the Group Dynamics Teaching Model in conjunction with the Situational

Leadership and Group Development Models was evaluated.

The Group Dynamics Teaching Model consists of nine components:

1. Group development
2. Expedition behavior
3. Giving and receiving feedback
4. Conflict strategies
5. Conflict resolution
6. Group dynamics
7. Role functions in groups
8. Defense mechanisms
9. Group dynamics assessment

The Situational Leadership model characterizes the flow of leadership styles from telling to selling, to participating, and, finally, to delegating. The four stages of the Group Development model outline both the amount of direction given (task behavior) and the amount of socio-emotional support given (relationship behavior). As the personal relations in a group pass through the stages of dependency, conflict, cohesion, and interdependence, the task functions of the group move from orientation, to organization, to data flow, and to problem solving, respectively. These models were integrated and used to teach the WEA course treatment group in Phipps' study.

Participants' self-perceptions of their style, adaptability, and effectiveness were measured using the LEAD-Self (Leadership Effectiveness and Adaptability Description - Self) instrument. Task and relationship behaviors, use of leader power, and leader effectiveness as perceived by students were measured two-thirds of the way

through the course with the Group Dynamics Questionnaire.

Phipps found the following:

1. Leader behavior was affected positively using a systematic approach.

2. The unsystematic approach affected leader behavior attitudes negatively.

3. The group dynamics were perceived more positively using the systematic approach.

4. There was a relationship between leader effectiveness and the participants' positive perceptions in regard to the group dynamics. (Phipps, 1986, p. 125)

Priest (1987b) investigated the fundamentals of outdoor pursuit leader preparation in Australia, Canada, Great Britain, New Zealand, and the United States. A content analysis of the outdoor leadership literature revealed seven attributes and seven skills of outdoor leaders. These were ranked in importance by 169 experts from the five nations.

The top two components--safety skills and sound judgment based upon experience--were explained by the experts' common concern for safety. "When asked to choose between participant safety and environmental protection, the majority of responding experts sided with safety" (Priest, 1987b, p. 94). Awareness and empathy for others, group-management skills, and problem-solving skills, the three components rated next in importance, indicated a growing interest in people-oriented training and what are known as "soft" (psycho-social) skills.

The experts in Priest's study also were asked to consider the 14 components in terms of the selection, preparation, and certification of outdoor pursuit leaders. The highest-ranked selection criteria included, in order, (a) physical fitness, (b) motivational philosophy and interest, (c) awareness and empathy, (d) personable traits and behaviors, (e) healthy self-concept and ego, (f) technical activity skills, and (g) safety skills. All of the components that were ranked highest as selection criteria, with the exception of awareness and empathy, were ranked lower as preparation criteria. In terms of the training of outdoor leaders, Priest's respondents indicated that field trips were the primary training method used. Of lesser importance was the use of discussions, lectures, simulations, and role playing. He found near-consensus on the notion of including a supervised practicum experience in the preparation of outdoor leaders.

Also examined was the topic of certification of outdoor leaders. No overall majority opinion was evident from the survey responses, but there was a greater inclination toward certifying components of leadership such as safety, instructional, and technical-activity skills than there was toward either overall certification or certification of any of the other components. Least interest was shown in certifying the attributes of outdoor leaders, particularly judgment.

Additionally, Priest noted that the great concern about legal liability litigation and rising insurance premiums in North America was reflected by a high regard for safety by those respondents. From the results of the study, Priest developed a paradigm for the preparation of outdoor pursuit leaders in North America.

The model, called Preparing Effective Outdoor Pursuit Leaders (PEOPL), is composed of the elements of selection, preparation, training, assessment, and certification identified as important to North American outdoor leaders. Potential leaders would be selected for experience and the leadership components of physical fitness, personable traits and behaviors, awareness and empathy, motivational philosophy and interest, healthy self-concept and ego, safety skills, and technical activity skills.

The PEOPL paradigm presents a modular approach to preparation whereby the certification stream and leadership-development stream happen concurrently but separately. The development track occurs at two levels of increasing responsibility: the assistant leader practicum and the associate leader practicum. Using an ongoing cycle of training and assessment with an experiential practicum and feedback, the assistant leader level involves preparation in organizational, environmental, and instructional skills. Likewise, the associate leader level uses a cyclic pattern of training and assessment with

experience to prepare the candidate in different skills--this time, skills in group management, problem solving, and flexible leadership style. As the candidate moves through the assistant and associate leader practica, a concurrent training, assessment, and skills certification cycle in technical activity and safety skills occurs. Eventually, the candidate becomes qualified to be a practicing outdoor leader.

The component of judgment was not added to the paradigm since comments from the North American experts cast some doubt on the appropriateness of including it in a leadership-preparation scheme. Priest stated that "if sound judgment is considered to arise from reflection on experience, then the experiential practicums listed within the training and assessment cycles would be the place for such reflection to occur, under the mentorship of established outdoor leaders." (1987b, p. 115)

Courses and College Curricula

Several researchers have focused their efforts on the development of college-level courses or degree programs in outdoor adventure leadership. Green (1981) developed the content of a leadership course for land-based outdoor pursuits for the Pacific Northwest area of the United States using the opinions of 61 outdoor leaders in a modified Delphi application. Consensus was reached on 35

of 175 topics rated by the leaders on a four-point scale of importance. When asked to select 10 of the topics for inclusion in a leadership course, the following were chosen:

1. risk-management plans (minimizing risks, emergency plans, prevention)
2. judgment
3. wilderness ethics
4. first aid
5. analyzing risks
6. minimum-impact practices
7. outdoor leadership objectives
8. hazard analysis: hypothermia
9. backcountry first aid
10. minimum-impact philosophy

Green further concluded from the results of his investigation that emergency medical techniques and outdoor skills were considered important, but each should be taught as separate prerequisite courses.

A topical course outline was developed based on the analysis of the outdoor leaders' ratings and comments. The topics for an outdoor leadership course in land-based outdoor pursuits, assuming prerequisites in emergency medical training and outdoor skills, are listed below:

1. Philosophy including philosophy of outdoor leadership, objectives, and outdoor program goals

2. Risk management including risk-management plans (minimizing risks, emergency plans, prevention), analyzing risks, liability considerations, and assessment of individual and group capabilities

3. Decision making including judgment and problem-solving analysis

4. Outdoor-leadership methods

5. Teaching principles including teaching methods and techniques for outdoor leaders

6. Small-group dynamics in the outdoors

7. Environmental awareness skills including wilderness and outdoor ethics, as well as minimum-impact philosophy and practices

8. Pretrip planning including single- and multiday trips, selection of location, itinerary (travel time and length), and food planning

9. Hazards analysis including hypothermia, hyperthermia, and avalanche awareness and safety

10. Map reading and interpretation

A prototype outdoor adventure education baccalaureate degree curriculum and activities model was developed by Simmons (1982). It is conceptualized as a cooperative venture between academic units and the college Student Union Outdoor Program.

A synthesis of information gleaned from a literature review, personal interviews with adventure education leaders, and the researcher's own experience regarding the goals and objectives common to outdoor leadership preparation, outdoor education, and higher education produced a list of academic curriculum objectives. Courses commonly taught at many colleges and universities were selected upon the investigator's judgment of their contribution toward meeting those objectives. Additionally, courses in outdoor adventure education and recreational skill acquisition were described, and objectives common to many Student Union outdoor programs

which pertained to the model were explained. Programming and operational activities as well as human, material, and natural resources required to support the curriculum were detailed.

A panel of 33 recognized professionals in the areas of curriculum development, student activities, and outdoor education reviewed the curriculum model and responded to a closed-form questionnaire. The closed form consisted of 53 items from seven topical categories: (a) curriculum objectives, (b) academic courses, (c) curriculum resources, (d) activity objectives, (e) activity program, (f) activity resources, and (g) coordination effort. Items receiving support from at least two-thirds of the experts were retained in the model. Comments made by the experts and responses of five selected panelists to an open-form questionnaire were used to further refine the model.

An area of obvious disagreement was the role of the Student Union in the model. Some experts highly praised this aspect of the prototype degree program as providing an avenue for leadership experiences while others just as strongly criticized it as impractical for political and administrative reasons. A synthesis of open-form questionnaire responses indicated that "the potential success in coordination of the curriculum and Student Union Outdoor Program would depend upon a combination of factors including the Student Union's program objectives,

administrative style, and traditional role within the institution" (Simmons, 1982, p. 39). Another topic evoking a mixed response from the evaluators was that of the potential job market for graduates of such a degree program. Simmons suggested further research be done from the employer's point of view.

Simmons' final model presented a specific list of courses and course descriptions. Based on a minimum graduation requirement of 180 quarter hours, the model includes 60 quarter hours of general education requirements; 42 quarter hours of outdoor adventure education courses; 35 quarter hours of outdoor recreational skills; 22 quarter hours of general recreation courses; 23 quarter hours of courses in natural sciences; 6 quarter hours in psychology, counseling, and guidance courses; and 3 quarter hours each in art, anthropology, and business. Of these, 165 quarter hours are required, and 32 quarter hours are electives.

Raiola (1986/1987) developed, pilot tested, and evaluated a college-level outdoor leadership curriculum. A list of 30 objectives was compiled from a review of the literature and other sources, including Buell's Outdoor Leadership Competency--A Manual for Self-Assessment and Staff Evaluation (1983), an outgrowth of his research on outdoor leadership competency for entry-level and experienced personnel (Buell, 1981). These objectives were

rated on a five-point scale of desirability for inclusion in an outdoor leadership education course by both a panel of five experts and a group of seven student leaders-in-training.

Additionally, the panel members were sent a second questionnaire on which they indicated their preferences for teaching specific objectives in either a classroom or field setting. Preferences were found to be related to applicability of the topic to the environment and were affected by variables such as group size, weather, geographical location, student-instructor ratio, and equipment limitations.

A combined student and panel rating of 80% or better identified 16 fundamental objectives for inclusion in the curriculum. No significant difference was found between the responses of the experts and the responses of the students. The most important objectives are listed below:

1. Experience in leading groups
2. Knowledge of subjective and objective dangers
3. Knowledge of judgment/decision making process
4. Information and theory that relate to the leader's ability to plan, prepare, and execute an activity with minimum impact on the environment and without injury to the participants
5. Participation in an 8- to 10-day field trip
6. Knowledge and theory of common hazards in wilderness settings

7. Knowledge of environmental factors that affect wilderness trips
8. Legal liability, standard of care, negligence
9. Knowledge of program itinerary
10. Low impact wilderness use practices
11. Information and knowledge of teaching techniques
12. Use of map and compass
13. Knowledge and theory of program planning
14. Knowledge and theory of risk management
15. Knowledge and theory of good oral communication
16. Presentation of techniques for learning specific technical motor competencies such as wilderness first aid, climbing, and kayaking (Raiola, 1986/1987, p. 28)

Based on the results of student and expert ratings and the review of the literature, the objectives were grouped under nine content elements for the curriculum: (a) leadership style, (b) objective/subjective judgment, (c) trip planning and organization, (d) environmental issues, (e) risk management, (f) instructional principles, (g) navigation, (h) group dynamics, and (i) nutrition. Further, the curriculum was composed of three phases: (a) a seven-day introductory field experience providing daily leadership opportunities, (b) a semester course which included all the recommended curriculum objectives and utilized a combination of classroom and field experiences, and (c) a final nine-day expedition again providing students actual leadership experience in the field. It

should be noted that students entered this course having completed a prerequisite outdoor skills course.

The curriculum was evaluated following the pilot test by a combination of methods, all of which provided support for the proposed curriculum. Results of both college faculty and course evaluations indicated that both the instructor and the course were ranked well above average. Student-designed evaluations focusing on the extent to which curriculum objectives for the course were realized indicated above-average understanding of all objectives except navigation, which was rated average. Pre- and postcourse student self-assessments produced a significant difference in students' overall perceptions of their knowledge and competence, showing an improvement following the course, and indicated a significant difference in nine areas addressed by course objectives. Researcher field observations and student interviews provided further positive evaluations of the application of the curriculum. Field experiences were considered an essential component of outdoor leadership education by both experts and students, and this opinion was substantiated by the researcher's field observations. At the completion of the course, students were able to meet the minimum standards for Maine Trip Leader licensing.

Effects of Outdoor Leadership Training

A number of nationally known organizations offer outdoor adventure leadership training. Two of these, the National Outdoor Leadership School and the Wilderness Education Association, were the targets of studies regarding the effects of their programs.

Baker (1975) conducted a study to determine whether participation in a basic-level five-week National Outdoor Leadership School (NOLS) course brought about change in the participants' attitudes concerning leadership behavior. Eighty participants in three Wilderness Expedition courses, one Biology Wilderness course, and two Mountaineering Expedition courses were given the Leadership Opinion Questionnaire (LOQ) before and after course participation. The LOQ was also administered to staff in order to establish baseline criteria of desirable behavior for NOLS leaders.

The NOLS staff model was determined to be high in the consideration dimension and average in the structure dimension of the LOQ. No significant differences between precourse and postcourse leadership attitudes were found overall for participants in either structure or consideration, except for wilderness expedition participants who scored lower on the consideration factor following the experience. This final finding was attributed to poor timing of the postcourse administration

of the questionnaire. Baker suggested that attitude changes were not evident because those courses allowed for very little actual practice of leadership and that different results might be achieved for participants in advanced courses such as the NOLS Instructor's course.

An exploratory study of the effects of outdoor leadership certification on 155 graduates of Wilderness Education Association (WEA) courses was conducted by Cockrell and Detzel (1985). The areas of safety and implementation of ethical backcountry-use practices were examined with a 32-item questionnaire. Although there was a slight reduction in the rate of participant evacuations and rescues performed following certification, no clear pattern emerged in the effects of certification on safety. While knowledge levels of both safety and minimum-impact use were found to be fairly low and inconsistent, graduates saw the WEA course as somewhat helpful in improving their safety practices and as having a little greater influence on their practices in backcountry areas. Also resulting from this study was the conclusion that WEA courses influence certain areas of knowledge and practice--particularly in expedition behavior, travel techniques in the wild outdoors, judgment, and ration planning--but that other sources also have provided training and experience for outdoor leaders.

Other Studies of Outdoor Adventure Leadership

A number of other studies of outdoor adventure leaders have explored a variety of topics. Issues in outdoor leadership, biographical and personality characteristics of effective leaders, professional ethics and the preparation of leaders, and measures of outdoor adventure leadership are among the subjects of those investigations.

A study conducted under the auspices of Outdoor Research, Inc. sought consensus of opinion from 35 selected outdoor leaders in the United States and Canada on a number of issues concering outdoor adventure leadership (Ewert & Johnson, 1983). A 10-item questionnaire using the open-ended question format elicited opinions regarding the meaning of outdoor leadership, the direction in which the field seemed to be heading, the potential role of experiential educators, certification, information dispersal, and recognized leadership within the field.

Leaders did not agree upon one acceptable outdoor leadership certification body, nor did they agree upon a publication or professional body which represented the field of outdoor leadership. Confusion about recognized outdoor leadership experts was also apparent.

Despite the overall lack of cohesiveness and communication between outdoor leaders from different organizations, however, there were commonalities including a "directional definition, a basic core of essential

components of leadership, and approaches to training" (Ewert & Johnson, 1983, p. 53). Both life experiences and university/college training were preferred as preparation sources by 46% of the outdoor leaders, though this finding may have been affected by the large number of respondents associated with colleges and universities. Three organizations were most frequently recognized as providing training for outdoor leaders: the National Outdoor Leadership School, Outward Bound, and the Wilderness Education Association. Several universities were also identified as sources of outdoor leadership preparation. Additionally, judgment and knowledge/skills were the most frequently identified components of outdoor leadership. Recommendations were made by the researchers to improve communication through networking, to establish a professional group and a periodical devoted to the field, and to support research and publication of findings in the outdoor leadership field.

Riggins (1984) analyzed selected biographical and personality characteristics contributing to the effectiveness of Colorado Outward Bound School instructors and assistant instructors. Staff peer evaluations to determine the most and least effective instructors, a researcher-developed biographical inventory, and the Fundamental Interpersonal Relations Orientation - Behavior (FIRO-B) personality assessment instrument were used. Six

biographical characteristics were found to be statistically related at the .05 level of significance to instructor effectiveness as follows:

1. Outward Bound instructors were rated more effective than assistant instructors.

2. The more effective instructors had taught a greater number of Outward Bound courses.

3. Those instructors who had not participated in the Outward Bound standard course were considered more effective.

4. Those with a bachelor's degree were rated more effective than those either without a degree or with higher degrees.

5. Older instructors were rated higher in effectiveness than younger instructors.

6. Those from families of three or more siblings were rated higher in effectiveness.

None of these biographical characteristics, however, emerged forcefully enough to be recommended as a prerequisite to employment.

While having an undergraduate degree was significantly related to effective leadership, the number or type of courses taken in any particular academic area was not significantly related to leader effectiveness. Participation in National Outdoor Leadership School courses also was found to be unrelated to the effectiveness of the Outward Bound leaders. Collectively and individually, personality characteristics were found to make no significant contribution to instructor effectiveness.

Havens (1986) investigated professional ethics in outdoor adventure education. A group of practitioners and experts agreed that most outdoor adventure educators learn about ethics in on-the-job work experiences. University preparation ranked second lowest as the place where outdoor adventure ethics are learned. Havens concluded:

> There is a strong need for material devoted to the subject of professional ethics within the context of outdoor adventure education. More importantly, the study of ethics and moral philosophy should be more concentrated in the pre-service curricula of future practitioners. It is a mistake and ethically questionable to send young professionals into the field with only technical expertise. (1986, p. 180)

Easther (1979) compared several measures of leadership with an assessment by an experienced outdoor leader. Rankings of 25 potential leaders were developed from (a) ratings based on attendance and results of tests and term papers in a college wilderness course, (b) peer group ratings, (c) two standardized tests--the Cattell 16PF Personality Test and the Leadership Opinion Questionnaire (LOQ), and (d) interviews by three experienced employers of wilderness leaders. These were correlated with rankings given by the wilderness course instructor just prior to the completion of the course.

Peer group ratings showed a significant positive correlation with the course instructor rankings as did the structure dimension of the LOQ. There was no significant correlation between instructor ranking and course results,

16PF scores, or the LOQ consideration factor. There were no significant correlations between interviewer ratings and other measures.

Easther concluded that neither the LOQ, 16PF, nor leadership course results derived from tests, papers, and attendance are accurate measures of potential for outdoor adventure activity leadership. The most dependable measures are the judgments of an experienced outdoor leader and instructor, followed by ratings of a peer group of trainee leaders. Administrators who lack expertise in outdoor adventure activity leadership are unlikely to select the same leaders as would an experienced outdoor leader. Easther pointed out that this last conclusion supports the use of certification by experienced evaluators and outdoor leadership training organizations in order to produce documentation useful to employers of outdoor leaders.

Research on Professional Preparation

A number of studies concerning professional preparation in education, physical education, outdoor education, and outdoor recreation were reviewed. Studies of a similar nature as that proposed in the current investigation gave guidance to the design of the study. Of particular interest were those studies in physical education and outdoor education using similar methods of

data collection and those targeting similar aspects of professional preparation. These are discussed in the following sections.

Studies of Professional Preparation in Physical Education

Professional preparation programs in physical education have been under close scrutiny for some time. In the early 1950s, college catalogs were used to provide curriculum information. This information was limited to course titles, brief course descriptions, course credit, and some faculty and departmental data (Breeden, 1954; Dawson, 1952).

In the late 1950s and early 1960s, a popular method for examining undergraduate physical education programs was to use a scorecard or checklist with weighted standards against which various aspects of an institution's program were evaluated (Bookwalter, 1962; Errington, 1957; Kerker, 1954; Kerr, 1955; Sauter, 1957). The areas evaluated included such things as general institutional practices, academic training and professional affiliation of instructional staff, teaching load, required curriculum, service program, and library facilities (Kerr, 1955); faculty policies and student practices (Errington, 1957); and extracurricular program, professional lab experiences,

student selection, student guidance, student recruitment, and placement and followup services (Sauter, 1957).

This method required visitation by the investigator and necessarily limited the number of programs that could be evaluated. Perhaps because of this limitation and a desire to examine the structure and practices of a greater number of institutions, the scorecard method gave way to mail questionnaires as a popular vehicle for studying professional preparation programs in physical education.

Using an 18-page questionnaire, Hess (1969) investigated undergraduate physical education professional preparation programs in 69 state universities. Following preliminary questions about the respondent and the department, the questionnaire consisted of checklist-format items regarding the desirability of aspects of the curriculum, whether those aspects were operating in a satisfactory manner, and, if unsatisfactory, the reasons they were considered to be so.

The early 1970s brought on national surveys of professional preparation in physical education. Two of these studies focused on the preparation of the elementary school physical education specialist. Hoffman (1972) sent questionnaires to 1,500 departments of professional preparation and sought information regarding program organization, courses, field experiences, personnel, and future program plans.

Staniford (1975/1976) used a two-phased mail survey to examine the professional preparation of elementary school physical education specialists. The first phase, a brief preliminary questionnaire, was sent to 750 institutions listed in the HPER directory of professional preparation institutions published in the Journal of Physical Education and Recreation in 1974. This phase determined the nature and organizational structure of the preparation programs, whether an elementary physical education specialist program was offered, and, if so, whether the respondent would be willing to answer a second questionnaire regarding the program. Staniford's second questionnaire, sent to the 272 programs with an elementary specialization, was designed to give both frequency and open-ended descriptive data, information about the desirability of some program aspects, and information about future trends and directions of the program. A followup interview of approximately 10% of the respondents used five open-ended items focusing on specific innovative developments, ideas, and future projections for the program.

A number of surveys of physical education professional preparation programs in the 1980s targeted topics similar to those in the study at hand. Many of those topics centered around characteristics of the institution, program, students, faculty, and course offerings.

Canfield (1980) described undergraduate physical education programs at four-year colleges and universities in the Central District of the American Alliance for Health, Physical Education, Recreation and Dance. Information was gathered through three-part questionnaires sent to the physical education chairpersons, athletic directors, and intramural directors at 168 institutions. The professional preparation program was one area studied. Faculty rank and degrees held by faculty members, number of students in the major and minor programs, size of the institution, proportion of the total undergraduate population in the program, and courses required in the major program were among the topics of this investigation. Canfield found that 70% of the faculty members held a master's degree and 16% held a doctorate. The investigation revealed that 26% of the physical education faculty members were instructors, 29% were assistant professors, 19% were associate professors, and 11% were full professors. Larger institutions generally had a more diverse curriculum and a larger number of physical education majors.

Murphy (1980) analyzed the undergraduate physical education teacher preparation curriculum of over 500 institutions listed in the 1974 Journal of Physical Education and Recreation HPER directory. Information about the curriculum was gathered from both department

heads and college catalogs. Murphy described the courses offered and the relative emphasis among three categories of courses: (a) physical education discipline studies, (b) sport and activity studies, and (c) professional teacher preparation studies. The questionnaire also gathered information about the student enrollment, number of faculty members, academic qualifications of faculty members, required and optional courses, and course credit. Other factors about the departments and institutions were also examined. Murphy found that the institutions with larger student enrollments and a greater number of faculty members offered a wider selection of courses. The only outdoor-related course listed by the institutions surveyed was camping.

Rahni (1983) used college catalogs to identify recommended courses for the professional preparation of physical education teachers. Four areas of the curriculum were identified: (a) general education, (b) professional physical education, (c) professional physical education activity, and (d) professional education. Courses were rated on a six-point scale by curriculum experts, and those courses with a mean rating of 3.0 or higher were used to develop a model curriculum. Respondents added outdoor education to the list of professional physical education courses derived from the catalogs. Three professional physical education activity courses added by respondents

were canoeing and boating, climbing and hiking, and orienteering.

Ten specific areas were investigated by Stier in national surveys of physical education professional preparation programs in four-year colleges and universities (1983) and preprofessional preparation programs in junior/community colleges (1984) using 11-page and 13-page questionnaires, respectively. Among the areas explored in those studies were general institutional characteristics, the program and sequence of courses, and characteristics of the students in the institution and program.

Areas of specialization within physical education professional preparation programs also have been a focus of study. Curriculum requirements for a coaching minor in physical education teacher education programs at colleges and universities in the Midwest District of the American Alliance for Health, Physical Education, Recreation and Dance were investigated by Stieger (1982). The structure of the coaching emphasis as well as course and hour requirements were topics of the investigation.

Case, Davis, and Fox (1984) assessed the status of sport management and related areas in physical education professional preparation programs at selected colleges and universities in the United States. Names of the institutions were gathered from college guides, HPER directories, and published lists of sport management

programs. Information from the survey enabled the investigators to describe the types of programs offered, degree specializations, program structure, course offerings, and future program plans.

Studies of Professional Preparation in Outdoor Education

Berger (1958) created a plan for developing competencies for leadership in school camping and outdoor education for elementary education students. The multistage study first determined the competencies needed by the classroom teacher for leadership in outdoor education and school camping. These competencies were derived from a literature review and the investigator's own experience. This list of competencies was validated by experienced and knowledgeable jurors.

The next step in the process was to examine the existing curriculum for elementary education students at one state college in New York. This examination revealed the curricular and extracurricular experiences offered that helped to develop the identified competencies. A competency check sheet was given to course instructors and extracurricular activity leaders. Each of the competencies was rated on a three-point scale indicating the extent to which the competency was included in the course or activity. Respondents listed experiences which were

offered to develop each of the competencies included in the course or activity.

Berger's questionnaire further probed for ways to better develop competencies that were included only incidentally or not at all. It also requested information about the obstacles and administrative problems which prevented the inclusion or development of those particular competencies. As a result of the findings and suggestions, a plan was proposed to develop the identified competencies in preservice teachers.

Modisett (1971) developed a pattern of curricular experiences in outdoor education for undergraduate students in elementary education and also determined the status of outdoor education in colleges and universities. A group of over 300 teachers, supervisors, curriculum directors, principals, and college instructors responded to a survey and rated the outdoor education experiences they felt should be incorporated into the professional preparation of elementary school teachers. The investigator then determined a pattern of outdoor education experiences for elementary school teachers-in-training. The pattern of outdoor education experiences was evaluated by two juries: one composed of professionals in outdoor education and the other composed of professionals in curriculum and teacher education.

A high correlation was found between teachers, curriculum directors, supervisors, and principals regarding outdoor education experiences elementary education majors should have. A moderate correlation existed between the opinions of the teachers and the college instructors, while a moderate to slight correlation was found between the teachers and the two juries. The members of the two juries preferred that the outdoor education experiences take place in professional education methods classes, while all other respondents placed the experiences in a specific outdoor education course.

Modisett also determined that 35% of the 64 colleges and universities investigated offered outdoor education, but in only one of those was it a requirement. The reasons given for lack of acceptance of outdoor education experiences for elementary education majors were crowded schedules, lack of staff, and lack of interest. The investigator then developed a specific outdoor education course for Adams State College in Colorado.

Grenier (1983) conducted a survey of outdoor education programs in Canadian universities. Outdoor education was defined as encompassing (a) specialized technical outdoor education such as the skills of rock climbing, canoeing, and cross-country skiing; (b) adventure education and outdoor pursuits; (c) acclimatization, (d) sensory

education; (e) conservation education; and (f) ecology and environmental education.

Of the 44 institutions which responded to the questionnaire, 37 (84.1%) offered outdoor education, ranging from one course to a full degree program. Just over half the universities with outdoor education offered between one and five courses, and only five institutions offered more than 15 courses. A total of 49 administrative units were involved, 28 of which were physical education departments.

Outdoor education existed most frequently as individual courses, although it also was offered in other forms such as a certificate in outdoor education, concentration in outdoor education, baccalaureate in physical education (outdoor pursuits), or baccalaureate in outdoor education. A total of 437 credits of outdoor education were available, with another 189 credits of related coursework offered in other academic units of the institutions. Of the 236 separate outdoor education courses existing in the Canadian universities, 62.7% were mostly or entirely practical (e.g., classes in canoeing or hiking), while the rest were predominantly or totally theoretical (e.g., Foundations of Outdoor Education).

Grenier's survey also explored the sites used for conducting outdoor education classes in Canadian universities. Over half the administrative units used

national or provincial parks and private outdoor centers or camps. About one-quarter of the universities owned an outdoor center or camp. Of the 129 faculty members involved in outdoor education courses, 103 were employed on a full-time basis. The master's degree was held by more outdoor education faculty members (52.6%) than was either a doctorate (38.8%) or a baccalaureate degree (8.6%).

Several courses or programs were inter- or multi-disciplinary, but most programs blended technical skills, environmental ethics, human and leadership development, and human relations. A few programs or courses were Outward Bound oriented, and one-third of the universities had programs aimed at teacher education with an emphasis on practicality, learning theory, educational psychology, and experiential education. Six universities had at least one compulsory outdoor education course for physical education students.

Summary

This chapter presented a review of the literature related to the topic of this investigation. This review revealed that a good deal of research and writing on the topic of outdoor adventure leadership has been done. The focus of this literature was primarily on the competencies, certification, and preparation of outdoor adventure leaders.

Studies of professional preparation in physical education and outdoor education which gave significant guidance to the development of this investigation were also reviewed. The data collection methods, research questions, and findings of these studies were considered in the execution of this study and in the interpretation of the results.

It is apparent from this review that there is a substantial amount of concern over the qualifications and preparation of outdoor adventure leaders. Several preparation models have been developed, both in and outside of higher-education settings, but none of them specifically addresses the preparation of preservice physical educators for leading or programming outdoor adventure experiences. The current study, therefore, represents an unduplicated effort to document the current status of such preparation in the United States.

CHAPTER III

PROCEDURES

This study investigated the nature and scope of outdoor adventure leadership and programming preparation available to students in physical education baccalaureate degree programs across the United States. The research took place in two major phases. In the first phase, institutions in which one or more outdoor adventure courses were offered to physical education majors were identified. The second phase investigated selected characteristics of the institutions, physical education programs, and outdoor adventure components in colleges and universities with a significant component in outdoor adventure leadership and programming. In particular, leadership and programming competencies developed through curricular offerings were examined. This chapter describes the procedures used in the conduct of this study.

Selection of the Mail Survey Method

Because of the nature and scope of this inquiry, the mail survey method was selected. This represents a relatively inexpensive procedure, as contrasted with face-to-face or telephone interviews, to obtain information from respondents who are located in a widespread geographic

area. In addition to this advantage, mail survey methods have become more acceptable than they once were in terms of the percentage of return and the detail of questioning possible. According to Dillman (1978):

> Recent improvements in procedures for conducting mail . . . surveys suggest that the inherent limitations that [this method was] once thought to have--such as low response rates and dependence on extremely short questionnaires--can be overcome, and that [this method] can now compete with face-to-face interviews for many kinds of studies. For certain studies they are superior. (p. vii)

A response rate of over 75% may be possible to attain using a mail survey of a specialized population whose interest in the topic is expected to be high (Dillman, 1978). This rate of survey completion should assure an acceptably unbiased result. "For most surveys that attain a sixty-percent return rate or better, the non-respondents will probably not affect the results in an appreciable way" (McMillan & Schumacher, 1984, p. 164). Babbie (1973) has indicated that a response rate of 50% is considered adequate, 60% is good, and 70% is very good (p. 165).

The Phase I questionnaire was sent to physical education department heads. The Phase II survey was directed to a person identified by the department head as the individual best able to respond to the more detailed questions; in many cases, this was someone who was intimately involved with the outdoor adventure component. The Phase I respondent group was expected to have some

interest in the investigation but not as great an interest as those directly involved in the teaching or coordination of the outdoor adventure courses. The investigator attempted to achieve at least a 50% response rate for the first-phase survey, designed to identify institutions that offered outdoor adventure courses to physical education majors. At least a 70% response rate was sought for the second-phase survey, designed to describe the curriculum and outdoor adventure leadership and programming competency development. The actual percentage of response for each questionnaire is reported in a later section.

Overview of the Data Collection Process

The collection of data for this investigation occurred in two phases. Figure 1 shows the data collection process. This process did not occur in a totally sequential fashion. Some early steps occurred concurrently, while others were dependent upon the completion of previous steps.

Phase I identified institutions in the United States which offered to physical education majors one or more courses in outdoor adventure leadership and programming. A mail survey with a follow-up postcard reminder was supplemented by a college-catalog search to gather these data.

At the same time as this phase was underway, preliminary steps were being taken to prepare for Phase II

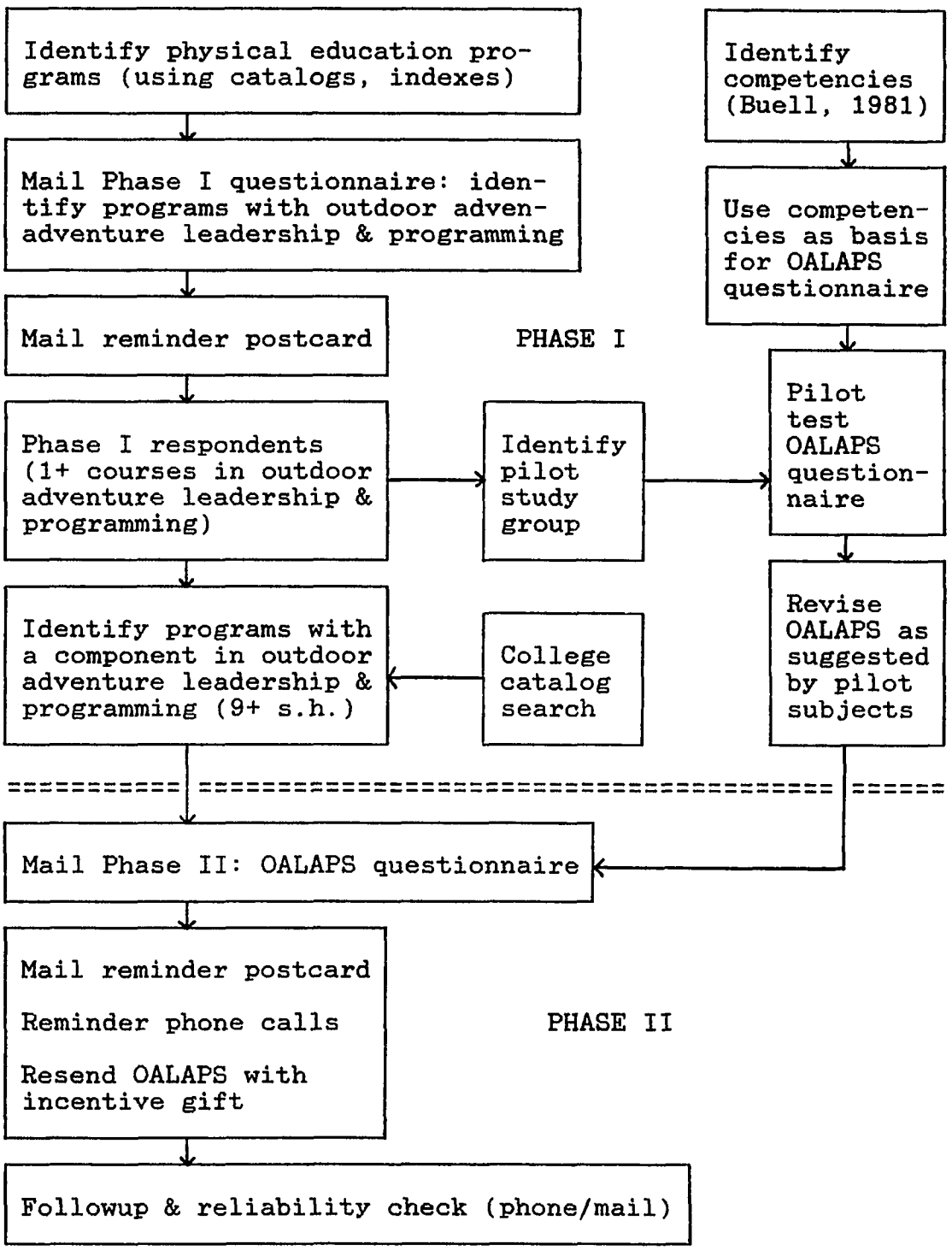

Figure 1. The data collection process--Phases I and II.

of the study. These preparatory steps included identifying a valid and reliable set of outdoor leadership competencies to use in investigating the curricula of the institutions identified in Phase I. This was accomplished through a library search of research and other written materials on the subject.

The competencies were used to develop a preliminary Outdoor Adventure Leadership and Programming Survey (OALAPS). This questionnaire was sent to a group of pilot subjects selected from early respondents to the Phase I questionnaire. Upon return of the pilot questionnaires, necessary revisions were made to the form.

The Phase II OALAPS questionnaire sought information regarding the institution, physical education major program, outdoor adventure curriculum component, and development of outdoor adventure leadership and programming competencies. It was mailed to the institutions which responded to the Phase I questionnaire or were identified through college-catalog information and which met specific stipulations regarding the number and types of courses offered.

Reminder postcards were sent, telephone calls were made, and entire questionnaires were sent again to nonrespondents. Further follow-up telephone calls or mailings were used to complete or clarify previous responses. Finally, a random sample of questions was

sent to obtain test-retest reliability information for the OALAPS questionnaire.

Phase I: Identification of Institutions and Programs

Physical education baccalaureate degree programs. In order to assess the characteristics of outdoor adventure leadership and programming preparation of preservice physical educators in the United States, it was first necessary to determine which institutions housed physical education major programs and in which of those programs outdoor adventure leadership and programming was a component of the physical education professional preparation curriculum. The identification of institutions in the United States with physical education baccalaureate degree programs was in itself a complicated task. No single source provided a comprehensive listing of such programs; therefore, several sources were used to create a compiled list, including (a) The College Blue Book: Degrees Offered by College and Subject (1985), (b) Directory of Undergraduate Physical Education Programs (1982), (c) Index of Majors 1984-85 (1984), (d) Peterson's Annual Guides/ Undergraduate Study: Guide to Four-Year Colleges 1986 (Lehman & Suber, 1985), and (e) Physical Education Gold Book: Directory of Physical Educators in Higher Education 1982-84 (1982).

This compilation process was completed in January 1987 and uncovered the names of 824 four-year colleges and universities. Each of these institutions was contacted by mail in late February 1987 in order to identify those whose physical education major program included a component in outdoor adventure leadership and programming. This brief questionnaire (Appendix B) was accompanied by a cover letter introducing the project and a return postcard (Appendix D).

Phase I questionnaire. The Phase I questionnaire asked whether outdoor adventure leadership and programming courses were included in the physical education teaching major program and, if they were, how many credit hours of theory/methods-oriented courses and how many credit hours of activity-based courses were offered. Participants were asked to indicate whether the credit hours were semester hours or quarter hours. This was done so that all credits could be converted to semester-hour equivalents. One quarter hour of credit was calculated to be equal to 0.6 semester hours.

In addition, the name and mailing address of the person most qualified to provide more detailed information about the outdoor adventure component was requested. A place on the postcard also was provided to indicate whether an institution had been misidentified as having a physical education major program when it had none.

The Phase I questionnaire also asked respondents to name other programs in their state of which they were aware that offered the outdoor adventure component in their physical education major program. This "snowball effect" produced the names of 15 institutions which were not on the original mailing list.

After a two-week period, 702 nonrespondents received a follow-up postcard (see Appendix D). This notice served as a thank-you to those whose responses were on the way and as a reminder to those who had not yet responded, urging them to mail back the Phase I postcard.

Phase I survey response. Table 1 displays the number of Phase I questionnaires sent to and received from institutions in each district of the American Alliance for Health, Physical Education, Recreation and Dance. A total of 437 (53.0%) Phase I postcards were returned. These responses were initially categorized into four groups:

a. YES: One or more outdoor adventure leadership and programming courses were offered to physical education majors.

b. NO: No outdoor adventure leadership and programming courses were offered to physical education majors.

c. NO PE: A physical education major was not offered; the institution was misidentified.

d. MAYBE: Responses were contradictory or ambiguous; necessary to consult college catalog for clarification.

Table 1

Phase I Survey Response Rates

AAHPERD District	Surveys Sent	Surveys Received			
		Have P.E. Major	Do Not Have P.E. Major	Total	
	n			n	%
Central	132	64	1	65	49.2
Eastern	103	44	3	47	45.6
Midwest	159	76	5	81	50.9
Northwest	40	23	0	23	57.5
Southern	325	172	10	182	56.0
Southwest	65	37	2	39	60.0
Total	824	416	21	437	53.0

No physical education major was offered by 21 institutions, so these were removed from the total to yield 416 usable returns. Of these 416 responses, 138 were clearly YES responses, 227 were clearly NO responses, and 51 were MAYBE responses.

The 51 MAYBE responses contained contradictory or ambiguous information. These respondents either had checked YES (outdoor adventure leadership and programming is offered) but had not indicated any course credit in the spaces provided, or they had checked NO (outdoor adventure leadership and programming is not offered) but had entered numbers in the spaces for course credit hours. The college catalogs of these 51 institutions were consulted to determine whether any outdoor adventure leadership and programming courses were indeed offered. Based on the information provided by the catalogs, these 51 responses were reclassified as YES or NO answers.

Adding the 51 reclassified responses to the original YES and NO groups produced a total of 184 institutions which offered at least one course in outdoor adventure leadership and programming in the physical education major program and 232 institutions which did not. The 184 institutions offering at least one course in outdoor adventure leadership and programming to students majoring in physical education represented 44.2% of the usable returns. Conversely, the 232 institutions offering no

outdoor adventure leadership and programming to students majoring in physical education represented 55.8% of the usable returns.

Definition of the outdoor adventure component. Since it was unknown at the outset of this project how outdoor adventure leadership and programming preparation would be represented in physical education baccalaureate degree programs, some delineation of the composition of a "significant component" in outdoor adventure leadership and programming was needed. This definition of a significant component was used to identify institutions to include in the second phase of the investigation.

A set of tentative guidelines was established in order to conduct a preliminary examination of the Phase I responses and the college-catalog curriculum descriptions. A significant component was defined as comprising a minimum of nine semester hours (or 15 quarter hours) of outdoor adventure leadership and programming coursework, of which at least six semester hours (10 quarter hours) were in theory/methods courses, and the remaining three semester hours (5 quarter hours) were in activity-oriented courses. This was used as the basic framework for the selection of recipients of the Phase II questionnaire.

Nine semester hours of coursework were chosen to represent a significant component in outdoor adventure leadership and programming in order to allow for some

degree of concentrated study and experiences in this area. Setting this number of semester hours as a minimum was designed to eliminate from the study programs with very limited offerings. While most designated program options, concentrations, tracks, or specialty areas require at least 12 (and sometimes many more) semester hours of coursework, outdoor adventure is still relatively new as an interest area among physical educators and may not be as well represented in the professional preparation curriculum as some other areas of specialization; therefore, 9 semester hours, or their equivalent, were considered a reasonable minimum definition of an outdoor adventure component. As expected, programs with much more extensive course offerings were uncovered in the present study.

A further stipulation was set that at least two-thirds of the nine hours were to be spent in courses of a theory and/or methods nature and the remaining one-third in courses which are primarily activity-based. This proportion was derived from an analysis of Buell's (1981) important and essential entry-level competencies (Appendix A). The current investigator grouped the competency statements according to their predominant focus: (a) theory/methods of outdoor adventure leadership or (b) outdoor adventure activities and skills. The results of this grouping identified approximately twice as many

theory/methods-focused competency statements as activity-focused competency statements.

When Phase I postcard responses and college-catalog curriculum descriptions were examined, it became apparent that very few programs met the above-described criteria. Also, in the process of confirming the presence or absence of outdoor adventure leadership and programming courses in the programs of the 51 institutions returning contradictory responses, it was noted that some college-catalog descriptions and postcard replies did not match very closely. In order to examine a broader segment of the population, and to allow for the apparent variability in interpreting the definition of outdoor adventure leadership and programming courses, the guidelines for selecting Phase II survey subjects were made somewhat less restrictive. An institution was added to the Phase II survey group if either the catalog or postcard information indicated that its physical education program had nine or more semester hours (or equivalent) of outdoor adventure courses even if it failed to meet the criteria of having at least six semester hours of theory/methods courses and three hours of activity courses. A few institutions which either had made ambiguous responses to the Phase I survey or whose college-catalog descriptions were somewhat unclear, but which nevertheless showed some promise of having the adventure component, were added to the list. A group of 38

institutions was identified from the Phase I responses using these criteria.

College-catalog search. Two weeks after mailing the follow-up postcard, a final effort was made to identify any additional institutions with a significant outdoor adventure component in the physical education baccalaureate degree program. In order to determine whether outdoor adventure preparation was conducted in the programs of the nonresponding institutions and the additional institutions suggested by respondents, a search of college catalogs contained on microforms (Career Guidance Foundation, 1986) was conducted. Curriculum descriptions of physical education major programs were examined to pinpoint likely candidates for inclusion in the group to receive the Phase II survey. A total of 23 institutions were added to the Phase II group as a result of this procedure.

Phase II subjects. A final pool of 61 institutions whose names were garnered from either a returned Phase I postcard, identification by other respondents, or the college-catalog search received the Phase II curriculum questionnaire. These represented 7.6% of all institutions offering a physical education major. The process of collecting data about the Phase II institutions and their outdoor adventure leadership and programming components is detailed in the following section.

Phase II: Outdoor Adventure Leadership and Programming Survey

The Outdoor Adventure Leadership and Programming Survey (OALAPS) instrument was created and refined in several stages. The OALAPS questionnaire consisted of two sections. Part A contained demographic and program information. Part B contained a rating scale of outdoor adventure leadership and programming competency development and related questions.

Demographic and program information. In order to determine characteristics of both the physical education baccalaureate degree program and the institution, several questions of a demographic nature were asked. These included the name and address of the institution, type of institution (state-supported or private), name and position of the respondent, title of the academic unit administering the program, current undergraduate enrollment of both the institution and the physical education baccalaureate degree program, and number of faculty members teaching in the physical education baccalaureate degree program.

In addition, specific information about the outdoor adventure leadership and programming component of the degree program was requested. This included the name, faculty rank, degrees, and outdoor adventure specialization areas of each faculty member teaching in the outdoor adventure leadership and programming component as well as

the academic year the outdoor adventure courses were first offered to physical education majors. Respondents were asked whether the outdoor adventure leadership and programming component was offered as a specific grouping of courses, and, if so, whether it was a minor; an option, a concentration area, a track, or a specialty within the major; or some other structure. The percentage of students enrolled in this area was also requested.

Additionally, the questionnaire inquired as to the types of areas or sites used for the courses in the outdoor adventure leadership and programming component (mountains; lakes; rivers; ocean; desert; forest; ropes course; field campus, outdoor education center, or camp; gymnasium; or classroom) and the approximate one-way travel distance to each. Also, the specific names and numbers of outdoor adventure leadership and programming courses, the number of credit hours granted for each, whether the courses were required or elective, and the number of contact hours per semester the courses meet were indicated. The primary format of each course was designated as either activity-oriented or theory/methods-oriented.

Finally, respondents were asked to describe any anticipated future developments in the outdoor adventure leadership and programming component within the physical education baccalaureate degree program and were requested

to send any additional descriptive information about the curriculum or course outlines along with the survey.

Selection of Buell's competencies. The review of literature suggests that certain competencies are considered basic and necessary for the safe and quality leadership of outdoor adventure programs. Several studies have identified specific competencies for the outdoor adventure leader (Buell, 1981; Cosgrove, 1984; Cousineau, 1977/1978; Priest, 1987; Swiderski, 1981) or content of outdoor leadership courses (Green, 1981; Raiola, 1986/1987; Simmons, 1982). The results of the investigation by Buell were selected to guide the creation of the survey tool.

Dr. Buell was contacted by telephone to discuss the use of his research results in the present study. He gave verbal permission for the investigator to use the list of competency statements to explore outdoor adventure leadership and programming preparation in physical education baccalaureate degree programs. Additionally, Dr. Buell fully endorsed this study and supports research contributing to knowledge about outdoor adventure leadership and programming in physical education (L. H. Buell, personal communication, December 11, 1986).

Buell's research was chosen for a number of reasons. First, neither the respondents nor the outdoor adventure program activities was limited to a specific geographic region, unlike several other studies of outdoor leadership

competencies or curriculum content (Cousineau, 1977/1978; Green, 1981; Swiderski, 1981). This aspect of Buell's research design should have provided a less region-specific result which generally is more appropriate for a nationwide survey such as the one used in the present study.

Second, Buell's survey respondents were divided equally among three groupings of outdoor adventure professionals: directors/administrators of programs, leaders/instructors of groups, and educators/trainers of leaders. Thus, his results reflect the viewpoints of individuals with differing types of involvement in the outdoor adventure field and paint a much broader picture of the requirements for outdoor adventure leadership than any single classification of respondents might provide. In other studies reviewed, investigators either did not include all three of the above-named groupings in the respondent pool or did not seek to classify respondents in this way.

Additionally, Buell's survey results specified competencies for an entry-level as well as an experienced-level outdoor adventure leader. Buell found differences between these two experience classifications in terms of specific competencies considered of greatest importance at each level; therefore, the entry-level list of competencies was more specifically related to the study at hand than competencies derived from other studies

wherein the level of leadership experience was left undefined.

Finally, Buell utilized several strategies to establish the validity and reliability of the survey instrument used. Several methods of determining the validity of the tool were used: (a) conducting a content analysis of the literature on outdoor adventure leadership to develop the competency items, (b) gathering detailed responses about the scope and focus of survey items from pilot subjects, and (c) having a random sample of pilot respondents retake and comment on the survey after modifications were made. Buell also inserted among the list of outdoor leadership competencies several bogus (inconsistent or irrelevant) survey items that should have been and were rated consistently low in importance. The validity established for Buell's competency listing, in turn, lends validity to the survey tool used in the present study which is based upon that work.

To establish reliability, Buell used a correlation of results between the first and second completion of the survey by a random sample of pilot respondents. A high correlation was noted, although no coefficient was reported. A final measure of the reliability of Buell's survey was the calculation of statistical reliability coefficients. Correlation coefficients ranged between .88 and .95 for the entry-level competency statements as

determined by the Equal and Unequal Length Spearman-Brown formulas, Guttman Split-Halves test, and Alpha tests (Buell, 1981, p. 96).

Design of the competency section. Each of the 153 competencies identified in Buell's study as being essential or important for the entry-level outdoor adventure leader fell into one of the following categories:

1. Philosophical, Historical, and Theoretical Foundations
2. Outdoor Adventure Leadership and Instructorship
3. Counseling, Human Service, and Human Development
4. Program Planning and Development
5. Outdoor Skills and Abilities
6. Environmental Awareness, Understanding, and Action
7. First Aid and Safety
8. Administration and Supervision
9. Facilities, Equipment, and Supplies
10. Professionalism
11. Evaluation and Assessment

For this study, Buell's 153 competency statements were summarized, truncated, and/or rearranged within their respective categories to provide a more compact listing of 103 numbered items containing 148 competencies. This modification process was carefully undertaken so as not to change the meaning of each item. The modified competency list was sent to Dr. Buell for examination, and he gave assurance that it accurately reflected the original competency list (L. H. Buell, personal communication, March 17, 1987). Table 2 shows the number of modified competencies within each category.

For each item, respondents were asked to indicate on a scale of 1 to 5 the degree to which the competency was

Table 2

Number of Outdoor Adventure Leadership and Programming Competencies in Each Category

Category Number	Category Name	Competencies in Category
I	Philosophical, Historical, and Theoretical Foundations	6
II	Outdoor Adventure Leadership and Instructorship	23
III	Counseling, Human Service, and Human Development	11
IV	Program Planning and Development	30
V	Outdoor Skills and Abilities	28
VI	Environmental Awareness, Understanding, and Action	9
VII	First Aid and Safety	20
VIII	Administration and Supervision	4
IX	Facilities, Equipment, and Supplies	7
X	Professionalism	7
XI	Assessment and Evaluation	3
Total		148

developed through the curriculum. A rating of 1 indicated that minimal development of the competency occurred in the curriculum, and a rating of 5 signified that the competency was highly developed in the curriculum. In case the competency was not addressed in any way in planned coursework experiences, a choice labeled Not At All was offered.

Following the competencies for each category, several additional questions were asked regarding the competency category in general. First, respondents were asked to indicate the percentage of competencies in the category which were developed in (a) outdoor adventure-specific courses, (b) other physical education courses, and (c) courses other than outdoor adventure-specific or physical education courses. Then, respondents were asked what types of course experiences were used to develop each competency. Choices from a list could be selected, or respondents could indicate, by writing in, other experiences not listed. The experiences listed include the following:

(a) lecture
(b) discussion/seminar
(c) skill demonstration
(d) reading/written assignments
(e) hands-on skill practice
(f) day trips
(g) three- to seven-day trips
(h) one- to three-week trips
(i) longer-than-three-week trips
(j) supervised student leadership experience, practicum, or internship

An overnight/weekend trip option was to have been included among the choices but was inadvertently left off the list on the final questionnaire.

Finally, if a competency was not well developed (that is, rated Not At All, 1, or 2 on the scale), respondents were asked whether they thought that competency could be further developed in the curriculum. If the response was affirmative, the questionnaire asked the respondent to make a brief suggestion of coursework or experiences to further develop that competency. On the other hand, if the response was negative, the respondent was asked to describe briefly the perceived obstacles to further development of that competency.

A front cover for the questionnaire containing information that introduced the study and gave definitions was added to Parts A and B to create a 28-page booklet. The final Phase II curriculum survey instrument--the Outdoor Adventure Leadership and Programming Survey (OALAPS)--can be found in Appendix C.

Pilot testing the OALAPS form. In late March 1987, the curriculum questionnaire was reviewed by five experienced and knowledgeable professionals currently or formerly involved in a physical education program with an outdoor adventure leadership and programming component. These pilot-test respondents received a cover letter, informed consent form (see "Requesting Participant Consent"

below), an OALAPS questionnaire, an evaluation sheet, and a stamped, preaddressed return envelope. (The pilot questionnaire differed very little in content from the final questionnaire. Because of its length, the pilot form has not been appended to this document. The final OALAPS questionnaire appears in Appendix C. See Appendix D for other materials sent to pilot respondents.)

The pilot-test subjects were asked to complete the questionnaire and give feedback in writing about the content, design, completeness, and clarity of the survey, as well as suggestions for improvement of the questionnaire. They gave very positive responses to the survey overall. They thought that the directions were clear and specific; the definitions provided were clear, sufficient, and relevant; the rating scale for competency development provided a sufficient range of responses; and there were no items which were ambiguous or might easily be misunderstood. Some of the subjects did comment that the form was lengthy (it took an average of 65 minutes for them to complete the questionnaire), which might discourage completion by respondents. The specific items suggested for removal, however, were considered by the researcher to be integral to the study, so this recommendation was not acted upon. For example, one pilot subject suggested reducing the number of competency statements in each category, but that would have reduced the validity of that

section of the tool as a representation of the important and essential entry-level outdoor leadership competencies.

The most important suggestion of the pilot respondents, which necessitated a revision of the questionnaire, was that the print used for that form was too small and difficult to read. The OALAPS questionnaire was modified to reflect this advice. Other modifications were made after examination of the completed pilot questionnaires. For instance, some items, other than the competency statements themselves, were reworded to evoke more specific responses.

Mailing the final OALAPS instrument. On April 17, 1987, a revised Phase II questionnaire, called the Outdoor Adventure Leadership and Programming Survey (OALAPS), was mailed to one faculty member (the department head or an individual named in Phase I by the department head) from each of the 61 institutions identified from the results of the Phase I survey and college-catalog search. In other words, survey recipients were at those institutions whose physical education baccalaureate degree program contained a component of at least nine semester hours in outdoor adventure leadership and programming, of which at least six semester hours were in theory/methods-oriented classes and three hours were in activity-based courses (with the exceptions noted in the previous section describing Phase I). The questionnaire (Appendix C), along

with a cover letter (see Appendix D), informed consent form (see "Requesting Participant Consent" below), and stamped, preaddressed return envelope, were sent at this time.

Two weeks after the original mailing, a reminder postcard (see Appendix D) was sent to all nonrespondents. In a period from four to eight weeks after the initial mailing, all remaining nonrespondents were telephoned to urge them to complete the questionnaire. As this was the beginning of the summer term for many of the institutions, many subjects were not reached directly, and messages were left.

The telephone calls did not produce the desired response rate, so a repeat mailing was prepared for sending to 26 nonresponding institutions at the beginning of the fall term. This mailing contained a new cover letter (see Appendix D) and all the same materials as those sent in April--informed consent form, OALAPS questionnaire, and stamped return envelope--plus a key-ring incentive gift. These were mailed September 1, 1987.

Final follow-up. Some of the OALAPS questionnaires initially contained unclear responses or omissions. In late September and early October 1987, telephone calls were made to those respondents to clarify relatively brief problem areas. In cases where omissions occurred in areas of the questionnaire requiring a lengthy list of competencies to be read before answering the item, a

written request for the missing or unclear information was mailed to the respondent.

Phase II survey response. The OALAPS questionnaire was mailed to 61 institutions. Included in this group were 38 institutions identified by the heads of their physical education departments as having nine or more semester hours of outdoor adventure leadership and programming courses. The remaining 23 institutions were determined by a college-catalog search to be likely to offer outdoor adventure leadership and programming preparation to physical education majors.

Several follow-up attempts--including sending reminder postcards, making telephone calls, and resending questionnaires with an incentive gift--over a five-month period failed to achieve the desired 70% response rate. Due to time limitations, a decision was made to end the data collection.

A summary of the number of responding and non-responding institutions is shown in Table 3. The representatives from 12 (19.7%) of the institutions contacted the investigator either by mail or telephone to say that the questionnaire did not apply to their program. Representatives of another 15 (24.6%) institutions fully completed the questionnaire; however, subsequent examination of specific course offerings that were indicated within these 15 completed questionnaires ruled

Table 3

Phase II Survey Response Summary

Description of Response Groups	n	%
Ineligible Institutions		
Did not complete questionnaire; responded by mail or telephone that it did not apply to their program.	12	19.7
Completed questionnaire, but did not meet semester-hour or other qualifications for retention in final analysis group.	15	24.6
Eligible Institutions		
Completed questionnaire and did meet semester-hour qualifications for retention in final analysis group.	12	19.7
Institutions not responding at all	22	36.1
Total questionnaires mailed	61	100.0

Note. Percentages do not total 100% due to rounding.

them ineligible for final analysis. The following are reasons for disqualification from the final analysis group:

1. Institution did not offer at least nine semester hours of outdoor adventure courses.
2. Institution did not offer at least six semester hours of theory/methods-oriented outdoor adventure courses.
3. Institution did not offer at least three semester hours of activity-oriented outdoor adventure courses.
4. Courses listed were not outdoor adventure topics.

Fully completed questionnaires were returned by 12 (19.7%) eligible institutions. No response at all was received from 22 (36.1%) of the institutions.

The rate of response can be determined by eliminating the ineligible institutions from the original pool of respondents. The 27 misidentified institutions were removed from the original pool of 61 institutions that were sent the OALAPS questionnaire to yield 34 potentially eligible institutions. A percentage of response within this group of 34 remaining institutions then was calculated: 12 (35.3%) responded by fully answering the OALAPS questionnaire, and the remaining 22 (64.7%) did not respond to the survey at all.

The 35.3% proportion was far below the 70% rate sought even though all feasible means of obtaining responses were exhausted over a five-month period. Other national surveys have shown similar difficulty in obtaining a 70% or greater

proportion of return, particularly those involving lengthy questionnaires. Stier's 11-page survey (1983) of 22 four-year college and university physical education programs resulted in a 65% response; Stier's similar 13-page survey (1984) of 300 two-year institutions yielded only a 58% return. Canfield's (1980) study of undergraduate physical education programs used a three-part questionnaire which was sent to 168 colleges and universities in the Central District of AAHPERD. Only 47% of the institutions in Canfield's study produced fully completed forms. Buell's (1981) 14-page questionnaire investigating outdoor adventure leadership competency listed 235 statements that were rated twice--once for entry-level competence and once for experienced-level competence. Buell's lengthy questionnaire, which was very similar to the one used in the present study, resulted in a 36% return.

Berdie and Anderson (1976) cited three reasons that people do not respond to mail questionnaires: (a) they never receive the questionnaire, (b) they decide not to cooperate, or (c) they forget to complete or return the questionnaire. It is unknown whether the 22 nonrespondents in the present survey failed to return their questionnaires for one of Berdie and Anderson's three reasons or whether, like 27 other institutions, they were misidentified and the curricula in their institutions did not really qualify.

The questionnaires that were returned may, in fact, represent an even greater percentage of a much smaller group of qualifying institutions. According to Kviz (1977), the 35.3% achieved in the current study may represent only a completion rate, and not a true response rate.

> Although many researchers report a "response rate" for mail surveys, it is usually impossible to compute a response rate for this method because sufficient data regarding the eligibility of nonrespondents are not available. Therefore, what is reported as a response rate, calculated as the proportion of completed questionnaires returned from the total sample, is often actually a completion rate. Thus response rates to mail surveys may be higher than we have been led to believe. (Kviz, 1977, p. 266)

It must be emphasized again that this investigation was limited to physical education baccalaureate degree programs with outdoor adventure leadership and programming courses in the curriculum. It is certainly recognized that many more programs may be available in other academic majors such as recreation and leisure studies, forestry, and so on.

Requesting Participant Consent

Approval from the Human Subjects Review Committee of the School of Health, Physical Education, Recreation, and Dance of the University of North Carolina at Greensboro was gained prior to initiating Phase I of the study. Cover letters were used in Phase I, the Pilot Study, and Phase II

of the investigation to describe the purposes of the study, the nature and extent of participation requested, and any possible risks to the participant (see Appendix D). A written informed consent form (see Appendix D) was sent along with the questionnaire to each of the respondents in the pilot study and Phase II. Since some information collected in Phase II may be used in the future to create a directory of physical education baccalaureate degree programs providing preparation for outdoor adventure leadership and programming, a place also was provided on the consent form for Phase II respondents to deny permission for inclusion of their program in such a directory.

Validity and Reliability of the OALAPS Questionnaire

Validity. The outdoor adventure leadership and programming competencies used to develop the OALAPS questionnaire were statements identified in Buell's 1981 study. Buell initially identified these entry-level essential and important outdoor leadership competencies from a review of the literature. They were then reviewed in stages, pilot tested, and finally rated as to importance by 120 outdoor adventure professionals. Buell deemed the statements to be valid measures of outdoor leadership competency.

The current investigator's review of the literature supported Buell's assertion that the competencies accurately reflected the outdoor adventure literature. Buell's final statements were modified slightly for this study to improve clarity, conciseness, and readability. The modified statements were given to Dr. Buell for examination, and he confirmed that they accurately reflected the original statements and that no meanings had been changed.

Reliability. Estimates of the reliability of the competency-development portion of the OALAPS questionnaire were obtained using a test-retest procedure. A randomly drawn selection of 10% of the items was sent to nine Phase II respondents who had returned completed questionnaires. This was done in a period from one to four months following the respondents' completion of the OALAPS questionnaire. Stability indices were computed for 15 competency statements, item VIII-C (course experiences used to develop Administration and Supervision competencies), and item X-B (percentage of Professionalism competencies developed by each of three types of courses). These represented 10% of each type of competency-development question. Appendix E gives the computational formulas and results of the calculations for each of the items.

Since the data obtained from the competency-development rating scale are ordinal, coefficient alpha

(Baumgartner & Jackson, 1982) was computed in a trials-by-subjects design for each of the 15 randomly selected items. The alpha coefficients ranged between .11 and .95 for the 15 items, with an average alpha of .63. The alpha coefficients of 7 of the items fell below .71. Several of these items were from categories considered less important by Phase II respondents, such as counseling skills and environmental interpretation. The respondents' lower regard for these competencies may be related to their lack of consistency in marking them.

For both item VIII-C and item X-B, coefficients of agreement (Safrit, 1981) were computed. The proportion of agreement was calculated for each of the 11 parts of item VIII-C. These coefficients ranged between .38 and .88, with an average proportion of agreement of .70. The overall coefficient falls to .40 when the proportion of agreement by chance is taken into account. Experiences yielding coefficients lower than .75 were skill demonstration, hands-on skill practice, day trips, and three- to seven-day trips. Skill demonstration and skill practice are less relevant to Administration and Supervision than other topics; the lack of relevance may have produced erratic responses. The unintentional omission of the overnight/weekend trips option may have resulted in the lowered reliability of the day trips and three- to seven-day trips options. It is likely that

respondents using overnight or weekend trips may have been unsure how to indicate them using only the choices listed.

For item X-B, an agreement was recorded whenever the percentage on the retest was within ±10% of the percentage recorded on the original questionnaire. This range was allowed since the three percentages could not vary independently; they had to total 100%, so a change in one of the percentages necessitated a change in the opposite direction in one or both of the other two answers. The proportion of agreement was .75 for adventure-specific courses, .63 for physical education courses, and .75 for non-outdoor adventure/non-physical education courses. The average proportion of agreement was .71 for item X-B.

The overall reliability coefficients approached or reached .70, which Nunnally (1978) indicated is sufficient in the early stages of research with a new measuring instrument. Further refinement of the OALAPS tool in terms of defining the domain of outdoor adventure and improving the timing of the retest administration probably would produce increased reliability coefficients.

Data Analysis Procedures

The researcher collected, recorded, and analyzed the responses of the subjects in both Phase I and Phase II of the study in order to answer the following questions:

1. Which colleges and universities in the United States included in their physical education baccalaureate degree program a component in outdoor adventure leadership and programming?
2. What were the characteristics of the institutions offering significant components in outdoor adventure leadership and programming to physical education majors?
3. What were the characteristics of the physical education baccalaureate degree programs offering significant components in outdoor adventure leadership and programming to physical education majors?
4. What were the characteristics of the outdoor adventure leadership and programming components?
5. Which of Buell's (1981) essential and important outdoor adventure leadership competencies for the entry-level professional were developed by curricular experiences within the physical education degree programs?
6. Which characteristics of the institutions, physical education programs, and outdoor adventure components distinguished high-development institutions (schools with overall competency development medians of 3.5 or greater) from low-development institutions (schools with overall competency development medians less than 3.5)?

Phase I data analysis. The returns of the Phase I questionnaire allowed a tally of institutions offering one or more outdoor adventure leadership and programming courses to physical education majors. The percentage which this represents of the total number of responding institutions with a physical education major program then was calculated. As reported in an earlier section, 184 (44.2%) of the eligible institutions responding to the Phase I questionnaire reported offering outdoor adventure leadership and programming in the physical education major program. A tally by geographic region to provide a picture of the nationwide distribution of these programs also was made and is presented in Chapter IV.

Phase II data analysis. Upon return of the OALAPS curriculum and competency questionnaires, data were compiled. Several data-coding rules were used to standardize the procedures:

1. In tabulating credit hours for the courses listed, all quarter hours were converted to semester hours. One quarter hour was equated with 0.6 semester hours.
2. Where credit hours for courses were variable (e.g., 1-3 semester hours), the average number of hours was used.
3. In recording total contact hours per course, unless otherwise specified, a 16-week semester was assumed. Where contact hours were given as round-the-clock field

experiences (e.g., a weekend or week-long trip), each day was counted as 16 clock hours of contact.

4. For any cases other than in verbal or written follow-up where the information was given more than once (for example, twice on the same questionnaire form, or once on the original questionnaire and once on the reliability question form) but with different responses each time, the first response was recorded for data summary.
5. Whenever two adjacent ratings were marked on the 1-5 scale of competency development, the average rating was recorded.
6. If one-way travel distance to program sites was given as a range (e.g., 100-200 miles), the average distance was recorded.

Following data compilation, descriptive statistical analyses were conducted. Measures of central tendency and measures of variability were calculated. Data were entered from the compilation sheets into a computer data file. The PROC FREQ, PROC MEANS, and PROC UNIVARIATE programs of the Statistical Analysis System (SAS, 1985a; SAS, 1985b) statistical package produced frequencies, percentages, means, medians, and semi-interquartile deviations necessary to answer the research questions posed. SAS computing was carried out at the Academic Computer Center of the University of North Carolina at Greensboro.

Frequencies, or frequency distributions, and modes are reported for categorical data (e.g., type of institution). For interval or ratio data (e.g., one-way travel distance to off-campus sites), the mean was calculated.

Since the competency-development scale was at an ordinal level of measurement, the median and semi-interquartile deviation score were calculated for development of each competency and each competency category across all institutions. Competency statements were then ordered by median development scores. The data were examined for trends such as the competency statements and categories in which higher levels of development occurred. For each institution, a total competency-development score was calculated by taking the median of the ratings of all competecies on the questionnaire.

Mean percentages were reported for types of courses used to develop each competency category. Course experiences used in the development of each competency category were described by reporting frequencies and modes.

Subgroups of institutions displaying higher degrees of competency development (overall median of 3.5 or greater) and lower degrees of competency development (overall median less than 3.5) were examined more closely. Measures of central tendency and variability were calculated for these subgroups in order to determine the characteristics of the institutions, physical education programs, outdoor

adventure components, and competency development that distinguished one subgroup from the other.

Suggestions for further developing low-rated competencies, perceived obstacles to such development, future plans for the outdoor adventure component, and other comments made by the respondents were not subjected to statistical analyses. These responses were simply described in narrative form.

Summary

This chapter described the methods used to collect data in Phase I, the identification of programs with an outdoor adventure component. Also described was the development of the Outdoor Adventure Leadership and Programming Survey and the procedures used in Phase II to gather information regarding the curriculum and competency development in those programs. Finally, an outline of the data analysis procedures was presented.

CHAPTER IV

FINDINGS AND DISCUSSION

This chapter describes the findings of an investigation of outdoor adventure leadership and programming preparation offered to undergraduate physical education majors in the United States. Detailed in this chapter are the results of a nationwide survey of institutions with physical education baccalaureate degrees (Phase I) and findings of the Outdoor Adventure Leadership and Programming Survey (Phase II). These survey results were recorded and analyzed in order to answer specific research questions regarding the (a) institutions, (b) physical education programs, (c) outdoor adventure components, and (d) outdoor adventure leadership and programming competencies developed in the curriculum.

This chapter also discusses and interprets the findings in light of current practices and the thinking of others in the fields of physical education and outdoor adventure education. Insights gained and patterns discerned from the analysis of the Outdoor Adventure Leadership and Programming Survey are highlighted. Implications for the preparation of physical education teachers are discussed.

Phase I

Research Question 1a: How many institutions in each district of the American Alliance for Health, Physical Education, Recreation and Dance offered to physical education majors one or more courses in outdoor adventure leadership and programming?

Of 416 colleges and universities in the United States with physical education baccalaureate degree programs, 184 (44.2%) offered one or more outdoor adventure leadership and programming courses to physical education majors. Table 4 presents the number and percentage of institutions in each district of the American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD) that offered these courses. The greatest number of institutions (71) offering such courses were found in the Southern District, with the fewest (9) located in the Northwest District.

These figures alone can be misleading, however, without consideration of the total number of institutions reporting from each district. For example, while the greatest number of institutions offering outdoor adventure leadership and programming courses was in the Southern District, this is the also the district with the greatest number of institutions responding to the Phase I survey; the same parallel was true of the Northwest District which

Table 4

Institutions That Did and Did Not Offer One or More Outdoor Adventure Leadership and Programming Courses to Physical Education Majors (Phase I)

AAHPERD District	Total n	Institutions Offering Outdoor Adventure		Institutions Not Offering Outdoor Adventure	
		n	%	n	%
Central	64	31	48.4	33	51.6
Eastern	44	24	54.5	20	45.5
Midwest	76	31	40.8	45	59.2
Northwest	23	9	39.1	14	60.9
Southern	172	71	41.3	101	58.7
Southwest	37	18	48.6	19	51.4
Total	416	184	44.2	232	55.8

had the lowest number of institutions with outdoor adventure course offerings but also had the lowest total number of respondents. An examination of Table 4 reveals the percentages of institutions that did and did not offer outdoor adventure leadership and programming courses with respect to the total number of institutions responding to the questionnaire in each district.

In the Eastern District, 54.5% of the institutions offered one or more outdoor adventure leadership and programming courses to physical education majors. This was the highest proportion of the six AAHPERD districts, and the Eastern District was the only one in which more institutions did offer outdoor adventure courses than did not. The next-highest proportions were found in the Southwest and Central Districts, where almost the same number of institutions offered as did not offer outdoor adventure courses (48.6% and 48.4%, respectively). The smallest percentages of institutions offering outdoor adventure courses to physical education majors were found in the Southern (41.3%), Midwest (40.8%), and Northwest (39.1%) Districts, in that order.

The mean number of semester hours in activity-based and theory/methods-based courses is depicted in Table 5. On the average, 6.69 semester hours of coursework in outdoor adventure leadership and programming were offered in these institutions. Of those semester hours, slightly

Table 5

Mean Semester Hours of Outdoor Adventure Leadership and Programming Courses Offered to Physical Education Majors in 184 Institutions (Phase I)

	Institutions	Mean Semester Hours		
AAHPERD District	n	Theory/ Methods	Activity	Total
Central	31	3.10	2.10	5.19
Eastern	24	4.29	6.27	10.56
Midwest	31[a]	2.23	3.12	5.35
Northwest	9	1.50	4.00	5.50
Southern	71	3.11	2.53	5.64
Southwest	18[a]	5.03	6.32	11.35
Total	184	3.22	3.47	6.69

[a]One of these institutions did not supply information regarding credit hours of courses offered and is not included in the calculation of mean semester hours.

less than half (3.22) were in courses that emphasized theory and/or methods of outdoor adventure leadership and programming, while slightly more than half (3.47) were primarily activity-based. The Southwest District offered the greatest amount of theory/methods coursework (5.03 semester hours), and the Northwest District offered the least (1.50 semester hours). The Southern and Eastern Districts led in activity-oriented coursework with 6.32 and 6.27 semester hours, respectively, while the Central District trailed with 2.10 semester hours of activity-oriented offerings.

It can be seen from the information gathered in the Phase I survey that less than half the physical education majors in institutions across the United States were given opportunities to develop competencies in outdoor adventure leadership and programming through the curriculum in their baccalaureate degree programs. Physical education students enrolled in colleges and universities in the Eastern District were most likely to have had some exposure to outdoor adventure education. Even so, the physical education majors enrolled in almost half those institutions were not provided any coursework in this topic. Grenier's 1983 study of outdoor education in Canadian universities--where outdoor education was defined to be essentially the same as outdoor adventure in the present study--indicated

that physical education departments in 63.6% of the universities offered outdoor education courses.

The semester hours of outdoor adventure leadership and programming that were offered by the 184 institutions were almost equally balanced between activity and theory/methods of outdoor adventure. Assuming that theory/methods-oriented courses typically carry two to three times the course credit that activity-oriented courses carry, this represents approximately two to three activity courses for every one theory/methods course offered.

In the investigator's preliminary analysis of Buell's (1981) list of entry-level outdoor leadership competencies, used in the Phase II survey, the balance was found to be tipped in favor of competencies that might be best learned in theory/methods-focused courses. Almost twice as many theory- or methods-oriented competencies were in Buell's list as activity-oriented competencies. This suggests that a ratio of twice as much theory/methods course credit as activity-based credit might provide a sufficient balance to accomplish essential and important entry-level outdoor adventure leadership and programming competency development. Only the institutions in the Central and Southern Districts offered more theory/methods course credit than activity credit, but in less than the 2:1 theory/methods-to-activity ratio suggested by Buell's competency list.

It is interesting to note, however, that in Grenier's study of outdoor education in Canadian universities there were almost twice as many courses of a practical nature as there were of a theoretical nature. This finding approximates the ratio obtained in the Phase I survey.

Grenier's study also found almost twice as many total credits of outdoor education offerings per institution as the national average that was revealed in the present study. The difference may be that Grenier did not limit his exploration to outdoor education courses offered specifically to physical education majors nor to courses narrowly focused on preparation for outdoor leadership in physical education school settings. In the present study, however, the institutions in AAHPERD's Southwest and Eastern Districts offered almost the same amount of total course credit per institution as the Canadian universities in Grenier's investigation.

Phase II

Research Question 1b: Which colleges offered to physical education majors a significant component in outdoor adventure leadership and programming?

The second phase of this investigation identified colleges and universities that offered a significant component in outdoor adventure leadership and programming

to physical education majors. Table 6 lists these institutions. Twelve Phase II institutions included in their curricula at least nine semester hours of courses in outdoor adventure leadership and programming, of which at least six semester hours were primarily theory/methods-oriented and at least three semester hours were activity-oriented.

Profile of the Institutions

Research Question 2: What were the characteristics of the institutions offering significant components in outdoor adventure leadership and programming to physical education majors?

Table 7 shows a profile of the Phase II colleges and universities. While the average enrollment of the Phase II institutions was slightly less than 8,000 students, these institutions ranged in size from 750 to 33,000 students. They were divided almost equally among three size groupings:

(a) institutions with less than 2,500 students,

(b) institutions with 2,500 to 9,999 students, and

(c) institutions with 10,000 or more students.

Nine (75%) of these institutions were state-supported or state-related. The rest were private colleges.

Table 6

Institutions Offering a Significant Component[a] in Outdoor Adventure Leadership and Programming to Physical Education Majors (Phase II)

Institution	Location
Chadron State College	Chadron, NE
Fairmont State College	Fairmont, WV
LeTourneau College	Longview, TX
Missouri Western State College	St. Joseph, MO
Southwestern Oklahoma State University	Weatherford, OK
Springfield College	Springfield, MA
Texas A & M University	College Station, TX
Towson State University	Towson, MD
University of New Hampshire	Durham, NH
West Chester University	West Chester, PA
Western Carolina University	Cullowhee, NC
Wheaton College	Wheaton, IL

[a] Institutions offered at least nine semester hours of outdoor adventure leadership and programming courses, of which at least six semester hours were primarily theory/methods and three semester hours were primarily activity.

Table 7

Profile of 12 Institutions With a Component in Outdoor Adventure Leadership and Programming for Physical Education Majors (Phase II)

Demographic Categories	n	%
Enrollment (mean = 7,862.5; min. = 750; max. = 33,000)		
Less than 2,500	4	33.3
2,500 to 9,999	5	41.7
10,000 or more	3	25.0
Control		
State	9	75.0
Private	3	25.0
AAHPERD District		
Central	2	16.7
Eastern	4	33.3
Midwest	2	16.7
Northwest	0	0.0
Southern	4	33.3
Southwest	0	0.0

Two-thirds of Phase II institutions came from the Southern and Eastern Districts of AAHPERD, while the remaining one-third was split between the Central and Midwest Districts. None of the colleges and universities were located in the Northwest or Southwest Districts of AAHPERD.

Judging by the wide range of enrollments in the Phase II colleges and universities, it appears that the size of the institution was not a factor in determining whether a significant component in outdoor adventure leadership and programming was offered to physical education majors. Within this small Phase II group, the institutions were predominantly state, rather than privately, controlled. It was surprising to find that none of the institutions with substantial outdoor adventure components were located in the southwestern or northwestern regions of the country, areas often associated with the wide range of undeveloped, wilderness environs typically used in outdoor adventure programs. It is certainly not for lack of suitable locations for outdoor experiences that these areas of the country were not represented among the locations of the Phase II colleges and universities.

Physical Education Programs

Research Question 3: What were the characteristics of the physical education baccalaureate degree programs offering

significant components in outdoor adventure leadership and programming to physical education majors?

The 12 physical education baccalaureate degree programs in Phase II institutions were administered by academic units with a variety of titles. More of the departments consisted solely of physical education than any other academic unit which merged physical education with health, recreation, leisure studies, fitness, and/or dance. The titles of the academic units are listed in Table 8.

Enrollment and faculty. The average enrollment in the physical education baccalaureate degree programs was 228 students, though these programs varied in size from 15 to 800 students. These physical education programs were taught by an average of just less than 22 faculty members, almost 80% of which were full-time faculty members (see Table 9).

Outdoor Adventure Components

Research Question 4a, b: What were the characteristics of the outdoor adventure leadership and programming components? For how many years had the outdoor adventure components been offered to physical education majors? How many physical education majors were enrolled in the outdoor adventure components?

Table 8

Academic Units Administering the Physical Education Baccalaureate Degree Programs With an Outdoor Adventure Component (n = 12)

Academic Unit	n	%
Physical Education Department/ Department of Physical Education	5	41.7
Department/Division of Health, Physical Education, and Recreation	4	33.3
Division of Physical Education, Recreation, Leisure Studies, and Dance	1	8.3
Department of Physical Education and Health/Fitness	1	8.3
Department of Health and Physical Education	1	8.3

Table 9

Profile of the Physical Education Baccalaureate Degree Programs With a Component in Outdoor Adventure Leadership and Programming (n = 12)

Demographic Categories	Mean		Min.	Max.
Enrollment	228.0		15	800
Faculty	21.7		4	50
Full-time	17.3	(79.7%)	3	47
Part-time	4.4	(20.3%)	0	20

Profile of the components. The outdoor adventure leadership and programming components in the Phase II institutions were not newcomers to these curricula. On the average, the component had been in existence just over 17 years. One institution had incorporated outdoor adventure in the curriculum since 1951.

That the earliest elements of the average outdoor adventure component in the Phase II institutions made their appearance around 1970 is not surprising. At that point in time, Outward Bound's first school in the United States had been operating for eight years, and its influence was being felt in a number of educational institutions. A year later, in 1971, Project Adventure, the well-known school-based adventure curriculum, came into being. In the early 1970s, physical educators, among others, began to realize the vast potential of outdoor adventure programming. It is not surprising that the advent of these components in the Phase II institutions coincided with these events.

Although the outdoor adventure component began as early as 1951 in one institution and 1956 in another, the remainder of the Phase II colleges and universities did not introduce elements of outdoor adventure into the physical education professional preparation program until the late 1960s and 1970s. Though the major adventure education thrust came with Outward Bound U.S.A. in the early sixties, the outdoor education and camping education movements of

earlier decades may have been influential in the two institutions whose outdoor adventure components began in the 1950s.

During the 1986-87 academic year, an average of approximately 38 physical education major students per institution were enrolled in the outdoor adventure leadership and programming courses. This represented 21.2% of all undergraduate physical education majors. As can be seen in Table 10, though, the number and percentage of students enrolled varied greatly. There were as few as 1 and as many as 188 physical education students in these courses at the various institutions. Between 1% and 75% of all physical education majors were enrolled in outdoor adventure leadership and programming courses during that academic year. Seven (58.3%) of the Phase II institutions reported that the proportion of physical education majors enrolling in the outdoor adventure courses was stable over the last several years. A decline in this proportion was noted by three (25.0%) of the colleges and universities, while two (16.7%) of them indicated that a greater proportion of physical education students had enrolled in outdoor adventure courses in recent years as compared to a few years ago.

On the average, only slightly more than 20% of the physical education majors in the 12 Phase II institutions were involved in the outdoor adventure leadership and

Table 10

Profile of the Outdoor Adventure Leadership and Programming Components (n = 12)

Demographic Categories	Mean	Min.	Max.
Years component had been in the curriculum	17.3	8	36
P.E. majors in outdoor adventure classes 1986-87			
Number of students	38.1	1	188
Percentage of all P.E. majors	21.2	1	75

programming curriculum in 1986-87. In five of the institutions, however, only 1% to 5% of the physical education majors enrolled in any outdoor adventure courses. This represents a very small proportion of the potential physical education teachers entering the work force in the succeeding four years. Given that the majority of institutions indicated that this proportion was stable and three even noted that the proportion in their institution was declining, the forecast for finding neophyte physical educators well-versed in outdoor adventure knowledge and skills is not encouraging. The vast majority of emerging physical educators, if they are to conduct any type of adventure programming in schools, will not be able to rely on outdoor adventure-specific preparation obtained in their college program.

Research Question 4c: How were the outdoor adventure components structured? Were they offered as (1) options, concentrations, tracks, or specialty areas within the physical education major; (2) minors; (3) individual courses; or (4) any other structures?

Structure. The outdoor adventure leadership and programming components existed in a number of forms, and many of the institutions offered the component in more than one of these forms. The number and proportion of

institutions offering each form of outdoor adventure leadership and programming are presented in Table 11.

Three-quarters of the institutions offered the component as clusters of courses (concentrations, options, specialty areas, or tracks) within the physical education major. Three-quarters of the colleges and universities made the outdoor adventure components available as individual courses, and one-third of the institutions offered the outdoor adventure components as a minor in physical education. Outdoor adventure was also offered as a major, a minor, and an option in recreation or leisure management; as a specialty area attached to a business major or a Bible major; and as a major in other departments within the institutions.

The fact that three-quarters of the institutions offered an outdoor adventure concentration, option, track, or specialty area within physical education and one-third offered an outdoor adventure minor gave an indication that there was some recognition of the need to group outdoor adventure courses into a focused area of study. Five of the 12 institutions also offered outdoor adventure in conjunction with other academic and professional areas of study. This type of cross-disciplinary effort is very appropriate, since outdoor adventure, like outdoor education in general, lends itself well to an integrated, interdisciplinary approach.

Table 11

Structure of the Outdoor Adventure Leadership and Programming Components (n = 12)

	Institutions	
Component Structure	n	%
Concentration, option, specialty area, or track in physical education	9	75.0
Individual courses	9	75.0
Minor	4	33.3
Other	5	41.7

Note. Some institutions offered the component in more than one form.

Research Question 4d: How many full-time and part-time faculty members were involved in teaching the outdoor adventure components? What were their faculty ranks and terminal degrees? In which areas of outdoor adventure did they specialize?

Faculty. Table 12 outlines the profile of the outdoor adventure faculty. The 12 Phase II institutions employed a total of 34 faculty members to teach the outdoor adventure leadership and programming courses. Of these, 70.6% were full-time faculty members, and 29.4% were employed part-time. While the faculty members may have been employed on a full-time basis by the colleges or universities, they may not have been assigned solely to teach outdoor adventure courses and it is likely that they had other responsibilities as well.

Assistant professors and associate professors predominated, accounting for 29.4% and 32.4% of the outdoor adventure faculty, respectively. Slightly less than one-quarter of the outdoor adventure faculty members were instructors. Those holding the rank of full professor were the least prevalent. Fully half of the outdoor adventure faculty members held a doctorate, and almost all of the other half held a master's degree.

The percentage of full-time outdoor adventure faculty members is approximately 10% less than the percentage of

Table 12

Profile of Faculty Teaching Outdoor Adventure Leadership and Programming at 12 Institutions

Demographic Categories	n	%	Min.	Max.
Faculty members (mean = 2.8, min. = 1, max. = 5)				
Full-time	24	70.6	1	4
Part-time	10	29.4	0	3
Faculty rank				
Instructor	8	23.5	0	4
Assistant professor	10	29.4	0	4
Associate professor	11	32.4	0	3
Full professor	5	14.7	0	1
Faculty degrees				
Bachelor's	1	2.9	0	1
Master's	16	47.1	0	3
Doctorate	17	50.0	0	3

full-time physical education faculty overall. It is also almost 10% lower than the proportion of full-time faculty members found in Grenier's 1983 study of outdoor education in Canadian universities.

That as many as 70% of the outdoor adventure faculty were full-time may indicate some valuing of that aspect of the curriculum and perhaps a desire for a degree of stability in that area as well. Along with that, almost 50% of the outdoor adventure faculty members held the ranks of either associate or full professor, and over 97% held advanced degrees. This aspect of the faculty members' backgrounds presumably added to the stability--and perhaps the experience and expertise--brought to the component by these faculty members.

Much like the results of the current study, Grenier's findings also indicated that a very high percentage--over 90%--of outdoor education faculty members in Canadian universities held either a master's degree or doctorate. On the other hand, a much larger percentage of the outdoor adventure faculty members in the current study held doctoral degrees than did physical education faculty members in Canfield's 1980 study of undergraduate physical education programs in the Central District of AAHPERD. Half the outdoor adventure faculty members in the present investigation had as the terminal degree the doctorate,

while only 16% of the physical education faculty members in Canfield's study had achieved that degree.

The 34 faculty members teaching courses in the outdoor adventure leadership and programming component, on the average, each specialized in two to three different areas of outdoor adventure. Twenty-seven different areas were noted among the 78 teaching specialties listed. The specialization areas of the 34 individuals teaching the outdoor adventure leadership and programming courses are indicated in Table 13.

The top specialty areas were backpacking and canoeing; each was cited by nine faculty members (26.5%) as an area of expertise. Cross-country skiing was mentioned as a specialization by seven (20.6%) of the faculty members. The next, in order of frequency, were outdoor adventure education (17.6%), rock climbing (14.7%), camping (11.8%), and leadership (11.8%).

Several specializations had themes centered around individual or group development. Areas such as leadership, counseling, programs for businesses, Outward Bound, personal growth, and therapy collectively accounted for 12 (15.4%) of the 78 faculty specializations listed.

There was a great deal of diversity in the specialty areas claimed by the outdoor adventure faculty members. The top three specialty areas--backpacking, canoeing, and cross-country skiing--are very common vehicles for outdoor

Table 13

Outdoor Adventure Specializations of 34 Faculty Members at 12 Institutions

	Faculty Members	
Specialization Areas	n	%
Backpacking	9	26.5
Canoeing	9	26.5
Cross-country skiing/snow skiing	7	20.6
Outdoor adventure education	6	17.6
Rock climbing	5	14.7
Camping	4	11.8
Leadership	4	11.8
Aquatics	3	8.8
Orienteering	3	8.8
Camp programs	2	5.9
Counseling and outdoor education	2	5.9
Mountain biking	2	5.9
Programs for businesses	2	5.9
Ropes course	2	5.9
Sailing	2	5.9
Survival	2	5.9
Wilderness learning	2	5.9
Wilderness skills	2	5.9
Winter camping	2	5.9
Environmental interpretation	1	2.9
Hiking	1	2.9
Org. and admin. of outdoor education	1	2.9
Outward Bound	1	2.9
Personal growth	1	2.9
SCUBA	1	2.9
Social therapy	1	2.9
Therapy	1	2.9

Note. Some faculty members listed more than one specialization area.

adventure learning. Also, they are considered to be more or less common outdoor recreational activities.

Other areas of faculty expertise, though, are not so commonplace and are more specific to outdoor adventure education programs. Specializations such as those promoting personal growth or group development through adventure activities, using the outdoors for therapy and counseling, and programming for businesses are outgrowths of the Outward Bound-type outdoor adventure movement.

Research Question 4e: How many courses were offered in outdoor adventure leadership and programming? How many semester hours of credit were granted for the courses? What was the main format of the courses (theory/methods or activity)? Were the courses required or optional? What was the number of contact hours per course? What were the titles of those courses?

Courses. The Phase II institutions offered a wide variety of outdoor adventure leadership and programming courses to physical education majors. An examination of Table 14 reveals that each institution offered an average of just over 13 outdoor adventure courses totaling 23.6 semester hours in which a physical education student could enroll. The fewest outdoor adventure courses offered by any of these institutions was 5, while the greatest number

Table 14

Mean Number and Semester Hours of Outdoor Adventure Leadership and Programming Courses Offered by 12 Institutions

Demographic Categories	Mean	%	Min.	Max.
Courses per institution (mean = 13.2, min. = 5, max. = 27)				
Activity format	9.4	71.2	3	21
Theory/methods format	3.8	28.8	2	7
Required	3.6	27.3	0	17
Elective	9.6	72.7	1	15
Semester hours per institution (mean = 23.6, min. = 9, max. = 52.5)				
Activity format	12.0	51.1	3.0	29.5
Theory/methods format	11.5	48.9	6.0	23.0
Required	8.6	36.6	0.0	42.5
Elective	15.0	63.4	1.0	25.0
Contact hours per course	55.7	--	16.0	320.0

of courses offered by a single institution was 27. The number of semester hours of coursework offered by an institution ranged from a low of 9 semester hours to a high of 52.5 semester hours.

The 12 Phase II institutions offered three-and-a-half times the average total semester hours of courses found in the 184 Phase I institutions that offered outdoor adventure leadership and programming courses. The mean numbers of courses and credits also compare favorably with the results of Grenier's 1983 study of outdoor education in Canadian universities. The Canadian universities offered an average of one-half the number of courses and credits offered by the Phase II institutions.

Most of the classes--almost three-quarters of them--were designated as electives for physical education majors. Four of the Phase II institutions required no outdoor adventure leadership and programming courses for their physical education majors. One institution, however, required as many as 17 courses (42.5 semester hours) for students who had chosen to complete a dual major in physical education teacher certification and outdoor education. That only about one-quarter of the outdoor adventure leadership and programming courses are required may partially explain why an average of only 21.2% of all physical education majors were involved in the component in an academic year. Stringent course requirements for

teacher certification may discourage some physical education majors from packing an already full schedule with elective outdoor adventure courses. If the outdoor adventure leadership and programming courses were not required by the institution, they may not have been taken by the physical education majors in these 12 Phase II colleges and universities.

Over 70% of the outdoor adventure leadership and programming courses offered by the 12 institutions had a predominantly activity-based format. This is a slightly larger proportion of activity courses and, concomitantly, a slightly smaller percentage of theory/methods courses than Grenier found in his 1983 study. Course offerings in the Canadian universities were 62.7% activity-oriented and 37.3% theory/methods-oriented.

Since activity courses typically carry about one-third to one-half the course credit of theory/methods-oriented courses, and since there were about two-and-a-half times more activity courses than theory/methods courses, the average total amount of activity-based credit in the Phase II institutions was almost the same as the average total amount of theory/methods-based credit. Means of 12.0 semester hours of activity and 11.5 semester hours of theory/methods courses were offered by the 12 Phase II institutions. The almost-equal proportions of activity and theory/methods semester hours in Phase II institutions are

nearly identical to the proportions of mean semester hours of activity and theory/methods outdoor adventure leadership and programming courses among 184 Phase I institutions (refer to Table 5). The total amounts of activity and theory/methods credit offered in the 12 Phase II institutions, however, are each approximately three-and-a-half times the respective amounts offered by the Phase I institutions.

A typical course in the component consisted of 55.7 contact hours, although as few as 16 clock hours were devoted to a half-credit canoeing class, while 300 hours were logged in a two-credit high-altitude mountaineering course, and a two- to four-credit internship necessitated 320 hours of contact time.

With an average offering of 13.2 courses and an average contact time of 55.7 clock hours per course, each Phase II institution's offerings in outdoor adventure leadership and programming for physical education majors totalled approximately 735 clock hours of potential instruction time. Extrapolating from this total the equivalence to the length of time spent in a round-the-clock field experience--such as that which might be offered by the National Outdoor Leadership School (NOLS) or Wilderness Education Association (WEA), for example--we could say that the sum of the average institution's courses

was like a six- to six-and-a-half-week field experience, with 16 hours per day of instruction time.

For comparison, consider that NOLS basic courses and WEA's National Standard Program for Outdoor Leadership are typically about five weeks in length. A student enrolling in all the courses offered by the average Phase II institution would be involved in more clock hours of potential instruction time than a student in the typical NOLS or WEA outdoor leadership program. With the exception of those rare students selecting to complete a minor or dual major option in outdoor adventure leadership, however, few physical education majors are likely to take 13 outdoor adventure courses in addition to teacher certification requirements in physical education.

The variety of course offerings is apparent from the titles displayed in Tables 15-17. There were 158 outdoor adventure leadership and programming courses available to physical education majors in the 12 Phase II institutions. Some courses offered by different institutions had the same name. Outdoor Education, for example, was a course offered by six of the institutions. There were, however, 105 different course titles among the 158 courses offered.

Courses which were primarily activity-based are listed in Table 15. These courses fell into a number of categories including backpacking, camping, and hiking (8 titles); climbing and mountaineering (8 titles); cross-

Table 15

Activity-Based Outdoor Adventure Leadership and Programming Courses Offered by 12 Institutions

Backpacking/Camping/Hiking
Beginning Backpacking
Camping & Backpacking
Hiking
Hiking & Backpacking
Intermediate Backpacking
Outdoor Pursuits (one week outdoor living/camping)
Winter Camping
Winter Wilderness Backpacking

Climbing/Mountaineering
Basic Ice Climbing
Beginning Mountaineering
Beginning Rock Climbing
High Altitude Mountaineering
Intermediate Rock Climbing
Rappelling
Rock Climbing & Rappelling
Rock Climbing/Mountain Biking

Cross-Country Skiing
Beginning Cross-Country Skiing/ Ski Touring
Intermediate Skiing/Ski Touring
Skiing 3 (Advanced)

Underwater Activities
Advanced Diver
Advanced SCUBA
Assistant Instructor SCUBA
Basic SCUBA
Intermediate Skin & SCUBA
Open Water Diver
SCUBA Certification
SCUBA, Lifesaving, & Accident Management
Skin & SCUBA
YMCA SCUBA Instructor

Watercraft Activities
Basic Sailing
Beginning Canoeing
Boating & Canoeing
Kayaking
River Canoeing
Sailing & Canoeing
Sailing/Canoeing/Kayaking
Special Aquatic Activities
Whitewater Canoeing
Wilderness Canoeing

Other
Advanced First Aid
Adventure/Challenge Activities
Bicycle Touring/Cycling
Camp Skills
Cave Exploring
Emergency Medical Technician
Experiences/Field Experiences in Outdoor Education
Independent Study in Outdoor Resource Center
Internship
Nonwinter Activities for Majors
Orientation to Outdoor Education
Orienteering
Outdoor Adventure
Outdoor Adventure Activities
Outdoor Education
Outdoor Education Seminar
Outdoor Leadership
Recreation Field Work I
Recreation Field Work II
Ropes Course Management
Survival
Teaching Assistantship
Venture Dynamics I
Venture Dynamics II
Wilderness Adventures II
Wilderness Adventures III
Wilderness Skills
Winter Activities for Majors

Table 16

Theory/Methods-Based Outdoor Adventure Leadership and Programming Courses Offered by 12 Institutions

Adventure Leadership/Programming
Leadership in Outdoor Pursuits
Leadership in Outdoor Recreational Pursuits
Methods & Techniques of Adventure Activities
Overview of Adventure Education
Practicum in Physical Education (assist instructing an adventure activity)
Principles of Recreational Outdoor Pursuits Education
Theory of Adventure Education
Wilderness Learning Seminar

Camping Education
Camp Administration
Camp Counseling
Camp Counseling & Program
Camp Leadership
Camp Program

Outdoor Education
Conservation of Natural Resources
Experiential Education
Organization & Administration of Outdoor Education
Outdoor Education
Outdoor Education Philosophy & Methods
Programs in Outdoor Education
Student Teaching in Outdoor Education

Recreation (Course Numbers With a Recreation Prefix)
Dynamics of Leadership
Group Leadership
Introduction to Recreation
Organization & Administration of Recreation
Outdoor Recreation
Personal Growth Through Adventure
Recreation Leadership
Recreation Programming
Seminar in Outdoor Recreation
Therapeutic & Prescriptive Recreation

Other
Introduction to Prose Writing
Introduction to Psychology
Small Group Communication

Table 17

Half Activity-Based and Half Theory/Methods-Based

Outdoor Adventure Leadership and Programming Courses

Offered by 12 Institutions

Adventure Leadership/Programming
Leadership for Backcountry Travel
Outdoor Adventure Programs

Camping Education
Camp Counseling
Camping Seminar
Practicum in Camping or Outdoor Education

Outdoor Education
Activities in Outdoor Education
Field Experiences in Outdoor Education
Outdoor Education
Practicum in Camping or Outdoor Education

country skiing (3 titles); underwater activities (10 titles); and watercraft activities (10 titles).

Another 28 course titles were either so diverse as to defy grouping under particular topical areas or not descriptive enough to determine in which activity category to place them. College catalogs often did not prove very helpful in grouping activity courses as they frequently provided no descriptive information about such courses, only their titles. Among the other 28 activity-based course titles indicated were varied topics such as first aid, cave exploring, cycling, orienteering, ropes course management, survival, and winter activities. Also mentioned were internships, field work, and teaching assistantships in which students can get first-hand experience in teaching or leading outdoor adventure activities.

Table 16 lists the titles of courses which focused primarily on theory and/or methods of outdoor adventure leadership and programming. These course titles aligned predominantly in four clusters: adventure leadership and programming (8 titles), camping education (5 titles), outdoor education (7 titles), and recreation (10 titles). Three other courses--Introduction to Prose Writing, Introduction to Psychology, and Small Group Communication--were considered by the respondents to be highly related to the outdoor adventure leadership and programming area and

were either recommended or required for physical education students focusing in this area. As with the activity-based offerings, courses providing teaching or leading experience were named--specifically, a physical education practicum that involves assisting in the instruction of an adventure activity and a student teaching experience in outdoor education.

In addition to the courses that were either primarily activity-oriented or primarily theory/methods-oriented, nine other titles were pegged as focusing equally on both orientations. These titles are indicated in Table 17.

One institution's representative indicated that his school's outdoor adventure program mainly consisted of "a series of skills and techniques courses which have as their primary objective personal skill development. Instructional methodology, organization and administration, etc. are offered in other courses and applied in these courses if the student so desires."

Table 18 shows the 11 main course topics that were offered by at least half the Phase II institutions. These 11 topics were found in 128 (81.0%) of the 158 courses offered by Phase II colleges and universities. Seven of the course topics were primarily activity-oriented, while the remaining four topics were found to have both activity and theory/methods orientations.

Table 18

Outdoor Adventure Leadership and Programming Courses Topics Taught in at Least 50% of Phase II Institutions

Main Course Topic	Teaching Focus	Institutions (n = 12)		Courses (n = 158)	
		n	%	n	%
Canoeing	Activity	11	91.7	15	9.5
General Outdoor Education	Activity, Theory/ Methods	9	75.0	15	9.5
Leadership	Activity, Theory/ Methods	9	75.0	15	9.5
Cross-Country Skiing/ Ski Touring	Activity	8	66.7	10	6.3
Outdoor Adventure Education	Activity, Theory/ Methods	8	66.7	17	10.8
SCUBA	Activity	8	66.7	15	9.5
Backpacking	Activity	7	58.3	7	4.4
Biking/Cycle Touring	Activity	7	58.3	7	4.4
Climbing/Rappelling	Activity	7	58.3	11	7.0
Orienteering	Activity	6	50.0	6	3.8
Practicum/Internship/ Field Work/Student Teaching	Activity, Theory/ Methods	6	50.0	10	6.3
Total		--	--	128	81.0

Canoeing, alone or in combination with other watercraft activities such as sailing, boating, and kayaking, was taught in more of the institutions than any other topic. Eleven (91.7%) of the Phase II colleges and universities taught canoeing in 15 different classes. Courses giving a general introduction to outdoor education theory, methods, and activities and courses dealing with leadership in the outdoors each were offered by nine (75.0%) of the institutions. Each of these two main topics was found in 15 different courses, and both theory/methods and activity approaches were used to teach them.

Offered by eight (66.7%) of the institutions were a variety of courses involving activities, theory, and methods of outdoor adventure education. There were 17 such courses among the eight institutions, the largest number of classes addressing a single topic.

Cross-country skiing/ski touring and SCUBA were activity-oriented courses also offered by eight (66.7%) of the Phase II institutions. Other activity-oriented topics found in at least six (50.0%) of the Phase II institutions were backpacking, biking/cycle touring, climbing/ rappelling, and orienteering. Finally, courses such as internships, practica, field work, and student teaching which give opportunities to apply the theory and methods of outdoor adventure in activity settings were found in exactly half the 12 Phase II colleges and universities.

As one might expect, these frequently taught topics were also listed as specific areas of outdoor adventure faculty expertise (see Table 13). Nine of the 11 topics--canoeing, leadership, cross-country skiing, outdoor adventure education, SCUBA, backpacking, biking, rock climbing, and orienteering--were specifically listed as outdoor adventure faculty specializations. In fact, they included the five most frequently listed faculty specialization areas. Faculty members also were likely to have been involved in the other two frequently offered areas: general outdoor education and various field experiences. General outdoor education, as a topic, broadly encompasses many of the faculty specialties, and an outdoor adventure faculty member might be expected to act as a student's college or university supervisor during the practica, internships, student teaching, and field experiences offered by the institutions.

Most of these commonly taught outdoor adventure topics were among Buell's (1981) important or essential entry-level competency topics. According to the results of that study, canoeing, cross-country skiing, backpacking, rock climbing, rappelling, and orienteering were outing sports or modes of travel in which the entry-level outdoor professional was expected to have leading or instructing ability.

Three other topics that were frequently taught by Phase II institutions were addressed by Buell's list of entry-level outdoor leadership competencies: leadership, general outdoor education, and outdoor adventure education. Buell's list included 23 specific competencies related to leadership, as well as many other competencies highly integral to skillful leadership. General outdoor education is interwoven throughout the 148-item competency list--from philosophical bases to environmental awareness and interpretation to specific outdoor living and traveling skills such as campcraft, hiking, and knowledge of weather signs. Outdoor adventure education, too, is addressed by competencies in almost every category. Field experiences such as internships, practica, and student teaching are implied by the expectation of applied competency in each area. Of the topics Phase II institutions taught most, only cycling and SCUBA failed to make Buell's list of important or essential entry-level outdoor adventure leadership competencies. Bicycle touring was ranked 11th of 26 specific outing sports or modes of travel and, with a mean of 2.31 on Buell's 4-point scale, fell into the desirable (recommended but not necessary) range of scores. The cutoff between desirable and important competencies was 2.50 on that scale. SCUBA was not included at all in Buell's inventory of outdoor leadership competencies.

Research Question 4f: What types of areas or sites were used for outdoor adventure course experiences and what was the approximate one-way travel distance to each from campus?

Program sites. The outdoor adventure leadership and programming courses were conducted in a wide variety of settings, both indoors and outdoors and both on and off the campuses of these institutions. Table 19 displays the types of sites used and the number of programs using them.

All 12 of the institutions used classrooms and gymnasia for some aspect of the outdoor adventure component. Likewise, all 12 of them used a mountain environment in one or more of the courses taught. Other popular areas for teaching outdoor adventure leadership and programming skills were forests, lakes, and rivers; all but one institution used each of these sites. Ten programs utilized a field campus, outdoor education center, or camp in some portion of the outdoor adventure component. A ropes course was employed by two-thirds of these colleges and universities. Ocean and desert environments were least favored as program sites.

While many of these program sites were easily accessible to students and faculty, others were located a great distance from the campus. Mean one-way distances, as

Table 19

Sites Used for Outdoor Adventure Courses and Distance Traveled to Each

Sites	Institutions Using Site		One-Way Distance to Site (in Miles)		
	n	%	Mean	Min.	Max.
		Indoor Sites			
Classroom	12	100.0	--	--	--
Gymnasium	12	100.0	--	--	--
		Outdoor Sites			
Mountains	12	100.0	335.4	10	1,500
Forest	11	91.7	140.5	0	500
Lake	11[a]	91.7	117.9	0	1,000
River	11	91.7	69.5	3	300
Field campus, o.e. center, or camp	10	83.3	129.3	1	1,000
Ropes course	8	66.7	37.1	1	198
Ocean	4	33.3	312.8	1	1,000
Desert	2	16.7	550.0	100	1,000
All outdoor sites used	--	--	168.5	0	1,500

[a]One institution did not supply mileage information for this site and is not included in the calculation of mean distance.

well as the minimum and maximum distances, to each of the program sites are also shown in Table 19.

Ropes courses were the most accessible of the outdoor sites, at an average distance of 37.1 miles from the campus. Rivers used by the programs were also relatively close to the institutions, requiring an average one-way trip of 69.5 miles.

While deserts, mountains, and oceans appeared to be, on the average, the three most distant sites, a look at the minimum and maximum distances to each of these reveals quite another picture. One of the two institutions using the desert indeed traveled quite far--1,000 miles. The other, however, found the desert much closer to home base, just 100 miles away. Likewise, some institutions chose mountain sites as close as 10 miles away, while others journeyed 1,500 miles to get there. Similarly, the ocean is but 1 mile from one campus; for another institution, the coast is located 1,000 miles away.

Table 20 paints another picture of the distances traveled by these outdoor adventure programs. The 12 institutions used a total of 68 sites. Of these, 17 sites (25%) were within 10 miles of the campuses. Another 20 (29.4%) of the program sites were located quite close, no more than 30 miles--or about a 30- to 45-minute drive--from the college or university. Seven (10.3%) of the areas used represented substantial trips of 501 to 1,500 miles.

Table 20

One-Way Distances to Outdoor Sites Used for Outdoor Adventure Leadership and Programming Courses in 12 Institutions

Distance Traveled to Site (Miles)	Number of Sites Used by All Institutions	Percentage of All Sites Used
0-10	17	25.0
11-30	20	29.4
31-100	13	19.1
101-500	11	16.2
501-1500	7	10.3
Total	68	100.0

Extensive travel to reach desirable locations for outdoor adventure program activities did not appear to be out of the question for many of the Phase II institutions. In fact, outdoor adventure classes from four different institutions traveled 1,000 miles or more to reach a particular mountain, lake, ocean, or desert site. Each of these far-ranging trips most likely took the participants to an area that presented particular geographic, climatic, or other environmental features not found in sites closer to home and probably afforded unique opportunities to learn outdoor leadership skills.

On the other hand, the majority of sites used for outdoor adventure leadership and programming courses were relatively close to the institutions--over half the sites were 30 miles or less from the college or university. As a matter of fact, 8 of the 68 sites used by these schools were either on the campus or within one mile of it. Lakes, forests, ropes courses, field campuses/camps/outdoor education centers, and even an ocean were found within one mile of five colleges and universities. Of course, the opportunities to develop some of the outdoor adventure competencies on-campus in the classroom and gymnasium were not overlooked by any of the institutions.

Outdoor adventure components and institution characteristics. Table 21 shows the data regarding six characteristics of the outdoor adventure leadership and

Table 21

Mean Values of Selected Characteristics of Outdoor Adventure Components, by Institution Characteristics

Institution Characteristic	n	Yrs.[a]	% in Adv.[b]	# of Courses[c]
Enrollment				
Less than 2,500	4	18.8	17.8	10.3
2,500 to 9,999	5	19.8	26.6	12.2
10,000 or more	3	12.0	16.7	18.7
Control				
State	9	16.9	23.1	13.8
Private	3	18.3	15.3	11.3
AAHPERD District				
Central	2	17.0	25.0	11.5
Eastern	4	13.3	16.5	19.3
Midwest	2	27.0	15.5	10.0
Northwest	0	--	--	--
Southern	4	16.3	26.8	9.5
Southwest	0	--	--	--

(Continued)

[a]Mean years outdoor adventure component has been offered.

[b]Mean percentage of all physical education majors enrolled in outdoor adventure courses.

[c]Mean number of outdoor adventure courses offered.

Table 21 (Continued)

Institution Characteristic	n	Sem. Hrs.[d]	Cont. Hrs.[e]	Miles[f]
Enrollment				
Less than 2,500	4	15.0	38.0	201.2
2,500 to 9,999	5	22.6	52.4	182.0
10,000 or more	3	36.7	62.0	106.3
Control				
State	9	26.6	54.8	143.5
Private	3	14.7	35.7	232.9
AAHPERD District				
Central	2	17.5	40.5	329.2
Eastern	4	33.3	60.0	34.9
Midwest	2	21.0	50.0	90.3
Northwest	0	--	--	--
Southern	4	18.3	44.8	283.7
Southwest	0	--	--	--

[d] Mean semester hours of outdoor adventure courses offered.

[e] Mean contact hours per outdoor adventure course.

[f] Mean miles traveled to all sites used in outdoor adventure courses.

programming component broken down and summarized according to three characteristics of the institutions. The six aspects of the outdoor adventure component were the mean (a) number of years the component has been part of the curriculum, (b) percentage of physical education majors that enrolled in outdoor adventure courses in 1986-87, (c) number of courses offered, (d) number of semester hours offered, (e) contact hours per course, and (f) number of miles traveled to all sites used in outdoor adventure courses. The three institution characteristics included (a) the institution enrollment, (b) whether the institution was under state or private control, and (c) the district of the American Alliance for Health, Physical Education, Recreation and Dance in which the institution was located.

Outdoor adventure courses were taught the longest--19.8 years--in the five institutions with an enrollment between 2,500 and 9,999. There was, on the average, only one year of difference between those institutions and smaller schools, but institutions with enrollments of 10,000 students or more averaged only a dozen years' involvement in outdoor adventure leadership and programming for physical education majors. The representative from one of the larger institutions described the evolution of that program's involvement in outdoor adventure for physical education majors.

> Basically speaking, our Department started a general one credit course in "outdoor education" in 1977 for all P.E. teacher certification students. In 1981, they created a position in the Department for an individual to focus primarily on the area of outdoor education most related to physical education (i.e., adventure education). This person (i.e., me) was to strengthen this component of the Department based on the influences that were appearing in P.E. curricula (e.g., Project Adventure). The content of the one credit course [Outdoor Adventure Activities] was revised to meet these current perspectives. This class remained at one credit and added depth and awareness to all majors' education. It really didn't reach the goals, however, of training majors to conduct, lead, and administer these types of programs. In 1983, based on this need and the need for trained professionals outside of the public school setting, the Department implemented the outdoor education option. Those P.E. teacher certification students that are interested in teaching adventure activities in the public schools are advised to take all or part of this curriculum. Six students are currently enrolled in such a "dual option" program. Students that have graduated with this dual option have experienced a great deal of success in the public schools they have entered.

The three private colleges and universities had outdoor adventure in the curriculum longer than the state institutions, and the two institutions from the Midwest District of AAHPERD offered outdoor adventure courses to physical edcation majors earlier than the other institutions in this investigation. It is interesting to note that although one might expect institutions in the Eastern District to have been influenced by the Project Adventure movement early, two of those four colleges and universities did not initiate an outdoor adventure component for physical education majors until six to seven years after the 1971 inception of the school adventure

physical education curriculum in Massachusetts. This six to seven year lag time, however, is not abnormal. According to Ellis (1981), a major curriculum shift in this country takes approximately 7 to 10 years.

The largest percentage of physical education majors enrolling in outdoor adventure courses were found in institutions in the 2,500-9,999 enrollment range. In those five schools, 26.6% of the physical education majors were in outdoor adventure leadership and programming courses during 1986-87. On the average, more physical education students were in adventure classes in the state colleges and universities than in the private institutions. The four Southern District schools had more physical education majors in outdoor adventure classes than did institutions in any of the other regions.

The largest institutions offered more courses, semester hours of courses, and contact hours per course than did institutions with enrollments under 10,000. State colleges and universities exceeded private institutions in each of these three outdoor adventure component characteristics, as well. As compared with institutions from other regions of the country, Eastern District institutions offered the greatest number of courses, semester hours, and contact hours per course.

It is not surprising that larger institutions and state-supported institutions offered more courses than

smaller or private institutions, respectively. The larger and state-supported institutions tended to have a greater number of faculty members in the physical education department, with a greater number of those faculty members teaching courses in the outdoor adventure component, than did the smaller and private institutions. Perhaps, too, the larger and state-supported institutions had more resources for programs in terms of faciltities, equipment, and supplies.

The smallest institutions--those with enrollments under 2,500--and private institutions took the longest journeys to reach outdoor adventure program sites, each traveling over 200 miles on the average. The greatest disparities appeared in the comparison of miles traveled by institutions in the various AAHPERD Districts. The schools in the Central District traveled over 300 miles to reach outdoor locations used in their adventure courses. Southern District schools traveled quite far as well, nearly 300 miles, but the Eastern and Midwest institutions found their program sites much closer to home, traveling an average of 34.9 and 90.3 miles, respectively.

Since the numbers of institutions in each of the characteristic subgroups are quite small, the results of this analysis must be interpreted cautiously. They may indicate trends, but these possible trends certainly should

be investigated further with larger numbers of institutions before conclusive statements may be made.

Development of Outdoor Adventure Leadership and Programming Competencies

Research Question 5a: Which of Buell's (1981) essential and important outdoor adventure leadership competencies for the entry-level professional were developed by curricular experiences within the physical education degree programs? To what degree was each competency category and each competency developed? Which competencies were developed to the greatest and least extents? Which competencies were not developed at all?

The 12 Phase II institutions developed the 148 outdoor adventure leadership and programming competencies to a fairly high degree. The scores for the competencies were based on a five-point Likert scale where 1 indicated minimal development and 5 indicated high development. High development was defined to mean that the competency received a considerable amount of emphasis in coursework experiences and was a major topic in one or more courses. Minimal development indicated that the competency was introduced briefly in no more than one course. The overall median development score of the 12 Phase II institutions for the 148 competencies was 4.00 on this scale. There was

relatively little variability in the overall development ratings across institutions as evidenced by a semi-interquartile deviation of 1.000 for this measure.

As the semi-interquartile deviation indicates, the 12 Phase II institutions presented a very homogeneous group with regard to outdoor adventure leadership and programming competency development. This group also tended to develop the 148 outdoor adventure leadership and programming competencies to a relatively high degree. The design of the investigation contributed to the homogeneity and skewness of the results. Requiring that all Phase II institutions have a minimum of 9 semester hours of outdoor adventure leadership and programming courses placed all Phase II colleges and universities well above the national average, discovered in Phase I of the study, of 6.69 semester hours. Including institutions with fewer semester hours of outdoor adventure leadership and programming in the curriculum may have resulted in a less homogeneous group in terms of competency development and possibly a lower median development score for the total collection of competencies.

Competency categories. Table 22 displays the median development scores and semi-interquartile deviations for each of the 11 outdoor adventure leadership and programming competency categories. Also shown is the percentage of

Table 22

Median Development Scores, Semi-Interquartile Deviations, and Percentage of Competencies Not Developed in Each Competency Category

Cat. #	Competency Category Name	Development Score[a] Mdn	Development Score[a] Q	Percentage of Competencies Not Developed
I	Philosophical, Historical, & Theoretical Foundations	4.00	0.750	0.0
II	Outdoor Adventure Leadership & Instructorship	4.00	0.500	0.4
III	Counseling, Human Service, & Human Development	4.00	1.500	3.8
IV	Program Planning & Development	4.00	1.000	1.7
V	Outdoor Skills & Abilities	4.00	1.000	1.2
VI	Environmental Awareness, Understanding, & Action	4.00	0.500	0.9
VII	First Aid & Safety	4.00	1.000	4.2
VIII	Administration & Supervision	4.00	0.500	4.2
IX	Facilities, Equipment, & Supplies	4.00	1.000	1.2
X	Professionalism	4.00	1.000	3.6
XI	Assessment & Evaluation[b]	4.00	0.500	8.3
All Competencies		4.00	1.000	2.0

[a]Based on a five-point Likert scale where 1 = minimally developed and 5 = highly developed.

[b]One institution addressed no competencies in this category.

competencies not developed at all in each competency category.

Each of the 11 competency categories was developed to a median level of 4.00. One institution, however, did not develop any of the Assessment and Evaluation competencies (Category XI). An examination of Table 22 reveals that there was moderate to little variability in the competency category development scores, with semi-interquartile deviations of 0.500 to 1.500. Category III (Counseling, Human Service, and Human Development) showed the greatest variability in development scores (Q = 1.500).

A very large proportion of competencies in all 11 categories was addressed to some degree in the outdoor adventure leadership and programming courses offered by the 12 Phase II institutions. Overall, 98% of the competencies were developed. The category with the highest percentage of undeveloped competencies was Assessment and Evaluation (Category XI), and that proportion, 8.3%, was quite small. All competencies in Category I (Philosophical, Historical, and Theoretical Foundations) were addressed in the outdoor adventure leadership and programming courses of the 12 Phase II institutions, and all but 0.4% of the competencies in Category II (Outdoor Adventure Leadership and Instructorship) were developed to some extent. The specific competencies that were not developed at all are detailed in a later section.

Competencies. The median development scores and semi-interquartile deviations for each of the 148 outdoor adventure leadership and programming competency statements appear in Appendix F. Median scores for the individual competencies ranged between 2.50 and 5.00; however, the vast majority of the competency medians were 4.00 or greater. Median development scores and the number of competencies having each median score as well as competency categories represented at each development level are indicated in Table 23.

Ninety-three (62.8%) of the 148 competencies had median development scores of 4.0, and competencies from each of the 11 outdoor adventure leadership and programming categories were among them. All competencies in Category I (Philosophical, Historical, and Theoretical Foundations) had median scores of 4.0. The median scores of Category II (Outdoor Adventure Leadership and Instructorship) competencies fell between 3.5 and 5.0. There were no competencies in Categories III (Counseling, Human Service, and Human Development), IX (Facilities, Equipment, and Supplies), or X (Professionalism) with a median greater than 4.5. Competencies in Categories IV (Program Planning and Development) and V (Outdoor Skills and Abilities) had median scores ranging from 3.0 to 5.0. None of the Category VI (Environmental Awareness, Understanding, and Action), VIII (Administration and Supervision), and XI

Table 23

Frequencies of the Median Development Scores of 148 Outdoor Adventure Leadership and Programming Competencies

Median Score[a]	Number of Competencies	Competency Categories Represented
5.00	12	II, IV, V, VII
4.75	1	II
4.50	12	II, III, IV, V, VII, IX, X
4.25	1	V
4.00	93	all categories
3.50	8	II, IV, V, VI, X
3.00	20	III, IV, V, VI, VII, VIII, IX
2.50	1	VII

[a] Based on a five-point Likert scale where 1 = minimally developed and 5 = highly developed.

(Assessment and Evaluation) competency medians were greater than 4.0. Category VII (First Aid and Safety) was the only one in which a competency with a median less than 3.0 was found. A single Category VII competency (#74b), regarding earning and maintaining certification in Red Cross Advanced First Aid and Emergency Care, was calculated to have a median score of 2.5 (discussed in greater detail in a later section). It is interesting, though, that Category VII competency medians ranged from 2.5 all the way to the top score of 5.0.

Competency development and institution characteristics. The overall median score for the outdoor adventure leadership and programming competencies was examined within each of three institution characteristics: (a) the institution enrollment, (b) whether the institution was state or private, and (c) the district of the American Alliance for Health, Physical Education, Recreation and Dance in which the institution was located. Table 24 shows this summary. Institutions with 2,500-9,999 students developed the outdoor adventure competencies to a greater extent--with an overall median score of 4.00--than either the smaller or larger institutions. The three largest institutions displayed the lowest level of development of the competencies.

There was no apparent difference between the nine state institutions and the three private colleges and

Table 24

Median Competency-Development Scores and Semi-Interquartile Deviations, by Institution Characteristics

Institution Characteristic	n	Median	Q
Enrollment			
Less than 2,500	4	3.5	0.750
2,500 to 9,999	5	4.0	0.250
10,000 or more	3	3.0	1.000
Control			
State	9	4.0	0.750
Private	3	4.0	1.000
AAHPERD District			
Central	2	3.5	0.500
Eastern	4	3.5	0.750
Midwest	2	4.5	0.500
Northwest	0	--	--
Southern	4	4.0	0.500
Southwest	0	--	--

universities with regard to the degree to which outdoor adventure leadership and programming competencies were developed. Only four AAHPERD Districts were represented in this study: Central, Eastern, Midwest, and Southern. The institutions in the Midwest District showed evidence of developing the competencies to a greater degree than institutions in any other district. The median competency development score for these two institutions was 4.5.

These findings suggest that institution size and geographic location may have had some bearing on the degree to which outdoor adventure leadership and programming competencies were developed in the curriculum for physical education majors. It appeared that whether the institution was public or private had little or no influence on the development of competencies in outdoor adventure leadership and programming. Once again, though, it should be remembered that since there were relatively small numbers of colleges and universities in each institution-characteristic subgroup, these findings should be interpreted with caution. While the findings may be indicative of trends, subsequent investigation with larger numbers of institutions is called for in order to be able to make definitive statements regarding the interaction of the institution characteristics with the development of competency in outdoor adventure leadership and programming.

Most-developed competencies. Twenty-five outdoor adventure leadership and programming competencies had median development scores of 4.50 or greater. These competencies, along with their median development scores and semi-interquartile deviation scores, are listed in Table 25.

Eight of the 25 most-developed competencies were from Category II, Outdoor Adventure Leadership and Instructorship. Five competencies each were from Categories V (Outdoor Skills and Abilities) and VII (First Aid and Safety). Category IV, Program Planning and Development, produced four of the top-rated competencies. One competency each came from Categories III (Counseling, Human Service, and Human Development), IX (Facilities, Equipment, and Supplies), and X (Professionalism). None of the most highly developed competencies were from the remaining four categories: (a) Philosophical, Historical, and Theoretical Foundations (Category I); (b) Environmental Awareness, Understanding, and Action (Category VI); (c) Administration and Supervision (Category VIII); and (d) Assessment and Evaluation (Category XI).

Like the North American outdoor leadership experts in Priest's (1987) study, the curriculum designers in the 12 Phase II institutions apparently had a great concern for safety in outdoor adventure programs. Over one-third of

Table 25

Medians and Semi-Interquartile Deviations of the 25 Most-Developed Outdoor Adventure Leadership and Programming Competencies

#	Competency	Category	n	Mdn[a]	Q
11.	Provide a standard of care and employ proper safety equipment and procedures.	II	12	5.00	0.500
19.	Recognize the potential psychological, sociological, and physiological impact.	II	12	5.00	1.000
26.	Follow a step-by-step progression to introduce and lead adventure activities and experiences.	II	12	5.00	0.500
49.	Select, organize, conduct, and evaluate				
	a. single-day outdoor adventure programs.	IV	12	5.00	0.875
	b. short-term resident (2-4 day) programs.	IV	11	5.00	1.000
50b.	Select, organize, conduct, and evaluate challenge/adventure activities and experiences.	IV	12	5.00	1.000
56.	Possess the necessary knowledge, skill, and behavior in				
	b. campcraft	V	11	5.00	0.500
	f. hiking and trail techniques	V	12	5.00	0.500

(Continued)

Table 25 (Continued)

#	Competency	Category	n	Mdn[a]	Q
69.	Design and have available a well-equipped first aid kit.	VII	12	5.00	0.875
74.	Earn and maintain current certification in				
	a. Red Cross Standard First Aid & Personal Safety	VII	11	5.00	1.000
	d. Heimlich Maneuver or Red Cross Abdominal Thrust	VII	11	5.00	1.000
77.	Convey the rationale for, and the implementation of, a no-drug-use policy.	VII	12	5.00	0.875
21.	Allow participants to engage in an activity only after they have gained entry-level understanding of the activity.	II	12	4.75	0.375
10.	Anticipate problems and act to prevent them.	II	12	4.50	0.500
12.	Select, organize, conduct, and evaluate activities which				
	b. enhance individual growth and development	II	12	4.50	0.500
	c. encourage group cooperation and interdependence	II	12	4.50	0.500
22.	Know that modeling is a significant aspect of leadership.	II	12	4.50	0.875

(Continued)

Table 25 (Continued)

#	Competency	Category	n	Mdn[a]	Q
29.	Understand the cognitive, affective, and psychomotor domains.	III	12	4.50	1.375
48a.	Select, organize, conduct, and evaluate outdoor adventure activities with adolescents.	IV	12	4.50	1.000
56r.	Possess the necessary knowledge, skill, and behavior in water safety procedures	V	12	4.50	1.250
57.	Possess the necessary leadership and instructorship ability in				
	a. backpacking	V	12	4.50	0.500
	e. hiking and walking	V	12	4.50	0.500
78.	Understand preventive aspects of personal/group health and safety.	VII	12	4.50	0.875
93.	Execute safety check of facilities, equipment, and supplies.	IX	12	4.50	0.875
95.	Convey the philosophy, content, and methods of outdoor adventure.	X	12	4.50	0.875

Note. For complete text of competency statements, see Appendix C.

[a] Based on a five-point Likert scale where 1 = minimally developed and 5 = highly developed.

the 25 competencies most well developed by the Phase II colleges and universities focused on safety-related issues.

Five of the 20 competencies from Category VII, First Aid and Safety, were in this top-rated group. These five concerned designing and having available a first-aid kit (#69), implementing a policy prohibiting drug use (#77), understanding preventive aspects of group and individual safety (#78), and maintaining current certification in Red Cross Standard First Aid and Personal Safety (#74a) and in the Heimlich Maneuver or Red Cross Abdominal Thrust (#74d).

In addition to the five competencies from the First Aid and Safety category, several others dealt with safety issues. Providing a standard of care and employing proper safety equipment and procedures was one of these (#11). Anticipating problems and acting to prevent them (#10) was another of the safety-related competencies. Possessing the necessary knowledge, skill, and behavior in water safety procedures (#56r), while considered an outdoor skill, was also related to safety concerns. Finally, executing a safety check of facilities, equipment, and supplies (#93) numbered among these safety-related competencies.

It is understandable that competencies focusing on issues of safety were heavily emphasized in the Phase II institutions' curricula. Over the years, the concurrent concerns of liability and litigation have plagued and, in

some cases, stalled the outdoor adventure movement, both within and outside of educational settings.

Priest's study in 1987 showed that, along with a great concern for safety in outdoor pursuits programs, both Canadian and American outdoor leadership experts had higher concerns for avoiding litigation and for lowering insurance premiums than did their counterparts in New Zealand and Great Britain. In the present study, this concern for having safety-conscious and safety-competent individuals lead outdoor adventure experiences was evident in the number of safety-related items among the most well developed competencies.

Other highly developed competencies concentrated on selecting, organizing, conducting, and evaluating single-day (#49a) and short-term (2-4 day) resident (#49b) programs. The top-ranked competencies involved challenge/adventure experiences (#50b) for adolescents (#48a) which enhance individual growth and development (#12b) and encourage group cooperation and interdependence (#12c). Outdoor skills of backpacking (#57a), hiking and walking (#56f, #57e), and campcraft (#56b) were cited as well-developed areas of the curriculum.

In addition to these, competencies related to teaching and leading abilities were highly developed. Introducing activities through a step-by-step progression (#26), knowing that modeling is a significant aspect of leadership

(#22), and understanding the cognitive, affective, and psychomotor domains (#29) were identified as well-developed competencies. Additionally, considered one of the top competencies was ensuring that participants gain an entry-level understanding of an activity before participating in that activity (#21). The 12 institutions emphasized the physical education student's ability to convey the content, philosophy, and methods of outdoor adventure (#95) and to recognize the potential psychological, sociological, and physiological impact of adventure education experiences (#19).

The top 25 competencies developed by the 12 Phase II institutions may be compared with Buell's (1981) top 27 competencies for entry-level outdoor leaders (three competencies tied at the 26th rank with a mean importance score of 3.20 in Buell's study). Eleven of Phase II's top 25 competencies were also among the competencies considered most important by the outdoor personnel in Buell's investigation. Ten of the 11 competencies dealt with safety topics including a standard of care, safe equipment, and procedures (#11); first aid kit (#69); no-drug-use policy (#77); participant involvement only after entry-level understanding of the activity (#21); anticipation and prevention of problems (#10); water safety procedures (#56r); certification in Red Cross First Aid and Personal Safety (#74a) and Heimlich Maneuver or similar procedure

(#74d); personal/group health and safety (#78); and safety checks of facilities, equipment, and supplies (#93). Leadership skill in backpacking (#57a) was also one of the highest-ranked competencies in both Buell's investigation and the current study.

Fourteen other topics received a great deal of attention in the outdoor adventure leadership and programming curriculum in the Phase II institutions, but they were not among the most important of Buell's entry-level competencies. One of these topics--understanding the cognitive, affective, and psychomotor domains (#29)--was among the Phase II institutions' top competencies, but was ranked 141st among Buell's 153 important or essential entry-level competencies for outdoor leaders.

Recall that Buell's respondents were either leaders, trainers of leaders, or adventure program directors. Their roles and concerns were diverse and not limited to the realm of physical education nor to elementary or secondary school programs. The topics receiving greatest attention by Phase II colleges and universities, but not considered most important by Buell's respondents, reflected the particular concerns of educators who prepare teachers of elementary and secondary school physical education. Short-duration programs (#49a, #49b), working with adolescent populations (#48a), and using challenge/

adventure activities such as group initiative tasks (#50b), skills such as campcraft (#56b), and hiking and walking (#56f, #57e) to enhance introductory outdoor experiences are typical of school programs in adventure. The educator's perspective also emphasized instructional skills and knowledge such as using gradual teaching progressions (#26); modeling desirable behavior (#22); utilizing knowledge of cognitive, affective, and psychomotor domains (#29); knowing, using, and conveying the philosophy, content, and methods of outdoor adventure (#95); concern with enhancing individual growth and development (#12b); and recognizing the potential psychological, sociological, and physiological impact of adventure experiences (#19).

The 16 competencies Buell's group considered highly important for an entry-level leader, but which were not among the competencies most highly developed by the Phase II institutions, overwhelmingly reflected safety concerns: competency in first aid and personal/group safety (#56d), applying proper physical and emotional first aid (#67), safety systems and procedures for accident or rescue situations (#70), participant health and safety reports (#81), survivial techniques (#72), C.P.R. (#74c), search-and-rescue plans (#71), possessing the physical fitness to handle safety and activity aspects of the program (#25, #56j), and limiting activities to areas of the leader's capability (#9).

Other topics most highly developed by Buell's group included respect for the difference between counseling and therapy and recognition of one's qualifications in this respect (#37), ecologically sound personal and group sanitation methods (#75), supportive helping relationships (#30), use of low-environmental-impact methods (#64), personal and group equipment selection (#56i), and leadership as tied to the leader's personality, follower expectations, and needs and goals of the group (#8).

Safety in outdoor adventure programs has been an area of great concern, not only to the outdoor adventure personnel participating in Buell's and other studies of outdoor adventure leadership (Cousineau, 1977/1978; Green, 1981; Priest, 1987b; Swiderski, 1981), but also to physical educators considering the inclusion of outdoor adventure in school curricula (Gaudiano, 1980). Considering that concern, it would seem to be of the highest order of priority to develop a broad base of competency in safety-related knowledge, attitudes, and skills. While ten safety-related competencies were ranked among the most well developed by the 12 Phase II institutions, another ten of Buell's high-ranking safety-oriented competencies were not. This condition suggests that curriculum designers and implementers should emphasize even more heavily safety-related competencies in the preparation for outdoor

adventure leadership and programming in school physical education programs.

Least-developed competencies. Twenty-one outdoor adventure leadership and programming competencies had median development scores of 3.00 or less. These competencies, along with their median development scores and semi-interquartile deviation scores, are listed in Table 26.

Most of these competencies belonged to two categories: Counseling, Human Service, and Human Development (Category III) and Outdoor Skills and Abilities (Category V). These each accounted for six of the least-developed competencies. Three Program Planning and Development (Category IV) competencies were also in this less-developed group. Two competencies each came from Categories VI (Environmental Awareness, Understanding, and Action) and VII (First Aid and Safety). The remaining two competencies were from Categories IX (Facilities, Equipment, and Supplies) and X (Professionalism).

Compared to more well-developed competencies, relatively little emphasis was placed on knowing or implementing counseling strategies and techniques. Six statements (#27, #28, #31, #32, #36, #37), more than half the Category III competencies, fell in this lowest cluster.

Additionally, four statements dealing with environmental (#50e, #61), ecological (#59), or nature-oriented

Table 26

Medians and Semi-Interquartile Deviations of the 21 Least-Developed Outdoor Adventure Leadership and Programming Competencies

#	Competency	Category	n	Mdn[a]	Q
27.	Implement selected counseling and personal development strategies.	III	11	3.00	1.000
28.	Apply knowledge about human growth and development patterns.	III	11	3.00	1.500
31.	Practice participant-centered counseling.	III	11	3.00	1.500
32.	Practice group counseling or guidance.	III	11	3.00	0.500
36.	Intervene in the event of psychological crisis.	III	11	3.00	1.500
37.	Respect the differences between counseling and therapy.	III	12	3.00	1.875
50.	Select, organize, conduct, and evaluate				
	d. Nature-oriented activities	IV	12	3.00	0.500
	e. Environmental interpretation	IV	12	3.00	0.000
55.	Synthesize and utilize existing research and program ideas as a means of improving programs.	IV	12	3.00	0.875

(Continued)

Table 26 (Continued)

#	Competency	Category	n	Mdn[a]	Q
56.	Possess the necessary knowledge, skill, and behavior in				
	a. Automobile/van logistics	V	12	3.00	0.750
	n. Search and rescue techniques and procedures	V	12	3.00	1.000
	q. Toolcraft	V	12	3.00	0.500
57.	Possess the necessary leadership and instructorship ability in				
	b. Bouldering	V	12	3.00	1.000
	f. Mountaineering	V	11	3.00	0.500
	i. Survival	V	12	3.00	1.000
59.	Demonstrate a basic knowledge and field application of the fundamental concepts of ecology.	VI	12	3.00	0.500
61.	Examine his/her own environmental prejudices and misinformation.	VI	12	3.00	0.500
71.	Organize and carry-out a comprehensive search-and-rescue plan.	VII	12	3.00	0.875

(Continued)

Table 26 (Continued)

#	Competency	Category	n	Mdn[a]	Q
86.	Understand the legal aspects of outdoor adventure programs.	VIII	12	3.00	0.500
91.	Know the modified facilities and/or equipment required to meet the needs of special populations.	IX	12	3.00	0.500
74b.	Earn and maintain current certification in Red Cross Advanced First Aid & Emergency Care.	VII	10	2.50	1.125

Note. For complete text of competency statements, see Appendix C.

[a]Based on a five-point Likert scale where 1 = minimally developed and 5 = highly developed.

(#50d) competencies were found in this lower-rated group. Among the least-developed competencies also were two statements concerning search-and-rescue techniques (#56n, #71). Leadership skills in bouldering (#57b), mountaineering (#57f), and survival (#57i) were considered less important to develop well. Knowledge, skill, and behavior in toolcraft (#56q) and automobile/van logistics (#56a), too, were among the least-developed competencies.

Using research for program improvement (#55), understanding legal aspects of outdoor adventure programs (#86), and knowledge of the needs of special populations regarding facilities and equipment (#91) were found in this group of competencies. Finally, with the lowest median score, was maintaining certification in Red Cross Advanced First Aid and Emergency Care (#74).

Ten of Phase II's least-developed competencies were also among the 21 least important of Buell's 153 essential and important entry-level outdoor leadership competencies. Four of them (#27, #28, #31, #32) dealt with counseling and human development topics, indicating that the two groups of respondents similarly placed a lower value on outdoor adventure leaders being well-versed in counseling skills. The two groups apparently also shared a belief that some environmental and nature-oriented competencies (#50d, #50e) were less important than other competencies. Skills such

as toolcraft (#56q)--using saws, axes, pocket knives, and the like--and bouldering (#57b) were considered by respondents in both the current study and Buell's 1981 study to be less important to develop in outdoor adventure leaders. Rounding out the topics less emphasized by both Buell's outdoor leadership personnel and the Phase II personnel were competencies dealing with needs of special populations (#91) and using research for program improvement (#55).

Two competencies least developed by the Phase II respondents were among the top 27 entry-level competencies in Buell's study. The first pertained to respecting the difference between counseling and therapy (#37). Its position among the lowest-rated competencies in the current study was consistent with the lesser emphasis placed upon counseling skills in the Phase II curricula. The second of these applied to organizing and carrying out a search-and-rescue plan (#71), and its position among the least-developed competencies was inconsistent with the heavy emphasis placed on safety-related competencies in the Phase II institutions' outdoor adventure leadership and programming curricula.

Competencies not developed. Only 3 of the 12 institutions reported that there were some competencies not addressed at all in their curricula. Of these institutions, one did not develop 3 competencies, another

did not develop 12 competencies, and the last did not develop 21 competencies. The other 9 institutions indicated that their outdoor adventure leadership and programming component addressed every one of the 148 competencies to some degree.

No single competency was addressed by fewer than 10 of the 12 institutions. Two institutions did nothing to develop competency 74b, "current certification in Red Cross Advanced First Aid and Emergency Care." Thirty-four other competencies were developed by only 11 of the institutions; that is, 1 institution did not in any way develop each of those competencies. The 35 competencies that were developed by fewer than 12 institutions can be found in Appendix G.

It should be noted that four of these same competencies also appear among the most-developed competencies, shown in Table 25. Competencies 49b, 56b, 74a, and 74d each were not developed at all by 1 institution, while at the same time they were developed to a high degree by the other 11 institutions, as shown by a 5.0 median development score for each. Likewise, 8 of the competencies developed by fewer than 12 institutions were among the 21 least-developed competencies (having median scores of 3.00 or less) shown in Table 26.

First Aid and Safety (Category VII) was the area in which the greatest number of undeveloped competencies

appeared. A single institution did not develop 9 of the 20 First Aid and Safety competencies, and a second institution also did not develop one of these same competencies (#74b). Five of these First Aid and Safety competencies concerned earning and maintaining certification in first aid, cardiopulmonary resuscitation, Heimlich maneuver, and lifesaving (#74a-e). The other four First Aid and Safety competencies not developed at all by one of the institutions pertained to using health records, participant contracts, and permission forms (#76); keeping abreast of current practices and information (#80); collecting and disseminating accident, health, and safety reports (#81); and implementing risk-management plans (#82).

It is incongruous with the high regard for safety among the Phase II institutions that more First Aid and Safety competencies were undeveloped than competencies in any other category. However, a single institution was the source of virtually all of the undeveloped competencies, so this finding is more a reflection of one institution's practice than a reflection of the whole group's pattern.

Six of the 30 Program Planning and Development (Category IV) competencies were among those not developed. Competencies necessary for conducting programs in educational institutions (#47), with college students and young adults (#48b, #48c), and in short- and long-term residential programs (#49b, #49c) were not a focus of one

institution's outdoor adventure curriculum. Another institution did not emphasize maintaining a journal or log (#54) as a program planning and development aid.

Counseling, Human Service, and Human Development (Category III) competencies were not heavily emphasized by one institution which developed only 6 of the 11 competencies in this category. The competencies not developed by this institution involved implementing selected counseling and personal development strategies (#27), applying knowledge about human growth and development (#28), practicing participant-centered and group counseling (#31, #32), and psychological-crisis intervention (#36).

One institution did nothing to develop two Outdoor Skills and Abilities (Category V) competencies, and two other institutions each did not develop one competency from this category. Knowledge and skills in campcraft (#56b) and leadership ability in cross-country skiing (#57d), mountaineering (#57f), and rock climbing and rappelling (#57h) were the Category V competencies not emphasized in the curricula of these three institutions.

Purchasing and/or making equipment and supplies (#66), a Category VI competency, was not considered important enough by one institution to include in its curriculum. Another institution did not address one Outdoor Leadership and Instructorship (Category II) competency; two

Administration and Supervision (Category VIII) competencies; one Facilities, Equipment, and Supplies (Category IX) competencies; three Professionalism (Category X) competencies; and three Assessment and Evaluation (Category XI) competencies. All competencies in Category I, Philosophical, Historical, and Theoretical Foundations, were developed to some degree by all 12 institutions.

There were no competencies exhibiting a great tendency to be undeveloped by the 12 Phase II institutions. Consider that, of 148 competency statements, 113 competencies (76.4%) were developed to some degree by 12 (100.0%) of the institutions, 34 competencies (23.0%) were developed by 11 (91.7%) of the institutions, and the remaining 1 competency (0.7%) was developed by 10 (83.3%) of the institutions. Virtually all of the competencies received considerable attention in the outdoor adventure leadership and programming courses of these 12 colleges and universities.

We can look, though, at the 21 least-developed competencies (Table 26) in conjunction with these 35 competencies developed by fewer than 100.0% of the institutions (Appendix G) to see what picture, if any, emerges. Seven (33.3%) of the least-developed competencies were addressed in the outdoor adventure component by fewer than 12 institutions, and five of these (#27, #28, #31, #32, #36) were from Category III, Counseling, Human

Service, and Human Development. Another statement dealing with leadership ability in mountaineering (#57f) was a Category V (Outdoor Skills and Abilities) competency.

Earning and maintaining Red Cross Advanced First Aid and Emergency Care (#74b) was the remaining topic, a Category VII (First Aid and Safety) competency. It was not developed at all by two institutions and in the ten other institutions was only developed to a median level of 2.50, the lowest score of all competencies. It is likely that this one First Aid and Safety certification area is one not normally required in most teacher preparation programs. It is more likely that the other four First Aid and Safety certificates would be earned by physical education majors. Most teacher certification majors will be required to take a first aid course which typically awards a Red Cross First Aid and Personal Safety certificate for successful completion. Such a course would usually include the Heimlich Maneuver or similar procedure and frequently includes C.P.R. as well. Many physical education majors will elect to take or be required to take lifesaving to fulfill an aquatic requirement in their degree program. Red Cross Advanced First Aid, though, is not normally required of physical education majors, and students with already overloaded schedules may opt to bypass taking it as an elective. Perhaps the Phase II institutions' neglect of this competency is a reflection of this situation.

Research Question 5b: What percentage of the competencies in each competency category were developed by courses in each of the following: (a) outdoor adventure-specific courses, (b) other physical education courses, or (c) non-outdoor adventure/non-physical education courses?

Types of courses used to develop competencies. Respondents from the 12 Phase II institutions indicated that two-thirds of all competencies were developed in the adventure-specific courses. Physical education courses other than the outdoor adventure leadership and programming classes provided development of 21.4% of the competencies. The remaining 12.6% of the competencies were developed through curricular experiences in other classes at the institutions. The percentage of outdoor adventure leadership and programming competency categories developed in the three types of courses is presented in Table 27.

The outdoor adventure-specific courses, by far, contributed the most toward the development of outdoor skills and abilities; over 80% of the Category V competencies were developed in this type of class. Outdoor adventure courses contributed less, however, to the development of Category III (Counseling, Human Service, and Human Development) than to any other category. Only 43.0% of this category's competencies were developed in outdoor adventure-specific courses. Instead, one-third of the

Table 27

Percentage of Outdoor Adventure Leadership and Programming Competencies Developed in Three Types of Courses

Competency Category	Outdoor Adventure Courses (%)	Other Physical Education Courses (%)	Other Courses (%)
I. Philosophical, Historical, & Theoretical Foundations	67.5	24.2	8.3
II. Outdoor Adventure Leadership & Instructorship	73.8	21.3	5.0
III. Counseling, Human Service, & Human Development	43.0	23.8	33.3
IV. Program Planning & Development	71.4	20.0	8.6
V. Outdoor Skills & Abilities	83.2	12.3	4.5
VI. Environmental Awareness, Understanding, & Action	72.7	7.3	20.0
VII. First Aid & Safety	63.0	19.9	17.1
VIII. Administration & Supervision	62.3	28.6	9.1
IX. Facilities, Equipment, & Supplies	72.6	20.3	7.1
X. Professionalism	59.9	27.3	12.8
XI. Assessment & Evaluation	70.3	18.5	11.2
All competency categories	66.0	21.4	12.6

Note. The values represent means of percentages indicated for each competency category. Percentages not totaling 100% are a result of rounding.

counseling competencies were developed in other courses in the institutions, and slightly less than one-quarter of them were promoted in physical education courses other than adventure classes. This one category displayed the most balanced contribution from among the three types of courses.

Physical education courses contributed more toward the cultivation of both the Administration and Supervision (Category VIII) competencies and the Professionalism (Category X) competencies than toward any other category. Curricular experiences in non-adventure/non-physical education courses accounted for the development of more competencies in Category III (Counseling, Human Service, and Human Development) and Category VI (Environmental Awareness, Understanding, and Action) than in any other competency category.

A curriculum designer planning the addition of outdoor adventure leadership and programming to a physical education teacher certification program might consider the prospect of including 148 specific competencies in as few new courses as possible a daunting task. When one considers, though, that fewer than 100 of those competencies need be addressed in adventure-specific courses, that task appears more manageable.

Various resources in the Phase II institutions supplied experiences to develop the outdoor adventure

leadership and programming competencies. While two-thirds of the competencies were addressed within adventure-specific courses, the remaining one-third were developed in nonadventure courses in physical education and other departments in the institution. Likely contributors within the physical education department were courses dealing with elementary or secondary school teaching methods, introduction to the profession, administration and supervision, measurement and evaluation, and exercise physiology. Health education offerings might contribute in first aid, personal and community health, safety, and nutrition areas. Departments of psychology, sociology, or educational counseling would likely offer courses in group dynamics, communication skills, and group and individual counseling strategies. Courses such as geology, botany, biology, and physiology in natural science departments would address environmental issues and nature-related topics. Many of these courses might be taken by the student to fulfill liberal-studies or teacher-certification requirements anyway. It does not then appear to be as formidable a task to address each of the 148 essential and important outdoor adventure leadership and programming competencies in the degree program of physical education teacher certification majors.

Research Question 5c: What types of experiences were used in the development of each competency category?

Course experiences used to develop competencies. Table 28 displays the percentage of outdoor adventure leadership and programming competency categories developed by each type of course experience. A very large proportion of outdoor adventure leadership and programming competencies were developed through traditional curricular delivery systems. Lecture and discussion/seminar-type experiences were employed in the development of 97.7% and 97.6% of all competency categories, respectively. Following close behind them were reading or written assignments (85.9%) and hands-on skill practice (82.4%).

Slightly more than three-quarters of the competency development was attributed, at least in part, to a supervised student leadership experience, practicum, or internship. Day trips (76.1%), skill demonstration (75.5%), and three- to seven-day trips (72.3%) were also cited as contributing to development of a large proportion of the competency categories.

Less-implemented strategies included trips of greater duration. One- to three-week trips were used to develop fewer than 40% of the competencies, and trips lasting longer than three weeks promoted development of less than 20.0% of the competency categories. Other experiences such

Table 28

Course Experiences Used to Develop Outdoor Adventure Leadership and Programming Competency Categories

Experience	Percentage of Competency Categories Developed Through This Experience
Lecture	97.7
Discussion/seminar	97.6
Reading or written assignments	85.9
Hands-on skill practice	82.4
Supervised student leadership experience, practicum, or internship	76.6
Day trips	76.1
Skill demonstration	75.5
3-7 day trips	72.3
1-3 week trips	38.7
Longer than 3 week trips	18.2
Other	12.9

as special cognitive/affective learning modules and other outdoor leadership training programs were cited in 12.9% of the cases. One respondent noted that off-campus experiences during the summer months were also encouraged for the student to learn, integrate, and expand his or her professional development.

The findings of Priest's (1987b) study of outdoor leadership preparation in five nations revealed that field trips were far preferred as the method for preparing outdoor leaders. Following closely behind that in preference, though, were discussions and lectures. These three experiences, with the exception of trips lasting three weeks or more, were also highly favored in the current investigation as can be seen by the high percentage of competencies developed through each of those experiences. Nearly all of Priest's respondents agreed that a supervised practicum was an important part of a preparation program. In the current study, a supervised student leadership experience was considered helpful in developing over three-quarters of the outdoor adventure leadership and programming competencies. The agreement between Priest's findings and the findings of the current study indicate the universal appeal of using certain types of curricular experiences to develop outdoor adventure leadership and programming competency.

The overnight/weekend-trips option was inadvertently left off the questionnaire. This situation is unfortunate, since weekend outings are often considered to be convenient and logical field experiences for courses which meet on weekdays. It is unclear whether respondents merged their overnight/weekend-trip responses with the day-trips option or with the three- to seven-day-trips option or whether they simply did not consider those trips at all when answering this item. It is possible that they believed "3-7 day trips" to be a typographical error and that it should have read "2-7 day trips." Without further follow-up, however, it is impossible to know for sure.

Further Competency Development

Research Question 5d: Did the respondents believe that it was possible, in their curricula, to increase the development of competencies which were not developed at all or which were rated low on the development scale? If so, what suggestions were made for coursework or experiences to further develop each of those competencies? If not, what were the perceived obstacles to further development?

When asked whether minimally developed or undeveloped competencies could be emphasized more in the curriculum, respondents replied affirmatively to the question only slightly more frequently than they responded negatively.

This question was to have been answered following each competency category in which one or more low-development scores (rated 1 or 2) or no-development scores (rated Not At All) were indicated. Because so many of the competencies were developed to a fairly high degree, this question pertained to less than 40% of the competency categories, and respondents provided answers in only two-thirds of these cases. Of the responses given, 18 Yes and 16 No responses were recorded for the question "Is it possible in your curriculum to increase the development of each competency rated NOT AT ALL, 1, or 2?"

Suggestions for further development. Respondents replying that they believed it was possible to increase the emphasis on minimally developed or undeveloped competencies were asked for suggestions for doing so. On the whole, most suggestions were vague, frequently noting only that the competency could be developed further if it were considered valuable enough to do so (see the following discussion of obstacles to further development).

One institution did make specific suggestions regarding several Category III (Counseling, Human Service, and Human Development) competencies which were not highly developed in the curriculum. This institution had plans to add a course entitled Interpersonal Effectiveness to deal with competencies concerning selected counseling and personal development strategies (#27), supportive and

helping relationships (#30), small-group dynamics (#33), serving as a catalyst for change in participants (#34), and the differences between counseling and therapy (#37). In order to better develop competency 28, applying knowledge about normal and special human growth and development patterns, this institution had plans to require that physical education students involved in the outdoor adventure component take six semester hours of sociology and psychology courses.

In response to the question about further development, one institution noted that competency 74e, life saving certification, was only an elective, perhaps implying that if it were a required course, the competency would be better developed. Adding information to existing courses was seen as a possible solution to improving the focus on three Category VIII (Administration and Supervision) competencies: assisting less-experienced/-knowledgeable staff (#83), implementing program policies with staff (#84), and functioning as a supervisor (#85). The courses to which the information would be added were not specified.

A respondent from another institution noted that it was desirable to increase emphasis on certain competencies. These included Category VII (First Aid and Safety) competencies regarding uses of personal health records and permission statements (#76), keeping abreast of current practices and information (#80), and using accident/injury

reports (#81). Also targeted for more emphasis was using final (product) evaluation of program outcomes (#101), a Category XI (Assessment and Evaluation) competency.

Obstacles to further development. Respondents indicating that it was not possible to increase the focus on minimally developed or undeveloped competencies were asked to describe what they perceived as obstacles to such development. Lack of time was cited as a reason for limited development of competencies in Categories III (Counseling, Human Service, and Human Development), V (Outdoor Skills and Abilities), VI (Environmental Awareness, Understanding, and Action), VII (First Aid and Safety), and X (Professionalism). Lack of money also was considered a deterrent to developing competencies in Categories V and VI, but respondents left unspecified the ways in which funding affected the development of the competencies. Duplication of the same topics in other courses was a reason competencies in First Aid and Safety (Category VII); Administration and Supervision (Category VIII); and Assessment and Evaluation (Category XI) were not well developed in the outdoor adventure leadership and programming component. Health education courses, in particular, were cited as having the ability to contribute to several of the First Aid and Safety competencies.

With regard to several of the Counseling, Human Service, and Human Development competencies, one respondent

noted that "undergraduates should not play psychologist" and that psychological intervention of the type indicated by these competencies is best facilitated by someone with post-graduate training in those areas. Another respondent cast doubt about the desirability of these and Category IV (Program Planning and Development) competencies and commented that competencies in these two categories were not appropriate for inclusion in skills classes.

Respondents noted that a lack of faculty expertise would necessitate hiring instructors to teach several Category V (Outdoor Skills and Abilities) competencies--specifically, leadership ability in bouldering, cross-country skiing, mountaineering, orienteering, rock climbing and rappelling, and survival--as well as one Category VII (First Aid and Safety) competency, advanced Red Cross First Aid and Emergency Care. Additionally, the same Category V leadership skills were not well developed by one institution because of concerns over legal liability and also because of lack of student interest.

Some competencies were not well developed and were not viewed as desirable to develop further simply because they were not considered important by those determining the curriculum for physical education majors. Automobile/van logistics, a Category V (Outdoor Skills and Abilities) competency was not considered important enough to emphasize in one institution. Likewise, a Category IX (Facilities,

Equipment, and Supplies) competency concerning the possession of a driver's license and the ability to perform basic motor vehicle operation and maintenance was considered by one institution's representative to be "of dubious value" for the student preparing for outdoor adventure leadership and programming. This competency was not stressed in the curriculum of two institutions. A Category VI (Environmental Awareness, Understanding, and Action) competency considered irrelevant by one respondent concerned using outdoor adventure equipment that utilizes recycled, renewable, or biodegradable resources (#66).

Three other competencies (#2, #4, #5) not deemed important enough to develop to a greater extent were noted in Category I (Philosophical, Historical, and Theoretical Foundations). Despite the fact that this was the sole category in which every competency was developed to some degree by each institution, the respondent from one of the schools rated three of these competencies less than 3.0 on the development scale but felt satisfied with the small amount of attention devoted to those topics in the curriculum. Selected competencies in Category II (Outdoor Adventure Leadership and Instructorship), IV (Program Planning and Development), and IX (Facilities, Equipment, and Supplies) were also not considered significant enough to be given more than a cursory treatment. The topics covered by these competencies, and the Category I

competencies cited earlier, include the following:

Category I: Philosophical, Historical, and Theoretical Foundations

- developing/articulating a personal and professional philosophy (#2)
- knowing the strengths and weaknesses of outdoor adventure (#4)
- understanding the philosophy and practices of experiential education (#5)

Category II: Outdoor Adventure Leadership and Instructorship

- helping others define goals and achieve ends (#7)
- limiting activities to the leader's areas of expertise (#9)
- enhancing individual growth through adventure (#12b)
- conveying a sense of wonder and joy about others and the world (#13)
- using different leadership styles and approaches, followership principles, delegation of responsibility, and modeling (#14, #15, #17, #18, #22)
- leading participants of varied backgrounds (#16)
- managing participant stress (#23)
- displaying appropriate appearance and behavior (#24)
- possessing adequate physical fitness for program activities (#25)

Category IV: Program Planning and Development

- meeting participant needs and interests (#39b)
- requiring program policies and procedures (#40)
- allowing participant involvement in program planning (#43)
- conducting programs in flatwater areas (#46c)
- conducting long-term resident programs (#49c)
- carrying out staff preplanning and a participant orientation (#51, #52)
- maintaining a journal or log to aid in planning (#54)
- using existing research to improve programs (#55)

Category IX: Facilities, Equipment, and Supplies

- securing permits/permission to use park lands or private property for programs (#89)

For the most part, however, these were isolated cases, with only a single institution suggesting that the competency was too insignificant to receive more than minimal development for physical education majors involved in the outdoor adventure leadership and programming component.

Characteristics Distinguishing High-Development Institutions From Low-Development Institutions

Research Question 6: Which characteristics of the institutions, physical education programs, and outdoor adventure components distinguished high-development institutions (schools with overall competency-development

medians of 3.5 or greater) from low-development institutions (schools with overall competency-development medians less than 3.5)?

The final research question was designed to discern any characteristics of the institutions, physical education programs, and outdoor adventure components that distinguished the institutions with overall competency development scores of 3.5 or greater from the institutions with median scores below 3.5. Eight of the 12 Phase II institutions had median competency development scores of 3.5 or higher on the 5-point Likert scale used in the Outdoor Adventure Leadership and Programming Survey. These eight institutions were considered to be the high-development group. The low-development group consisted of the remaining four institutions.

Institutions. Characteristics of the institutions in both the high-development group and the low-development group are shown in Table 29. Institution size was one of the characteristics displaying the greatest difference between the high- and low-development groups. On the average, low-development institutions had more than twice as many students as the high-development institutions. The mean enrollment for the high-development group was 5,256, while in the low-development group it was 13,075. Only one

Table 29

Profile of the Institutions, According to Level of Competency Development

Demographic Categories	High-Development Institutions[a] (n = 8)		Low-Development Institutions[b] (n = 4)	
	n	%	n	%
Enrollment	(Mean = 5,256)		(Mean = 13,075)	
Less than 2,500	2	25.0	2	50.0
2,500 to 9,999	5	62.5	0	0.0
10,000 or more	1	12.5	2	50.0
State/Private				
State	6	75.0	3	75.0
Private	2	25.0	1	25.0
AAHPERD District				
Central	1	12.5	1	25.0
Eastern	2	25.0	2	50.0
Midwest	2	25.0	0	0.0
Northwest	0	0.0	0	0.0
Southern	3	37.5	1	25.0
Southwest	0	0.0	0	0.0

[a] Institutions with median competency-development scores of 3.5 or greater on a 5-point scale.

[b] Institutions with median competency-development scores less than 3.5 on a 5-point scale.

of the high-development colleges and universities had a student body of 10,000 or more.

The proportions of state and private institutions were the same for both groups. Three-quarters of the institutions in each group were state-affiliated and the rest of them were private schools.

The Central, Eastern, Midwest, and Southern Districts of the American Alliance for Health, Physical Education, Recreation, and Dance were represented in the Phase II group of institutions. All four of them were represented in the high-development group. Of these four districts, only the Midwest District was not represented among the institutions which developed the outdoor adventure leadership and programming competencies to a lesser degree.

Physical education program. As one might expect, characteristics describing the size of the physical education program, depicted in Table 30, showed distinctions similar to those regarding institution enrollments. The high-development colleges and universities had about half as many physical education majors and faculty members (means of 157.6 students and 17.0 faculty members) as institutions in the low-development group (means of 368.8 students and 31.0 faculty members).

A slightly smaller proportion of the high-development group's physical education faculty members were full-time

Table 30

Profile of the Physical Education Baccalaureate Degree Programs, According to Level of Competency Development

Demographic Categories	High-Development Institutions[a] (n = 8)		Low-Development Institutions[b] (n = 4)	
	Mean	(%)	Mean	(%)
Enrollment in P.E. degree program	157.6		368.8	
P.E. Faculty	17.0		31.0	
Full-time	12.4	(72.9)	27.0	(87.1)
Part-time	4.6	(27.1)	4.0	(12.9)

[a] Institutions with median competency-development scores of 3.5 or greater on a 5-point scale.

[b] Institutions with median competency-development scores less than 3.5 on a 5-point scale.

employees. In the high-development group, 72.9% of the physical education faculty members were full-time, while in the low-development group, 87.1% were full-time.

Outdoor adventure component. Although there were differences between the high- and low-development groups in the number of students who were enrolled in the institutions and physical education programs and in the number of faculty members in the physical education departments, there were only very small differences in the numbers of students and faculty members directly involved in the outdoor adventure components. There were, however, greater differences between the high- and low-development groups in the full-/part-time employment status of outdoor adventure faculty, certain outdoor adventure faculty ranks, and the percentage of physical education majors involved in the outdoor adventure courses. The characteristics of the outdoor adventure faculty members in the high- and low-development institutions are shown in Table 31.

The proportion of outdoor adventure faculty members employed full-time was approximately 10% greater in the high-development group (73.9%) than in the low-development group (63.6%). The high-development group had 19.0% fewer instructors, 16.6% more assistant professors, 7.5% more associate professors, and 5.2% fewer full professors than did the low-development group. The high- and low-

Table 31

Profile of Faculty Teaching Outdoor Adventure Leadership and Programming Courses, According to Level of Competency Development

Demographic Categories	High-Development Institutions[a] (n = 8)		Low-Development Institutions[b] (n = 4)	
	n	%	n	%
Faculty Members	(mean = 2.9)		(mean = 2.8)	
Full-time	17	73.9	7	63.6
Part-time	6	26.1	4	36.4
Faculty rank				
Instructor	4	17.4	4	36.4
Assistant professor	8	34.8	2	18.2
Associate professor	8	34.8	3	27.3
Full professor	3	13.0	2	18.2
Faculty degrees				
Bachelor's	1	4.3	0	0.0
Master's	11	47.8	5	45.5
Doctorate	11	47.8	6	54.5

Note. Percentages not totaling 100% are due to rounding.
[a] Institutions with median competency-development scores of 3.5 or greater on a 5-point scale.
[b] Institutions with median competency-development scores less than 3.5 on a 5-point scale.

development groups did not differ substantially with regard to the degrees held by faculty members.

There was a marked difference between the two groups in the proportion of physical education majors involved in outdoor adventure courses during the 1986-1987 academic year (see Table 32). In the high-development group, 24.9% of all physical education majors enrolled in the outdoor adventure classes, while only 13.8% of the students in the low-development institutions did so. On the average, outdoor adventure courses in the high-development institutions had been in existence 19.3 years, 5.5 years longer than in the colleges and universities which did not develop the outdoor adventure leadership and programming as well.

Table 33 describes the number of courses and semester hours of credit offered in both the high- and the low-development colleges and universities. High-development institutions offered only slightly more courses (13.4 courses) and credit for those courses (24.6 semester hours) than did institutions in the low-development group (12.8 courses and 21.6 semester hours).

The high-development group offered a greater proportion of theory/methods-based courses (30.6%) and required courses (33.6%) than did the low-development group (24.5% and 13.7%, respectively). Conversely, as compared to the low-development group, a smaller percentage of

Table 32

Profile of the Outdoor Adventure Leadership and Programming Components, According to Level of Competency Development

Demographic Categories	High-Development Institutions[a] (n = 8) Mean	Low-Development Institutions[b] (n = 4) Mean
Years component had been in the curriculum	19.3	13.8
Physical education majors in outdoor adventure classes 1986-87	39.2	35.9
Percentage of all physical education majors	(24.9%)	(13.8%)

[a] Institutions with median competency-development scores of 3.5 or greater on a 5-point scale.

[b] Institutions with median competency-development scores less than 3.5 on a 5-point scale.

Table 33

Number and Semester Hours of Outdoor Adventure Leadership and Programming Courses, According to Level of Competency Development

Demographic Categories	High-Development Institutions[a] (n = 8)		Low-Development Institutions[b] (n = 4)	
	Mean	(%)	Mean	(%)
Courses	13.4		12.8	
Activity format	9.3	(69.4)	9.7	(75.5)
Theory/methods format	4.1	(30.6)	3.1	(24.5)
Required	4.5	(33.6)	1.8	(13.7)
Elective	8.9	(66.4)	11.0	(86.3)
Semester Hours	24.6		21.6	
Activity format	12.0	(48.8)	12.1	(56.1)
Theory/methods format	12.6	(51.2)	9.5	(43.9)
Required	10.8	(43.9)	4.3	(19.7)
Elective	13.8	(56.1)	17.3	(80.3)
Contact hours per course	54.4		41.3	

[a] Institutions with median competency-development scores of 3.5 or greater on a 5-point scale.

[b] Institutions with median competency-development scores less than 3.5 on a 5-point scale.

activity-based and elective courses were found in the outdoor adventure components of the high-development institutions. A similar pattern was noted regarding the proportion of semester hours of credit available for the outdoor adventure classes. Just over half (51.2%) the high-development group's semester hours were in theory/ methods-based courses, 7.3% more than the proportion for the low-development group, and 43.9% of the hours were in required courses, a 24.2% margin above the percentage for the low-development group.

The colleges and universities that more thoroughly developed the outdoor adventure leadership and programming competencies offered an average of 54.4 contact hours per course. Each outdoor adventure leadership and programming course in the institutions that developed the competencies to a lesser extent involved only 41.3 clock hours of contact time.

The sites used by the high- and low-development institutions and the one-way traveling distance to each are shown in Table 34. All institutions in both groups used the traditional classroom and gymnasium settings. There were some differences, however, in the types of outdoor sites used for the outdoor adventure leadership and programming courses.

The high-development institutions favored lakes and mountains the most as sites for outdoor adventure programs,

Table 34

Sites Used for Outdoor Adventure Leadership and Programming Courses, According to Level of Competency Development

Sites	Institutions Using Site n	(%)	n	(%)	Mean One-Way Mileage to Site	
	High[a] Development		Low[b] Development		High Devel.	Low Devel.
Indoor Sites						
Classroom	8	(100.0)	4	(100.0)	--	--
Gymnasium	8	(100.0)	4	(100.0)	--	--
Outdoor Sites						
Lake	8[c]	(100.0)	3	(75.0)	158.9	22.3
Mountains	8	(100.0)	4	(100.0)	316.9	372.5
Field campus, o.e. center, or camp	7	(87.5)	3	(75.0)	180.1	10.7
Forest	7	(87.5)	4	(100.0)	200.0	36.5
River	7	(87.5)	4	(100.0)	75.7	58.8
Ropes course	5	(62.5)	3	(75.0)	52.8	11.0
Desert	2	(25.0)	0	(0.0)	550.0	--
Ocean	2	(25.0)	2	(50.0)	500.5	125.0
All outdoor sites used	--	--	--	--	204.5	98.0

[a] Institutions with median competency-development scores of 3.5 or greater on a 5-point scale.

[b] Institutions with median competency-development scores less than 3.5 on a 5-point scale.

[c] One institution did not supply mileage information for this site and is not included in the calculation of mean distance.

while the low-development institutions used mountain, forest, and river environments most extensively for their program activities. A field campus, outdoor education center, or camp was used by a greater proportion of the high-development group (87.5%) than the low-development group (75.0%). Lakes were used by all of the high-development institutions but by only three-quarters of the low-development colleges and universities. On the other hand, a larger percentage of the low-development group used forests (100.0%), rivers (100.0%), and ropes courses (75.0%) for programs as compared to the high-development institutions (87.5%, 87.5%, and 62.5%, respectively). While one-quarter of the high-development group used deserts, none of the low-development group did so. An ocean environment was used by half of the low-development schools but by only one-quarter of the high-development group.

There were differences, too, in the distances traveled by the two groups to reach the various outdoor sites. On the average, high-development institutions traveled more than twice as far as low-development institutions to reach all the outdoor areas used in these outdoor adventure programs; high-development schools traveled an average of 204.5 miles, while the low-development group journeyed 98.0 miles.

The most notable differences appeared in the distances to lake, forest, ocean, and field campus/outdoor education center/camp settings. The high-development group journeyed almost 160 miles to lakes, while their low-development counterparts traveled just over 20 miles. The low-development group found ocean environments as close as 125 miles away, but the high-development institutions used ocean sites 500 miles from their campuses. Likewise, forests used in outdoor adventure programs of the high-development group were more distant than those used by the institutions developing the competencies less well. High-development schools used forest settings that were, on the average, 200 miles away, while outdoor adventure courses in low-development institutions took place in forests only 36.5 miles from their campuses.

The field campuses, outdoor education centers, and camps used by high-development institutions were several hours away, at a distance of approximately 180 miles. Those used by the institutions in the low-development group were quite close to their campuses--a mere 10.7 miles away. Neither group had to travel very far to reach a ropes course. On the average, these areas were within an hour's drive. The high-development group used ropes courses just over 50 miles away, but the low-development group found theirs a bit closer, just 11 miles from their home bases.

Both the high- and low-development groups traveled rather long distances--316.9 and 372.5 miles, respectively--to reach the mountain environments used in their programs. Two of the high-development institutions used desert settings that were 550 miles away, but none of the low-development institutions used the desert in their outdoor adventure component.

Table 35 shows another representation of the one-way distances traveled by both the high- and low-development groups. The high-development group used a total of 45 sites while the low-development group used 23 sites. Just over half the sites used were 30 miles or less from the campuses for both groups of institutions, probably requiring no more than one-half to three-quarters of an hour's drive. More differences between the groups become apparent when considering the sites at greater distances from the campuses. Sites requiring trips of 100 miles or more were used in one-third of the cases for the high-development institutions, while only 13% of the sites used by low-development institutions necessitated trips of that length. Only one site used by the low-development institutions required a trip of more than 500 miles. Colleges and universities in the low-development group used almost twice the proportion of sites in the 31-to-100-mile range that the high-development group used; approximately

Table 35

Distances to Outdoor Sites Used for Outdoor Adventure Leadership and Programming Courses, According to Level of Competency Development

One-Way Distance Traveled to Site (Miles)	Sites Used by High-Development Institutions[a]		Sites Used by Low-Development Institutions[b]	
	n	%	n	%
0-10	11	24.4	7	30.4
11-30	13	28.9	6	26.1
31-100	6	13.3	7	30.4
101-500	9	20.0	2	8.7
501-1500	6	13.3	1	4.3
Total	45	100.0	23	100.0

Note. Percentages do not total 100% due to rounding.

[a] Institutions with median competency-development scores of 3.5 or greater on a 5-point scale.

[b] Institutions with median competency-development scores less than 3.5 on a 5-point scale.

30% of the areas used by the low-development group were in that range of distances.

Summary of demographic differences. Demographically, the eight high-development institutions were distinct from the four low-development institutions in a number of ways, suggesting possible trends which should be investigated to a greater degree with a larger number of institutions. Basically, the demographic differences for this particular group of institutions can be summarized as follows:

1. The high-development institutions had smaller institution enrollments, physical education major enrollments, and physical education faculty sizes than did low-development institutions.
2. Institutions in the Midwest District of AAHPERD tended to develop competencies to higher degree than did institutions in the Central, Eastern, or Southern Districts.
3. High-development institutions had a slightly smaller proportion of full-time physical education faculty members than did low-development institutions.
4. There were more full-time outdoor adventure faculty members in the high-development institutions than in the low-development institutions.
5. There were more assistant professors and associate professors and fewer instructors and full professors

among the high-development outdoor adventure faculty than the low-development outdoor adventure faculty.

6. A greater proportion of physical education majors were enrolled in outdoor adventure courses per year in high-development institutions than in the low-development institutions.
7. Outdoor adventure components began in high-development institutions earlier than in low-development institutions.
8. High-development institutions offered a greater number of courses and semester hours of credit in outdoor adventure leadership and programming courses than did the low-development institutions.
9. A greater proportion of the high-development institutions' courses and credits were in theory/methods-oriented courses than were those of the low-development institutions.
10. The high-development institutions required a greater proportion of courses and credits than did the low-development institutions. This may account for the higher percentage of physical education majors enrolling in outdoor adventure leadership and programming courses in high-development institutions per year.
11. High-development institutions averaged twice the mileage of low-development institutions to reach outdoor adventure program sites.

Development of outdoor adventure leadership and programming competencies. The high- and low-development groups did not differ only in demographic characteristics. Some differences between the two groups were revealed regarding the development of outdoor adventure leadership and programming competencies. These distinctions are discussed in the following sections.

Competency categories. The median competency-development scores and semi-interquartile deviations for each of the 11 outdoor adventure leadership and programming competency categories for both groups of institutions are displayed in Table 36. The overall median scores of the high- and low-development institutions differed by one point on the five-point Likert scale of development, with the high-development group tallying a 4.00 and the low-development group indicating a development level of 3.00 for all competencies. The scores of both groups showed equivalent variability with a semi-interquartile deviation of 0.500.

All but three of the high-development group's competency categories had a median score of 4.00. Categories II (Outdoor Adventure Leadership and Instructorship), IV (Program Planning and Development), and VII (First Aid and Safety) showed median development scores of 5.00. As for the low-development group, a median development score of 3.00 was recorded for all but one of

Table 36

Median Development Scores and Semi-Interquartile Deviations of Competency Categories, by Level of Competency Development

Cat. #	Competency Category Name	High-Devel.[a] Group (n = 8) Mdn	High-Devel.[a] Group (n = 8) Q	Low-Devel.[b] Group (n = 4) Mdn	Low-Devel.[b] Group (n = 4) Q
I	Philosophical, Historical, & Theoretical Foundations	4.00	0.500	3.00	0.750
II	Outdoor Adventure Leadership & Instructorship	5.00	0.500	3.00	0.500
III	Counseling, Human Service, & Human Development	4.00	1.000	2.00	1.000
IV	Program Planning & Development	5.00	0.500	3.00	0.000
V	Outdoor Skills & Abilities	4.00	0.500	3.00	0.500
VI	Environmental Awareness, Understanding, & Action	4.00	0.500	3.00	0.500
VII	First Aid & Safety	5.00	0.500	3.00	0.500
VIII	Administration & Supervision	4.00	0.125	3.00	0.500
IX	Facilities, Equipment, & Supplies	4.00	0.500	3.00	0.500
X	Professionalism	4.00	0.500	3.00	0.000
XI	Assessment & Evaluation	4.00	0.000	3.00	0.500
All Competencies		4.00	0.500	3.00	0.500

[a] Institutions with median competency-development scores of 3.5 or greater based on a 5-point Likert scale where 1 = minimally developed and 5 = highly developed.

[b] Institutions with median competency-development scores less than 3.5.

the categories. Category III (Counseling, Human Service, and Human Development) had a median score of 2.00.

Table 37 displays the percentage of competencies in each of the categories that were not developed at all. Overall, a considerable proportion of the competencies were developed to some degree by both groups of institutions. Upon examination of this table, though, it becomes apparent that more of the competencies were undeveloped in the curricula of the low group than in the curricula of the high group. Nearly all the competencies were developed to some degree by the high-development institutions. Competency categories in which greater proportions of undeveloped competencies appeared in the low-development group were Counseling, Human Service, and Human Development (Category III); First Aid and Safety (Category VII); Administration and Supervision (Category VIII); Professionalism (Category X); and Assessment and Evaluation (Category XI). The proportion of undeveloped competencies in these five categories ranged from 10.7% to 25.0%.

Types of courses used. The percentages of outdoor adventure leadership and programming competency categories developed in outdoor adventure-specific courses, other physical education courses, and non-outdoor adventure/non-physical education courses in the two groups of institutions are shown in Table 38. For all categories combined, the outdoor adventure courses contributed to the

Table 37

Percentage of Competencies Not Developed at All, According to Level of Competency Development

Cat. #	Competency Category Name	% of Competencies Not Developed: High-Devel.[a] Group (n = 8)	% of Competencies Not Developed: Low-Devel.[b] Group (n = 4)
I	Philosophical, Historical, & Theoretical Foundations	0.0	0.0
II	Outdoor Adventure Leadership & Instructorship	0.0	1.1
III	Counseling, Human Service, & Human Development	0.0	11.4
IV	Program Planning & Development	0.0	5.0
V	Outdoor Skills & Abilities	0.9	1.8
VI	Environmental Awareness, Understanding, & Action	0.0	2.8
VII	First Aid & Safety	0.6	11.3
VIII	Administration & Supervision	0.0	12.5
IX	Facilities, Equipment, & Supplies	0.0	3.6
X	Professionalism	0.0	10.7
XI	Assessment & Evaluation	0.0	25.0
All Competencies		0.6	5.6

[a] Institutions with median competency-development scores of 3.5 or greater based on a 5-point Likert scale where 1 = minimally developed and 5 = highly developed.

[b] Institutions with median competency-development scores less than 3.5.

Table 38

Percentage of Outdoor Adventure Leadership and Programming Competency Categories Developed in Three Types of Courses, According to Level of Competency Development

Competency Category		Outdoor Adventure Courses (%)		Physical Education Courses (%)		Other Courses (%)	
		Hi[a]	Lo[b]	Hi	Lo	Hi	Lo
I	Philosophical, Historical, & Theoretical Foundations	64.4	73.8	26.9	18.8	8.8	7.5
II	Outdoor Adventure Leadership & Instructorship	75.0	71.3	18.1	27.5	6.9	1.3
III	Counseling, Human Service, & Human Development	50.0	29.0	18.8	33.8	31.3	37.3
IV	Program Planning & Development	73.6	67.5	14.3	30.0	12.1	2.5
V	Outdoor Skills & Abilities	81.4	86.3	11.4	13.8	7.1	0.0
VI	Environmental Awareness, Understanding, & Action	77.9	63.8	9.3	3.8	12.9	32.5
VII	First Aid & Safety	75.4	41.3	17.7	23.8	6.9	35.0
VIII	Administration & Supervision	63.5	60.0	24.1	37.5	12.4	2.5
IX	Facilities, Equipment, & Supplies	69.1	78.8	21.1	18.8	9.7	2.5
X	Professionalism	70.5	38.8	12.9	56.3	16.6	5.0
XI	Assessment & Evaluation	72.3	48.8	13.6	48.8	14.1	2.5
All categories		68.6	59.9	18.4	28.4	13.0	11.7

Note. Percentages not totaling 100% are due to rounding.

[a] Institutions with median competency-development scores of 3.5 or greater on a 5-point scale (n = 8).

[b] Institutions with median competency-development scores less than 3.5 on a 5-point scale (n = 4).

development of 68.6% of the high-development group's competencies and 59.9% of the low-development group's competencies. Physical education courses in the high-development institutions addressed 18.4% of the competencies, while, in the low-development institutions, they contributed to the cultivation of 28.4% of the competencies. Other courses in the colleges and universities accounted for 13.0% and 11.7% of the competency development in the high- and low-development groups, respectively. This analysis indicates that the low-development institutions relied more heavily on the physical education courses to achieve the outdoor adventure leadership and programming competencies than did the institutions in the high-development group. In general, though, both groups of institutions used the three types of courses in similar ways, with outdoor adventure courses contributing the most and courses that were neither outdoor adventure nor physical education contributing the least toward the development of outdoor adventure leadership and programming competencies.

Some differences between the high- and low-development groups with regard to the contribution of the various types of courses were apparent in several of the competency categories. For example, while half the Counseling, Human Service, and Human Development (Category III) competencies in the high-development group were developed in outdoor

adventure-specific courses, only 29.0% of the low-development group's Category III competencies were developed in those courses. Instead, more of the physical education courses in the low-development institutions contributed to the cultivation of Counseling, Human Service, and Human Development competencies. More than three-quarters of the high-development group's First Aid and Safety (Category VII) competencies were also developed in the outdoor adventure courses, but only 41.3% of them were addressed by outdoor adventure courses in the low-development institutions. A much greater portion of Category VII development fell to the non-outdoor adventure/non-physical education courses in the low-development institutions (35.0%) as compared with the high-development institutions (6.9%).

Professionalism (Category X) and Assessment and Evaluation (Category XI) were two other areas showing distinct differences in the responses given by the high- and low-development institutions. Far less of the burden of developing competencies in these two categories fell upon the outdoor adventure courses in the low-development institutions than in the higher-development group. Conversely, a greater proportion of the competencies in Categories X and XI were developed by physical education courses in the low-development group than by physical education courses in the high-development group. Other

courses in the institutions contributed less toward the development of these competencies in the low-development institutions than they did in the high-development colleges and universities.

One other competency category, Environmental Awareness, Understanding, and Action (Category VI) showed a difference of emphasis between the high- and low-development groups. Courses which were neither physical education nor outdoor adventure were responsible for developing 32.5% of these competencies in the low-development institutions, while only 12.6% of the Category VI competencies in the high-development colleges and universities were developed in this type of course.

Course experiences used. The percentages of competencies developed by various types of curricular experiences as estimated by respondents in both the high- and low-development groups are shown in Table 39. The proportions of competencies developed by lectures, discussions/seminars, hands-on skill practice, and skill demonstrations are relatively similar for both groups of institutions. Discussions/seminars and lectures are by far the preferred methods of curriculum transmission for both groups, with over 95% of the competency topics being addressed in each of these ways.

Some differences between the high- and low-development groups appear in the proportions of competencies developed

Table 39

Course Experiences Used to Develop Outdoor Adventure Leadership and Programming Competencies, According to Level of Competency Development

Experience Used to Develop Competencies	Percentage of Competencies Developed	
	High-Devel. Group[a]	Low-Devel. Group[b]
Discussion/seminar	98.9	95.5
Lecture	97.7	97.7
Reading or written assignments	94.3	70.5
Supervised student leadership experience, practicum, or internship	86.4	56.8
Hands-on skill practice	85.2	77.3
Day trips	81.8	63.6
Skill demonstration	78.4	70.5
3- to 7-day trips	78.4	59.1
1- to 3-week trips	42.2	31.8
Other	19.3	0.0
Longer than 3-week trips	13.6	27.3

[a] Institutions with median competency-development scores of 3.5 or greater on a 5-point scale (n = 8).

[b] Institutions with median competency-development scores less than 3.5 on a 5-point scale (n = 4).

through the use of reading/written assignments and various types of field experiences. Assignments involving reading or writing were used to develop 94.3% of the high-development group's competencies but only 70.5% of the low-development group's competencies. With the exception of trips longer than three weeks in duration, high-development institutions utilized field experiences to develop a larger proportion of competencies than did low-development institutions. High-development institutions used one- to three-week trips to develop 10.4% more of the competencies than did the low-development institutions. Likewise, the higher-development group utilized day trips to develop 18.2% more competencies, three- to seven-day trips to develop 19.3% more competencies, and supervised student leadership exeriences/practica/internships to develop 29.6% more competencies than did the low-development group. Other experiences such as special cognitive/affective learning modules and other outdoor leadership training programs were used to promote the development of 19.3% of the competencies in the high-development institutions, but none of these were used in low-development colleges and universities.

Summary of competency-development differences. Generally, the distinctions between the high- and low-development institutions with regard to competency development can be summarized as follows:

1. The overall competency-development median of the high-development institutions was one point higher than the median of the low-development institutions on the five-point Likert scale of development. This represented only a small difference between the two groups.
2. The categories in which greatest differences in competency medians appeared were Categories II (Outdoor Adventure Leadership and Instructorship), III (Counseling, Human Service, and Human Development), IV (Program Planning and Development), and VII (First Aid and Safety). The high-development institutions' medians were two points higher than the low-development institutions' medians for each of these categories.
3. The low-development institutions had greater proportions of undeveloped competencies than did high-development institutions.
4. The categories in which the greatest differences in undeveloped competencies appeared were III (Counseling, Human Service, and Human Development), VII (First Aid and Safety), X (Professionalism), and XI (Assessment and Evaluation). The low-development institutions had greater proportions of undeveloped competencies in each of these categories.
5. The high-development institutions used physical education courses to develop a smaller percentage of

competencies than did low-development institutions. Both outdoor adventure-specific courses and non-outdoor adventure/non-physical education courses were used more by high-development institutions than low-development institutions.

6. Outdoor adventure courses were used to develop more Category III (Counseling, Human Service, and Human Development), VII (First Aid and Safety), X (Professionalism), and XI (Assessment and Evaluation) competencies in high-development institutions than in low-development institutions. Non-outdoor adventure/non-physical education courses were used less in the development of Category VI (Environmental Awareness, Understanding, and Action) and VII (First Aid and Safety) competencies in high-development institutions than in low-development institutions. Physical education courses were used to develop a smaller percentage of Category X (Professionalism) competencies in high- than in low-development institutions.

7. A greater proportion of competencies in high-development institutions than in low-development institutions were developed through the use of reading/written assignments, single day to three-week trips, and supervised practica. High-development institutions used trips that were more than three weeks

in length to develop fewer competencies than did low-development institutions.

Other Phase II Findings

Several of the Phase II institutions had future plans for their outdoor adventure leadership and programming component. The plans of five of the colleges and universities included the following:

1. Add more advanced-level skill development courses; add sailing.
2. To a specialty area in physical education and minor for other majors, add the following required three-semester-hour courses: Outdoor Adventure Pursuits I and II (activity-based), Adventure Programming (activity- and theory/methods-based), Interpersonal Effectiveness (theory/methods-based), Adventure Leadership (activity- and theory/methods-based), Field Experiences (activity-based), and a one- to three-semester-hour Leadership Practicum (activity-based).
3. Add a master's program in adventure education; establish a Center of Excellence focusing on research of adventure education programs; establish a center focusing on outreach programs for specific populations; add a whitewater instructor's course; and seek external funding for programs for behaviorally disturbed adolescents and families in crisis.

4. Establish a master's degree in outdoor education.
5. Establish a ropes course on campus.

A sixth respondent indicated that plans were uncertain, but that a study was underway. The remaining six respondents did not indicate any future plans for their outdoor adventure leadership and programming component.

General Observations

During the first phase of the research project, a number of respondents elected to supply additional comments beyond the information requested on the brief questionnaire. A number of institutions' representatives indicated that although the physical education major program did not offer outdoor adventure leadership and programming courses, their institution's recreation or leisure studies department did so. As was noted at the outset of this investigation, it was recognized that the subject of outdoor adventure leadership and programming was known to be offered within other academic majors such as recreation and leisure studies, as well as others including forestry, outdoor education, and the like. No attempt was made in the present study to try to include those programs that did not prepare students to teach physical education in elementary or secondary schools.

It has been well documented that outdoor adventure activities are found increasingly in the basic instruction

programs in many colleges and universities across the country (Tangen-Foster & Lathen, 1983). Many Phase I respondents indicated as much. Other respondents indicated that a camping or outdoor education course, which was not specifically outdoor adventure-oriented was the only related offering at their institutions. Outdoor adventure was offered solely as a part of another course in a handful of colleges and universities, and in a couple of other institutions, it was addressed only as part of an interdisciplinary program. Sadly, too, a couple of institutions indicated that they were reducing their programs, and that, while they had outdoor adventure at the time of the survey, they had plans to drop it from the curriculum.

More encouraging, though, were the indications that outdoor adventure was becoming an area of interest among some who were engaged in the professional preparation of physical educators. Here are a few samples of this expressed interest. One respondent from Georgia wrote:

> I am in accord with your general thesis that adventure programs are becoming quite popular and serve a very useful purpose in the curriculum. I'm sure that our majors program committee, in their current goal projections re. curriculum, will be addressing our present and future status relative to providing outdoor adventure leadership and training courses in the curriculum.

Another respondent, this one from North Carolina, said:

> I find it extremely refreshing to find someone with a sincere interest in tackling the problem of trained outdoor leaders, . . . especially as it relates to physical educators in the public schools. There are others . . . who share your interest, but to date it has been difficult getting the right wheels to turn.

Several respondents commented that they were considering adding or already had plans to add outdoor adventure to the curriculum for physical education majors. Respondents from South Carolina indicated that a course in outdoor education was to become a requirement in 1988 for physical education majors in that state. While outdoor education by itself is not the same as preparation for outdoor adventure leadership and programming, a background in outdoor education applied to physical education is a large step in the right direction.

Implications for Physical Education Teacher Preparation

A disquieting theme emerged from the many written comments made by Phase I respondents and from written and verbal comments made by potential and actual Phase II respondents. It was this: There are many physical educators--even those who are responsible for preparing future teachers of physical education--who have a limited acquaintance with or understanding of outdoor adventure education. Even though given a basic definition including

examples of adventure activities, a good number of respondents in this study initially indicated courses or programs that are not generally considered outdoor adventure education. Even more perplexing was that many of them initially omitted a number of courses that would normally be considered outdoor adventure activities or at least strong supporting coursework for preparation to lead or develop programs in outdoor adventure. Written and telephone follow-up eventually uncovered these originally omitted courses.

What is apparent is that physical educators lack a common language with which to speak about outdoor adventure education. There is not a common conception among physical educators, and probably many others as well, of what comprises outdoor adventure education. This is the very point raised by Gilbert and Chase (1988) with regard to outdoor education, under whose umbrella outdoor adventure education generally is thought to reside. As outdoor educators have had difficulty defining what the field encompasses, so have adventure educators had similar difficulty in defining their domain. The lack of a single, widespread, acceptable definition plagues not only outdoor education in general, but also outdoor adventure in particular. Without a common language, little can be done to advance the ideas and ideals of this unique form of education. Undoubtedly, this situation contributed to the

confusion apparent among the participants in the present investigation.

This is not to say that no attempts have been made to bring outdoor adventure education into the mainstream of current physical education curriculum. As was highlighted in Chapter I, several efforts have been made to embrace outdoor adventure as a curricular alternative, particularly since Project Adventure came onto the scene in 1971. Articles published in the physical education profession's journals--most notably two series on outdoor adventure in the Journal of Physical Education, Recreation and Dance in April 1978 and May/June 1986--have showcased the topic. The Council on Outdoor Education of the American Alliance for Health, Physical Education, Recreation and Dance has sponsored sessions at every recent national convention, and outdoor adventure presentations are common at district- and state-level meetings as well.

This effort to spread the word about outdoor adventure has been largely unsuccessful among physical educators. As discovered in the current study, less than half our nation's physical education teacher preparation programs offer to their majors any outdoor adventure leadership and programming courses. And what became even more painfully clear in the second phase of this study is that, while some institutions offered courses, only a small percentage of their physical education majors enrolled in them.

It will be interesting to see if and how this picture changes in the coming years. Recent modifications to the National Council for Accreditation of Teachers (NCATE) guidelines (1987) for the preparation of physical education teachers may have some influence on this change process. Newly added to the guidelines is a requirement that prospective physical education teachers demonstrate the skills and knowledge necessary to plan, implement, and evaluate outdoor leisure pursuits in physical education programs. Perhaps the pressure to meet NCATE standards will prompt more physical education teacher preparation curriculum designers to learn what outdoor adventure education has to offer physical education and to begin implementing such preparation in their physical education major programs.

Outdoor adventure supporters have spent years justifying the "good" of outdoor adventure, in school physical education curricula and elsewhere, by citing improvements in social, cognitive, and psychomotor functioning of participants. It is now time to move beyond that justification stage. It is time for the undergraduate preparation of physical education teachers to include experiences in personal skill development, knowledge acquisition, attitude cultivation, and leadership experience in outdoor adventure activities.

A Model for Outdoor Adventure Leadership and Programming Preparation for Physical Education Teaching Majors

A prototype for including outdoor adventure leadership and programming in the professional preparation of physical education teachers was developed as a result of this investigation. The intent is to suggest a framework of courses in outdoor adventure leadership and programming which can be modified to meet local needs and merged with an existing physical education teacher certification program. In the development of the model, consideration was given to the findings of this study, to information about outdoor adventure leadership found in the current literature, and to the investigator's own experience with and knowledge about both physical education professional preparation and outdoor adventure education.

The proposed model incorporates the findings regarding the Phase II institutions' course offerings, competency development, and course types and course experiences used in that development. Two levels of depth are proposed in this preparation scheme. The first is a basic introductory level to be required of all physical education teacher certification majors. The main goal of these offerings is to familiarize the student with the area of outdoor adventure education, to develop basic personal skills in some common adventure activities, and to introduce the

student to the leadership skills necessary to conduct in as safe a manner possible a quality, basic outdoor adventure program in a school setting.

Expanding on these required courses is a cluster of elective courses. These are designed to provide a more in-depth exposure to outdoor adventure leadership and programming for students who elect to focus on that area within their physical education teacher preparation program. It is offered here as an "option" in physical education, although the term selected could just as easily have been "track," "concentration," or "specialty area." In fact, with the addition of a few courses, the option could be transformed into an academic minor.

Both the minimal requirements at the introductory level and the more concentrated option combine practical activity with study in the theory and methods of the field. The following are the proposed academic courses for the outdoor adventure option in physical education.

Course Titles	Semester Hours
Outdoor Adventure Activities I	1
Outdoor Adventure Activities II	1
Introduction to Outdoor Adventure Education	3
Outdoor Adventure Leadership	3
Practicum in Outdoor Adventure	3
Two intermediate-level activities from the following (1 semester hour each):	2
Backpacking	
Canoeing/Kayaking	
Rock Climbing/Mountaineering	
SCUBA	
Total	13

Course descriptions. A brief description of each course, including a summary of the course content, prerequisites, and semester hours of credit follows. Courses that are required of all teacher certification students, whether or not they elect to take the outdoor adventure option, are so noted.

Outdoor Adventure Activities I
(1 semester hour)
An activity-based survey course focusing on personal skill acquisition, basic knowledge of the activity, and fundamental teaching techniques in each of the following activities: canoeing (flatwater), backpacking, orienteering, and rock climbing/ rappelling. Two weekend outings are required field experiences.

No prerequisite. Required of all teacher certification majors.

Outdoor Adventure Activities II
(1 semester hour)
An activity-based survey course focusing on personal skill acquisition, basic knowledge of the activity, and fundamental teaching techniques in each of the following activities: cross-country skiing, cycle touring, SCUBA, and high and low ropes course. Two weekend outings are required field experiences.

No prerequisite. Elective for teacher certification majors; required for outdoor adventure option.

Introduction to Outdoor Adventure Education
(3 semester hours)
A brief introduction to the history, philosophy, and methods of outdoor education; the history, philosophy, theories, and methods of adventure education; survey of programs in outdoor adventure; introduction to leadership, safety, and legal concerns; and adventure programming within the context of physical education. Course incorporates activity-based field experiences including group and individual initiative tasks and ropes course participation.

Prerequisite: Outdoor Adventure Activities I. Required of all teacher certification majors.

Outdoor Adventure Leadership
(3 semester hours)
Various aspects of leading outdoor adventure activities are emphasized including topics such as the following: role of the outdoor leader; styles of leadership; group process; communication skills; expedition behavior; trip planning, execution, and evaluation; decision making and judgment; equipment selection; travel plans and trip logistics; weather; and safety in the outdoors. Students will be afforded opportunities to develop and refine leadership skills through field experiences. Course begins with a one-week field experience and ends with a one-week expedition providing student leadership opportunities.

Prerequisite: Introduction to Outdoor Adventure Education. Elective for teacher certification majors; required for outdoor adventure option.

Practicum in Outdoor Adventure
(3 semester hours)
A supervised leadership experience in a public school or other setting such as summer camp, college student union outing club, or Boy or Girl Scouts. Students are required to keep a journal to log and reflect upon experiences.

Prerequisite: Outdoor Adventure Leadership. Elective for teacher certification majors; required for outdoor adventure option.

Intermediate Activity Courses
(1 semester hour each)
Outdoor adventure option students must also select two intermediate-level activity courses from the following:

Intermediate Backpacking
Intermediate Canoeing/Kayaking
Intermediate Rock Climbing/Mountaineering
Intermediate SCUBA

Focus of the intermediate activities is on continued personal skill development and teaching strategies for the specific activity. Field trips required.

Prerequisites: Outdoor Adventure Activities I and II. Elective for teacher certification majors; two required for outdoor adventure option.

Coordination with existing courses. The outdoor adventure-specific courses in the option just described are not intended to, nor can they, provide all the competencies needed by an entry-level outdoor adventure leader. Other courses that students will take in their four-year program can fulfill many of the competency-development needs. For example, the student in the typical physical education major program will be required to take courses in measurement and evaluation, professionalism, teaching methods, organization and administration, exercise physiology, and first aid. These each make specific contributions to the development of outdoor leadership competencies. A course in lifesaving may be elected to fulfill the student's aquatic requirement and to meet an entry-level outdoor leadership competency. The student can meet basic college requirements in the natural and social sciences and at the same time further develop competencies considered important for the outdoor leader by selecting elective courses such as group dynamics, communication skills, counseling, geology, biology, botany, zoology, or environmental sciences.

Following is a breakdown of how each academic area and each outdoor adventure-specific course might contribute to the development of competencies in each of the 11 competency categories.

I. Philosophical, Historical, and Theoretical Foundations
- Introduction to Outdoor Adventure Education

II. Outdoor Adventure Leadership and Instructorship
- Outdoor Adventure Leadership
- Physical education professional courses
- Practicum in Outdoor Adventure

III. Counseling, Human Service, and Human Development
- Outdoor Adventure Leadership
- Counseling or group dynamics courses in psychology, sociology, or educational counseling department
- Practicum in Outdoor Adventure

IV. Program Planning and Development
- Introduction to Outdoor Adventure Education
- Outdoor Adventure Leadership
- Physical education professional courses
- Practicum in Outdoor Adventure

V. Outdoor Skills and Abilities
- Outdoor Adventure Activities I and II
- Intermediate-level activities
- Outdoor Adventure Leadership
- First aid courses in health education department
- Physical education professional courses, including exercise physiology
- Practicum in Outdoor Adventure

VI. Environmental Awareness, Understanding, and Action
- Introduction to Outdoor Adventure Education
- Environmental science courses

VII. First Aid and Safety
- Outdoor Adventure Leadership
- First aid and safety courses in health education department

VIII. Administration and Supervision
- Introduction to Outdoor Adventure Education
- Physical education professional courses
- Practicum in Outdoor Adventure

IX. Facilities, Equipment, and Supplies
- Outdoor Adventure Activities I and II
- Intermediate-level activities
- Outdoor Adventure Leadership
- Physical education professional courses

X. Professionalism
Introduction to Outdoor Adventure Education
Physical education professional courses
Practicum in Outdoor Adventure

XI. Assessment and Evaluation
Introduction to Outdoor Adventure Education
Physical education professional courses
Practicum in Outdoor Adventure

Integrating other findings into the model. Findings of the current study suggested that safety issues were of paramount concern both to the physical educators in Phase II and to outdoor leadership professionals and experts who participated other studies. Since this is true, safety issues should be interwoven throughout the course experiences in both activity- and theory/methods-based classes. While an advance first aid certificate was not considered by the respondents in the current investigation particularly important to develop in physical education majors, it was one of the important entry-level competencies. It is strongly recommended that students taking the outdoor adventure option complete an advanced first aid course.

Another theme that emerged from the literature was the need for sound judgment and decision-making skills in the outdoor adventure leader. If sound judgment arises from reflection upon experience, as Priest (1987b) has claimed, then various field experiences under many conditions are desired components of a preparation program for outdoor

adventure leadership. Some sort of experiential component is built into almost every course in this model. Early opportunities for students to practice their leadership abilities are recommended. Much like Raiola's (1986/1987) model curriculum, the proposed Outdoor Adventure Leadership course uses a precourse field experience upon which the semester course can build and a postcourse expedition to apply the learnings of the semester. If possible, these might take place just before the start of the term and just after the semester ends in order to obtain an uninterrupted week for each experience.

The validity of the competencies regarding the possession of a motor vehicle license and having basic vehicle maintenance skills was questioned by Phase II respondents. It is not feasible to try to incorporate those competencies in a college-level course. Rather, they should be considered prerequisites to any field experience or practicum in which the student may be required to transport participants to a site.

Summary of the model. The model suggests that a minimum of two courses be completed by all physical education teacher certification majors. These are a survey-type activity course entitled Outdoor Adventure Activities I, which gives an introduction to four adventure activities, and a theory/methods-oriented course called Introduction to Outdoor Adventure Education, which also

incorporates selected activities and field experiences.

The outdoor adventure option was designed to meet the needs of curriculum planners seeking to add in-depth experiences for physical education teacher certification students who choose to concentrate in the area of outdoor adventure. This program requires a total of 13 semester hours of outdoor adventure courses. In addition to the two aforementioned required courses, the following classes are suggested: Outdoor Adventure Activities II (a survey of four different adventure activities), Outdoor Adventure Leadership, Practicum in Outdoor Adventure, and two intermediate-level adventure activity courses. It is recommended that the student be urged to take appropriate supporting coursework in other academic areas such as the natural and social sciences, health education, and the like. An effort should be made to integrate outdoor adventure applications into the subject matter of various traditional physical education requirements.

Some cautions are in order. The two required courses can only supply the barest minimum in the way of outdoor adventure leadership and programming competency development. Even with its more extended coursework, the outdoor adventure option cannot supply all the competencies needed for effective outdoor adventure leadership. Enberg, Harrington, and Cady (1981) expressed this notion with

regard to physical education teacher preparation in general:

> The pre-service program cannot identify nor develop all competencies needed for effective teaching. Some competencies/needs can be identified only after the individual has begun professional practice; they are unique to the person involved and to the milieu in which he/she is teaching. (p. 20)

The same is true of the physical educator's preparation in outdoor adventure education. It is strongly recommended that students seek to continue their outdoor leadership preparation through participation in workshops, conferences, and programs offered by established outdoor leadership schools.

Chapter Summary

This chapter described and discussed the findings of an investigation of physical education preparation for physical education majors in the United States. The results of a nationwide survey (Phase I) indicated the scope and depth of such preparation in terms of the number of institutions offering outdoor adventure leadership and programming courses and the amount of course credit offered.

Also presented were the findings of the Outdoor Adventure Leadership and Programming Survey (Phase II) which was administered to 12 institutions with significant components in outdoor adventure leadership and programming

for physical education majors. Findings regarding the characteristics of the institutions, physical education programs, outdoor adventure components, and development of outdoor adventure leadership and programming competencies were described. Also highlighted were characteristics that distinguished institutions with high development of the competencies from institutions with low development of the competencies.

These findings were discussed in light of the current literature and practice in the fields of outdoor adventure leadership and physical education teacher preparation. Implications for the preparation of physical education teachers were discussed, and a model for such preparation was presented.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter presents a brief description of the procedures used in this investigation and the major findings with regard to the research questions posed in Chapter I. Also included are suggestions for the preparation of physical educators and recommendations for further study.

Summary

The investigation detailed in this document examined the nature and scope of outdoor adventure leadership and programming preparation available to undergraduate physical education majors across the United States. There has been a good deal of support recently from physical education curriculum specialists for the inclusion of outdoor adventure activities in elementary and secondary school physical education programs. Despite this interest, the review of literature revealed a conspicuous absence of research focusing on the outdoor adventure leadership and programming preparation of physical education teachers. As a result, the current project was conceptualized to initiate research into this aspect of the physical educator's professional preparation.

The study employed a nationwide survey of physical education baccalaureate degree programs (Phase I), followed by a detailed examination of selected programs that offered preservice physical education teachers a significant component in outdoor adventure leadership and programming preparation (Phase II). The first phase was designed to identify institutions that offered to physical education majors one or more courses in outdoor adventure leadership and programming. The Phase I questionnaire was sent to the heads of physical education departments in 824 colleges and universities identified by a systematic search of five sources listing baccalaureate degree programs. Over half those institutions responded to this questionnaire. A college-catalog search was used to supply information about the nonresponding institutions. From the questionnaire responses and the college-catalog search, a pool of respondents was selected to receive the Phase II Outdoor Adventure Leadership and Programming Survey (OALAPS), designed specifically for this study.

The OALAPS questionnaire explored the development of specific outdoor adventure leadership and programming competencies and the ways in which these competencies were developed in 12 institutions that offered significant outdoor adventure components. Phase II respondents indicated on a five-point Likert scale the degree to which

each of Buell's (1981) important and essential entry-level outdoor leadership competencies was developed through planned curricular experiences. Also explored were the contributions of three types of courses to the development of the competencies and specific course experiences used in that development. Other data that was collected included suggestions for further developing competencies and perceived obstacles to such development.

Also examined in Phase II were selected characteristics of the 12 institutions, physical education programs, and outdoor adventure components, including information regarding the students, faculty, and courses. Characteristics distinguishing institutions that developed competencies to a greater degree from institutions that developed competencies to a lesser degree were identified.

Data were collected, coded, and computer analyzed using descriptive statistics. Data not conducive to statistical analyses were reported in narrative form. The findings, literature review information, and experience of the investigator were drawn together to propose a model for outdoor adventure leadership and programming preparation for physical education preservice teachers.

Major Findings and Conclusions

1. Which colleges and universities in the United States included in their physical education baccalaureate degree programs a component in outdoor adventure leadership and programming?

In the United States, 184 (44.2%) of the institutions surveyed offered one or more outdoor adventure leadership and programming courses to preservice physical education teachers. The only region where more than half the institutions offered such courses was the Eastern District of AAHPERD. A mean of 6.69 semester hours of such courses were made available to physical education majors in these 184 institutions. Almost half these courses were theory/methods-oriented, and the other half were activity-based. The greatest average number of semester hours was offered by institutions in the Southwest and Midwest AAHPERD Districts.

A significant component of outdoor adventure leadership and programming was found in 12 colleges and universities which responded to the Phase II survey. These were Chadron State College, Fairmont State College, LeTourneau College, Missouri Western State College, Southwestern Oklahoma State University, Springfield College, Texas A & M University, University of New Hampshire, West Chester University, Western Carolina University, and Wheaton College.

2. What were the characteristics of the institutions offering significant components in outdoor adventure leadership and programming to physical education majors?

Although the average enrollment of the 12 institutions was approximately 8,000 students, the enrollments varied dramatically from very small colleges to very large universities. The 12 institutions were primarily state-related and were located in either the Central, Eastern, Midwest, or Southern Districts of AAHPERD.

3. What were the characteristics of the physical education baccalaureate degree programs offering significant components in outdoor adventure leadership and programming to physical education majors?

The academic units offering the outdoor adventure leadership and programming component consisted solely of physical education more often than they consisted of physical education combined with health, recreation, leisure studies, fitness, and/or dance. The average enrollment in the physical education undergraduate program was 228 students although the number of students varied widely. There was an average of 22 faculty members in the physical education department, of which almost 80% were employed full-time.

4. What were the characteristics of the outdoor adventure leadership and programming components?

Outdoor adventure leadership and programming courses had been offered, on the average, just over 17 years. A mean of approximately 38 physical education major students were enrolled in outdoor adventure leadership and programming courses in the 1986-87 academic year, representing 21.2% of all undergraduate physical education majors. The proportion of students enrolled in outdoor adventure courses varied widely from 1% to 75%. Over half the institutions indicated that this proportion had remained stable in recent years. The outdoor adventure component was most frequently offered as either individual courses or as a cluster of courses (concentrations, options, specialty areas, or tracks) within the physical education major.

A mean of 2.8 faculty members per institution were involved in teaching the outdoor adventure courses. Of these, 70.6% were full-time. Assistant and associate professors predominated. Fully half the outdoor adventure faculty members held a doctorate, and almost as many others held a master's degree.

Each faculty member, on the average, specialized in two to three different areas of outdoor adventure. Backpacking and canoeing were the most frequently mentioned areas of faculty expertise, followed by cross-country

skiing, outdoor adventure education, rock climbing, camping, and leadership. In all, 27 different faculty specialization areas in outdoor adventure were found.

A wide variety of outdoor adventure leadership and programming courses were offered to physical education majors in the 12 institutions, with a mean of 13.2 courses totaling 23.6 semester hours per institution. Slightly more than one-quarter of the courses were required of physical education majors. Over 70% of the outdoor adventure courses had a predominantly activity-based format, with the remaining courses having a theory/methods orientation. A typical course consisted of 55.7 contact hours.

Over 100 different course titles were identified. Eleven course topics were offered by at least half the institutions and included backpacking, canoeing, climbing/rappelling, cross-country skiing, cycling, orienteering, SCUBA, general outdoor education, leadership, outdoor adventure education, and supervised practica.

Classrooms, gymnasia, and mountain environments were used by all institutions to teach some aspect of the outdoor adventure component. More than half the institutions used forests, lakes, rivers, ropes courses, and field campuses, outdoor education centers, or camps. Ocean and desert environments were used by no more than one-third of these institutions. Most of the program sites

were not more than 30 miles away, but sites on campus and as far as 1,500 miles away were used.

Institutions with 2,500 to 9,999 students, private institutions, and institutions from the Midwest District, on the average, began offering outdoor adventure courses earlier than other institutions. The greatest mean percentages of physical education students enrolled in outdoor adventure courses were found in institutions with 2,500 to 9,999 students, state institutions, and institutions in the Southern District. Colleges and universities with 10,000 or more students, state institutions, and Eastern District schools offered a greater mean number of courses, semester hours of credit, and contact hours in outdoor adventure leadership and programming than other institutions. The smallest institutions, private schools, and schools in the Central District traveled farther, on the average, to reach program sites than any other institutions in this group.

5. Which of Buell's (1981) essential and important outdoor adventure leadership competencies for the entry-level professional were developed by curricular experiences within the physical education degree programs?

On a five-point Likert scale of competency development, where 1 indicated minimal development and 5 indicated high development, the overall median score for

the 12 Phase II institutions was 4.00, with a semi-interquartile deviation of 1.000 for this measure. Each of the 11 competency categories was developed to a median level of 4.00, with semi-interquartile deviations ranging from 0.500 to 1.500. The Assessment and Evaluation category contained the greatest proportion of undeveloped competencies (8.3%). All Philosophical, Historical, and Theoretical Foundations competencies and all but 0.4% of the Outdoor Adventure Leadership and Instructorship competencies were developed to some extent by all 12 institutions.

Median development scores for the individual competencies ranged from 2.50 to 5.00. Earning and maintaining certification in Red Cross Advanced First Aid and Emergency Care was the sole competency to have a median score lower than 3.00 and was the only competency developed by fewer than 11 of the 12 institutions.

Within this group of 12 institutions, the schools with 2,500 to 9,999 students tended to developed the outdoor adventure competencies to a greater extent than either smaller or larger institutions. There was no overall difference in the median competency-development scores between state and private institutions. The colleges and universities in the Midwest District tended to provide a greater degree of development than the schools in the Central, Eastern, or Southern Districts.

The 25 most-developed competencies were primarily from three categories: Outdoor Adventure Leadership and Instructorship, Outdoor Skills and Abilities, and First Aid and Safety. Over one-third of the most-developed competencies focused on safety-related issues.

The majority of the 21 least-developed competencies were from the Counseling, Human Service, and Human Development category and the Program Planning and Development category. Three institutions were the source of all the competencies not developed at all, and undeveloped competencies represented only 2% of all competencies. Five Counseling, Human Service, and Human Development competencies, one Outdoor Skills and Abilities competency, and one First Aid and Safety competency were totally undeveloped by one or two institutions and were minimally developed by the rest.

Two-thirds of all competencies were developed in outdoor adventure-specific courses, 21.4% of the competencies were developed in physical education courses, and the remaining 12.6% were developed in other courses. In every category, outdoor adventure courses contributed more to the development of competencies than any other courses. The greatest proportions of development from adventure-specific coursework were found in the Outdoor Adventure Leadership and Instructorship category and in the First Aid and Safety category. The greatest contribution

of physical education courses was in the areas of Administration and Supervision and in Professionalism, while the greatest contribution of non-outdoor adventure/ non-physical education courses was in the areas of Counseling, Human Service, and Human Development and in Environmental Awareness, Understanding, and Action.

Traditional curricular delivery systems such as lectures, discussions and seminars, reading or written assignments, and skill practice were used in the development of over 80% of all competencies. Skill demonstration, supervised student leadership experiences, and trips of no more than seven days' duration were used in developing over 70% of all competencies. Least frequently used were trips over one week in length.

Respondents believed it was impossible to increase the emphasis on minimally developed or undeveloped competencies in 47% of the cases. Considered as obstacles to further development were lack of time, money, and faculty expertise; not considering the competency important; and duplication of topics in other courses. In situations where further development was considered possible, suggestions included adding specific courses addressing the topic, adding information to existing courses, and requiring students to take existing courses on the topic.

6. What characteristics of the institutions, physical education programs, and outdoor adventure components distinguished high-development institutions (schools with overall competency-development medians of 3.5 or greater) from low-development institutions (schools with competency-development medians less than 3.5)?

The eight high-development institutions had greater institution and physical education major enrollments, and larger faculties than did the low-development institutions. High-development institutions had a slightly smaller proportion of full-time physical education faculty members but more full-time outdoor adventure faculty members than did low-development institutions. There were more assistant and associate professors and fewer instructors and full professors among the outdoor adventure faculty in high-development institutions. A greater proportion of physical education majors were enrolled in outdoor adventure courses in high-development than in low-development institutions.

The outdoor adventure components began earlier in high-development institutions than in low-development institutions. High-development institutions offered a greater number of courses and semester hours in outdoor adventure leadership and programming than did low-development institutions. A greater proportion of courses were required and were theory/methods-oriented in

high-development than in low-development institutions. High-development institutions averaged twice the mileage of low-development institutions to reach outdoor adventure program sites.

The overall competency-development median of the high-development institutions was one point greater on a five-point Likert scale of development than the median of the low-development institutions. The high-development institutions' competency medians were two points higher than the low-development institutions' medians in the following categories: Outdoor Adventure Leadership and Instructorship; Counseling, Human Service, and Human Development; Program Planning and Development; and First Aid and Safety. Greater proportions of competencies were undeveloped by low-development institutions than by high-development institutions, especially in the Outdoor Adventure Leadership and Instructorship, First Aid and Safety, Professionalism, and Assessment and Evaluation categories.

High-development institutions used both outdoor adventure-specific courses and non-outdoor adventure/ non-physical education courses to develop a greater proportion of competencies than did low-development institutions. A greater proportion of competencies were developed by high-development institutions through reading or written assignments, trips up to three weeks in length,

and supervised practica. Trips longer than three weeks were used less by high-development institutions than by low-development institutions.

Recommendations

Outdoor Adventure Preparation Model for Physical Education Majors

The findings of this study prompted the development of a model of outdoor adventure leadership and programming preparation for physical education teacher certification majors. The proposed model recommends that two courses be required of all physical education teacher certification majors. The first of these is Outdoor Adventure Activities I, which includes flatwater canoeing, backpacking, orienteering, and rock climbing/rappelling. The second required course is Introduction to Outdoor Adventure Education, which includes, among other things, an introduction to the history, philosophy, theories, and methods of outdoor adventure education and gives an overview of adventure programs in the context of physical education curricula.

Also recommended are courses comprising an option in outdoor adventure for physical education majors. In addition to the two above-mentioned required courses, the option includes Outoor Adventure Activities II (cross-country skiing, cycle touring, SCUBA, and ropes course

activities), Outdoor Adventure Leadership, intermediate-level activities (backpacking, canoeing/kayaking, rock climbing/mountaineering, and SCUBA), and Practicum in Outdoor Adventure. It is recommended that these courses be offered to physical education teacher certification majors who wish to focus more on outdoor adventure for school physical education programs. These courses should be coordinated with existing curricular offerings in the physical education department and other academic units of the institution. An emphasis on safety-related issues and practices and on supervised field experiences is recommended.

Recommendations for Further Study

1. The Phase I portion of the study could be replicated after a few years to investigate changes in outdoor adventure leadership and programming offerings, especially those resulting from recent National Council for Accreditation of Teacher Education (NCATE) guidelines regarding teaching competence in outdoor leisure pursuits. If the survey is repeated, it is highly recommended that respondents be given a more detailed explanation and delimitation of qualifying outdoor adventure courses.

2. Phase II of the study could be replicated using different criteria for the selection of institutions. For example, institutions offering fewer semester hours of outdoor adventure leadership and programming coursework might be included. Comparisons could be made between institutions offering different total amounts of credit in outdoor adventure leadership and programming courses. An optimal level of courses or credit hours might be discovered in this manner. As in the previous recommendation, a more thorough description of outdoor adventure and qualifying courses would be needed to help participants focus on the topic of interest.

3. The proposed paradigm for the outdoor adventure leadership and programming preparation of physical education teachers could be implemented, and the effects of the curriculum could be studied, especially relative to the exit competencies of graduating physical education majors. Longitudinal studies would aid in measuring the effectiveness of the proposed curriculum plan.

4. A study could be conducted to discover how and where inservice physical educators who now teach outdoor adventure in elementary and secondary schools learned to do so.

5. A study could be devised to determine how and where the college and university faculty members who teach outdoor adventure leadership and programming courses have obtained their training.

6. A more in-depth analysis of the actual experiences used to develop outdoor adventure leadership and programming competencies is needed. Identification of such experiences would aid in refining the proposed curriculum.

7. It is recommended that other means for physical education teachers to develop competencies in outdoor adventure leadership and programming besides undergraduate degree programs be identified and examined.

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APPENDIX A

BUELL'S ENTRY-LEVEL ESSENTIAL AND IMPORTANT OUTDOOR ADVENTURE LEADERSHIP COMPETENCIES (1981)

BUELL'S ENTRY-LEVEL ESSENTIAL AND IMPORTANT OUTDOOR ADVENTURE LEADERSHIP COMPETENCIES (1981)

NOTE: Numbers are Buell's original item numbers. Items marked with an asterisk (*) denote ESSENTIAL ranking; all other statements were ranked as IMPORTANT.

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It is essential/important for an outdoor adventure leader to be competent to:
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A. PHILOSOPHICAL, HISTORICAL AND THEORETICAL FOUNDATIONS

1. Demonstrate an understanding of the philosophical foundations of Outdoor Adventure activities and experiences that serve as the basis for present programs and services.

5. Develop and be able to articulate a personal and professional philosophy of Outdoor Adventure which is compatible with the philosophy generally accepted by the field and the sponsoring agency.

6. Understand and communicate the rationale for using the outdoors as a medium for education, recreation and human services.

7. Know the limitations of the Outdoor Adventure field, as well as its strengths.

8. Understand the philosophy and practices of Experiential Education, which uses experience as the main mode of inquiry in the education process.

9. Recognize Outdoor Adventure Education as a process of encountering and solving, in an out-of-doors or simulated out-of-doors setting, exciting and daring physiological, psychological and sociological challenges which lead to personal and group awareness and growth.

B. OUTDOOR ADVENTURE LEADERSHIP AND INSTRUCTORSHIP

10. Recognize that Outdoor Adventure Leadership is a process which assists an individual and/or group to identify goals and objectives and achieve those ends through Adventure activities and experiences.

11. Acknowledge that leadership is tied to the leader's personality characteristics, follower's expectations, program circumstances and the needs and goals of the group.

* 12. Possess the judgment and maturity necessary to limit the activities and the participant's involvement to areas of the leader's actual capabilities or assign areas of weakness to someone with the required abilities.

* 13. Anticipate problems and act to prevent situations that may be harmful to the participants, the program, and/or the sponsoring institution or agency.

* 14. Provide a standard of care necessary to supervise and lead the program activities, as well as employ proper safety equipment and procedures.

16. Select, organize, conduct and evaluate Outdoor Adventure activities and experiences which will allow participants to acquire and use environmentally sound living and learning skills and techniques.

17. Convey a dynamic "Sense of Wonder" and "Joy" regarding the mystery and excitement of the world in which one lives and the people with whom one shares experiences.

18. Appropriately employ the proper style of leadership--autocratic, democratic, or laissez-faire for the individual(s), the group, and the situation.

19. Utilize the principles of followership, which allows group members to serve in a democratic role, thus retaining the capacity to suggest, criticize, and evaluate the leaders.

20. Lead participants who possess diverse backgrounds and different frames of reference, such as, ethnic, racial, geographic, social and religious.

21. Acknowledge the need and possess the ability to diplomatically assign specific leadership responsibilities to members of the group.

22. Select appropriate approaches and strategies of Outdoor Leadership, such as, discovery approach, simulated learning situations, and socratic questioning method.

23. Select, organize, conduct and evaluate Outdoor Adventure activities and experiences that will enhance individual growth and development of a given group of program participants.

25. Recognize the potential psychological, sociological and physiological impact of high adventure activities and experiences upon participant, staff and agency.

26. Follow an educationally effective step-by-step progression when introducing and leading Adventure activities and experiences.

27. Master a specific battery of technical skills and abilities associated with Outdoor Adventure activities and the related modes of travel necessary to carry out each activity.

28. Allow participants to engage in activities and experiences that include physical and/or psychological risk and stress only after they have gained sufficient entry-level understanding of the activity or experience.

29. Know that modeling is a significant aspect of leadership and that a leader should not only have above average skills but also knowledge of its effect upon participants.

30. Select, organize, conduct and evaluate Adventure activities and experiences that will encourage group cooperation and interdependence.

31. Manage psychological and physiological stress in participants as an expected occurrence in certain Outdoor Adventure activities and experiences.

32. Employ the problem-solving approach in order to maximize personal growth and group cooperation.

33. Display personal appearance and behavior appropriate to the program circumstances, the program goals, the service population, and the program sponsors.

* 34. Possess the necessary physical fitness to effectively handle the safety and activity aspects of the program.

35. Assure that participants develop skills in a progression or sequential pattern, in a controlled environment which will foster more success than failure, thus providing motivation for continued involvement in the activity.

36. Select, organize, conduct and evaluate Outdoor Adventure activities and experiences which develop within individuals and groups awareness, understanding and positive action toward the natural and cultural environments.

C. COUNSELING, HUMAN SERVICE AND HUMAN DEVELOPMENT

37. Implement selected counseling and personal development strategies which are effective and appropriate in Outdoor Adventure programs.

38. Apply normal and special human growth and development patterns, including psychological, sociological and physiological characteristics of the participants, and be able to modify or adjust leadership methodology and/or program activities accordingly.

39. Understand the cognitive (rational), affective (feelings), and psychomotor (physical) domains of learning and be able to make full use of these domains in conducting activities and experiences.

40. Develop a supportive and helping relationship with participants by imparting such qualities as genuineness, acceptance, empathy, trust and clarity.

41. Practice participant or client-centered counseling which assists the individual to make self-determined and responsible choices as a realization of his/her potential.

42. Practice group counseling or guidance as a vehicle for group cooperation and individual development.

43. Apply principles of small group dynamics, particularly as related to age, sex, cultural background, and individual psychological, sociological, physiological, and spiritual needs.

45. Serve as a catalyst for positive change in the values, attitudes, and actions of both individuals and groups.

46. Work with individuals by becoming involved in the processes of listening, observing, questioning and acting.

47. Intervene in the event of psychological crisis on the part of the program and/or participant.

48. Respect the differences between counseling and therapy; recognize one's personal qualifications so as not to endanger participants by exceeding his/her limits of training and experience.

D. PROGRAM PLANNING AND DEVELOPMENT

49. Offer participants breadth of experiences by providing several Outdoor Adventure activities and/or experiences in a given resident program unless said program is designed to be specialized.

50. Select, organize, conduct and evaluate programs that reflect the qualities of variety, creativity and challenge.

53. Realize that program planning requires precise policies and procedures in order to provide the participants with a safe and successful program.

54. Select, organize, conduct and evaluate Outdoor Adventure programs which are not found in the normal course of life and are characterized by containing elements of risk, stress, challenge, and adventure.

55. Select, organize, conduct and evaluate programs which reflect the specific psychological, physiological and sociological needs and interests of the participants.

56. Apply the use of as many human senses as possible to ensure integration of both awareness and learning.

57. Design programs that use indigenous (local) resources and respect and reflect the local culture and environment.

58. Allow participants to share in selected aspects of selecting, organizing, and conducting programs.

59. Encourage activities and experiences which develop skills and abilities which can be utilized throughout one's lifetime.

60. Assess each program activity and experience in terms of its individual, social and environmental impact.

61. Select, organize, conduct and evaluate resident and multi-day programs in the following environmental settings:
    a. Backcountry wilderness areas
    b. Mountain areas
    c. Flatwater areas

62. Select, organize, conduct and evaluate selected Outdoor Adventure programs in the following societal settings and agencies:
    a. Educational Institution based program

63. Select, organize, conduct and evaluate selected Outdoor Adventure activities and experiences with the following age groups:
    a. Adolescent
    b. College students
    c. Young adults

64. Select, organize, conduct and evaluate selected Outdoor Adventure programs in the following time periods:
    a. Short-term resident (2-4 days)
    b. Long-term resident (5 or more days)
    c. Single day programs

65. Select, organize, conduct and evaluate specific activities and experiences from the following Outdoor Adventure program categories:
    a. Group building activities and experiences
    b. Challenge/Adventure activities and experiences
    c. Outdoor Education and Environmental Education
    d. Nature Oriented Activities
    e. Environmental Interpretation
    f. Outing Sports and Outdoor Skills

66. Carry out staff pre-planning which focuses upon participants, program objectives, activities, equipment, program site, logistics, leadership and other important components of program development.

67. Plan, organize and present a thorough orientation for the participants prior to their actual program involvement.

68. Select and implement the logistics necessary to conduct a safe and successful program. Logistics are the program, participant, and leader supports necessary to carry out the program, such as travel itinerary and equipment supply strategies.

71. Maintain a journal or log to record personal insights and feelings as an aid to program organization and overall documentation.

72. Synthesize and utilize existing research and program ideas as a means of improving programs.

E. OUTDOOR SKILLS AND ABILITIES

73. Possess the necessary knowledge, skill, and behavior in the following Outdoor Skill categories:

a. Automobile/van logistics
b. Campcraft
c. Environmental Awareness and Interpretation
d. First Aid and Personal/Group Safety
e. Food selection and preparation
f. Hiking and Trail techniques
g. Navigation and selection of off-the-trail routes
h. On-the-trail activities and experiences
i. Personal and group equipment selection
j. Physical fitness
k. Physiology and nutrition
l. Program Behavior (Expedition Behavior)
m. Ropecraft
n. Search and Rescue techniques and procedures
o. Special mode of travel
p. Survival
q. Toolcraft
r. Water Safety procedures
s. Weather

74. Possess the necessary leadership and instructorship ability in the Outing Sports and/or Modes of Travel:

a. Backpacking
b. Bouldering
c. Canoeing, flat water
d. Cross Country Skiing (Nordic)
e. Hiking and Walking
f. Mountaineering
g. Orienteering
h. Rock Climbing and Rappelling
i. Survival

F. ENVIRONMENTAL AWARENESS, UNDERSTANDING AND ACTION

75. Foster within participants an awareness of Planet Earth which leads to appreciation, understanding and action toward maintaining a quality environment.

76. Demonstrates a basic knowledge and field application of the dynamics of natural and cultural environmental systems; including the fundamental concepts of Ecology.

81. Assist in the altering or changing of participant's attitudes, values and behaviors toward the environment by encouraging environmental awareness and reinforcing positive behavior.

82. Examine his/her own environmental prejudices and misinformation and make concerted effort to change if necessary.

84. Develop within participants a variety of environmentally compatible leisure skills and competencies for personal recreation pursuits.

85. Utilize in programs the activities and techniques of Environmental Education, which is an integrated educational process dealing with humankind's interrelationship with natural and cultural factors.

86. Know the environmental impact of specific Outdoor Adventure activities and experiences and incorporate this knowledge and understanding into the design and operation of programs; use no-trace, low impact methodologies.

87. Reduce consumption and pollution by encouraging the use of recycled, renewable and biodegradable products and materials.

88. When possible, and not at the expense of safety, purchase and/or make Outdoor Adventure equipment and supplies that effectively utilize renewable resources.

G. FIRST AID AND SAFETY

* 89. Analyze and apply with confidence and expertise the proper physical and emotional first aid and implement the necessary action plans to insure the health and safety of all members of the group.

90. Apply basic physiological and psychological understandings of the human body to insure not only participant safety, but their involvement in the activities and experiences as well.

* 91. Design and have available for immediate use a well equipped First Aid Kit appropriate to the activity, the participants, and the environmental conditions.

* 92. Develop and communicate, for each program, appropriate Safety Systems and related procedures which will become operational in the event of an accident and/or rescue situation.

93. Organize and carry-out a comprehensive search and rescue plan appropriate to the program, the participants and the environmental conditions.

94. Implement, should a survival situation occur, the basic techniques and methods of human survival in a given setting and/or situation.

95. Develop or obtain sound or accepted written safety procedures and policies which are accessible to staff and selected participants; such procedures and understandings shall be developed for each adventure activity and modified when necessary, to accommodate other program variables.

96. Earn and maintain current certification in the following First Aid and Safety areas:

a. Red Cross Standard First Aid & Personal Safety
b. Red Cross Advanced First Aid & Emergency Care
c. Red Cross Cardiopulmonary Resuscitation (C.P.R.)
d. Heimlick Maneuver or Red Cross Abdominal Thrust
e. Red Cross Advanced Life Saving, or YMCA Lifesaving, or Boy Scout Life Guard or their equivalent

98. Know and instruct the most sanitary and ecologically sound methods of personal and group sanitation.

99. Understand the nature of and implications and uses of personal health records, participant contracts and written permission statements.

100. Convey the rationale for and the implementation of a non-drug-use policy and the resulting actions in the event of a violation.

101. Understand and convey the preventive aspects of personal and group health and safety.

102. Improvise equipment, supplies and materials for first aid, safety, and rescue when normal support, equipment and materials are not available.

104. Keep abreast of current practices and new information in health and safety by attending training sessions, refresher courses, reading professional publications, and continuing in-service practice.

105. Collect, record and communicate the necessary accident, health and safety report information in the event of an accident or injury.

106. Implement a risk management plan that coordinates all personnel, program activities, and logistical operations in order to prevent and/or lessen the severity of accidents and injuries.

H. ADMINISTRATION AND SUPERVISION

107. Accept the authority and responsibility of assisting less experienced and less knowledgeable staff in selecting, organizing and conducting programs.

108. Accept, or challenge, when appropriate, the policies, plans and programs delegated by top management and be able to implement them with the program staff and other available resources.

109. Function as a supervisor by accepting responsibility for teaching, encouraging and enabling all individuals involved in the program to make the best use of their abilities and available resources.

110. Understand the legal aspects of Outdoor Adventure programs and services, particularly the dimensions of legal liability and insurance.

I. FACILITIES, EQUIPMENT AND SUPPLIES

114. Research, select and purchase the most practical and safe equipment, supplies, and materials used in the outdoor program.

115. Discriminate between environmentally and socially compatible facilities, equipment and supplies, and those that are not.

116. Assemble, operate and provide adequate maintenance of all equipment and supplies in accordance with manufacturer's and/or professionally recommended standards.

119. Secure the necessary licenses, permits, and written permissions from landowners or land managers on whose property the program is to be conducted.

120. Provide adequate maintenance of all equipment facilities and supplies used in specific programs.

122. Assemble, operate and maintain program equipment and supplies in accordance with manufacturer's and/or professionally recommended standards.

123. Know the needs of special populations and the modified facilities and/or equipment required to meet these needs.

124. Possess a current motor vehicle operator's license and be able to operate and basically maintain a motor vehicle.

125. Execute a safety check of all facilities, equipment and supplies prior to use in programs.

J. PROFESSIONALISM

126. Develop immediate and long range personal and professional goals and objectives consistent with the leader's interests, needs and expertise.

127. Convey the philosophy, content and methods of Outdoor Adventure to program participants, parents/guardians, agency personnel, and the general public.

130. Keep abreast of changes in the field by reading, observing and discussing as well as attending pre-service and in-service training programs.

133. Maintain high standards of quality in written materials produced in association with one's program and agency.

134. Understand the profession by becoming familiar with the range of professional resources including people, places, and print/non-print materials.

137. Understand Federal, State and Local legislation, regulations and policies affecting the Outdoor Adventure field.

138. Contribute to the advancement of the profession by willingly communicating and assisting others who are in, or entering the field, information on one's professional experiences and understandings.

K. EVALUATION AND ASSESSMENT

139. Design, conduct and interpret final or product evaluation focusing upon the overall success of the program in line with the originally stated objectives in order to identify what went well and what needs improvement.

140. Design, conduct and interpret on-going or process evaluation during the program as a means to improve the program and more clearly meet the needs and expectations of the participants and the sponsoring agency.

141. Perform continual staff evaluation which focuses upon personal and peer leadership effectiveness and performance.

APPENDIX B

PHASE I QUESTIONNAIRE AND REPLY CARD

PHASE I QUESTIONNAIRE

OUTDOOR ADVENTURE LEADERSHIP AND PROGRAMMING IN PHYSICAL EDUCATION

Please place your answers to the following questions on the attached postcard.

1. Name of your institution

2. Does your physical education major curriculum include courses in outdoor adventure leadership and programming?

3a. How many credit hours of Theory/Methods courses and Activity courses do you offer in outdoor adventure leadership and programming?

3b. If you do not use semester hours at your institution, what do you use?

4. Name and mailing address of person to contact for further information about the outdoor adventure leadership and programming curriculum.

5. If you know of institutions in your state which offer outdoor adventure leadership and programming <u>in the physical education major program,</u> please list them in the spaces provided. (If you know of none in your state, please list <u>any</u> others you may know.)

1.

2.

3a.

3b.

4.

5.

PLACE REPLY POSTCARD HERE

After completing, detach and mail card.

THANK YOU FOR YOUR TIME

PHASE I REPLY POSTCARD

BEFORE COMPLETING CARD, READ ITEMS ON ATTACHED QUESTION SHEET.

1. Institution_____

2. [ ] NO [ ] YES [ ] We don't have a physical education major.

3a. [ ] hours THEORY/METHODS courses [ ] hours ACTIVITY courses

3b. Other than semester hours:_____

4. Name_____
Address_____
_____Phone_____

5. Other institutions:_____
_____
_____

APPENDIX C

PHASE II OUTDOOR ADVENTURE LEADERSHIP AND PROGRAMMING SURVEY

Outdoor Adventure Leadership & Programming Survey

Outdoor adventure activities have strongly been supported by physical educators as valuable additions to the elementary and secondary school curriculum and are gradually becoming part of physical education programs across the United States. As the use of outdoor adventure activities grows, so does the concern for the quality and safety of the leadership of those programs. In turn, the professional preparation and qualifications of those who lead outdoor programs have become topics of major interest.

This questionnaire will explore the outdoor adventure leadership and programming component in your physical education baccalaureate degree program. (While it is recognized that preparation for outdoor adventure leadership and programming is frequently offered in other academic majors, such as Recreation and Leisure Studies, this exploration is restricted to opportunities available to physical education majors.) The outdoor adventure component may include elective courses as well as required courses, and it may even include courses offered by other departments which are directly related to achieving competency in outdoor adventure leadership and programming (for example, a course in group dynamics offered by a sociology department). The main focus of the courses, however, should be in preparing the physical educator to utilize outdoor adventure experiences in school physical education programs.

Part A of the questionnaire requests some information about your institution, physical education program, and outdoor adventure component. Part B is a detailed list of outdoor adventure leadership and programming competencies identified by Larry Buell in a 1981 study as being essential or important for the entry-level outdoor adventure leader. In Part B, you are being asked to indicate which of these competencies are and are not developed in your curriculum. A scale is provided for you to indicate the degree to which each competency is developed by your curriculum.

2

DEFINITIONS

When answering the questionnaire, please keep in mind the following definitions:

outdoor adventure activities: Those activities which take place in a natural land or water environment, involving non-mechanized and non-animal means of travel, and which may include elements of real or perceived risk. Such activities may include, but are not limited to, hiking, backpacking, bouldering, rock climbing, ropes courses, mountaineering, orienteering, cross-country skiing, primitive camping, canoeing, rafting, kayaking, caving, snowshoeing, and wilderness survival. Excluded from this definition are activities such as car camping, motor boating, horseback riding, dog sledding, and aerial activities such as hang gliding and parachuting.

outdoor adventure leadership: The act of assuming responsibility for the learning, welfare, and safety of participants involved in outdoor adventure activities.

outdoor adventure programming: The act of planning, implementing, and evaluating a sequence of outdoor adventure activities.

Reference: Buell, L.H. (1981). The identification of outdoor adventure leadership competencies for entry-level and experienced-level personnel. (Doctoral dissertation, University of Massachussetts). (Also published as Research series: Outdoor adventure leadership competencies for entry-level and experienced-level personnel. Greenfield, MA: Environmental Awareness.)

OUTDOOR ADVENTURE LEADERSHIP AND PROGRAMMING SURVEY - PART A

PLEASE PRINT CLEARLY

Name of institution: _____

Person completing form:
Name: (Dr.) (Mr.) (Ms.) _____

Position/Title: _____

Phone #: (_____)_____

****

ABOUT THE INSTITUTION...

Undergraduate enrollment ¦_____¦

Type of institution (check one): ¦___¦ state-supported

¦___¦ private

****

ABOUT THE PHYSICAL EDUCATION BACCALAUREATE DEGREE PROGRAM...

Title of unit
administering program: _____

Mailing Address of Unit: _____
(Building/Street/P.O. Box)
_____
(City, State, Zip)

Undergraduate enrollment in p.e. major program: ¦_____¦

Number of faculty teaching in program full-time: ¦_____¦

part-time: ¦_____¦

****

ABOUT THE OUTDOOR ADVENTURE LEADERSHIP AND PROGRAMMING COMPONENT...

Academic year component first introduced: 19¦___¦ - 19¦___¦

Program structure -- Outdoor adventure courses are currently offered as (check appropriate box):

¦___¦ minor ¦___¦ concentration in p.e. major

¦___¦ option in p.e. major ¦___¦ specialty area in p.e. major

¦___¦ track in p.e. major ¦___¦ individual courses

¦___¦ other (please specify)_____

4

ABOUT THE OUTDOOR ADVENTURE COMPONENT (CONTINUED)...

What proportion (%) of the total number of undergraduate physical education majors have been enrolled in outdoor adventure classes during the 1986-87 academic year? _____%

How has this proportion (% physical education majors enrolled in outdoor adventure classes) changed over the last several years? (check one)

- [ ] increased
- [ ] decreased
- [ ] no change

Faculty teaching this component:

name	faculty rank	(circle) full- or part-time	degrees	list area(s) of specialization in outdoor adventure
_____	_____	FT PT	_____	_____
_____	_____	FT PT	_____	_____
_____	_____	FT PT	_____	_____
_____	_____	FT PT	_____	_____

Outdoor adventure leadership and programming courses currently offered:

course prefix and #	name of course	credit hours: (see #1 below)	(circle) required or elective	total # of contact hours	(circle) course format (see #2 below)
_____	_____	_____	R E	_____	A T/M
_____	_____	_____	R E	_____	A T/M
_____	_____	_____	R E	_____	A T/M
_____	_____	_____	R E	_____	A T/M
_____	_____	_____	R E	_____	A T/M
_____	_____	_____	R E	_____	A T/M

1. Credit hours are: (check one) [ ] semester hours [ ] quarter hours [ ] other (specify)_____

2. A = course is primarily activity-oriented format
   T/M = course is primarily theory and/or methods format

****
** For any course listed above whose relationship to outdoor **
** adventure leadership and programming may not be apparent **
** from the course name, please give a one-line description **
** (There is additional space in the back of this booklet). **
****

ABOUT THE OUTDOOR ADVENTURE COMPONENT (CONTINUED)...

Types of areas or sites used for the outdoor adventure course experiences and approximate one-way travel distance of those from campus:

Area/site used (check all that apply)	One-way travel distance (miles)
☐ mountains	_____
☐ lake	_____
☐ river	_____
☐ ocean	_____
☐ desert	_____
☐ forest	_____
☐ ropes course	_____
☐ field campus, outdoor education center, or camp	_____
☐ gymnasium	
☐ classroom	

Briefly describe any anticipated future developments in the outdoor adventure leadership and programming component.

OUTDOOR ADVENTURE LEADERSHIP AND PROGRAMMING SURVEY - PART B

DIRECTIONS

1. For each outdoor adventure leadership competency statement, indicate whether or not the competency is developed in your curriculum:

   a. If the competency is not addressed in any way in planned coursework experiences, indicate by placing an X in the box labeled NOT AT ALL.

   b. If the competency is addressed in your curriculum, circle a number on the scale of 1 (minimally developed) to 5 (highly developed) for the degree to which the competency is developed by your curriculum. The end points of this scale are defined as follows:

   Minimally developed (1): The competency is introduced briefly in no more than one course.

   Highly developed (5): The competency receives a considerable amount of emphasis in coursework experiences and will be a major topic in one or more courses.

   Even if you do not agree with some of the competencies, do not rate the statements based on your idea of the relative importance of those competencies. Please indicate only the degree to which your curriculum provides experiences through which students may achieve those competencies.

2. Following the competencies in each of the categories are several questions regarding that group of statements. Please be as specific as possible in your responses.

I. PHILOSOPHICAL, HISTORICAL, & THEORETICAL FOUNDATIONS

A. The student who has completed the component in outdoor adventure leadership and programming will:	Degree of Development					
	NOT AT ALL	minimally developed			highly developed	
1. Demonstrate an understanding of the philosophical foundations of outdoor adventure activities and experiences	___	1	2	3	4	5
2. Develop and be able to articulate a personal and professional philosophy of outdoor adventure	___	1	2	3	4	5
3. Understand and communicate the rationale for using the outdoors as a medium for education, recreation, and human services	___	1	2	3	4	5
4. Know the strengths and limitations of outdoor adventure	___	1	2	3	4	5
5. Understand the philosophy and practices of experiential education	___	1	2	3	4	5
6. Recognize outdoor adventure education as a process of encountering and solving, in an out-of-doors or simulated out-of-doors setting, exciting and daring physiological, psychological, and sociological challenges which lead to personal and group awareness and growth	___	1	2	3	4	5

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I. PHILOSOPHICAL, HISTORICAL, & THEORETICAL FOUNDATIONS

B. What percentage of the PHILOSOPHICAL, HISTORICAL, & THEORETICAL FOUNDATIONS competencies are developed in each of the following:

1. outdoor adventure courses _____%
2. other physical education courses _____%
3. courses other than physical education _____%

total = 100 %

C. Which of the following course experiences are used in the development of these competencies? (Check all that apply.)

_____ 1. lecture
_____ 2. discussion/seminar
_____ 3. reading or written assignments
_____ 4. skill demonstration
_____ 5. hands-on skill practice
_____ 6. day trips
_____ 7. 3-7 day trips
_____ 8. 1-3 week trips
_____ 9. more than 3 week trips
_____ 10. supervised student leadership experience, practicum, or internship
_____ 11. other (please specify) _____

D. If you marked NOT AT ALL, 1, or 2 for the development level of any competency, answer the following:

Is it possible, in your curriculum, to increase the development of each competency you rated NOT AT ALL, 1, or 2? Please respond below, indicating the competency number for each item you discuss.

1. [___] YES ---> What suggestions do you have for coursework or experiences to further develop this competency (these competencies)?

competency # suggestions

2. [___] NO ---> What obstacles do you see to further development of this competency (these competencies)?

competency # obstacles

II. OUTDOOR ADVENTURE LEADERSHIP & INSTRUCTORSHIP

A. The student who has completed the component in outdoor adventure leadership and programming will:

	NOT AT ALL	Degree of Development: minimally developed			highly developed	
7. Recognize that outdoor adventure leadership is a process which assists an individual and/or group to identify goals and objectives and achieve those ends through adventure activities and experiences	___	1	2	3	4	5
8. Acknowledge that leadership is tied to the leader's personality characteristics, follower's expectations, program circumstances, and the needs and goals of the group	___	1	2	3	4	5
9. Possess the judgment and maturity necessary to limit the activities and the participant's involvement to areas of the leader's actual capabilities or assign areas of weakness to someone with the required abilities	___	1	2	3	4	5
10. Anticipate problems and act to prevent situations that may be harmful to the participants, the program, and/or the sponsoring institution or agency	___	1	2	3	4	5
11. Provide a standard of care necessary to supervise and lead the program activities, as well as employ proper safety equipment and procedures	___	1	2	3	4	5
12. Select, organize, conduct, and evaluate outdoor adventure activities and experiences which:						
a. allow participants to acquire and use environmentally sound skills and techniques	___	1	2	3	4	5
b. enhance individual growth and development of participants	___	1	2	3	4	5
c. encourage group cooperation and interdependence	___	1	2	3	4	5
d. develop within individuals and groups awareness of, understanding of, and positive action toward the natural and cultural environments	___	1	2	3	4	5
13. Convey a dynamic "sense of wonder" and "joy" regarding the world and the people with whom one shares experiences	___	1	2	3	4	5
14. Employ the appropriate style of leadership (autocratic, democratic, or laissez-faire) for the individual(s), group, and situation	___	1	2	3	4	5
15. Utilize the principle of followership, which allows group members to function in a democratic role, retaining the capacity to suggest, criticize, and evaluate	___	1	2	3	4	5
16. Lead participants who possess different frames of reference and diverse ethnic, racial, geographic, social, and religious backgrounds	___	1	2	3	4	5
17. Assign specific leadership responsibilities to group members	___	1	2	3	4	5
18. Employ approaches and strategies, such as discovery approach, simulation situations, socratic-questioning method, and problem-solving to maximize personal growth and group cooperation	___	1	2	3	4	5
19. Recognize the potential psychological, sociological, and physiological impact of high-adventure activities and experiences upon participant, staff, and agency	___	1	2	3	4	5
20. Master a specific battery of technical skills and abilities associated with outdoor adventure activities and the related modes of travel necessary to carry out each activity	___	1	2	3	4	5

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II. OUTDOOR ADVENTURE LEADERSHIP & INSTRUCTORSHIP

A. The student who has completed the component in outdoor adventure leadership and programming will:

	NOT AT ALL	Degree of Development: minimally developed			highly developed	
21. Allow participants to engage in activities and experiences that include physical and/or psychological risk and stress only after they have gained sufficient entry-level understanding of the activity or experience	___	1	2	3	4	5
22. Know that modeling is a significant aspect of leadership and understand its effect upon participants	___	1	2	3	4	5
23. Manage psychological and physiological stress in participants	___	1	2	3	4	5
24. Display personal appearance and behavior appropriate to the program circumstances, program goals, service population, and program sponsors	___	1	2	3	4	5
25. Possess the necessary physical fitness to effectively handle the safety and activity aspects of the program	___	1	2	3	4	5
26. Follow a step-by-step progression when introducing and leading adventure activities and experiences to assure that participants develop skills in a sequential pattern and in a controlled environment which will foster more success than failure	___	1	2	3	4	5

B. What percentage of the OUTDOOR ADVENTURE LEADERSHIP & INSTRUCTORSHIP competencies are developed in each of the following:

1. outdoor adventure courses _____%
2. other physical education courses _____%
3. courses other than physical education _____%

total = 100 %

C. Which of the following course experiences are used in the development of these competencies? (Check all that apply.)

_____ 1. lecture
_____ 2. discussion/seminar
_____ 3. reading or written assignments
_____ 4. skill demonstration
_____ 5. hands-on skill practice
_____ 6. day trips
_____ 7. 3-7 day trips
_____ 8. 1-3 week trips
_____ 9. more than 3 week trips
_____ 10. supervised student leadership experience, practicum, or internship
_____ 11. other (please specify) _____

II. OUTDOOR ADVENTURE LEADERSHIP & INSTRUCTORSHIP

D. If you marked NOT AT ALL, 1, or 2 for the development level of any competency, answer the following:

Is it possible, in your curriculum, to increase the development of each competency you rated NOT AT ALL, 1, or 2? Please respond below, indicating the competency number for each item you discuss.

1. [ ] YES ---> What suggestions do you have for coursework or experiences to further develop this competency (these competencies)?

competency # suggestions

2. [ ] NO ---> What obstacles do you see to further development of this competency (these competencies)?

competency # obstacles

III. COUNSELING, HUMAN SERVICE, & HUMAN DEVELOPMENT

A. The student who has completed the component in outdoor adventure leadership and programming will:

		Degree of Development: NOT AT ALL	minimally developed			highly developed
27.	Implement selected counseling and personal development strategies which are effective and appropriate in outdoor adventure programs	___	1	2	3	4	5
28.	Apply knowledge about normal and special human growth and development patterns, including psychological, sociological and physiological characteristics of the participants, and be able to modify or adjust leadership methodology and/or program activities accordingly	___	1	2	3	4	5
29.	Understand the cognitive, affective, and psychomotor domains of learning and be able to make use of this knowledge in conducting activities and experiences	___	1	2	3	4	5
30.	Develop a supportive and helping relationship with participants by displaying such qualities as genuineness, acceptance, empathy, trust, and clarity	___	1	2	3	4	5
31.	Practice participant-centered counseling	___	1	2	3	4	5
32.	Practice group counseling or guidance as a vehicle for group cooperation and individual development	___	1	2	3	4	5
33.	Apply principles of small group dynamics	___	1	2	3	4	5
34.	Serve as a catalyst for positive change in the values, attitudes, and actions of both individuals and groups	___	1	2	3	4	5
35.	Work with individuals by listening, observing, questioning, and acting	___	1	2	3	4	5
36.	Intervene in the event of psychological crisis on the part of the program and/or participant	___	1	2	3	4	5
37.	Respect the differences between counseling and therapy; recognize one's personal qualifications so as not to exceed one's limits of training and experience	___	1	2	3	4	5

B. What percentage of the COUNSELING, HUMAN SERVICE, & HUMAN DEVELOPMENT competencies are developed in each of the following:

1. outdoor adventure courses _____%
2. other physical education courses _____%
3. courses other than physical education _____%

total = 100 %

C. Which of the following course experiences are used in the development of these competencies? (Check all that apply.)

_____ 1. lecture
_____ 2. discussion/seminar
_____ 3. reading or written assignments
_____ 4. skill demonstration
_____ 5. hands-on skill practice
_____ 6. day trips
_____ 7. 3-7 day trips
_____ 8. 1-3 week trips
_____ 9. more than 3 week trips
_____ 10. supervised student leadership experience, practicum, or internship
_____ 11. other (please specify) _____

III. COUNSELING, HUMAN SERVICE, & HUMAN DEVELOPMENT

D. If you marked NOT AT ALL, 1, or 2 for the development level of any competency, answer the following:

Is it possible, in your curriculum, to increase the development of each competency you rated NOT AT ALL, 1, or 2? Please respond below, indicating the competency number for each item you discuss.

1. ¦___¦ YES ---> What suggestions do you have for coursework or experiences to further develop this competency (these competencies)?

competency # suggestions

2. ¦___¦ NO ---> What obstacles do you see to further development of this competency (these competencies)?

competency # obstacles

IV. PROGRAM PLANNING & DEVELOPMENT

A. The student who has completed the component in outdoor adventure leadership and programming will:

		Degree of Development					
		NOT AT ALL	minimally developed			highly developed	
38.	Offer participants breadth of experiences unless the program is designed to be specialized	¦___¦	1	2	3	4	5
39.	Select, organize, conduct, and evaluate outdoor adventure activities and experiences which:						
	a. are not found in the normal course of life, provide variety and creativity, and are characterized by risk, stress, challenge, and adventure	¦___¦	1	2	3	4	5
	b. meet the specific psychological, physiological, and sociological needs and interests of the participants	¦___¦	1	2	3	4	5
40.	Realize that program planning requires precise policies and procedures in order to provide the participants with a safe and successful program	¦___¦	1	2	3	4	5
41.	Plan for participant use of as many human senses as possible to insure integration of both awareness and learning	¦___¦	1	2	3	4	5

IV. PROGRAM PLANNING & DEVELOPMENT

A. The student who has completed the component in outdoor adventure leadership and programming will:

		Degree of Development				
		NOT AT ALL	minimally developed			highly developed
42.	Design programs that use local resources and respect and reflect the local culture and environment		1	2	3	4	5
43.	Allow participants to share in some aspects of selecting, organizing, and conducting programs		1	2	3	4	5
44.	Encourage activities and experiences to develop skills and abilities which can be utilized throughout one's lifetime		1	2	3	4	5
45.	Assess each program activity and experience in terms of its individual, social, and environmental impact		1	2	3	4	5
46.	Select, organize, conduct, and evaluate resident and multiday programs in the following environmental settings:						
	a. Backcountry wilderness areas		1	2	3	4	5
	b. Mountain areas		1	2	3	4	5
	c. Flatwater areas		1	2	3	4	5
47.	Select, organize, conduct, and evaluate selected outdoor adventure programs based in educational institutions		1	2	3	4	5
48.	Select, organize, conduct, and evaluate selected outdoor adventure activities and experiences with the following age groups:						
	a. Adolescent		1	2	3	4	5
	b. College students		1	2	3	4	5
	c. Young adults		1	2	3	4	5
49.	Select, organize, conduct, and evaluate selected outdoor adventure programs in the following time periods:						
	a. Single-day programs		1	2	3	4	5
	b. Short-term resident (2-4 days)		1	2	3	4	5
	c. Long-term resident (5 or more days)		1	2	3	4	5
50.	Select, organize, conduct, and evaluate specific activities and experiences from the following outdoor adventure program categories:						
	a. Group-building activities and experiences		1	2	3	4	5
	b. Challenge/adventure activities and experiences		1	2	3	4	5
	c. Outdoor education and environmental education		1	2	3	4	5
	d. Nature-oriented activities		1	2	3	4	5
	e. Environmental interpretation		1	2	3	4	5
	f. Outing sports and outdoor skills		1	2	3	4	5
51.	Carry out staff preplanning which focuses upon participants, program objectives, activities, equipment, program site, logistics, leadership, and other important components of program development		1	2	3	4	5
52.	Plan, organize, and present a thorough orientation for the participants prior to their actual program involvement		1	2	3	4	5
53.	Select and implement the logistics necessary to conduct a safe and successful program, such as travel itinerary and equipment supply strategies		1	2	3	4	5
54.	Maintain a journal or log to record personal insights and feelings as an aid to program organization and overall documentation		1	2	3	4	5
55.	Synthesize and utilize existing research and program ideas as a means of improving programs		1	2	3	4	5

IV. PROGRAM PLANNING & DEVELOPMENT

B. What percentage of the PROGRAM PLANNING & DEVELOPMENT competencies are developed in each of the following:

1. outdoor adventure courses _____%
2. other physical education courses _____%
3. courses other than physical education _____%

total = 100 %

C. Which of the following course experiences are used in the development of these competencies? (Check all that apply.)

_____ 1. lecture
_____ 2. discussion/seminar
_____ 3. reading or written assignments
_____ 4. skill demonstration
_____ 5. hands-on skill practice
_____ 6. day trips
_____ 7. 3-7 day trips
_____ 8. 1-3 week trips
_____ 9. more than 3 week trips
_____ 10. supervised student leadership experience, practicum, or internship
_____ 11. other (please specify) _____

D. If you marked NOT AT ALL, 1, or 2 for the development level of any competency, answer the following:

Is it possible, in your curriculum, to increase the development of each competency you rated NOT AT ALL, 1, or 2? Please respond below, indicating the competency number for each item you discuss.

1. [ ] YES ---> What suggestions do you have for coursework or experiences to further develop this competency (these competencies)?

competency # suggestions

2. [ ] NO ---> What obstacles do you see to further development of this competency (these competencies)?

competency # obstacles

V. OUTDOOR SKILLS & ABILITIES

A. The student who has completed the component in outdoor adventure leadership and programming will:

		Degree of Development				
		NOT AT ALL	minimally developed			highly developed
56.	Possess the necessary knowledge, skill, and behavior in the following outdoor skill categories:					
a.	Automobile/van logistics	☐	1	2	3	4	5
b.	Campcraft	☐	1	2	3	4	5
c.	Environmental awareness and interpretation	☐	1	2	3	4	5
d.	First aid and personal/group safety	☐	1	2	3	4	5
e.	Food selection and preparation	☐	1	2	3	4	5
f.	Hiking and trail techniques	☐	1	2	3	4	5
g.	Navigation and selection of off-the-trail routes	☐	1	2	3	4	5
h.	On-the-trail activities and experiences	☐	1	2	3	4	5
i.	Personal and group equipment selection	☐	1	2	3	4	5
j.	Physical fitness	☐	1	2	3	4	5
k.	Physiology and nutrition	☐	1	2	3	4	5
l.	Program behavior (expedition behavior)	☐	1	2	3	4	5
m.	Ropecraft	☐	1	2	3	4	5
n.	Search and rescue techniques and procedures	☐	1	2	3	4	5
o.	Special mode of travel	☐	1	2	3	4	5
p.	Survival	☐	1	2	3	4	5
q.	Toolcraft	☐	1	2	3	4	5
r.	Water safety procedures	☐	1	2	3	4	5
s.	Weather	☐	1	2	3	4	5
57.	Possess the necessary leadership and instructorship ability in the following outing sports and/or modes of travel:						
a.	Backpacking	☐	1	2	3	4	5
b.	Bouldering	☐	1	2	3	4	5
c.	Canoeing, flat water	☐	1	2	3	4	5
d.	Cross country skiing (nordic)	☐	1	2	3	4	5
e.	Hiking and walking	☐	1	2	3	4	5
f.	Mountaineering	☐	1	2	3	4	5
g.	Orienteering	☐	1	2	3	4	5
h.	Rock climbing and rappelling	☐	1	2	3	4	5
i.	Survival	☐	1	2	3	4	5

V. OUTDOOR SKILLS & ABILITIES

B. What percentage of the OUTDOOR SKILLS & ABILITIES competencies are developed in each of the following:

1. outdoor adventure courses _____%
2. other physical education courses _____%
3. courses other than physical education _____%

total = 100 %

C. Which of the following course experiences are used in the development of these competencies? (Check all that apply.)

_____ 1. lecture
_____ 2. discussion/seminar
_____ 3. reading or written assignments
_____ 4. skill demonstration
_____ 5. hands-on skill practice
_____ 6. day trips
_____ 7. 3-7 day trips
_____ 8. 1-3 week trips
_____ 9. more than 3 week trips
_____ 10. supervised student leadership experience, practicum, or internship
_____ 11. other (please specify) _____

D. If you marked NOT AT ALL, 1, or 2 for the development level of any competency, answer the following:

Is it possible, in your curriculum, to increase the development of each competency you rated NOT AT ALL, 1, or 2? Please respond below, indicating the competency number for each item you discuss.

1. [ ] YES ---> What suggestions do you have for coursework or experiences to further develop this competency (these competencies)?

competency # suggestions

2. [ ] NO ---> What obstacles do you see to further development of this competency (these competencies)?

competency # obstacles

VI. ENVIRONMENTAL AWARENESS, UNDERSTANDING, & ACTION

A. The student who has completed the component in outdoor adventure leadership and programming will:

	NOT AT ALL	Degree of Development: minimally developed			highly developed	
58. Foster within participants an awareness of Planet Earth which leads to appreciation, understanding, and action toward maintaining a quality environment	___	1	2	3	4	5
59. Demonstrate a basic knowledge and field application of the dynamics of natural and cultural environmental systems, including the fundamental concepts of ecology	___	1	2	3	4	5
60. Assist in the altering or changing of participants' attitudes, values, and behaviors toward the environment by encouraging environmental awareness and reinforcing positive behavior	___	1	2	3	4	5
61. Examine his/her own environmental prejudices and misinformation, and make a concerted effort to change if necessary	___	1	2	3	4	5
62. Develop within participants a variety of environmentally compatible leisure skills and competencies for personal recreation pursuits	___	1	2	3	4	5
63. Utilize environmental education activities and techniques	___	1	2	3	4	5
64. Know the environmental impact of specific outdoor adventure activities and experiences and incorporate this knowledge and understanding into the design and operation of programs; use no-trace, low-impact methodologies	___	1	2	3	4	5
65. Encourage the use of recycled, renewable, and biodegradable products and materials	___	1	2	3	4	5
66. When possible, and not at the expense of safety, purchase and/or make outdoor adventure equipment and supplies that effectively utilize renewable resources	___	1	2	3	4	5

B. What percentage of the ENVIRONMENTAL AWARENESS, UNDERSTANDING, & ACTION competencies are developed in each of the following:

1. outdoor adventure courses _____%
2. other physical education courses _____%
3. courses other than physical education _____%

total = 100 %

C. Which of the following course experiences are used in the development of these competencies? (Check all that apply.)

_____ 1. lecture
_____ 2. discussion/seminar
_____ 3. reading or written assignments
_____ 4. skill demonstration
_____ 5. hands-on skill practice
_____ 6. day trips
_____ 7. 3-7 day trips
_____ 8. 1-3 week trips
_____ 9. more than 3 week trips
_____ 10. supervised student leadership experience, practicum, or internship
_____ 11. other (please specify) _____

VI. ENVIRONMENTAL AWARENESS, UNDERSTANDING, & ACTION

D. If you marked NOT AT ALL, 1, or 2 for the development level of any competency, answer the following:

Is it possible, in your curriculum, to increase the development of each competency you rated NOT AT ALL, 1, or 2? Please respond below, indicating the competency number for each item you discuss.

1. [ ] YES ---> What suggestions do you have for coursework or experiences to further develop this competency (these competencies)?

competency # suggestions

2. [ ] NO ---> What obstacles do you see to further development of this competency (these competencies)?

competency # obstacles

VII. FIRST AID & SAFETY

A. The student who has completed the component in outdoor adventure leadership and programming will:

	NOT AT ALL	Degree of Development: minimally developed			highly developed	
67. Apply with confidence and expertise the proper physical and emotional first aid and implement the necessary action plans to insure the health and safety of all members of the group	[ ]	1	2	3	4	5
68. Apply basic physiological and psychological understandings of the human body to insure participant safety and involvement in the activities	[ ]	1	2	3	4	5
69. Design and have available for immediate use a well-equipped first aid kit appropriate to the activity, the participants, and the environmental conditions	[ ]	1	2	3	4	5

VII. FIRST AID & SAFETY

A. The student who has completed the component in outdoor adventure leadership and programming will:

		Degree of Development				
		NOT AT ALL	minimally developed			highly developed
70.	Develop and communicate, for each program, appropriate safety systems and related procedures which will become operational in the event of an accident and/or rescue situation	___	1	2	3	4	5
71.	Organize and carry-out a comprehensive search-and-rescue plan appropriate to the program, the participants, and the environmental conditions	___	1	2	3	4	5
72.	If necessary, implement the basic techniques and methods of human survival for a given setting and/or situation	___	1	2	3	4	5
73.	Develop or obtain sound or accepted written safety procedures and policies which are accessible to staff and selected participants; such procedures and understandings shall be developed for each adventure activity and modified when necessary, to accomodate other program variables	___	1	2	3	4	5
74.	Earn and maintain current certification in the following first aid and safety areas:						
	a. Red Cross Standard First Aid & Personal Safety	___	1	2	3	4	5
	b. Red Cross Advanced First Aid & Emergency Care	___	1	2	3	4	5
	c. Red Cross Cardiopulmonary Resuscitation (C.P.R.)	___	1	2	3	4	5
	d. Heimlick Maneuver or Red Cross Abdominal Thrust	___	1	2	3	4	5
	e. Red Cross Advanced Life Saving, YMCA Lifesaving, Boy Scout Life Guard, or their equivalent	___	1	2	3	4	5
75.	Know and teach the most sanitary and ecologically sound methods of personal and group sanitation	___	1	2	3	4	5
76.	Understand the nature, implications, and uses of personal health records, participant contracts, and written permission statements	___	1	2	3	4	5
77.	Convey the rationale for, and the implementation of, a no-drug-use policy and consequences of a violation	___	1	2	3	4	5
78.	Understand and convey the preventive aspects of personal and group health and safety	___	1	2	3	4	5
79.	Improvise equipment, supplies, and materials for first aid, safety, and rescue when normal resources are not available	___	1	2	3	4	5
80.	Keep abreast of current practices and new information in health and safety by attending training sessions and refresher courses, reading professional publications, and continuing inservice practice	___	1	2	3	4	5
81.	Collect, record, and communicate the necessary accident, health, and safety report information in the event of an accident or injury	___	1	2	3	4	5
82.	Implement a risk management plan that coordinates all personnel, program activities, and logistical operations in order to prevent and/or decrease the severity of accidents and injuries	___	1	2	3	4	5

VII. FIRST AID & SAFETY

B. What percentage of the FIRST AID & SAFETY competencies are developed in each of the following:

1. outdoor adventure courses _____%
2. other physical education courses _____%
3. courses other than physical education _____%

total = 100 %

C. Which of the following course experiences are used in the development of these competencies? (Check all that apply.)

_____ 1. lecture
_____ 2. discussion/seminar
_____ 3. reading or written assignments
_____ 4. skill demonstration
_____ 5. hands-on skill practice
_____ 6. day trips
_____ 7. 3-7 day trips
_____ 8. 1-3 week trips
_____ 9. more than 3 week trips
_____ 10. supervised student leadership experience, practicum, or internship
_____ 11. other (please specify) _____

D. If you marked NOT AT ALL, 1, or 2 for the development level of any competency, answer the following:

Is it possible, in your curriculum, to increase the development of each competency you rated NOT AT ALL, 1, or 2? Please respond below, indicating the competency number for each item you discuss.

1. ¦___¦ YES ---> What suggestions do you have for coursework or experiences to further develop this competency (these competencies)?

competency # suggestions

2. ¦___¦ NO ---> What obstacles do you see to further development of this competency (these competencies)?

competency # obstacles

VIII. ADMINISTRATION & SUPERVISION

A. The student who has completed the component in outdoor adventure leadership and programming will:

		Degree of Development				
		NOT AT ALL	minimally developed			highly developed
83.	Accept the authority and responsibility of assisting less experienced and less knowledgeable staff in selecting, organizing, and conducting programs	___	1	2	3	4	5
84.	Accept, or challenge when appropriate, and be able to implement with program staff the policies, plans, and programs delegated by top management	___	1	2	3	4	5
85.	Function as a supervisor by accepting responsibility for teaching, encouraging, and enabling all individuals involved in the program to make the best use of their abilities and available resources	___	1	2	3	4	5
86.	Understand the legal aspects of outdoor adventure programs and services, particularly the dimensions of legal liability and insurance	___	1	2	3	4	5

B. What percentage of the ADMINISTRATION & SUPERVISION competencies are developed in each of the following:

1. outdoor adventure courses _____%
2. other physical education courses _____%
3. courses other than physical education _____%

total = 100 %

C. Which of the following course experiences are used in the development of these competencies? (Check all that apply.)

_____ 1. lecture
_____ 2. discussion/seminar
_____ 3. reading or written assignments
_____ 4. skill demonstration
_____ 5. hands-on skill practice
_____ 6. day trips
_____ 7. 3-7 day trips
_____ 8. 1-3 week trips
_____ 9. more than 3 week trips
_____ 10. supervised student leadership experience, practicum, or internship
_____ 11. other (please specify) _____

VIII. ADMINISTRATION & SUPERVISION

D. If you marked NOT AT ALL, 1, or 2 for the development level of any competency, answer the following:

Is it possible, in your curriculum, to increase the development of each competency you rated NOT AT ALL, 1, or 2? Please respond below, indicating the competency number for each item you discuss.

1. [ ] YES ---> What suggestions do you have for coursework or experiences to further develop this competency (these competencies)?

competency # suggestions

2. [ ] NO ---> What obstacles do you see to further development of this competency (these competencies)?

competency # obstacles

IX. FACILITIES, EQUIPMENT, & SUPPLIES

A. The student who has completed the component in outdoor adventure leadership and programming will:

	NOT AT ALL	Degree of Development: minimally developed			highly developed	
87. Research, select, purchase, assemble, operate, and maintain according to manufacturer's and/or professionally recommended standards the most practical and safe equipment, supplies, and materials..	[ ]	1	2	3	4	5
88. Discriminate between facilities, equipment, and supplies that are environmentally and socially compatible and those that are not.....	[ ]	1	2	3	4	5
89. Secure from landowners or land managers the necessary licenses, permits, and written permissions to conduct programs on their property...	[ ]	1	2	3	4	5
90. Provide adequate maintenance of all equipment, facilities, and supplies used.....	[ ]	1	2	3	4	5
91. Know the modified facilities and/or equipment required to meet the needs of special populations.....	[ ]	1	2	3	4	5
92. Possess a current motor vehicle operator's license and be able to operate and perform basic maintenance on a motor vehicle.....	[ ]	1	2	3	4	5
93. Execute a safety check of all facilities, equipment, and supplies prior to use in programs.....	[ ]	1	2	3	4	5

IX. FACILITIES, EQUIPMENT, & SUPPLIES

B. What percentage of the FACILITIES, EQUIPMENT, & SUPPLIES competencies are developed in each of the following:

1. outdoor adventure courses _____%
2. other physical education courses _____%
3. courses other than physical education _____%

total = 100 %

C. Which of the following course experiences are used in the development of these competencies? (Check all that apply.)

_____ 1. lecture
_____ 2. discussion/seminar
_____ 3. reading or written assignments
_____ 4. skill demonstration
_____ 5. hands-on skill practice
_____ 6. day trips
_____ 7. 3-7 day trips
_____ 8. 1-3 week trips
_____ 9. more than 3 week trips
_____ 10. supervised student leadership experience, practicum, or internship
_____ 11. other (please specify) _____

D. If you marked NOT AT ALL, 1, or 2 for the development level of any competency, answer the following:

Is it possible, in your curriculum, to increase the development of each competency you rated NOT AT ALL, 1, or 2? Please respond below, indicating the competency number for each item you discuss.

1. [___] YES ---> What suggestions do you have for coursework or experiences to further develop this competency (these competencies)?

competency # suggestions

2. [___] NO ---> What obstacles do you see to further development of this competency (these competencies)?

competency # obstacles

X. PROFESSIONALISM

A. The student who has completed the component in outdoor adventure leadership and programming will:

		Degree of Development					
		NOT AT ALL	minimally developed			highly developed	
94.	Develop immediate and long-range personal and professional goals and objectives	___	1	2	3	4	5
95.	Convey the philosophy, content, and methods of outdoor adventure to program participants, parents/guardians, agency personnel, and the general public	___	1	2	3	4	5
96.	Keep abreast of changes in the field by reading, observing, and discussing, as well as by attending preservice and inservice training programs	___	1	2	3	4	5
97.	Maintain high standards of quality in written materials produced in association with one's program and agency	___	1	2	3	4	5
98.	Become familiar with the range of professional resources including people, places, and print/nonprint materials	___	1	2	3	4	5
99.	Understand federal, state, and local legislation, regulations, and policies affecting the outdoor adventure field	___	1	2	3	4	5
100.	Willingly communicate information about one's professional experiences and understandings, and assist others who are in or are entering the field	___	1	2	3	4	5

B. What percentage of the PROFESSIONALISM competencies are developed in each of the following:

1. outdoor adventure courses _____%
2. other physical education courses _____%
3. courses other than physical education _____%

total = 100 %

C. Which of the following course experiences are used in the development of these competencies? (Check all that apply.)

_____ 1. lecture
_____ 2. discussion/seminar
_____ 3. reading or written assignments
_____ 4. skill demonstration
_____ 5. hands-on skill practice
_____ 6. day trips
_____ 7. 3-7 day trips
_____ 8. 1-3 week trips
_____ 9. more than 3 week trips
_____ 10. supervised student leadership experience, practicum, or internship
_____ 11. other (please specify) _____

X. PROFESSIONALISM

D. If you marked NOT AT ALL, 1, or 2 for the development level of any competency, answer the following:

Is it possible, in your curriculum, to increase the development of each competency you rated NOT AT ALL, 1, or 2? Please respond below, indicating the competency number for each item you discuss.

1. [ ] YES ---> What suggestions do you have for coursework or experiences to further develop this competency (these competencies)?

competency # suggestions

2. [ ] NO ---> What obstacles do you see to further development of this competency (these competencies)?

competency # obstacles

XI. ASSESSMENT & EVALUATION

A. The student who has completed the component in outdoor adventure leadership and programming will:

	NOT AT ALL	minimally developed			highly developed
		Degree of Development			
101. Design, conduct, and interpret final (product) evaluation focusing upon the overall success of the program relative to the originally stated objectives	[ ]	1	2	3	4	5
102. Design, conduct, and interpret ongoing (process) evaluation during the program as a means of improving the program and more clearly meeting the needs and expectations of the participants and the sponsoring agency	[ ]	1	2	3	4	5
103. Perform continual staff evaluation which focuses upon personal and peer leadership effectiveness and performance	[ ]	1	2	3	4	5

XI. ASSESSMENT & EVALUATION

B. What percentage of the ASSESSMENT & EVALUATION competencies are developed in each of the following:

1. outdoor adventure courses _____%
2. other physical education courses _____%
3. courses other than physical education _____%

total = 100 %

C. Which of the following course experiences are used in the development of these competencies? (Check all that apply.)

_____ 1. lecture
_____ 2. discussion/seminar
_____ 3. reading or written assignments
_____ 4. skill demonstration
_____ 5. hands-on skill practice
_____ 6. day trips
_____ 7. 3-7 day trips
_____ 8. 1-3 week trips
_____ 9. more than 3 week trips
_____ 10. supervised student leadership experience, practicum, or internship
_____ 11. other (please specify) _____

D. If you marked NOT AT ALL, 1, or 2 for the development level of any competency, answer the following:

Is it possible, in your curriculum, to increase the development of each competency you rated NOT AT ALL, 1, or 2? Please respond below, indicating the competency number for each item you discuss.

1. ¡___¡ YES ---> What suggestions do you have for coursework or experiences to further develop this competency (these competencies)?

competency # suggestions

2. ¡___¡ NO ---> What obstacles do you see to further development of this competency (these competencies)?

competency # obstacles

Please use this space for any additional comments about your outdoor adventure leadership and programming component.

```
************************************************************
**                                                        **
**   Any course outlines or other descriptive information **
**   about your outdoor adventure curriculum that you wish **
**   to return with the survey will be most gratefully    **
**   appreciated.                                         **
**                                                        **
************************************************************
```

Thank you for taking the time to complete this questionnaire.

☐ Check here if you would like to receive a summary of the survey results.

APPENDIX D

CORRESPONDENCE

PHASE I COVER LETTER

February 18, 1987

Dear colleague:

Outdoor adventure activities have strongly been supported by physical educators as valuable additions to the elementary and secondary school curriculum and are gradually becoming part of physical education programs across the United States. As the use of outdoor adventure activities grows, so does the concern for the quality and safety of the leadership of those programs. In turn, the professional preparation and qualifications of those who lead outdoor programs have become topics of major interest.

As part of my doctoral study at the University of North Carolina at Greensboro, I am conducting an investigation of the preparation for outdoor adventure leadership and programming offered in physical education baccalaureate degree programs across the United States. This study will examine curricula intended to enable physical education majors to lead and conduct outdoor adventure programs in elementary and secondary school physical education. At this early stage of the study, I am requesting some information from you in order to identify physical education professional preparation programs with a component in outdoor adventure leadership and programming. Upon completion of the research, a list of such programs will be made available to those who may be interested in contacting others involved in this curriculum area.

If your program meets the requirements for inclusion in the study, the person you designate on the reply card will be hearing from me again in the near future with a request for participation in a more in-depth investigation of the curriculum. (This person might be yourself or a faculty member involved in the teaching or administration of the outdoor adventure component.)

Please be sure to read the questions on the enclosed form before completing your responses on the attached post card. When you have completed the card, detach it from the question sheet and drop it in the mail. I would appreciate your response at your earliest convenience.

If you would like further information, please feel free to call me at 919/854-1282 (home) or 919/275-9809 (work), or to write me at 810 Scott Avenue, Greensboro, NC 27403. Thank you in advance for your assistance.

Sincerely,

Karen J. Uhlendorf

Karen J. Uhlendorf

PHASE I COVER LETTER (CONTINUED)

When answering the attached questions, please keep in mind the following definitions:

outdoor adventure leadership: The act of assuming responsibility for the learning, welfare, and safety of participants involved in outdoor adventure activities.

outdoor adventure programming: The act of planning, implementing, and evaluating a sequence of outdoor adventure activities.

outdoor adventure activities: Those activities which take place in a natural land or water environment, involving non-mechanized and non-animal means of travel, and which may include elements of real or perceived risk. Such activities may include, but are not limited to, hiking, backpacking, bouldering, rock climbing, ropes courses, mountaineering, orienteering, cross-country skiing, primitive camping, canoeing, rafting, kayaking, caving, snowshoeing, and wilderness survival. Excluded from this definition are activities such as car camping, motor boating, horseback riding, dog sledding, and aerial activities such as hang gliding and parachuting.

PHASE I REMINDER POSTCARD

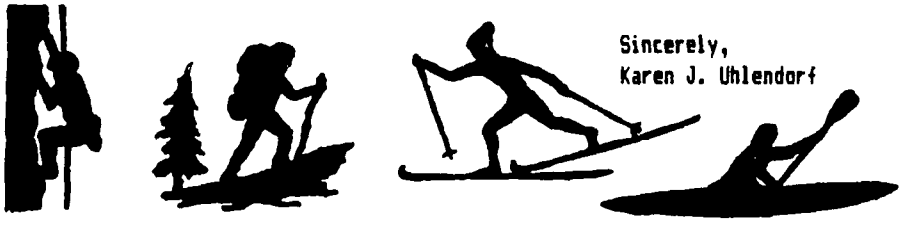
March 9, 1987

Dear colleague:

You may recall that recently I sent you a brief questionnaire about outdoor adventure leadership and programming preparation in your physical education major curriculum. If you have already returned your response, thank you for your prompt reply.

If you have not answered it yet, please take a few moments to do so now. When you have finished, simply detach the self-addressed, stamped post card and drop it in the mail. Your return of the post card within the week will be most appreciated. Thank you again for your time and cooperation.

Please contact me if you no longer have the questionnaire: 810 Scott Ave., Greensboro, NC 27403, (919) 854-1282 (H) / (919) 275-9809 (O).



Sincerely,
Karen J. Uhlendorf

PILOT STUDY COVER LETTER

March 23, 1987

Dear Colleague:

Recently I contacted you regarding your participation in a pilot test of a questionnaire to be used to investigate the preparation for outdoor adventure leadership and programming offered in physical education baccalaureate degree programs across the United States. This study will examine curricula intended to enable physical education majors to lead and conduct outdoor adventure programs in elementary and secondary school physical education.

I am asking you to complete the questionnaire regarding the outdoor adventure component of the physical education baccalaureate degree program in which you are currently or have recently been involved. First, please be sure to read and sign the enclosed Informed Consent Form. Before completing the questionnaire, read the items on the evaluation sheet so you can make note of any problem areas as you go along. Then, answer the outdoor adventure questionnaire.

When you have finished the questionnaire, please respond to the items on the evaluation sheet. These questions will allow you to give feedback regarding the content, design, completeness, and clarity of the questionnaire. You are one of a very small number of participants in the pilot study, so please be as critical as possible in your evaluation in order that I may remedy any potential weaknesses in the survey form before its final distribution. Your comments will be very helpful in improving the questionnaire.

When you have completed the questionnaire and evaluation sheet, return them along with the consent form in the preaddressed, stamped envelope provided. I would appreciate your response within seven days so that the remainder of the project may progress on schedule.

For your generous contribution of time and energy, I plan to make available to you a list of other programs like yours with a component in outdoor adventure leadership and programming to aid you in networking efforts, as well as a summary of the research results, including suggestions for further development of these outdoor adventure competencies within physical education major programs. Thank you in advance for your time and expertise.

If you would like further information, please feel free to write me at 810 Scott Ave., Greensboro, NC 27403, or call (919) 854-1282 (home) / (919) 275-9809 (work).

Sincerely,

Karen J. Uhlendorf

Karen J. Uhlendorf

PILOT STUDY INFORMED CONSENT FORM

THE UNIVERSITY OF NORTH CAROLINA AT GREENSBORO
SCHOOL OF HEALTH, PHYSICAL EDUCATION, RECREATION, AND DANCE

SCHOOL REVIEW COMMITTEE

INFORMED CONSENT FORM *

I understand that the purpose of this study is to examine the preparation for outdoor adventure leadership and programming offered in physical education baccalaureate degree programs.

I confirm that my participation is entirely voluntary. No coercion of any kind has been used to obtain my cooperation.

I understand that I may withdraw my consent and terminate my participation at any time during the project.

I have been informed of the procedure that will be used in the project and understand what will be required of me as a subject.

I understand that all of my responses, written/oral/task, will remain completely anonymous.

I understand that a summary of the results of the project will be made available to me at the completion of the study if I so request.

I wish to give my voluntary cooperation as a participant.

_____
Signature

_____
Address

_____

_____
Date

*Adopted from L.F. Locke and W.W. Spirduso. Proposals that work. New York: Teachers College, Columbia University, 1976, p. 237.

Approved 3/78

PILOT QUESTIONNAIRE EVALUATION FORM

DIRECTIONS: Before completing the outdoor adventure leadership and programming questionnaire, please read this form to familiarize yourself with these items. Then, complete the questionnaire. After you have finished the questionnaire, respond to the items on this form. PLEASE TYPE OR PRINT CLEARLY.

NAME OF RESPONDENT_____

1. How long did it take for you to complete the questionnaire (excluding this evaluation form)?

_____ minutes

2. Are the directions clear and sufficient? (If not, how can they be improved?)

3. Are the definitions provided in the directions clear? sufficient? relevant? (If not, how can they be improved?)

4. Is the questionnaire difficult to read, cluttered, or organized poorly? (If so, how can it be improved?)

PILOT QUESTIONNAIRE EVALUATION FORM (CONTINUED)

5. Does the rating scale for competency development provide a sufficient range of responses? (too many intervals? too few?)

6. Is the questionnaire so lengthy or complex that it would discourage completion by respondents? (If so, how would you improve it?)

7. Are there any items which are ambiguous and might be easily misunderstood? (Please list by number and briefly explain.)

8. Do you have any other suggestions for improvement of this questionnaire (in particular, regarding the content, design, completeness, and clarity of the survey form)?

PHASE II COVER LETTER

April 17, 1987

Dear Colleague:

Outdoor adventure activities have strongly been supported by physical educators as valuable additions to the elementary and secondary school curriculum and are gradually becoming part of physical education programs across the United States. As the use of outdoor adventure activities grows, so does the concern for the quality and safety of the leadership of those programs. In turn, the professional preparation and qualifications of those who lead outdoor programs have become topics of major interest.

As part of my doctoral study at the University of North Carolina at Greensboro, I am conducting an investigation of the preparation for outdoor adventure leadership and programming offered in physical education baccalaureate degree programs across the United States. This study will examine curricula intended to prepare physical education majors to conduct outdoor adventure activities in elementary and secondary school physical education programs. While there is a growing body of knowledge about outdoor leadership and adventure programs in general, the undergraduate preparation and competence of physical education teachers to implement adventure programs in school settings has not yet been explored.

Since your program has been identified as including a component in outdoor adventure leadership and programming, I am requesting your participation in a more in-depth investigation of your curriculum. (If there is another faculty member more able to answer detailed questions about the outdoor adventure curriculum, please forward these materials to that person.) Only a very few programs--less than 10 percent of all physical education baccalaureate degree programs in the United States--currently include outdoor adventure leadership and programming courses and will be asked to take part in this investigation, so your participation in this study is vital. Upon completion of this research project, a list of such programs and other findings will be made available to you to aid in networking efforts and curriculum development in this area.

I know this questionnaire comes at a particularly busy time for you. I'm hopeful that your concern for the preparation of future teachers and your interest in the outdoor adventure area will encourage you to take the time to respond to this survey. The enclosed questionnaire will provide detailed information about your curriculum and thus will take approximately 60-90 minutes to complete. Please be sure you first read and sign the enclosed Informed Consent Form. When you have completed the questionnaire, return it and the Consent Form in the preaddressed, stamped envelope provided. I would appreciate your response at your earliest convenience.

If you need further information, please write me at 810 Scott Ave., Greensboro, NC 27403, or call 919/854-1282 (home) or 919/275-9809 (work).

Thank you for your time and effort. Your participation in this investigation will contribute greatly to an understanding of the status of outdoor adventure leadership and programming preparation in physical education baccalaureate degree programs.

Sincerely,

Karen J. Uhlendorf

PHASE II INFORMED CONSENT FORM

THE UNIVERSITY OF NORTH CAROLINA AT GREENSBORO
SCHOOL OF HEALTH, PHYSICAL EDUCATION, RECREATION, AND DANCE

SCHOOL REVIEW COMMITTEE

INFORMED CONSENT FORM *

I understand that the purpose of this study is to examine the preparation for outdoor adventure leadership and programming offered in physical education baccalaureate degree programs.

I confirm that my participation is entirely voluntary. No coercion of any kind has been used to obtain my cooperation.

I understand that I may withdraw my consent and terminate my participation at any time during the project.

I have been informed of the procedure that will be used in the project and understand what will be required of me as a subject.

I understand that a summary of the results of the project will be made available to me at the completion of the study if I so request.

I wish to give my voluntary cooperation as a participant.

Signature: _____

Address: _____

_____

Date: _____

*Adopted from L.F. Locke and W.W. Spirduso. Proposals that work. New York: Teachers College, Columbia University, 1976, p. 237.

Approved 3/78

****

Information from this investigation may be used to create a directory of physical education baccalaureate degree programs with an outdoor adventure leadership and programming component.

Please check and sign below if you DO NOT want your program to be included in such a directory.

¦___¦ DO NOT include my program in a directory.

_____
Signature

_____
Date

PHASE II REMINDER POSTCARD

May 1, 1987

Dear Colleague,

I hope by now you have received my questionnaire about outdoor adventure leadership and programming preparation in your physical education major curriculum.* I realize that this is a particularly busy time of the year for you. If you have already completed and mailed back the survey, thank you for the promptness of your reply.

If you have not yet completed the form, I hope you will be able to find the time to do so as soon as possible. Your input in this investigation is very important; your physical education major program is one of a very few including preparation in outdoor adventure leadership and programming.

If, for some reason, you have not yet received the questionnaire, please contact me. Thank you for your time and effort.

Sincerely,

Karen J. Uhlendorf
810 Scott Ave., Greensboro, NC 27403 (H) 919-854-1282 (O) 919-275-9809

* If the questionnaire has been forwarded to another faculty member, please forward this card also.

PHASE II REPEAT MAILING COVER LETTER

810 Scott Avenue
Greensboro, NC 27403

September 1, 1987

Dear Colleague:

Several months ago I sent to you a questionnaire regarding outdoor adventure leadership and programming preparation offered to your physical education majors. This exploration of the undergraduate preparation and competence of future physical education teachers to implement adventure programs in school settings is well underway. A preliminary review of the data collected thus far reveals that there are but a very few institutions in the country which offer their physical education majors this preparation.

Since your program has been identified as one highly likely to be offering your physical education majors courses in this area, I am very interested in hearing from you. In order to obtain the most complete picture of the status and scope of such preparation nationwide, your participation in this study is of utmost importance. I am hopeful that your concern for the preparation of future teachers and your interest in outdoor adventure will encourage you to take the time to complete the survey. Upon completion of this research project, a list of programs and other findings will be made available to you to aid in networking efforts and curriculum development in this area.

The enclosed questionnaire will take approximately 60-90 minutes to complete. Please be sure you first read and sign the enclosed Informed Consent Form. When you have completed the questionnaire, return it in the preaddressed, stamped envelope provided. Since the data collection process is drawing to a close, please return the materials within 7 days.

Please note: If, somehow, your institution has been misidentified and your physical education majors have no opportunities (either required or elective) to take courses which prepare them to lead and program outdoor adventure activities, please drop me a note to that effect using the envelope provided.

If you need further information, please call me at 919/854-1282 (home) or 919/275-9809 (work).

Please accept the enclosed hand-crafted leather key ring as a token of my appreciation for your time and effort.

Sincerely,

Karen J. Uhlendorf

Karen J. Uhlendorf

PHASE II FOLLOW-UP COVER LETTER

810 Scott Avenue
Greensboro, NC 27403

October 3, 1987

Dear Colleague:

Several months ago you responded to a questionnaire regarding outdoor adventure leadership and programming preparation in your physical education baccalaureate degree program. Thank you for the time and energy you devoted to the completion of that form. A preliminary analysis of the data reveals that your program is one of a very small number of programs across the country which offer physical education majors such courses.

So that I might get the most complete picture of your program and its offerings, please answer the enclosed questions. These are items from your original questionnaire in which your responses were not clearly marked, were omitted, or need further clarification. As I would like to represent your program as accurately as possible, please take a few minutes to answer this handful of items.

I have also sent you several questions which you answered on the original questionnaire in order to help establish the reliability of the questionnaire. Please answer these items again. If you have kept a copy of your original responses, it is essential that you do not copy those responses in answering the reliability items.

It is important that you send back these responses in the return envelope within 7 days.

Please accept the enclosed hand-crafted leather key ring as a token of my appreciation for your time and effort.

Sincerely,

Karen J. Uhlendorf

Karen J. Uhlendorf

PHASE II RELIABILITY RETEST COVER LETTER

810 Scott Avenue
Greensboro, NC 27403

October 3, 1987

Dear Colleague:

I recently spoke with you on the telephone about the questionnaire to which you responded regarding outdoor adventure leadership and programming preparation in your physical education baccalaureate degree program. Thank you for the time and energy you devoted to the completion of that form. A preliminary analysis of the data reveals that your program is one of a very small number of programs across the country which offer physical education majors such courses.

As I mentioned on the telephone, I have sent you some questions which you answered on the original questionnaire in order to help establish the reliability of this survey instrument. Please answer these items again. If you have kept a copy of your original responses, it is essential that you do not copy those responses in answering the reliability items.

It is important that you send back these responses in the return envelope within 7 days.

Please accept the enclosed hand-crafted leather key ring as a token of my appreciation for your time and effort.

Sincerely,

Karen J. Uhlendorf

Karen J. Uhlendorf

APPENDIX E

RELIABILITY COEFFICIENTS

Test-Retest Reliability Coefficients

for 15 Competency Statements

Category Number	Competency Number[a]	Alpha Coefficient	Standard Error of Measurement
II	15	.82	2.13
III	27	.20	1.66
III	34	.83	2.01
IV	39b	.95	2.54
IV	42	.11	1.33
IV	48c	.40	1.29
IV	50e	.58	0.87
V	56g	.89	1.73
V	57c	.36	1.33
V	57e	.50	0.94
VI	62	.71	1.05
VII	71	.67	2.04
VII	81	.76	2.31
IX	90	.81	1.52
X	96	.83	1.64

[a]See Appendix C for text of competency statements.

Average alpha = .63

Computational Formula

$$r_{\alpha} = \left(\frac{k}{k - 1}\right)\left(\frac{s_x^2 - \Sigma s_j^2}{s_x^2}\right)$$

(Baumgartner & Jackson, 1982, pp. 103-105)

where

r_{α} = coefficient alpha

k = number of trials

s_x^2 = variance for criterion score

Σs_j^2 = sum of variances for trials

Test-Retest Reliability Coefficients for Item VIII-C

Course Experiences Used	Proportion of Agreement
Lecture	.88
Discussion/seminar	.75
Reading/written assignments	.88
Skill demonstration	.38
Hands-on skill practice	.38
Day trips	.50
3-7 day trips	.63
1-3 week trips	.75
More than 3 week trips	.88
Supervised student leadership experience, practicum, or internship	.75
Other experiences	.88

Average Proportion of Agreement $P_o = .70$

Average Proportion of Agreement adjusted for chance agreements $\hat{k} = .40$

Computational Formulas

$$\hat{k} = \frac{P_o - P_c}{1 - P_c}$$ (Safrit, 1981, pp. 130-132)

where

P_o = Proportion of agreement obtained in the data set

$$= \frac{\text{total \# of items in agreement}}{\text{total \# of items}}$$

P_c = Proportion of agreement expected by chance

$$= \sum_{i=1}^{k} (P_i)(P_i)$$

where

P_i = marginal proportion

Test-Retest Reliability Coefficients for Item X-B

Types of Courses	Proportion of Agreement	Range of Differences in Percentages
Outdoor Adventure-Specific	.75	0% - 60%
Other Physical Education	.63	0% - 50%
Non-Outdoor Adventure/ Non-Physical Education	.75	0% - 45%

Average Proportion of Agreement = .71

APPENDIX F

OUTDOOR ADVENTURE LEADERSHIP AND PROGRAMMING COMPETENCY-DEVELOPMENT MEDIAN SCORES

APPENDIX F: OUTDOOR ADVENTURE LEADERSHIP AND PROGRAMMING COMPETENCY-DEVELOPMENT MEDIANS[a] AND SEMI-INTERQUARTILE DEVIATION SCORES

		All Institutions			High-Development Institutions (Mdn ≥ 3.5)			Low-Development Institutions (Mnd < 3.5)		
#	Competency[b]	n	Mdn	Q	n	Mdn	Q	n	Mdn	Q
COMPETENCY CATEGORY I Philosophical, Historical, and Theoretical Foundations										
1.	Demonstrate an understanding of the philosophical foundations of outdoor adventure.	12	4.00	1.000	8	4.50	0.500	4	3.00	0.750
2.	Develop a personal and professional philosophy of outdoor adventure.	12	4.00	0.875	8	4.00	0.500	4	2.50	1.250
3.	Understand and communicate the rationale for using the outdoors as a medium for education.	12	4.00	0.500	8	4.50	0.500	4	3.50	0.875
4.	Know the strengths and limitations of outdoor adventure.	12	4.00	1.000	8	4.50	0.500	4	3.00	0.750
5.	Understand the philosophy and practices of experiential education.	12	4.00	0.875	8	4.00	0.750	4	3.00	1.750
6.	Recognize outdoor adventure education as a process of encountering and solving challenges which lead to personal and group awareness and growth.	12	4.00	0.500	8	4.00	0.500	4	4.00	0.750
COMPETENCY CATEGORY II Outdoor Leadership and Instructorship										
7.	Recognize leadership as a process which assists an individual or group to identify and achieve goals.	12	4.00	1.000	8	5.00	0.500	4	2.50	0.875

APPENDIX F (CONTINUED)

#	Competency[b]	All Institutions			High-Development Institutions (Mdn ≥ 3.5)			Low-Development Institutions (Mnd < 3.5)		
		n	Mdn	Q	n	Mdn	Q	n	Mdn	Q
8.	Acknowledge that leadership is tied to the leader's personality characteristics, follower's expectations, program circumstances, and group needs/goals.	12	4.00	0.375	8	4.00	0.375	4	3.00	0.375
9.	Possess the judgment and maturity to limit the activities to the leader's actual capabilities.	12	4.00	0.500	8	4.00	0.500	4	3.50	1.625
10.	Anticipate problems and act to prevent them.	12	4.50	0.500	8	5.00	0.500	4	4.00	0.750
11.	Provide a standard of care and employ proper safety equipment and procedures.	12	5.00	0.500	8	5.00	0.375	4	3.50	0.875
12.	Select, organize, conduct, and evaluate activities which									
	a. use environmentally sound skills and techniques.	12	4.00	0.500	8	4.50	0.500	4	3.50	0.875
	b. enhance individual growth and development.	12	4.50	0.500	8	5.00	0.500	4	3.50	1.250
	c. encourage group cooperation and interdependence.	12	4.50	0.500	8	5.00	0.500	4	3.50	0.875
	d. develop awareness of, understanding of, and positive action toward natural and cultural environments.	12	4.00	0.875	8	4.50	0.500	4	3.00	0.375
13.	Convey a dynamic "sense of wonder" and "joy" regarding the world.	12	4.00	1.000	8	4.50	0.875	4	2.50	1.750
14.	Employ the appropriate style of leadership.	12	4.00	0.500	8	4.00	0.375	4	2.50	1.250

APPENDIX F (CONTINUED)

#	Competency[b]	All Institutions			High-Development Institutions (Mdn ≥ 3.5)			Low-Development Institutions (Mnd < 3.5)		
		n	Mdn	Q	n	Mdn	Q	n	Mdn	Q
15.	Utilize the principle of followership.	12	4.00	0.875	8	4.00	0.875	4	2.50	1.250
16.	Lead participants of diverse backgrounds.	11	4.00	0.500	8	4.00	0.375	3	3.00	0.500
17.	Assign leadership responsibilities to group members.	12	4.00	0.875	8	4.50	0.500	4	3.00	1.125
18.	Employ discovery approach, simulation situations, socratic-questioning method, and problem solving.	12	3.50	1.000	8	4.50	1.000	4	2.50	0.875
19.	Recognize the potential psychological, sociological, and physiological impact of adventure activities.	12	5.00	1.000	8	5.00	0.000	4	3.00	0.000
20.	Master technical skills and abilities of outdoor adventure activities and modes of travel.	12	4.00	0.500	8	5.00	0.500	4	3.50	0.500
21.	Allow participants to engage in an activity only after they have gained entry-level understanding of the activity.	12	4.75	0.375	8	4.00	0.500	4	4.00	0.375
22.	Know that modeling is a significant aspect of leadership.	12	4.50	0.875	8	5.00	0.375	4	3.00	0.750
23.	Manage psychological and physiological stress in participants.	12	4.00	1.000	8	4.75	0.500	4	3.00	0.750
24.	Display appropriate personal appearance and behavior.	12	4.00	0.875	8	4.00	0.500	4	3.00	1.500
25.	Possess the necessary physical fitness.	12	4.00	1.000	8	4.50	0.500	4	3.00	0.750

APPENDIX F (CONTINUED)

#	Competency[b]	All Institutions			High-Development Institutions (Mdn ≥ 3.5)			Low-Development Institutions (Mnd < 3.5)		
		n	Mdn	Q	n	Mdn	Q	n	Mdn	Q
26.	Follow a step-by-step progression to introduce and lead adventure activities and experiences.	12	5.00	0.500	8	5.00	0.000	4	3.50	0.500
	COMPETENCY CATEGORY III Counseling, Human Service, and Human Development									
27.	Implement selected counseling and personal development strategies.	11	3:00	1.000	8	4.00	1.250	3	2.00	1.000
28.	Apply knowledge about human growth and development patterns.	11	3.00	1.500	8	4.00	1.375	3	2.00	1.000
29.	Understand the cognitive, affective, and psychomotor domains.	12	4.50	1.375	8	5.00	0.375	4	1.50	0.875
30.	Develop a supportive and helping relationship with participants.	12	4.00	0.938	8	4.25	0.500	4	3.00	0.375
31.	Practice participant-centered counseling.	11	3.00	1.500	8	4.00	1.375	3	2.00	1.000
32.	Practice group counseling or guidance.	11	3.00	0.500	8	3.50	0.875	3	3.00	1.000
33.	Apply principles of small group dynamics.	12	4.00	0.875	8	4.00	0.375	4	2.00	0.750
34.	Serve as a catalyst for positive change.	12	4 00	1.500	8	5.00	0.500	4	2.00	0.375
35.	Work with individuals by listening, observing, questioning, and acting.	12	4.00	1.000	8	5.00	0.500	4	3.00	0.750
36.	Intervene in the event of psychological crisis.	11	3.00	1.500	8	3.50	1.625	3	3.00	1.500

APPENDIX F (CONTINUED)

#	Competency[b]	All Institutions			High-Development Institutions (Mdn ≥ 3.5)			Low-Development Institutions (Mnd < 3.5)		
		n	Mdn	Q	n	Mdn	Q	n	Mdn	Q
37.	Respect the differences between counseling and therapy.	12	3.00	1.875	8	4.00	1.750	4	2.00	1.000
	COMPETENCY CATEGORY IV Program Planning and Development									
38.	Offer participants breadth of experiences.	12	4.00	0.500	8	4.00	0.375	4	3.00	0.375
39.	Select, organize, conduct, and evaluate outdoor adventure activities and experiences which									
	a. are not found in the normal course of life and are characterized by risk, stress, challenge, and adventure.	12	4.00	0.875	8	5.00	0.500	4	3.00	0.375
	b. meet participant needs and interests.	12	4.00	1.375	8	5.00	0.500	4	1.50	0.875
40.	Realize that program planning requires precise policies and procedures.	12	4.00	1.000	8	5.00	0.500	4	3.00	0.375
41.	Plan for the use of as many senses as possible.	12	4.00	1.000	8	5.00	0.500	4	3.00	0.375
42.	Design programs that use local resources and respect and reflect the local culture and environment.	12	4.00	0.500	8	4.00	0.375	4	3.00	1.125
43.	Allow participants to share in aspects of selecting, organizing, and conducting programs.	12	4.00	0.875	8	4.00	1.000	4	3.50	0.875
44.	Encourage activities to develop lifetime skills and abilities.	12	4.00	0.500	8	5.00	0.500	4	4.00	0.375

APPENDIX F (CONTINUED)

#	Competency[b]	All Institutions			High-Development Institutions (Mdn ≥ 3.5)			Low-Development Institutions (Mnd < 3.5)		
		n	Mdn	Q	n	Mdn	Q	n	Mdn	Q
45.	Assess each program activity in terms of its impact.	12	3.50	1.000	8	4.50	0.875	4	3.00	0.000
46.	Select, organize, conduct, and evaluate resident and multiday programs in									
	a. backcountry wilderness areas.	12	4.00	1.000	8	5.00	0.500	4	3.00	0.000
	b. mountain areas.	12	4.00	1.000	8	4.50	0.500	4	3.00	0.750
	c. flatwater areas.	12	4.00	1.000	8	4.50	0.875	4	3.00	0.750
47.	Select, organize, conduct, and evaluate programs based in educational institutions.	11	4.00	0.500	8	4.75	0.500	3	3.00	1.000
48.	Select, organize, conduct, and evaluate selected outdoor adventure activities and experiences with									
	a. adolescents.	12	4.50	1.000	8	5.00	0.375	4	3.00	0.375
	b. college students.	11	4.00	1.000	8	4.50	0.500	3	3.00	0.000
	c. young adults.	11	4.00	1.000	8	4.25	0.500	3	3.00	0.000
49.	Select, organize, conduct, and evaluate									
	a. single-day programs.	12	5.00	0.875	8	5.00	0.000	4	3.00	0.375
	b. short-term resident programs (2-4 days).	11	5.00	1.000	8	5.00	0.375	3	3.00	0.000
	c. long-term resident programs (5 or more days).	11	4.00	1.000	8	4.50	0.875	3	2.00	0.500

APPENDIX F (CONTINUED)

#	Competency[b]	All Institutions			High-Development Institutions (Mdn ≥ 3.5)			Low-Development Institutions (Mnd < 3.5)		
		n	Mdn	Q	n	Mdn	Q	n	Mdn	Q
50.	Select, organize, conduct, and evaluate									
	a. group-building activities.	12	4.00	0.875	8	4.00	0.500	4	3.00	0.000
	b. challenge/adventure activities.	12	5.00	1.000	8	5.00	0.000	4	3.00	0.000
	c. outdoor education and environmental education.	12	4.00	1.000	8	5.00	0.500	4	3.00	0.750
	d. nature-oriented activities.	12	3.00	0.500	8	3.75	0.500	4	3.00	0.375
	e. environmental interpretation.	12	3.00	0.000	8	3.00	0.750	4	3.00	0.375
	f. outing sports and outdoor skills.	12	4.00	1.000	8	5.00	0.500	4	3.00	0.375
51.	Carry out staff preplanning which focuses upon important components of the program.	12	4.00	1.000	8	4.50	0.500	4	2.50	0.875
52.	Plan, organize, and present a thorough participant orientation.	12	4.00	0.875	8	4.00	1.000	4	2.50	0.875
53.	Select and implement the logistics necessary to conduct a safe and successful program.	12	4.00	0.938	8	5.00	0.500	4	3.00	0.375
54.	Maintain a journal or log.	11	4.00	0.500	8	4.00	0.750	3	3.00	0.500
55.	Synthesize and utilize existing research and program ideas as a means of improving programs.	12	3.00	0.875	8	4.00	1.000	4	3.00	0.750

APPENDIX F (CONTINUED)

#	Competency[b]	All Institutions n	All Institutions Mdn	All Institutions Q	High-Development Institutions (Mdn ≥ 3.5) n	High-Development Institutions (Mdn ≥ 3.5) Mdn	High-Development Institutions (Mdn ≥ 3.5) Q	Low-Development Institutions (Mnd < 3.5) n	Low-Development Institutions (Mnd < 3.5) Mdn	Low-Development Institutions (Mnd < 3.5) Q
COMPETENCY CATEGORY V Outdoor Skills and Abilities										
56.	Possess the necessary knowledge, skill, and behavior in									
a.	automobile/van logistics.	12	3.00	0.750	8	3.00	1.000	4	3.00	0.750
b.	campcraft.	11	5.00	0.500	8	5.00	0.375	3	4.00	0.500
c.	environmental awareness and interpretation.	12	3.50	0.875	8	4.00	0.875	4	3.00	0.750
d.	first aid and personal/group safety.	12	4.00	0.500	8	5.00	0.500	4	3.50	0.875
e.	food selection and preparation.	12	4.00	0.500	8	4.00	0.750	4	3.00	0.375
f.	hiking and trail techniques.	12	5.00	0.500	8	5.00	0.000	4	3.50	0.500
g.	navigation and selection of off-the-trail routes.	12	4.00	0.750	8	4.00	0.500	4	3.50	0.500
h.	on-the-trail activities.	12	4.00	0.875	8	5.00	0.500	4	3.00	1.125
i.	personal and group equipment selection.	12	4.25	0.500	8	5.00	0.438	4	3.50	0.500
j.	physical fitness.	12	4.00	0.875	8	4.75	0.500	4	3.00	0.750
k.	physiology and nutrition.	12	4.00	0.500	8	4.00	0.375	4	3.00	0.000
l.	program behavior (expedition behavior).	12	4.00	0.875	8	4.50	0.500	4	3.00	0.375
m.	ropecraft.	12	4.00	0.875	8	4.00	0.500	4	3.00	0.375

APPENDIX F (CONTINUED)

#	Competency[b]	All Institutions			High-Development Institutions (Mdn ≥ 3.5)			Low-Development Institutions (Mnd < 3.5)		
		n	Mdn	Q	n	Mdn	Q	n	Mdn	Q
	n. search and rescue techniques and procedures.	12	3.00	1.000	8	4.00	0.500	4	2.00	0.000
	o. special mode of travel.	12	3.50	0.875	8	4.00	0.875	4	2.00	1.125
	p. survival.	12	4.00	0.500	8	4.00	0.375	4	3.00	0.375
	q. toolcraft.	12	3.00	0.500	8	3.00	0.000	4	2.00	0.750
	r. water safety procedures.	12	4.50	1.250	8	5.00	0.375	4	2.00	0.750
	s. weather.	12	4.00	0.875	8	4.00	0.500	4	2.50	0.500
57.	Possess the necessary leadership and instructorship ability in									
	a. backpacking.	12	4.50	0.500	8	5.00	0.375	4	3.50	0.500
	b. bouldering.	12	3.00	1.000	8	4.00	1.250	4	2.50	0.875
	c. canoeing, flat water.	12	4.00	1.000	8	5.00	0.500	4	3.00	0.750
	d. cross-country skiing (nordic).	11	4.00	0.500	8	4.00	0.375	3	3.00	1.000
	e. hiking and walking.	12	4.50	0.500	8	5.00	0.375	4	4.00	0.375
	f. mountaineering.	11	3.00	0.500	7	3.00	0.500	4	3.00	0.750
	g. orienteering.	12	3.50	1.375	8	4.00	1.375	4	2.50	0.875
	h. rock climbing and rappelling.	11	4.00	1.000	7	4.00	1.000	4	3.00	1.125
	i. survival.	12	3.00	1.000	8	4.00	0.875	4	2.50	0.500

APPENDIX F (CONTINUED)

#	Competency[b]	All Institutions			High-Development Institutions (Mdn ≥ 3.5)			Low-Development Institutions (Mnd < 3.5)		
		n	Mdn	Q	n	Mdn	Q	n	Mnd	Q
COMPETENCY CATEGORY VI Environmental Awareness, Understanding, and Action										
58.	Foster within participants an awareness of Planet Earth.	12	3.50	0.500	8	4.00	0.375	4	2.50	0.500
59.	Demonstrate a basic knowledge and field application of the fundamental concepts of ecology.	12	3.00	0.500	8	3.50	0.500	4	2.50	0.500
60.	Assist in the altering of participants' attitudes, values, and behaviors toward the environment.	12	4.00	0.875	8	4.00	0.500	4	3.00	0.375
61.	Examine his/her own environmental prejudices and misinformation.	12	3.00	0.500	8	4.00	0.500	4	2.50	0.500
62.	Develop within participants a variety of environmentally compatible leisure skills and competencies.	12	4.00	0.500	8	4.50	0.500	4	4.00	0.375
63.	Utilize environmental education activities and techniques.	12	4.00	0.500	8	4.00	0.750	4	3.00	0.375
64.	Know the environmental impact of outdoor adventure activities; use no-trace, low-impact methodologies.	12	4.00	0.375	8	4.00	0.375	4	3.00	0.375
65.	Encourage the use of recycled, renewable, and biodegradable products and materials.	12	3.00	0.875	8	3.50	0.500	4	2.50	0.875
66.	When possible, purchase and/or make outdoor adventure equipment and supplies that effectively utilize renewable resources.	11	3.00	1.000	8	4.00	1.250	3	3.00	1.000

APPENDIX F (CONTINUED)

#	Competency[b]	All Institutions			High-Development Institutions (Mdn ≥ 3.5)			Low-Development Institutions (Mnd < 3.5)		
		n	Mdn	Q	n	Mdn	Q	n	Mdn	Q
COMPETENCY CATEGORY VII First Aid and Safety										
67.	Apply the proper physical and emotional first aid.	12	4.00	0.875	8	5.00	0.500	4	3.00	0.750
68.	Apply basic physiological and psychological understandings of the human body.	12	4.00	1.250	8	5.00	0.500	4	2.00	1.125
69.	Design and have available a well-equipped first aid kit.	12	5.00	0.875	8	5.00	0.375	4	3.00	1.125
70.	Develop and communicate appropriate safety systems and procedures.	12	4.00	0.500	8	5.00	0.500	4	4.00	0.750
71.	Organize and carry-out a comprehensive search-and-rescue plan.	12	3.00	0.875	8	4.00	0.875	4	2.00	0.375
72.	Implement the basic techniques and methods of human survival.	12	4.00	0.375	8	4.00	0.500	4	3.00	1.000
73.	Develop or obtain sound or accepted written safety procedures and policies.	12	4.00	1.375	8	5.00	0.875	4	2.00	1.125
74.	Earn and maintain current certification in									
	a. Red Cross Standard First Aid & Personal Safety.	11	5.00	1.000	8	5.00	0.375	3	2.00	1.500
	b. Red Cross Advanced First Aid & Emergency Care.	10	2.50	1.125	7	3.00	1.000	3	2.00	1.500
	c. Red Cross Cardiopulmonary Resuscitation (C.P.R.).	11	4.00	1.000	8	5.00	0.875	3	2.00	1.500

APPENDIX F (CONTINUED)

#	Competency[b]	All Institutions			High-Development Institutions (Mdn ≥ 3.5)			Low-Development Institutions (Mnd < 3.5)		
		n	Mdn	Q	n	Mdn	Q	n	Mdn	Q
	d. Heimlich Maneuver or Red Cross Abdominal Thrust.	11	5.00	1.000	8	5.00	0.375	3	2.00	1.500
	e. Red Cross Advanced Life Saving, YMCA Lifesaving, Boy Scout Life Guard, or their equivalent.	11	4.00	1.500	8	4.50	0.875	3	2.00	0.500
75.	Know and teach the most sanitary and ecologically sound methods of personal and group sanitation.	12	4.00	0.875	8	5.00	0.500	4	3.00	0.750
76.	Understand the uses of personal health records, participant contracts, and written permission statements.	11	4.00	1.000	8	5.00	0.875	3	3.00	1.500
77.	Convey the rationale for, and the implementation of, a no-drug-use policy.	12	5.00	0.875	8	5.00	0.000	4	3.00	1.125
78.	Understand preventive aspects of personal/group health and safety.	12	4.50	0.875	8	5.00	0.375	4	3.00	0.375
79.	Improvise equipment, supplies, and materials for first aid, safety, and rescue.	12	3.50	1.000	8	5.00	0.875	4	3.00	0.375
80.	Keep abreast of current practices and new information in health and safety.	11	4.00	1.500	8	4.50	0.500	3	2.00	0.500
81.	Collect, record, and communicate the necessary accident, health, and safety report information.	11	4.00	1.000	8	4.50	0.875	3	3.00	0.000
82.	Implement a risk management plan.	11	4.00	1.000	8	5.00	0.875	3	3.00	0.500

APPENDIX F (CONTINUED)

#	Competency[b]	All Institutions			High-Development Institutions (Mdn ≥ 3.5)			Low-Development Institutions (Mnd < 3.5)		
		n	Mdn	Q	n	Mdn	Q	n	Mdn	Q
COMPETENCY CATEGORY VIII Administration and Supervision										
83.	Assist less experienced and less knowledgeable staff.	11	4.00	0.500	8	4.00	0.375	3	3.00	0.500
84.	Accept and be able to implement the policies, plans, and programs delegated by top management.	11	4.00	0.500	8	4.00	0.000	3	3.00	0.500
85.	Function as a supervisor.	12	4.00	0.500	8	4.00	0.375	4	2.50	0.875
86.	Understand the legal aspects of outdoor adventure programs.	12	3.00	0.500	8	3.75	0.875	4	3.00	0.375
COMPETENCY CATEGORY IX Facilities, Equipment, and Supplies										
87.	Research, select, purchase, assemble, operate, and maintain equipment, supplies, and materials.	12	4.00	0.875	8	4.00	0.500	4	3.00	0.750
88.	Discriminate between facilities, equipment, and supplies that are environmentally and socially compatible and those that are not.	12	4.00	1.000	8	4.50	0.500	4	3.00	0.375
89.	Secure the necessary licenses, permits, and written permissions to conduct programs.	12	4.00	0.500	8	4.00	0.375	4	2.50	0.875
90.	Provide adequate maintenance of all equipment, facilities, and supplies used.	12	4.00	0.500	8	4.00	0.375	4	3.00	0.000
91.	Know the modified facilities and/or equipment required to meet the needs of special populations.	12	3.00	0.500	8	4.00	0.500	4	3.00	0.375

APPENDIX F (CONTINUED)

#	Competency[b]	All Institutions			High-Development Institutions (Mdn ≥ 3.5)			Low-Development Institutions (Mnd < 3.5)		
		n	Mdn	Q	n	Mdn	Q	n	Mdn	Q
92.	Possess a current motor vehicle operator's license and be able to operate and perform basic maintenance on a motor vehicle.	11	4.00	1.500	8	4.50	1.250	3	3.00	2.000
93.	Execute a safety check of all facilities, equipment, and supplies.	12	4.50	0.875	8	5.00	0.375	4	3.00	0.750
	COMPETENCY CATEGORY X Professionalism									
94.	Develop immediate and long-range personal and professional goals.	11	4.00	1.000	8	4.50	0.875	3	3.00	0.500
95.	Convey the philosophy, content, and methods of outdoor adventure.	12	4.50	0.875	8	5.00	0.375	4	3.00	0.375
96.	Keep abreast of changes in the field.	12	4.00	1.000	8	4.50	0.500	4	3.00	0.000
97.	Maintain high standards of quality in written materials produced.	11	4.00	1.000	8	4.00	0.500	3	3.00	1.000
98.	Become familiar with the range of professional resources.	12	4.00	0.875	8	4.50	0.500	4	3.00	0.750
99.	Understand legislation, regulations, and policies affecting the outdoor adventure field.	12	3.50	0.500	8	4.00	0.375	4	2.00	1.000
100.	Willingly communicate information about one's professional experiences and understandings.	11	4.00	1.000	8	5.00	0.500	3	3.00	0.500

APPENDIX F (CONTINUED)

# Competency[b]	All Institutions n	All Institutions Mdn	All Institutions Q	High-Development Institutions (Mdn ≥ 3.5) n	High-Development Institutions (Mdn ≥ 3.5) Mdn	High-Development Institutions (Mdn ≥ 3.5) Q	Low-Development Institutions (Mnd < 3.5) n	Low-Development Institutions (Mnd < 3.5) Mdn	Low-Development Institutions (Mnd < 3.5) Q
COMPETENCY CATEGORY XI Assessment and Evaluation									
101. Design, conduct, and interpret final (product) evaluation.	11	4.00	1.000	8	4.00	0.375	3	2.00	0.500
102. Design, conduct, and interpret ongoing (process) evaluation.	11	4.00	0.500	8	4.00	0.000	3	3.00	0.000
103. Perform continual staff evaluation.	11	4.00	0.500	8	4.00	0.375	3	3.00	0.500

[a] Based on a five-point Likert scale where 1 = minimally developed and 5 = highly developed.

[b] For complete text of competency statements, see Appendix C.

APPENDIX G

COMPETENCIES NOT DEVELOPED BY ONE OR MORE INSTITUTIONS

APPENDIX G

COMPETENCIES NOT DEVELOPED BY ONE OR MORE INSTITUTIONS

Cat.	#	Competency	n	Mdn[a]	Q
II	16.	Lead participants of diverse backgrounds.	11	4.00	0.500
III	27.	Implement selected counseling and personal development strategies.	11	3.00	1.000
III	28.	Apply knowledge about human growth and development patterns.	11	3.00	1.500
III	31.	Practice participant-centered counseling.	11	3.00	1.500
III	32.	Practice group counseling or guidance.	11	3.00	0.500
III	36.	Intervene in the event of psychological crisis.	11	3.00	1.500
IV	47.	Select, organize, conduct, and evaluate programs based in educational institutions.	11	4.00	0.500
IV	48.	Select, organize, conduct, and evaluate activities with			
		b. College students	11	4.00	1.000
		c. Young adults	11	4.00	1.000
IV	49.	Select, organize, conduct, and evaluate			
		b. Short-term resident (2-4 days) programs.	11	5.00	1.000
		c. Long-term resident (5 or more days) programs.	11	4.00	1.000

(Continued)

APPENDIX G (Continued)

Cat.	#	Competency	n	Mdn[a]	Q
IV	54.	Maintain a journal or log.	11	4.00	0.500
V	56b.	Possess the necessary knowledge, skill, and behavior in campcraft.	11	5.00	0.500
V	57.	Possess the necessary leadership and instructorship ability in			
		d. Cross country skiing (nordic)	11	4.00	0.500
		f. Mountaineering	11	3.00	0.500
		h. Rock climbing and rappelling	11	4.00	1.000
VI	66.	Purchase and/or make equipment and supplies.	11	3.00	1.000
VII	74.	Earn and maintain current certification in			
		a. Red Cross Standard First Aid & Personal Safety	11	5.00	1.000
		b. Red Cross Advanced First Aid & Emergency Care	10	2.50	1.125
		c. Red Cross Cardiopulmonary Resuscitation (C.P.R.)	11	4.00	1.000
		d. Heimlich Maneuver or Red Cross Abdominal Thrust	11	5.00	1.000
		e. Red Cross Advanced Life Saving, YMCA Lifesaving, Boy Scout Life Guard, or their equivalent	11	4.00	1.500

(Continued)

APPENDIX G (Continued)

Cat.	#	Competency	n	Mdn[a]	Q
VII	76.	Understand the uses of personal health records, participant contracts, and written permission statements.	11	4.00	1.000
VII	80.	Keep abreast of current practices and new information in health and safety.	11	4.00	1.500
VII	81.	Collect, record, and communicate the necessary accident, health, and safety report information.	11	4.00	1.000
VII	82.	Implement a risk management plan.	11	4.00	1.000
VIII	83.	Assist less experienced and less knowledgeable staff.	11	4.00	0.500
VIII	84.	Accept and be able to implement the policies, plans, and programs delegated by top management.	11	4.00	0.500
IX	92.	Possess a current motor vehicle operator's license and be able to operate and perform basic maintenance on a motor vehicle.	11	4.00	1.500
X	94.	Develop immediate and long-range personal and professional goals.	11	4.00	1.000
X	97.	Maintain high standards of quality in written materials.	11	4.00	1.000
X	100.	Willingly communicate information about one's professional experiences and understandings.	11	4.00	1.000

(Continued)

APPENDIX G (Continued)

Cat.	#	Competency	n	Mdn[a]	Q
XI	101.	Design, conduct, and interpret final (product) evaluation.	11	4.00	1.000
XI	102.	Design, conduct, and interpret ongoing (process) evaluation.	11	4.00	0.500
XI	103.	Perform continual staff evaluation.	11	4.00	0.500

Note. For complete text of competency statements, see Appendix C.

[a]Based on a five-point Likert scale where 1 = minimally developed and 5 = highly developed.