ABSTRACT

NOVAK, J. D. Analysis of training protocols for challenge course instructors. MS in Exercise and Sport Science – Physical Education Teaching, August 1999, 42pp. (J. Steffen)

Challenge course (CC) instructors (N = 29) were surveyed to determine time allotments for teaching 29 basic CC facilitator competencies. The primary purpose of the study was to identify teaching times of CC instructors. The secondary purpose was to identify a rank order presentation of adventure activities. A questionnaire was used to acquire data pertaining to CC facilitation. The questions asked instructors to record teaching times of 29 predefined competencies and total program training times. Results indicated a mean total training time of $x = 45.5$ hours ($\pm$ 15.2). The mean time and standard deviation of the 29 competencies were generated. The top 10 competencies reported to take the greatest average amount of teaching time were identified. Questions were posed to determine the sequencing of adventure activities within a CC facilitator training program. It was reported that the presentation order of adventure activities in a program was consistent with research done in 1997 regarding presentation order of adventure activities.

ANALYSIS OF TRAINING PROTOCOLS FOR CHALLENGE COURSE INSTRUCTORS

A MANUSCRIPT STYLE THESIS PRESENTED

TO

THE GRADUATE FACULTY

UNIVERSITY OF WISCONSIN – LA CROSSE

IN PARTIAL FULFILLMENT

OF THE REQUIREMENTS FOR THE

MASTER OF SCIENCE DEGREE

BY

JEREMY D. NOVAK

AUGUST 1999

COLLEGE OF HEALTH, PHYSICAL EDUCATION, AND RECREATION

UNIVERSITY OF WISCONSIN-LA CROSSE

THESIS FINAL ORAL DEFENSE FORM

Candidate: Jeremy Dean Novak

We recommend acceptance of this thesis in partial fulfillment of this candidate's requirements for the degree:

Master of Science in Exercise and Sport Science – Physical Education Teaching

The candidate has successfully completed the thesis final oral defense.

Jeffrey Paul Steffen — 7-1-99

Thesis Committee Chairperson Signature — Date

Gregory M. Walker — 7-1-99

Thesis Committee Member Signature — Date

Kay D. Martinez — 7-1-99

Thesis Committee Member Signature — Date

This thesis is approved by the College of Health, Physical Education, and Recreation.

Gail Tyman — 7-30-99

Associate Dean, College of Health, Physical Education, and Recreation — Date

Gail Tyman — 7-30-99

Dean of Graduate Studies — Date

ACKNOWLEDGEMENTS

This thesis would not have been possible without the help of many people. I would like to thank the following individuals for their assistance throughout this endeavor.

My committee members: Dr. Jeff Steffen, Dr. Ray Martinez, and Dr. Greg Walsko. Your support, suggestions, patience, and helpfulness were greatly appreciated. Dr. Jeff Steffen, thank you for your assistance in collecting data, keeping me motivated, and your positive attitude and energy. Dr. Ray Martinez, thank you for the many conversations and support throughout the project. Dr. Greg Walsko, thank you for your critical eye, suggestions, and ideas on text formatting.

Thank you to the HPER IT Lab staff for the expertise and assistance they provided.

To all of those who took time to read through the manuscript and give me suggestions – thank you. I would also like to thank the other graduate students who endured alongside of me and kept the atmosphere a lighthearted, enjoyable, and memorable one.

TABLE OF CONTENTS

LIST OF TABLES

TABLE PAGE

LIST OF APPENDICES

INTRODUCTION

For the past two decades, practitioners of adventure based programming have debated issues of standards, certification, and accreditation (ACCT, 1998). The Association of Experiential Education has pioneered the process of establishing standards for adventure programming since its inception in 1977. More recently, the Association for Challenge Course Technology (ACCT) has brought people who work exclusively on challenge courses together in an attempt to define specific standards for building, operating, and facilitating challenge courses. The two aforementioned professional organizations have greatly contributed to the development of adventure programming standards which are constantly striving to make challenge course programming safe.

Throughout the process of developing standards, it has been verbalized that attempts should be made to determine what trainers of challenge course facilitators were teaching, as well as the amount of time it takes to teach challenge course facilitator competencies. These attempts would be one more step to insure that qualified and competent facilitators are running programs, thus helping to assure the safety and goals of various groups are being met. The next logical step seems to be to establish unified standards and training protocols of challenge course facilitators.

Certification and accreditation are controversial issues. Certification refers to a process that guarantees certain minimum standards have been met or exceeded by a candidate as evaluated by a certifying agency. Accreditation is a recognition that a program or institution has met certain predetermined standards

of operation (Priest & Gass, 1997). In the industry of adventure programming, the notion of accreditation is looked upon with more favor than certification. Since accreditation focuses more on an organization as a whole most professionals in the field consider it more encompassing, relative to program quality, than certification. Priest and Gass (1997) stated that "adventure leadership is not a case of certification, but an ongoing process of preparation that takes place over a long period of time and is never fully completed for the person who aspires to be safe" (p.35). In order to provide quality and safe programs, certain minimum standards must be met by those who build, operate, and facilitate on challenge courses. Perhaps one way to begin this process is to invesitgate challenge course facilitator training programs.

The purpose of this study was to analyze training protocols of challenge course instructors regarding the total time it takes to teach a basic course in challenge course facilitation and the time allotments of 29 predefined challenge course facilitator competencies (ACCT, 1998). The researcher desired to discern the length of time trainers in the challenge course industry are running initial preparatory programs (excluding additional shadow hours) which impart knowledge and basic skills to people so that they can begin the process of becoming safe, competent, and quality challenge course facilitators.

METHODS AND PROCEDURES

Survey respondents were members of the Association for Challenge Course Technology (ACCT). Respondents voluntarily completed a questionnaire if they considered themselves trainers of challenge course facilitators. A total of 90 questionnaires were distributed and 45 completed surveys were returned to the researcher. Due to attrition only 29 of the 45 returned surveys were used, which yielded a return rate of nearly 30%.

Fifty three percent of survey respondents indicated training solely on outdoor courses, and 47% reported training on both outdoor and indoor courses. Respondents were surveyed on the focus of their training. The choices were: educational, recreational, therapeutic, corporate, or any combination of the four. Several respondents indicated having more than one focus in their training program. Twenty-eight of 29 respondents indicated an educational focus, 16 a corporate focus, 20 a recreational focus, and 11 a therapeutic focus. Table 1 presents the training focus of the programs surveyed.

Table 1. Training Focus

Category	Yes	(%)	No	(%)
Educational	28	(96.6)	1	(3.40)
Corporate	16	(51.7)	13	(48.3)
Recreational	20	(58.8)	9	(41.4)
Therapeutic	11	(34.5)	18	(65.5)

A questionnaire (see Appendix A) was developed according to the challenge course facilitator competencies established by the ACCT (1998). The questionnaire consisted of 29 items that asked if a specific competency was taught, followed by a space for the respondent to record the average hours allotted to teach the competency. The amount of total training hours in a program was also recorded to ensure that there was not a discrepancy in the respondents' answers.

The survey instrument was validated by five experts in the field of challenge course administration, construction, and facilitation. Builders, directors, and trainers were asked to comment on the format, content, and clarity of the questionnaire items along with the overall survey. These suggestions were incorporated into the design of the survey.

The researcher attended the 9th Annual Association for Challenge Course Technology (ACCT) International Conference and Symposium in San Antonio, Texas from January 13-17, 1999. At the ACCT International Conference, the researcher personally distributed the survey for the challenge course instructors to record characteristics of their training programs. An attached response form was provided for respondents to obtain the results of the study (see appendix B). Participants were asked to return completed questionnaires to the researcher by the end of the conference. Stamped and self-addressed envelopes were also provided for respondents that were not able to complete the surveys at the conference. The results of the study were sent to those who requested them along with a follow-up letter (see appendix C).

RESULTS

The data collected from the survey were analyzed using SPSS 8.0 for Windows. Descriptive statistics were run to obtain measures of central tendency and frequencies. Data regarding total hours in a training program is shown in Table 2 and Figure 1.

Table 2. Statistics of Total Program Hours

Statistic	Hours
Mean	45.5
Median	40.0
Mode	40.0
Standard Deviation	15.2
Range	64.0
Minimum	16.0
Maximum	80.0

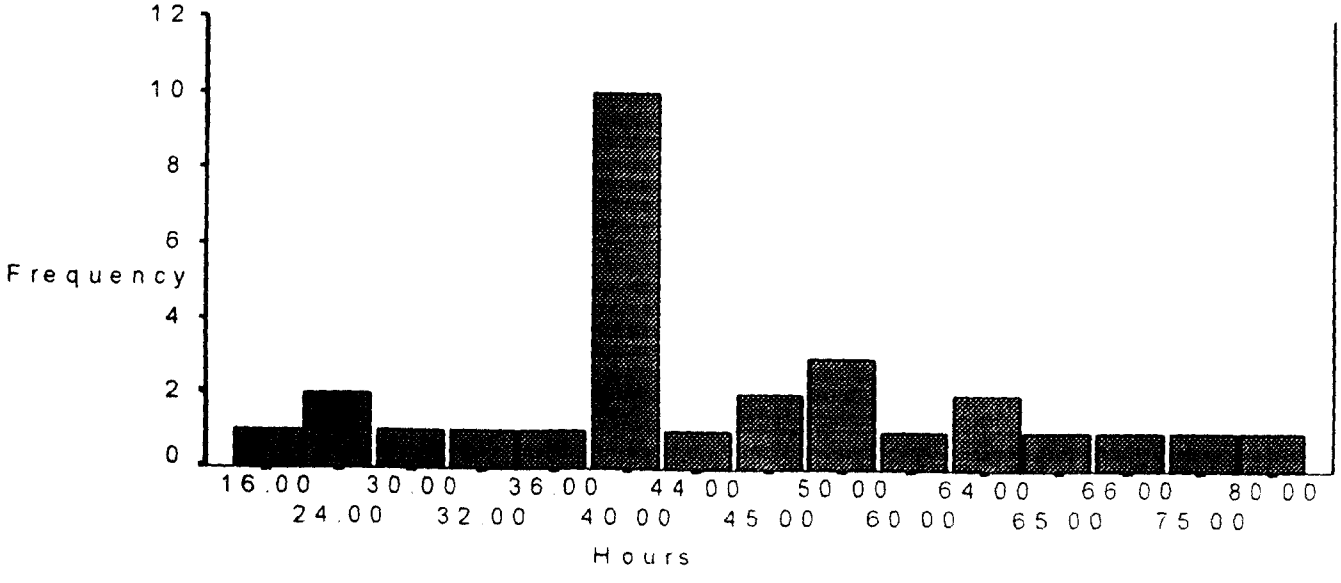

Figure 1. Total Training Time Frequency Distribution

Table 2 represents measures of central tendency as well as the variability of the total training hours of reported training programs. The median total hours were 40.0, and the most often represented time is 40.0 hours with ten occurrences. The mean total hour of the reported training programs was 45.5 (± 15.15). Figure 1 represents total training time frequency distribution. A mean total training time of 45.5 hours was reported. Twenty-three respondents conducted programs of 40 hours or more in duration. The highest reported value was 80 hours and the lowest was 16 hours.

The 29 competencies were each assigned a number (i.e. Q1 and Q2). The questions were aimed at collecting data regarding the amount of time it takes to train facilitators in specific challenge course competencies. This would give facilitators a basic understanding and skill level to begin the process of becoming challenge course facilitators. The focus of each question is listed below.

Q1= Acquaintance activities

Q2= Icebreakers/Deinhibitizers

Q`3= Problem solving activities

Q4= Communication activities

Q5= Trust activities

Q6= Low ropes elements; and effective spotting techniques

Q7= Group processing or debriefing; reflecting upon prior activities

Q8= Accommodating persons with special needs

Q9= Accessibility of low and high elements

Q10= Full Value Contract; means by which participants respect themselves and others

Q11= Challenge by Choice; allows participants to challenge themselves without external pressure

Q12= Program safety and operational practices

Q13= Program philosophy and established ethical practices

Q14= Current installation practices as related to participant safety

Q15= Effective assessment of environment to ensure participants' safety

Q16= Modification of programming based on environmental conditions

Q17= Select activities that prepare participants for demands of the program

Q18= Appropriately sequence activities based on group assessment and the needs, abilities, and readiness of the individuals

Q19= Belaying and associated components; climbing contract that effectively communicates readiness of climber and belayer

Q20= How to safely use lobster claws or some form of static/self belay

Q21= Knots appropriate to given applications

Q22= How to correctly put on and use a commercial or hand-made harness

Q23= Set up and take down of high elements using specialized equipment needed; includes a 3:1 pulley system and other accessible equipment

Q24= Organize and administer groups on the challenge course (scheduling and associated tasks)

Q25= Be aware of and assess if participants are dressed appropriately for the activities

Q26= About equipment specifications and care procedures

Q27= How to effectively monitor and inspect all equipment and facilities before, during and after use

Q28= How to be aware of participants' physical needs

Q29= Rescue and emergency protocols (technical, equipment, medical and non-medical)

Table 3 depicts the mean and standard deviation (in hours) of the time it takes to teach the 29 competencies.

Table 3. Statistics of 29 competencies

Item	Mean *	Standard Deviation*
Q1	0.95	0.57
Q2	1.16	0.74
Q3	2.75	1.02
Q4	1.39	1.02
Q5	3.16	5.24
Q6	5.26	3.41
Q7	2.90	2.50
Q8	0.88	1.00
Q9	0.80	1.01
Q10	0.78	0.56
Q11	0.80	0.55
Q12	2.64	1.94
Q13	1.55	1.47
Q14	1.14	1.22
Q15	0.84	0.84
Q16	0.53	0.45
Q17	1.20	2.08

Q18	1.59	1.82
Q19	4.15	4.22
Q20	1.91	2.12
Q21	2.12	1.90
Q22	1.32	1.31
Q23	2.73	2.78
Q24	0.66	0.77
Q25	0.40	0.27
Q26	1.48	1.50
Q27	1.50	1.58
Q28	0.60	0.78
Q29	3.21	2.69

* times given in hours

The top ten competencies that were reported as having the largest mean teaching times were: low ropes elements and effective spotting techniques (5.26); belaying and associated components (4.15); rescue and emergency protocols (3.21); trust activities (3.15); group processing or debriefing (2.90); problem solving activities/group initiatives (2.75); set-up and take-down of high elements (2.73); program safety and operational practices (2.64); and knots appropriate to given applications (2.12).

Table 4 presents respondents' answers regarding order of presentation of different activities. The results are similar to what was found in prior study in terms of sequencing the seven adventure activities (Bisson, 1997). Acquaintance activities are presented first to allow the group to become familiar with each other, followed by the remaining activities (ice breakers, communication, problem solving, and trust which are sequenced in a manner that enables the individual and group to work together to reach their respective goals.

These activities may be communication oriented, whereas others may focus on group problem solving. Other activities are done individually, such as low and high ropes elements, and some activities are performed as an entire group (trust activities). In Table 4 each activity is ranked where it is reportedly presented in a program, followed by the number of instructors who teach the activity in that order.

Table 4. Ranking of Activity Instruction

Acquaintance Activities

Rank	Frequency	Percent
1	24	82.8
2	2	6.9
3	1	3.4
6	1	3.4
NA	1	3.4
Total	29	100

Icebreakers/Deinhibitizers

Rank	Frequency	Percent
1	3	10.3
2	22	75.9
3	1	3.4
7	1	3.4
NA	2	6.9
Total	29	100

Communication Activities

Rank	Frequency	Percent
2	2	6.9
3	17	58.6
4	5	17.2
5	1	3.4
NA	4	13.8
Total	29	100

Problem Solving

Rank	Frequency	Percent
2	1	3.4
3	3	10.4
4	17	58.6
5	5	17.2
6	1	3.4
NA	2	6.9
Total	29	100

Trust Activities

Rank	Frequency	Percent
3	4	13.8
4	4	13.8
5	13	44.8
6	5	17.2
NA	3	10.3
Total	29	100

Low Elements

Rank	Frequency	Percent
2	1	3.4
3	2	6.9
4	1	3.4
5	6	20.7
6	17	58.6
NA	2	6.9
Total	29	100

High Elements

Rank	Frequency	Percent
1	1	3.4
4	1	3.4
5	1	3.4
6	1	3.4
7	23	79.3
NA	2	6.9
Total	29	100

Approximately 64.6 % of the respondents suggested the following progressions: acquaintance activities first; icebreakers/deinhibitizers second; communication activities third; problem solving activities fourth; trust activities fifth; low ropes elements sixth; and high ropes elements seventh.

DISCUSSION

The purpose of this study was to analyze training protocols of challenge course instructors regarding the total time it takes to teach a basic course in challenge course facilitation and the time allotments of 29 predefined challenge course facilitator competencies. It was found that times allotted to teach specific facilitator competencies were often similar in length. Additionally, a common total time for a training program was discovered. Considering only six challenge course instructors run programs that are less than 40 hours in length, it would be safe to assume that a training program that is 40 hours or more is adequately teaching basic technical skills and leadership abilities.

The results obtained from this study show that the majority of trainers in challenge course programming run programs that are at least 40 hours in length. This lends support to the notion that a program covering basic challenge course facilitation techniques and skills should be at least 40 hours in length. It was reported that some training programs were longer than 40 hours. This may be due to a misinterpretation of the questionnaire or a more in-depth course covering material beyond an introductory level. Teaching times reported under 40 hours may not be covering material in sufficient detail to give facilitators a base knowledge and skill level that would enable them to provide a safe and quality program for participants, or it may be due to a misinterpretation of the questionnaire.

A typical facilitator training program reportedly spends approximately 13.5 hours on leadership based competencies. These would be skills such as processing the activities with the group; assessing the environment and participants' abilities physically and emotionally; knowing how to select activities appropriate to the group; and knowing how to modify programming based on situational circumstances and other associated skills. The remaining time would be spent learning technical competencies. Technical skills would include presenting different adventure activities, knowing how to put on a harness, setting up and taking down high element equipment; knowing how to safely and effectively spot on low elements; and belaying safely and effectively on the high elements.

Some of the 29 competencies reportedly had wide ranges of time allotments. These discrepancies may be due to the range of reported total training hours (64 hours) or as a result of misinterpreting the questions. It is important to keep in mind the novelty of the instrument used to acquire data along with the entire study in general. Further studies could be done to aid in determining what constitutes a high quality training program. Possible topics of study should focus on recertification protocols for challenge course facilitators. Another topic should be the amount of shadow hours (where new facilitators "shadow" a qualified facilitator to gain practice) a new facilitator must have before becoming qualified to run a program on his or her own.

In 1997, Christian Bisson conducted a study to determine a hypothetically correct sequence of presenting adventure activities and the effects this has on group participants. Bisson discovered that a hypothetically correct sequence of presentation would place acquaintance activities first; deinhibitizers second; communication activities third; goal setting fourth; trust activities fifth; group problem solving sixth; individual low ropes activities seventh; individual high ropes activities eighth; and an outdoor pursuit experience ninth (Bisson, 1997). To lend support to the present study, the researcher posed questions relative to Bisson's study. It was found that the results were similar in that the reported sequencing of activities for this study closely matched the study conducted by Bisson. However, the steps of goal setting and outdoor pursuit experience were not asked due to the differences in focus of the separate investigations.

A professional preparation program in outdoor adventure education leadership at the University of Quebec at Chicoutimi was developed by Bilodeau in 1987. He identified the different elements a competent leader should possess and wrote an entire program for the university. The objectives of the classes and the times it takes to cover the material are given in the project. These characteristics would possibly be helpful to future programs wishing to develop a curriculum that covers what a qualified leader should know and be able to do.

The researcher acknowledges that this is a preliminary study and would recommend that subsequent studies be performed to reinforce the findings within. Direct observations of individual programs running facilitator training

classes would be one possible avenue. One could also obtain copies of various training curricula to identify what programs are doing. Both of these studies would allow for a more in-depth examination of what trainers of challenge course facilitators are teaching in initial preparation programs.

REFERENCES

Association for Challenge Course Technology. (1998. January). Challenge course standards (2nd ed.). Purcellville, VA. ACCT.

Bilodeau, M. (1987). Professional preparation in outdoor adventure education leadership at the University of Quebec at Chicoutimi. Unpublished doctoral dissertation, University of Northern Colorado, Greeley.

Bisson, C. (1997). The effects of varying the sequence of categories of adventure activities on the development of group cohesion. Unpublished doctoral dissertation, University of Northern Colorado, Greeley.

Priest, S., & Gass, M.A. (1997) Effective leadership in adventure programming. Champaign, IL: Human Kinetics.

APPENDIX A

QUESTIONNAIRE: TRAINING PROTOCOLS OF CHALLENGE COURSE INSTRUCTORS

CHALLENGE COURSE TRAINING PROTOCOLS QUESTIONNAIRE
University of Wisconsin - La Crosse

The goal of this study is to describe typical training protocols utilized by challenge course instructors. Specific competency areas will be examined as well as the time allotted to teach the competency. Time is defined as the total amount of time allocated for instruction plus supervised practice time. This survey is interested in all aspects of a training regimen by which a person would become a safe, effective and knowledgeable challenge course facilitator.

In this study, we define training protocols as anything that is covered in a curriculum that teaches people how to become effective and safe challenge course facilitators. We acknowledge that additional "shadowing" hours may be required, however, that is beyond the scope of this study.

PLEASE READ THROUGH THE ENTIRE QUESTIONNAIRE BEFORE BEGINNING.

FACILITY Please check the appropriate response for the following questions.

1. Which type of course(s) do you train on? ____ Indoor _____ Outdoor _____ Both
2. What is the focus of your training? (Please check all that apply.)

_____ Recreational _____Therapeutic _____Educational
_____Corporate

COMPETENCIES
For the following questions answer in terms of approximate number of minutes or hours. If the question is not applicable please write NA in the blank. Time would be the sum of instruction time plus practice time.

A. AVERAGE TOTAL HOURS REQUIRED IN TRAINING PROTOCOL = _____

B. Do you teach: Time

1. Acquaintance activities (name games)? _____
2. Icebreakers (warm-up games/deinhibitizers)? _____
3. Problem solving activities (group initiatives)? _____
4. Communication activities? _____
5. Trust activities? _____
6. Low ropes elements (all spotting and spotting related activities)? _____
7. How to process or debrief? _____
8. How to accommodate persons with special needs? _____
9. Accessibility of the low and high elements? _____
10. About "Full Value Contract" or a similar way in which facilitators enable participants to respect each other? _____
11. About "Challenge by Choice" or a similar method of allowing individuals to challenge themselves? _____
12. Program safety and operational practices? _____
13. Program philosophy and established ethical practices? _____
14. Current installation practices as related to participant safety? _____
15. How to effectively assess changes in the environment which may affect participant safety? _____
16. How to modify programming based on environmental conditions? _____
17. How to select activities which prepare participants for physiological demands of the program? _____
18. How to select activities in an appropriate sequence based on assessment of the group and the needs, abilities and readiness of the individuals? _____

19. Belaying and the associated components (i.e. a climbing contract, where the climber and belayer are effectively communicating what's happening)? _____
20. How to safely use lobster claws or some form of a static / self-belay? _____
21. Knots appropriate to the given applications? _____
    Please list the types of knots you teach. _____
    _____
22. How to correctly put on and use a commercial harness / Studebaker / Swiss-seat? _____
23. How to set up and take down high elements using the specialized equipment needed (Including a 3:1 pulley and other accessible equipment)? _____
24. How to organize and administer groups on the challenge course (i.e. scheduling and associated tasks)? _____
25. How to be aware of and assess if participants are dressed appropriately for the program's activities? _____
26. About equipment specifications and care procedures? _____
27. How to effectively monitor and inspect all equipment and facilities before, during, and after use? _____
28. How to be aware of participants physical needs (hunger, thirst, fatigue, etc...)? _____
29. Rescue and emergency protocols (technical, equipment, medical and non-medical)? _____

C. If there is a difference between the total program time requirement (letter 'A' at the beginning) and the total of items 1-31, would you agree this difference is equal to the amount of undocumented time spent on management issues (bathroom breaks, water breaks, transition times etc...)?

Please circle correct response: Y / N

Other Items

Please order the following activities regarding how you present them, with one being the first thing presented. (If one or more do not apply, please leave blank.)

_____Acquaintance Activities (name games)
_____Problem Solving Activities
_____Trust Activities
_____High Elements
_____ Icebreakers (Deinhibitizers)
_____ Communication Activities
_____ Low Elements
_____ Other (Please specify)_____

If there is anything else that you do as an instructor to assist in the acquisition of skills for people who are training to become challenge course facilitators please write it down with the appropriate times.

_____
_____
_____
_____
_____

Thank you for your time and consideration in filling out this questionnaire. A copy of the results will be provided to you if you wish. Please complete the separate response form to receive the results.

Sincerely

Jeremy D. Novak
1918 State Street
La Crosse, Wisconsin 54601
Phone: 608-796-9709
Fax: 608-785-8172
E-mail: novak_j3@students.uwlax.edu

APPENDIX B

SURVEY RESULTS RESPONSE SHEET

Survey Results Response Sheet

I would like to have a copy of the results of the study. Please send them to the following address:

Name (Of Institution) _____
Address _____
City _____ State _____ Zip Code _____

Thank you for your time in completing this questionnaire. I will get a copy of the results to you as soon as the data is compiled and analyzed.

Sincerely,

Jeremy D. Novak
1918 State Street
La Crosse, WI 54601
Phone: 608-796-9709
Fax: 608-785-8172
E-mail: novak_j3@students.uwlax.edu

APPENDIX C

FOLLOW-UP LETTER

August 6, 1999

Jeremy D. Novak
PO Box 521
La Crosse, Wisconsin 54602

To Whom It May Concern,

In January 1999, at the Association for Challenge Course Technology International Conference and Symposium in San Antonio, Texas you completed a questionnaire dealing with time allotments of teaching various challenge course facilitator competencies. Thank you for completing and returning this questionnaire.

Along with the completion of the survey, you requested that I send results of the study. Enclosed with this letter are those results. It is my wish that these results can be of some constructive use in your program. If you have any questions or concerns regarding the results of the study please feel free to contact me anytime at (608)784-9985 or e-mail at novak_j3@students.uwlax.edu.

Thank you again for your time and effort in completing this questionnaire.

Sincerely,

Jeremy D. Novak
PO Box 521
La Crosse, Wisconsin 54602
(608) 784-9985
novak_j3@students.uwlax.edu

enclosure

APPENDIX D

REVIEW OF RELATED LITERATURE

REVIEW OF RELATED LITERATURE

Adventure Education

The field of adventure education is defined as a focus on interpersonal and intrapersonal skills utilizing adventurous activities in a way that provides a group or an individual with compelling tasks to accomplish (Priest & Gass, 1997; Priest, 1990). The purpose of adventure education is to induce change and growth in the participants through activities that the participants perceive as involving high risk. Adventure education occurs as a process, and there are several characteristics of the process. These characteristics are: the learner, or the person being affected; unfamiliar physical and social learning environments; characteristic problem-solving tasks; lessons learned through adaptive dissonance; and a leader who plays a variety of roles from translator, initiator, trainer, maintainer, authority guardian, and exemplar (Priest & Gass, 1997).

The applications of adventure education are found in four distinct realms: recreation, education, group development, and therapeutic. A recreational focus aims to have fun, learn a new skill, and hopefully change the way people feel. Education based programming focuses on changing the way people think through generating enrichment, teaching concepts, or creating awareness. Developmental (or corporate training) programming targets changing the way people behave by increasing function and positive interactions. A therapeutic

focus aims to change the way people behave by decreasing dysfunctional behavior and negative actions by presenting beneficial alternative, more positive, and cooperative behaviors (Priest, 1995). Numerous studies have been done which demonstrate the potential benefits of adventure education such as increasing physical fitness, decreasing socially deviant behaviors, enabling people to succeed in various capacities, and developing trust among coworkers (Constantine, 1994; Nyhus, Napper-Owen, & Phillips, 1996; Priest, 1995; Priest, 1996; Priest & Montelpare, 1995; Steffen, Cross, Stiehl, & Smith, 1994).

There has been increased interest in outdoor adventure pursuits for the past century. Due to this interest, professional preparation programs have responded accordingly offering people opportunities to develop and refine their skills in these activities. Unfortunately, the underlying purposes and benefits of outdoor adventure activities seem to be misunderstood. Darst and Armstrong (1980) suggest that the negative reaction to adventurous activities may be due to a reluctance to assume legal responsibility for the participants of high-risk activities. Despite this reluctance, the number of participants in high-risk adventure activities continues to increase which gives support to the need for high-quality education programs to train people in the necessary skills.

Outward Bound

Adventure education has been used in a wide variety of capacities since it became a formally accepted means of education through the Outward Bound program. Outward Bound was founded in 1941 in Aberdovey, Wales by Kurt

Hahn and Lawrence Holt as a program for youth destined for the armed services or other physically demanding careers (Miner, 1990). Initially, young men participated in the program which consisted of various activities such as orienteering, search and rescue training, ocean and mountain expeditions, an obstacle course, and service to the community over a month long period of time. Outward Bound is a term used by sailors as they head out to sea on a voyage. They were considered "outward bound". Kurt Hahn was a German educator exiled to Britain by the Nazi's for his open stance of opposition against the Nazi movement. He had started prosperous alternative schools in Germany and when he became established in Britain he established contacts to form similar schools there. Lawrence Holt was a director of a merchant shipping line who was concerned about the rate of merchant seaman dying after their ships were torpedoed by German U-boats (Miner, 1990). He believed that they were not being properly trained and together with Hahn developed a curriculum that would strengthen the inner resolve of the men before shipping out.

Although Holt had different motives than Hahn for establishing a school, their principles were on parallel planes and moving in the same direction. Hahn was first an educator and his desire was to instill in young people righteousness, a sense of duty to fellow people, and active citizenship (Richards, 1990). He also believed that given the right influences young people could be encouraged to act in a way that was consistent with his beliefs. However, it was his belief that because of six societal declines, youth were not attaining their potential as

humans. Hahn defined these six social diseases as: the decline of fitness; initiative and enterprise; memory and imagination; skill and care; self-discipline; and compassion (Richards,1990).

The present day challenge course is a continuation of the Outward Bound obstacle course. The obstacle course was intended to mimic a ship's rigging at sea, thereby training the students for possible conditions they may encounter while on their ocean expedition (Priest & Gass, 1997)

When Outward Bound moved to the United States in the early 1960's many of the same principles and activities went along with it. One of these was the obstacle course. Several other organizations spawned from the Outward Bound movement. One of these was the National Outdoor Leadership School.

National Outdoor Leadership School

Paul Petzoldt was the chief mountaineering instructor for Colorado Outward Bound School when it first started. After several years working for Outward Bound, Petzoldt was concerned about the lack of competent and qualified instructors that were taking people into the wilderness. He conceived of a program that would be geared towards teaching people outdoor skills, leadership development, minimum impact conservation techniques, and expedition dynamics (Bachert, 1990). Petzoldt, along with help from Tap Tapley formed and ran the National Outdoor Leadership School (NOLS) in 1965. The school was based out of Lander, Wyoming, and was successful from the beginning graduating 83 people in the first summer. Since then, the school has

expanded considerably offering courses varying in length from 2 weeks to a full semester on five continents. NOLS continues to be a prominent and respected organization in the field of adventure education. In the 1970's, Petzoldt again had the opportunity to begin something new and exciting. He established another organization in association with several universities that would give people an outdoor educator certification. This organization was called Wilderness Education Association (WEA).

Wilderness Education Association

The idea of forming the Wilderness Education Association came from several different angles. One was the expertise of Paul Petzoldt, who again recognized the need for establishing a connection between institutions of higher education and the field of outdoor/adventure education. He, along with Dr. Frank Lupton of the University of Western Illinois began taking students into the Wyoming Wind River mountain range with the idea of giving them an experience that would be unequaled, yet still be in accordance with the university's established curriculum. These university related expeditions eventually led to a meeting in 1977 among several people who were directors or administrators in outdoor education centers. The topic of a wilderness leader certification program was the focus of the meeting and as a result the Wilderness Education Association was formed. The purpose of the Wilderness Education Association is to improve the quality of the wilderness and wilderness experience through the education of users and the certification of outdoor leaders (Lupton, 1990).

Ultimately, the goal was to teach basic competencies so the wilderness user will have a safe, enjoyable experience with little impact on the environment (Lupton, 1990).

The Association developed an 18 point curriculum that certifies students on three different levels, and is the only program in the country that offers such a certification (Priest & Gass, 1997). The skills level states that a person is certified to go into the wilderness with a group, a leader level certification shows that a person is qualified enough to take a group into the wilderness, and an instructor's certification qualifies a person to instruct others in various outdoor skills. The Association was a step in the direction of certification of outdoor leaders, however, the certification is not recognized by any government agency at this time.

Project Adventure

Another organization that is grounded in Outward Bound is Project Adventure (PA). In 1971 a group of people who had backgrounds in Outward Bound began the process of implementing the principles and ideas of Outward Bound into a standard high school curriculum. Jerry Pieh, the high school principal of Hamilton-Westham High School in Hamilton, Massachusetts and Gary Baker wrote a proposal to the federal Office of Education in an attempt to gain support in mainstreaming the Outward Bound process in a secondary school setting (Prouty, 1990). All of the high school disciplines were involved in

the process, however, the main thrust of the project took place in the tenth grade physical education curriculum.

After a period of three years, the PA team would evaluate the results of their program. The whole process worked so well that PA became incorporated, and grew to become the largest organization to help others use adventure education as a catalyst for personal/professional growth and change (Prouty, 1990).

Through PA curricula the tenth grade physical education class went through a sequence of warm-ups, trust building activities, initiative problems, and low and high ropes course elements. Initially, PA's focus was in the education realm and as a product of this educational focus, goals were developed that would compliment this aim. The two primary goals of the curriculum were to have the students solve problems in a group more creatively and efficiently; and to demonstrate that preconceived barriers to what was possible often held the group as well as individuals from increasing achievement (Prouty, 1990). Teachers in different classes reinforced these goals in their classrooms, thereby extending adventure activities and the principles learned from them into the entire high school curriculum.

As PA grew and expanded it's focus, four specific learning goals were developed to blanket the different focuses of various groups. These learning goals are: increase participants' sense of personal confidence; increase mutual support within a group; develop an increased level of agility and physical

coordination; and develop increased joy in one's physical self and in being with others (Rohnke, 1986).

Presently, the PA staff performs a variety of duties. The design and construction of challenge courses, as well as training people to successfully program groups on the challenge courses is probably what PA is most well known for. Project Adventure has played a significant role in the acceptance of adventure education as a legitimate means of education, particularly in the use of challenge courses as a medium for educating people.

Definition of Challenge Courses

On a physical level, challenge courses (sometimes referred to as ropes courses) consist of an aesthetically designed series of ropes, cables, and logs combined is such a way as to simulate challenges that might be found in a natural setting (Rohnke, Tait, & Wall, 1997). A challenge course experience involves various activities that are planned around the designed obstacles to accomplish set goals that the group has made at the start of the experience. Some of the activities directly involve the large obstacles, whereas others are carried out with minimal or no additional props aside from the participants. Initially, most challenge courses were built outside using trees and ropes. There has been a recent development in the use of large telephone poles and industrial grade aircraft cable which considerably increases the safety of the courses. Challenge courses can also be built inside, thus allowing for programs in climates that are not conducive to year-round outside programs, to continue operations

throughout the year. These indoor courses are constructed using the building beams and girders as anchors rather than poles or trees.

Rationale for Challenge Courses

Challenge courses are used in a variety of areas with different objectives. The recent growth of challenge courses has arguably been in the field of adventure therapy. However, physical education has been the driving force for the challenge course industry since 1971, when Project Adventure built a challenge course at Hamilton-Wenham Regional High School in Massachusetts. Project Adventure has been the leader in the industry since its inception. The first course was designed with a tenth grade physical education class as the focus.

The challenge course industry and physical education have been closely linked for nearly 30 years. There is debate to whether or not high-risk activities such as challenge courses should be a part of a physical education curriculum. Some educators believe that it should be incorporated for the challenges it presents, both personal and in a group setting. Other educators believe that it is not appropriate for younger aged students, but is more acceptable in a middle school or high school class. Still others do not believe that high-risk activities should be incorporated into any aspect of a physical education curriculum (Journal of PERD, 1995).

Moore (1986) claims that adventurous activities should be a part of the elementary school physical education curriculum for the following reasons: all

participants are active regardless of skill level, students find success in challenging activities, and students experience a different activity in a non-competitive atmosphere. In the high school physical education class. Latess (1986) advocates introducing high-risk activities to students. He also supports the use of physical education activities in other disciplines, stating that "...(adventure) activities facilitate an interdisciplinary approach to learning (p.56)."

In 1992, Constantine conducted a study that aimed to determine the effects a ropes course experience would have on perceived self-efficacy. The results suggest several things. Constantine's study found that the self-efficacy of students who participated in the ropes course experience had a higher ranking than students in a weight training control group. Nyhus, et al. (1996) found that the physical self-efficacy of college students was significantly raised through participation in an adventure course experience. Steffen, et al. (1994) found that the self-esteem of at-risk college students was increased through an 8 week adventure program consisting of low and high ropes elements. In a study comparing the effects of ropes courses and group initiatives to develop an organization's trust, Priest (1996) discovered that both were effective at raising participants' overall trustworthiness.

Also, relative to fitness and wellness, ropes courses have a positive effect. In a study looking at heart rates, Priest and Montelpare (1995) found that maximum heart rates of 68 participants ranged from 126 to 197. These results

suggest that ropes courses may have fitness benefits if all safety precautions are taken and people with heart problems are identified and observed carefully.

The potential benefits of activities associated with challenge courses are well documented. However, if effective programming is to occur, competent and qualified leaders or facilitators must be in positions of leadership.

Professional Preparation of Outdoor Adventure Educators

In an article by Henderson (1988) the subject of establishing adventure education as an educational process that has distinct merit is addressed. Henderson stated that in order to convince the mainstream educational system that adventure education has legitimacy, three things must occur. First adventure educators must assert that adventure experiences can supplement traditional subjects and is a valuable curriculum enhancer. Second, the outdoor adventure experience itself can foster appreciation and responsibility for natural settings. Third, the adventure experience gives the learner a personal growth opportunity by exposing one to different learning opportunities that can be transferred to other areas of life (pp.15-16).

Henderson (1988) also gives several suggestions pertaining to training outdoor adventure leaders. First, technical skills should be taught. This includes rope work, wilderness travel, and initiatives (p. 16). Along with the training goes the experience with these activities to acquire judgement skills necessary to safe and satisfactory programming. Second, interdependent with the technical skills, is leadership ability. Leadership abilities would include the skill needed to

evaluate students' physical and emotional abilities, and the tools to effectively work with people on an individual basis, as well as in a group setting (p. 16). Leadership skills should be flexible to allow for different circumstances that may arise throughout the course of a program. Individual and social dynamics are constantly in flux and must be treated accordingly.

Third, a well developed knowledge of curriculum design will ensure the right activity for the proper physical and social setting (p. 17). Just as a carpenter needs to have many tools in his or her tool box to do a job well, so must a teacher have a wide assortment of activities to make the experience educational and positive. Lastly, a person should be trained in the experiential methodology or the theoretical foundation of adventure education (p. 17). Such training will hopefully aid the educator in acquiring a more complete understanding of his or her actions.

Studies have been conducted at various universities that demonstrate what physical education majors are being taught in regards to adventure activities. Uhlendorf (1988) found that only 44% of physical education preparation programs offered outdoor adventure courses to the majors in the program. Several organizations, including the American Alliance for Health, Physical Education, Recreation, and Dance (AAPHERD); the College and University Physical Education Council (CUPEC); and the National Council for the Accreditation of Teacher Education (NCATE) state in their physical educator training guidelines what graduates in the profession should know and be able to

do. These guidelines include the ability to demonstrate sufficient skill and knowledge of outdoor adventure activities, along with the necessary skills to plan, implement, and assess lessons in the area of outdoor adventure activities (Uhlendorf, 1988).

In addition to recognition from these organizations, the National Association for Sport and Physical Education (NASPE) supports outdoor adventure pursuits in a physical education curriculum. It is clearly stated in the national benchmarks that outdoor pursuit skills should be offered at an eighth grade level as an introduction. At the tenth grade level students should demonstrate basic competencies in outdoor adventure activities (NASPE, 1991).

Gass and Williamson (1995) address the lingering debate of program accreditation versus individual certification. The authors cite several studies where professional opinions regarding program accreditation or individual certification were gathered. It was reported in these studies that 62% of those surveyed preferred program accreditation rather than individual certification. A similar study showed that 70% of those surveyed preferred program accreditation instead of individual certification.

The authors give four reasons for this preference. First, accreditation allows programs to achieve standards without losing flexibility of how those standards are met. Second, a systemic view of the process of adventure programming is taken rather than a step-by-step categorical one. Third, program accreditation encourages ongoing improvement through internal and external

review. Lastly, accreditation assures clients, agencies, and resource managers that a program has clearly defined and appropriate objectives and maintains conditions under which their achievement can be reasonably met (p. 23).

According to Gass and Williamson (1995), for a program to become accredited, it must successfully follow six steps. These steps are: 1) self-evaluation and training, 2) internal evaluation and training, 3) learning from knowledgeable external sources, 4) obtaining outside consultation, 5) outside peer review, and finally 6) accreditation (p. 23).

It is likely that the debate will continue regarding accreditation versus certification. However, the more important issue remains that the adventure education profession must be adequately training people to assume roles as effective leaders. If comprehensive training is overlooked or underrated, the future of the profession is compromised. With the ever-expanding growth of the field of high-risk, high-adventure activities, it is imperative that people be trained to experience these activities safely.

REFERENCES

Bachert, D. (1990). Historical evolution of NOLS: The National Outdoor Leadership School. In J.C. Miles & S. Priest (Eds.), Adventure education (pp. 83-88). State College, PA: Venture.

Constantine, M. (1992). The effects of a ropes course experience on perceived self efficacy: A study designed to examine the effects of an adventure program. Pennsylvania Journal of Health, Physical Education, Recreation and Dance, 63 (2), 10.

Darst, P. W., & Armstrong, G. P. (1980). Outdoor adventure activities for school and recreation programs. Prospect Heights, IL: Waveland.

Gass, M. A., & Williamson, J. (1995). Accreditation for adventure programs. Journal of Physical Education, Recreation, and Dance, 66(1). 22-27.

Henderson, B. (1988). Professional training for adventure-based education. Canadian Association of Health, Physical Education, and Recreation, 54(3), 14-17.

Journal of Physical Education, Recreation, and Dance. (1995). Issues: Should elementary and secondary school physical education programs include high risk activities such as rock climbing and ropes courses? 66(4), 6-11.

Latess, D. R. (1986). Physical education and outdoor adventure: Do they belong together? Journal of Physical Education, Recreation, and Dance, 57(5), 54-56.

Lupton, F. (1990). WEA History. In J.C. Miles & S. Priest (Eds.). Adventure education (pp. 89-95). State College, PA: Venture.

Miner, J. (1990). The creation of Outward Bound. In J.C. Miles & S. Priest (Eds.), Adventure education (pp. 55-66). State College, PA: Venture.

Moore, G. K. (1986). Elementary physical education: Involving outdoor adventure activities. Journal of Physical Education, Recreation, and Dance, 57(5), 61-63.

Nadler, R., & Luckner, J. (1992). Processing the adventure experience. Dubuque, IA: Kendall/Hunt.

National Association for Sport and Physical Education. (1991). The physically educated person: Outcomes and benchmarks of quality education programs. Reston, VA: Author.

Nyhus, R. A., Napper-Owen, G., & Philips, D. A. (1996). The effect of an adventure education experience on the physical self-efficacy of college students [Abstract]. Research Quarterly for Exercise and Sport, 67(1), A86.

Priest, S. (1990). The semantics of adventure education. In J.C. Miles & S. Priest (Eds), Adventure education (pp. 113-117). State College, PA: Venture.

Priest, S. (1995). Challenge course facilitator competence. The Journal of Experiential Education, 18(3), 158-160.

Priest, S. (1996). Developing organizational trust: Comparing the effects of ropes courses and group initiatives. The Journal of Experiential Education, 19(1), 37-39.

Priest, S., & Gass, M.A. (1997). Effective leadership in adventure programming. Champaign, IL: Human Kinetics.

Priest, S., & Montelpare, W. (1995). Prediction of heart rates on a ropes course from simple physical measures. The Journal of Experiential Education, 18(1), 25-29.

Prouty, D. (1990). Project Adventure: A brief history. In J.C. Miles & S. Priest (Eds.), Adventure education (pp. 97-109). State College, PA: Venture.

Richards, A. (1990). Kurt Hahn. In J.C. Miles & S. Priest (Eds.). Adventure education (pp. 67-74). State College, PA: Venture.

Rohnke, K. (1986). Project Adventure: A widely used generic product. Journal of Physical Education, Recreation, and Dance, 57(5), 68-69.

Rohnke, K., Tait, C., & Wall, J. (1997). The complete ropes course manual (2nd ed.). Dubuque, IA: Kendall/Hunt.

Steffen, J., Cross, R., Stiehl, J., & Smith, M. (1994). Adventure education for at-risk college students [Abstract]. Research Quarterly for Exercise and Sport, 65(1), A83.

Uhlendorf, K.J. (1988). An investigation of outdoor adventure leadership and programming preparation in physical education baccalaureate degree programs. Unpublished doctoral dissertation, University of North Carolina at Greensboro.

Uhlendorf, K. J., & Gass, M. A. (1992). The preparation of physical education majors in adventure activities. Physical Educator, 49(1), 33-38.