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THE EFFECTS OF A PUBLIC SCHOOL SYSTEM'S ONE DAY ADVENTURE EXPERIENCE

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Priest (1990) has defined adventure education as being concerned with two relationships, the interpersonal (relationships with others) and the intrapersonal (self-concept). According to Priest (1990), the "premise of adventure education" (p.114) is that change takes place in individuals and groups due to their participation in challenging problem-solving tasks. These activities may cause positive changes that help participants experience personal growth and development, ultimately enabling them to overcome limits that are self-imposed.

This paper reports on a study that investigated the effects of a public school system's one-day adventure experience on students' self-reports of life effectiveness. According to Neill, Marsh & Richards (1997), life effectiveness is defined as, "the psychological and behavioral aspects of human functioning which determine a person's effectiveness or proficiency in any given situation". In the formulation of Life Effectiveness, Neill et al. (1997) utilized Williams, Eyring, Gaynor & Long's' (1991) conceptual definition of effective life management:

One's life is well managed—one believes s/he is doing those things that make the best use of his or her resources. Sh/e believes that s/he has opportunities for self-improvement, focuses on the present, makes good decision, solves problems efficiently, achieves desired goals, maintains a balance among the important areas of life, does mainly what s/he enjoys, and is managing life with increased effectiveness (p.168).

LITERATURE REVIEW

Conrad and Hedin (1981), Burton (1981), Gillis and Cason (1994) and Hattie, Marsh, Richards and Neill (1997), authors of extensive reviews of literature, found positive effects on

the social, psychological, and intellectual development of participants. These authors also summarized the research in the field by stating more investigation is needed into adventure programs such as type of activities, group size, instruction, and studies to analyze the components of programs to make them more efficient and effective.

Hattie, et al. (1997) conducted a meta-analysis of ninety-six studies in the field of adventure education from 1968 to 1994. They concluded that the many outcomes of adventure studies could be categorized into six broad outcomes: leadership, self-concept, academic achievement, personality, interpersonal relations and "adventuresomeness." All of the outcomes except adventuresomeness had positive effects maintained over time.

Additionally the researchers reported that the effect of adventure programs (2 to 30 days in length) might be maintained over time, even up to 24 months. Supporting this finding, they indicated that "substantial follow-up effects are unlike most educational programs, where the typical follow-up effects are negative, or at best zero, and there is quick fading" (p. 57).

Neill (1999), building on recent meta-analysis conducted by the aforementioned researchers, found moderate overall effects for outdoor education programs. He studied and analyzed longitudinal life effectiveness data from over 3,000 participants in adventure programs ranging from 2 to 26 days and found that longer programs and programs with adults tended to have a greater impact. Analysis of long-term outcomes indicated retention of personal development gains at around 5 months with some loss of those benefits evident at 12 months. Neill summarized his study by stating that "overall, this large empirical study confirms many of the findings from recent meta-analytic

work on outdoor education programs and contributes more detailed information about the sources of variability in personal development outcomes" (p.1).

In regard to the one-day adventure experience for school age students, no studies have been reported. Reina and Priest (unpublished and under review) have reported on a one day corporate adventure training and found positive effects in trust development as measured by the Interpersonal Trust Inventory. Klint and Priest (in press) observed and interviewed eleven subjects involved in a single day corporate adventure training program. They interviewed participants after the final debriefing, four days follow-up, and four months later. This qualitative study used triangulation, and found that the group, in their brief experience, realized better teamwork, improved interactions, increased trust, and effective communication.

Description of Adventure Program in the Study

Beyond the Limits is an adventure education program utilizing a challenge ropes course and classroom experiential activities. Beyond the Limits is owned and operated by the Wicomico County Board of Education located in Salisbury, Maryland on the Eastern Shore of Maryland. Collaboration exists between the Wicomico Board of Education and Salisbury State University.

The Full Value Commitment is part of the bedrock of Beyond the Limits. The Full Value Commitment is based on the use of contracting which is commonly used in group therapy to help people achieve their goals (Corey and Corey, 1987). Schoel (1988) states that Full Value is a positive term for a social contract that helps the group build a safe place. Beyond the Limits students are expected to follow the Full Value Commitment which includes: giving 100% of effort, respecting each other, giving and receiving feedback, and following the safety rules of the intervention. This four-step commitment provides the structure and guidelines for all activities. During Beyond the Limits, the commitment is reinforced through a carefully planned curriculum of group and individual initiatives.

The most commonly used facilitation style at Beyond the Limits is debriefing the experience (Gass & Priest 1987), in which a discussion analyzing group and individual actions takes place after the challenge ropes course activity. This discussion is group-centered not leader centered and affords group members the opportunity to learn from reflection.

Beyond the Limits' goals are to develop students' intrapersonal and interpersonal skills through adventuresome experiences on the challenge ropes course and inside the classroom.

PROBLEM STATEMENT

In 1990 the Beyond the Limits program served approximately 100 students, and in 2000 the program will serve approximately 4500 students, teachers and adults. In 1990 the program served five schools encompassing one group per school, and in 2000 the program will serve 23 schools and 15 corporate/non-profit groups encompassing approximately 150 different groups. This study was undertaken because of this growth and the shift of the program focus to the one-day and multiple-day (throughout students' school careers) Beyond the Limits' experiences. The aim of this research was to determine the effectiveness of the one-day adventure program and also the effect of multiple one-day experiences. For evaluative purposes, effectiveness is determined by significant improvement on the Life Effectiveness Questionnaire (LEQ-H) instrument.

METHODOLOGY

Measures

The Life Effectiveness Questionnaire (LEQ) was developed by Neill, Marsh and Richards (1997) to measure personal changes likely to occur as a result of adventure education programs. The authors developed a self-report instrument that measures key areas of life effectiveness that may be targeted by adventure programs. Dimensions include Achievement Motivation, Active Initiative, Emotional Control, Intellectual Flexibility, Self-Confidence, Social Competence, Task Leadership and Time Management. Neill (1997) describes the development of the LEQ as the next step in the historical

EFFECTS OF PUBLIC SCHOOL ONE-DAY ADVENTURE PROGRAM

development of psychometrically developed instrumentation used in adventure education studies.

Neill (1997) states that in the 1970s instrumentation such as the Tennessee Self-Concept Scale and Rotter's Locus of Control were used. These instruments were limited due to the fact they were not designed to measure change that could occur in an adventure program. In the 1980s, Marsh's multidimensional self-concept questionnaires (SDQ's) were developed. These questionnaires were linked more closely to adventure programs, included larger sample sizes and used more rigorous methodology, such as truncated time series designs. Marsh's SDQ instruments were primarily designed for assessment purposes, not necessarily developmental change. So, the authors developed an instrument to measure personal changes due to adventure programs. Based upon a review of the literature, Neill et al. (1997) identified independent concepts relating to potential life effectiveness domains. Neill et al. (1997) sought to develop an instrument that would provide maximum information in as short a time as possible and still be sensitive to change. They wanted the instrument to be relevant to adventure program aims and the broad range of skills necessary for successful living (Neill, 1997). Confirmatory factor analysis was conducted on the original 64-item questionnaire yielding the current 24 item, eight-factor model.

The eight sub-scales (Table 1) have similar relations with the variables they measure for males and females and all age groups. Alphas for the sub scales range from .83-.88, and test-retest correlations are .59-.81. Neill et al. (1997) note that the test-retest correlation was a low estimate because the retest was conducted at the completion of Outward Bound or similar programs which is expected to have affected responses. The eight scales are represented by three questions each. Students respond on an eight-point scale: False (not like me) to True (like me).

The instrument is written for a wide range of participants (e.g. people with learning disabilities, people without English as their first language, school children, corporate managers, etc.)

and takes approximately ten minutes to complete (Neill, 1997).

Procedure

During the summer, the faculty of Salisbury State University Social Work Department and staff of the Beyond the Limits Program met to plan the intervention and the research study. Permission was received from James Neill to use the LEQ-H, the Wicomico County Board of Education to conduct the research in their schools, and the teachers and administrators of the schools who would be directly involved in the research. Finally, parent permission to participate in the research study as well as the adventure program was obtained.

Students were administered the LEQ-H pre-test prior to participating in the intervention on the day of the experience. Instructions were read to all participants, including item and response examples. For those individuals reporting difficulty in reading or understanding parts of the instrument, assistance was given. A LEQ-H post-test was administered 30 days following the experience in the students' classroom.

For the statistical analyses, the Statistical Package for the Social Sciences (SPSS) was used. This was a quasi-experimental study that used paired t-tests to analyze the data for pre and post tests' group means. Comparison of pre-test LEQ-H for first time versus prior participants was analyzed with independent t-tests.

RESULTS

One hundred students participated in this study. Subjects' age ranged from 10 to 18 years. ($x=12.7$ years.), and 54% ($n=54$) were female. Racial composition of the sample was 78% ($n=78$) Caucasian, 15% ($n=15$) African-American, and 7% ($n=7$) other. This was a first time Beyond the Limits experience for seventy-five percent ($n=75$) of the subjects. The remaining subjects with prior Beyond the Limits experience had participated in the program an average of 2.4 times, with a range of 1 to 6 times.

After the Beyond the Limits experience, students scored significantly higher at follow-up on the LEQ-H (Table 2). Scores were also significantly higher for the Time-Management,

TABLE 1
LEQ-H Sub-Scales and Definitions

Sub-Scale	Definition & Example of Question Asked
Active Initiative	The extent to which the individual likes to initiate action in new situations. I like to be an active "get into it" person.
Achievement Motivation	The extent to which the individual is motivated to achieve excellence and put the required effort into action to attain it. I try to do the best I possibly can.
Emotional Control	The extent to which the individual perceives he/she can adapt his/her thinking and accommodate new information from changing conditions and different perspectives. I can stay calm in stressful situations.
Intellectual Flexibility	The extent to which the individual perceives he/she can adapt his/her thinking and accommodate new information from changing conditions and different perspectives. I am adaptable and flexible in my thinking and ideas
Self-Confidence	The degree of confidence the individual has in his/her abilities and the success of their actions. I know I have the ability to do anything I want to do.
Social Competence	The degree of personal competence and self-perceived ability in social situations. I am open to new ideas.
Task Leadership	The extent to which the individual perceives he/she can lead other people effectively when a task needs to be done and productivity is a primary requirement. I can get people to work for me.
Time Management	The extent that an individual perceives he/she makes optimum use of time. I plan and use my time efficiently

Task-Leadership, and Emotional-Control sub-scales. Additionally, students who reported prior Beyond the Limits' experience at baseline scored higher on total LEQ-H scores and all of the sub scales (See Table 3).

Limitations

The findings and discussion should be considered in light of the following study limitations. First, there may be a significant selection bias in that not all schools in the jurisdiction were considered for study participation. Furthermore, among those schools that were con-

sidered, classes whose teachers were considered "user-friendly" to the study were recruited. The study was dependent upon teacher cooperation to administer and collect parent permission forms and follow-up data.

Secondly, the questionnaires were administered by the Beyond the Limits facilitators and were self-report of self-perception. Our study currently lacks an objective criterion to measure proposed change impacted by the intervention.

EFFECTS OF PUBLIC SCHOOL ONE-DAY ADVENTURE PROGRAM

TABLE 2
Comparison of Pre- and Post-test Mean LEQ Scores

Scale	Pre-Test Score			Post-Test Score	
	N	Mean	SD	Mean	SD
LEQ Total Score	95	159.47	20.60	162.89**	20.60
Sub-Scale					
Time Management	100	18.17	3.90	19.06**	4.20
Social Competence	99	19.06	3.69	19.96	1.33
Achievement Motivation	100	21.55	2.67	21.38	3.06
Intellectual Flexibility	100	20.11	2.86	20.45	3.28
Task Leadership	99	18.53	4.01	19.61***	3.47
Emotional Control	100	18.32	4.09	19.13*	3.93
Active Initiative	97	21.30	3.36	21.31	3.42
Self Confidence	100	21.41	2.73	21.48	2.96

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

TABLE 3
Comparison of LEQ-H Mean Scores for First-time vs. Prior Participants on Pre-Test

Scale	First-time Participants			Prior Participants		
	n	Mean	SD	n	Mean	SD
LEQ Total Score	73	156.36	21.94	25	168.72**	12.52
Sub-Scales:						
Time Management	75	17.84	4.04	25	19.16	3.33
Social Competence	75	19.46	3.82	25	21.48*	2.75
Achievement Motivation	75	21.10	2.85	25	22.88**	1.42
Intellectual Flexibility	75	19.77	2.89	25	21.12*	2.55
Task Leadership	74	18.01	4.09	25	20.08*	3.40
Emotional Control	75	17.96	4.15	25	19.40	3.79
Active Initiative	75	20.93	3.61	25	22.48*	2.02
Self Confidence	75	21.17	2.93	25	22.12	1.92

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

DISCUSSION

The results are quite promising in regard to the one-day adventure program. After 30 days, the total LEQ-H score was significantly different, and three sub-scales showed significant differences (time management, emotional control, and task leadership). Neill, (1999) in a study with over 3000 participants in a variety of Australian adventure programs, found larger effect sizes in the same sub-scales as the one-day study. Consistent with longer interventions (Marsh, Hattie, Richards, & Neil 1997; Cason & Gillis 1994), it appears that the one-day adventure intervention has an impact on students' development.

The aim of this study was to research the one-day adventure experience and the use of the multi-dimensional self-report questionnaire, the LEQ-H. This instrument was specifically developed to be used with outdoor adventure programs, and it was designed to be sensitive to changes that can occur from an adventure experience. Another aim of the study was to investigate students who had previous adventure experience with Beyond the Limits during their school career. The study found that these students showed a higher LEQ-H pre-test score than first-time participants. This is potentially encouraging because the possibility exists of residual effect of multiple one-day experiences, and this may lead to greater long-term effects when compared to a one-day program or a consecutive-day program that are traditionally used in the adventure field. This finding must also be considered in regard to the limited control and to the possibility that students might rate themselves higher about any fun, challenging activity that they had previous experience with.

In this research study the school system and university collaborated, allowing the research to be done effectively. The positive relationship that has been built between Salisbury State University, Beyond the Limits and the Board of Education may be a model for other adventure programs.

Another practical issue to consider is how to fit the research study into instructional time. One of the strengths of the LEQ-H is that in a short time (10-15 minutes), much information can be attained.

Future studies need to incorporate some kind of real-world measure, in addition to self-reports, into their design. Real-world measures could be school record data and demographics that could be analyzed.

The one-day adventure program is a widely used model by challenge course practitioners. This study has provided data towards supporting the claim that this experience is effective in regards to student development.

REFERENCES

- Conrad, D., & Hedin, D. (1981). National assessment of experiential education: Summary and implications. In J. Kielsmeier & R. J. Kraft (Eds.), *Experiential learning: In schools and higher education*. Dubuque, IA: Kendall-Hunt.
- Corey, M. S., & Corey, G. (1987). *Groups: Process and practice*. Belmont, CA: Brooks/Cole.
- Eagle, H. (1999). Long-term differences between participants and non-participants in "Beyond the Limits" adventure education program. *Dissertation Abstracts International*, (presently being published).
- Gass, M., & Priest, S. (1997). *Effective leadership in adventure programming*. Champaign, IL: Human Kinetics.
- Gillis, H. L., & Cason, D. (1994). A meta-analysis of outdoor adventure programming with adolescents. *Journal of Experiential Education*, 17, 40-47.
- Hattie, J.; Marsh, H. W.; Neill, J. T., & Richards, G. E. (1997). Adventure education and Outward Bound: Out-of-class experiences that make a lasting difference. *Review of Educational Research*, 67, 43-87.
- Klint, K. A. & Priest, S. (in press). Qualitative research on the transfer effectiveness of a corporate adventure training program. *Journal of Adventure Education and Outdoor Leadership*.
- Neill, J. (1999) Personal development outcomes of outdoor education programs. Poster presented to the 11th Australasian Human Development Conference, Sydney, Australia, July 8-10, 1999.
- Neill, J., Marsh, H., & Richards, G. (1997). The life effectiveness questionnaire: development and psychometrics. Unpublished article from James Neill, Outward Bound, Australia.

EFFECTS OF PUBLIC SCHOOL ONE-DAY ADVENTURE PROGRAM

Priest, S. (1990). The semantics of adventure education. In J. C. Miles & S. Priest (Eds.), *Adventure Education* (pp. 113-119). State College, PA: Venture.

Reina, D., & Priest, S. (in review). The role of touch in developing interpersonal trust. *Journal of Experiential Education*.

Schoel, J., Prouty, R., & Radcliffe, P. (1988). *Islands of healing*. Hamilton, MA: Project Adventure.

Williams, R. L., Eyring, M., Gaynor, & Long, J. D. (1991). Development of views of lifescale. *Psychology and Health*, 5, 165-181.

Wurdinger, S. D. (1995). *Philosophical issues in adventure education*. Dubuque, IA: Kendall-Hunt. ☞

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