Developing Life Effectiveness Through Adventure Education: The Roles of Participant Expectations, Perceptions of Empowerment, and Learning Relevance

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The processes behind many adventure education programs remain poorly documented, and how development is fostered through adventure is not well understood. While a number of theory-based articles do exist, little empirical research has been available to influence experiential education program design. This study explores the roles that participant pre-program expectations, on-program perceptions of empowerment, and learning relevance play in the development of life effectiveness through an adventure education program. The path analyses supported the hypothesized role of perceived personal empowerment as a mediator between participant expectations and the development of life effectiveness. The hypothesized mediating role of perceived learning relevance was not supported. Implications for program design and future research on the adventure education process are discussed.

Keywords: Adventure education, Life effectiveness, Empowerment
Despite several recent attempts to understand the developmental process believed inherent in adventure-based experiential education programs, the way in which participant development occurs on such programs is not well understood. While a number of people have stressed the importance of understanding programmatic processes (e.g., Allison & Pomeroy 2000; Ewert, 1989), relatively little research-based guidance is available to influence experiential education program design.

One recent attempt to empirically dissect the adventure experience (Sibthorp, 2003) proposed that participant characteristics (e.g., expectations, motivation, age, gender) are not directly related to development on adventure programs, but rather, the impact of these participant characteristics is mediated by characteristics of the program experience, including perceptions of participant empowerment and learning relevance. In order to test this proposition, a program relevant outcome variable was needed. The concept of life effectiveness (Neill, Marsh, & Richards, 2003) has been recently used in a number of experiential education program research and evaluation efforts (e.g., Fabrizio, 2002; Purdie, Neill, & Richards, 2002; Stenger, 2001) and was considered an appropriate outcome variable given the program goals and research design in this study. Life effectiveness is broadly defined as “the extent to which a person believes that they are effective in various major tasks of life” (Neill, personal communication, October 31, 2003) and is similar to “life skills,” as defined by Gilchrist, Schinke, and Maxwell (1987).

While some argue that participant expectations and motivations can directly affect the outcome (e.g., Ewert, 1988), Sibthorp (2003) posits that the impacts of these factors are most important when viewed through their interactions with the participants’ on-program experiences and perceptions of personal empowerment and learning relevance. Therefore, this study had three primary purposes: (a) to assess the fit of the model proposed by Sibthorp that perceptions of personal empowerment and learning relevance mediate the relationship between expectations and the development of life effectiveness (see Figure 1), (b) to compare this model with an alternative model that includes a direct (non-mediated) impact of expectations on the development of life effectiveness (see Figure 2), and (c) to further explore the relationship between perceptions of participants’ experiences and the developmental outcomes measured by the Life Effectiveness Questionnaire.
Review of Literature

Sibthorp (2003) found that the development of self-efficacy through an adventure education program was related to participants' perceptions of learning relevance and personal empowerment while on the program. In a second analysis, he found that pre-program expectations and motivations were related to these same on-program perceptions (e.g., learning relevance and personal empowerment) but that expectations and motivations did not seem to be directly related to the development of self-efficacy. Thus, Sibthorp proposes that participant characteristics are important to adventure program outcomes, but their role in development may be mediated by participants' perceptions of on-program characteristics, most notably perceptions of personal empowerment and learning relevance. The mediating variables are thought to determine whether or not pre-program expectations have an impact on participant development. In an effort to explore this proposition, the authors reviewed the literature on participant expectations, personal empowerment, and perceptions of task or learning relevance and their roles in participant learning. In addition, the last section of the literature review further explores the concept of Life Effectiveness, the outcome measure used in this study.

Participant Expectations

Both teachers' expectations of students, and students' expectations about themselves, appear to be important aspects of academic learning. Personal expectations about getting good grades and understanding material also appeared to be the best predictors of student success (Becker, Davis, & Neal, 1990). Student's self-expectancy has been found
to be significantly related to academic achievement (Haynes & Johnson, 1983), and achievement expectancies have been show to predict subse-
quent academic performance (House, 1993). While student expectations
seem to play important roles in academic learning, their importance in
adventure education still warrants additional investigation.

Ewert (1988) posits that a student’s pre-course expectations may be
an important factor in participant growth during adventure education
courses. His position is that students seeking change and development
may enroll in these courses in search of a catalyst for personal growth.
Others have also noted that the voluntary nature of course enrollment
may be an important factor in course outcomes (e.g., Herbert, 1998).
Thus, while expectations appear to be important participant characteris-
tics in explaining learning and development through adventure educa-
tion programs, their precise role is not well understood.

**Empowerment**

The concept of empowerment remains debated in the literature. Most of the literature on empowerment has focused on three main areas
of study: (a) community empowerment, (b) organizational empowerment,
and (c) individual or psychological empowerment, which is considered to
be the most critical element of empowerment theory (Hinnant, 2001).
Community empowerment attends to the community needs, and the uti-
lization of community resources to contribute to the common good of the
community at large. Organizational empowerment involves an active
management and worker structure in which all the members play a vital
role in the functioning and decision-making of the organization at large.
Individual or psychological empowerment refers to the individual’s abili-
Empowerment at the individual level is tied to organizational empowerment and community empowerment through a better personal understanding of interpersonal, social and political resources.

Zimmerman (2000) divided individual empowerment into three factors: (a) intrapersonal, (b) interactional, and (c) behavioral. The intrapersonal component encompasses internal factors that will influence a person's perceptions of individual empowerment, such as motivation, perceived competence, and perceived control. The interactional component involves an individual's effective interaction with the environment, knowing and understanding how to succeed within a given set of environmental parameters. The behavioral component involves the actions required to influence the outcomes through participation. The combination and interaction of these three factors will determine the ability and degree of empowerment an individual is capable of achieving in any given context.

However, empowerment is commonly considered both a process and an outcome. That is, through an empowering process individuals learn to participate in a given social context with the understanding that their participation brings with it a sense of importance. Individuals who are powerless must become aware of their power, develop some skills for gaining control over such power, and exercise the control without infringing on the rights of others who could potentially be empowered as well (McWhirter, 1991). Through this process students develop a sense of empowerment, which is thought to be domain specific (Schulz et al., 1995).

The outcome typically associated with empowerment is the belief that individuals can, in a specific situation, take actions resulting in the desired outcome, and the belief that these actions can actually be performed. Essentially, the empowerment outcomes are the result of the desired, intentional processes. However, a student who develops a sense of empowerment through a process that involves both the belief in ability and action, is thought unlikely to feel that same sense given different environmental constraints and characteristics. Such domain specificity makes the utility of empowerment as an education outcome dubious (Zimmerman, 1995).

Empowerment of students in education settings has long been considered beneficial to learning (e.g., Brunson & Vogt, 1996; Huff & Johnson, 1998). Individuals who are empowered are thought to be more able to focus on challenges and opportunities presented to them, as well as experiencing a greater ability to take control, or to make changes in their own lives (Howell, 1992; McWhirter, 1991). A participative,
empowering environment has been associated with increased levels of awareness, knowledge, self-confidence, self-esteem, efficacy, perceptions of control, development of more positive attitudes, sense of community, and critical thinking (Kieffer, 1984; Lord & Hutchinson, 1993; Schulz et al., 1995). Educators have long been describing the benefits of empowerment. Despite this, good empirical studies, supporting many of these suppositions, remain lacking in the educational context.

The idea of democracy and active student involvement in experiential education is not new (cf. Dewey, 1916). However, while many continue to advocate for empowering, student-driven, educational processes in adventure-based experiential programs (e.g., Hyde-Hills, 1998; Kimball, 1991; Wilson, 1995), little is known about the specific role(s) empowerment plays in the adventure education process. Hyde-Hills (1998) describes empowerment in adventure as a process by which individuals may learn to become their own agents of change through involvement in program preparation, decisions, and responsibility. Kimball (1991) views empowerment as something that resides within participants and can be fostered by a sequential structuring of authentic problems and tasks within a well functioning group. Thus, while empowerment in and through, adventure education seems to be a worthwhile goal, the specific relationship between the process of on-program empowerment and developmental outcomes of such courses warrants further investigation.

**Learning Relevance or Value**

Most of the literature on perceived learning relevance stems from the work of Eccles and Wigfield (Wigfield & Eccles, 2000). Their work primarily considers the value that students place on specific learning tasks. Their current conceptualization of task value includes a student’s perceptions of interest, importance, and usefulness (Eccles, Wigfield, Harold, & Blumenfeld, 1993), and these variables have been shown related to student performance (Schroth, 2001).

Perception of task value is considered important in traditional education settings because it can increase motivation and learning effectiveness (Eccles & Wigfield, 2002; Wigfield & Eccles, 2000). If individuals do not perceive value or relevance, they are more likely to apply less effort, and either drop-out or switch to activities having more perceived relevance. Students tend to bring greater relevance to the activity when they are permitted to engage in questioning or evaluation of the purpose of the activity. Similarly, when the students have a better understanding of the purpose of the activity, they are more likely to feel committed and derive relevance from it on a higher level (Elder & Paul, 2001). In addition, Brunson & Vogt (1996) posits that a “learner controlled” format,
where the learner has options over how they choose to learn, as well as the pacing and sequence of their learning, tends to give the learner a sense of ownership over the activity, and their perception of learning relevance and content retention tends to be higher. Thus, it appears that a learning environment in which students are encouraged to engage in an empowering process might foster perceptions of task relevance, as well as perceptions of empowerment. However, few studies have attempted to address the importance of task or learning relevance in regards to an individual's perception of an activity outside of a school setting.

Task value, or relevance in experiential education literature, while commonly recognized as important, has received limited coverage. Walsh and Golins (1976) mention the role that characteristic problem-solving tasks provide for learning in adventure education. However, their definition of these tasks consists of words like organized, incremental, concrete, manageable, consequential, and holistic. While some of these concepts certainly overlap with perceptions of task value or relevance, consequential tasks, for example, are considered worthwhile, which would parallel Eccles' et al. (1983) concepts of usefulness, they are certainly not identical.

Learning relevance and connections with learning have long been valued in experiential education (e.g., Dewey, 1916), while connections with student interests and ideas is considered essential in experiential education programs. In addition, students' connections between the course content and their own lives is thought to increase the value of the learning as application transfers beyond the discreet adventure experience (Priest & Gass, 1997). This generalization beyond the course is often thought to be assisted by the “processing” of the experience. Thus, it seems that perceptions of task or learning relevance may play important roles in learning on experiential adventure-based programs.

**Life Effectiveness**

While the intent of this study was to determine the role of expectations, personal empowerment, and perceived learning relevance on participant development, a measurable developmental outcome was needed to serve as the dependent variable in the model. After reviewing the program's targeted outcomes (see learning themes below), the Life Effectiveness Questionnaire (LEQ) appeared to provide a reasonable proxy. Life effectiveness is essentially "the psychological and behavioral aspects of human functioning which determine a person's effectiveness or proficiency in any given situation" (Neill et al., 1997, p. 5). The LEQ assumes that the general psychological and behavioral processes referred to in the definition of life effectiveness can be further explained using eight dimensions. These eight dimensions are: (a) Achievement
motivation—the degree that an individual is driven to accomplish excellence; (b) Active initiative—the degree that an individual will take charge, or initiate an action in a new setting; (c) Emotional control—the degree an individual is able to remain in control while perceiving to be involved in an emotionally stressful environment; (d) Intellectual flexibility—the extent to which an individual is able to modify his or her pattern of thinking based on new/changing information being provided to them; (e) Self confidence—an individual's belief about his or her abilities and how those abilities would contribute to his or her success; (f) Social competence—one's ability to be confident and have the capacity to effectively interact socially; (g) Task leadership—the degree to which an individual believes they can organize a group effectively given the task as the primary interest; and (h) Time management—the ability of an individual to make the best use of his or her time. Neill et al. (2003), posit that the better functionality a person exhibits on these dimensions, the greater one's personal effectiveness will be, and consequently, the more likely that individual is to accomplish personal achievements.

Therefore, this study was conducted to determine if the model proposed by Sibthorp (2003) offers a viable explanation of the roles of participant expectations, perceptions of personal empowerment, and perceptions of learning relevance in participant development, as measured by the LEQ through an adventure-based experiential education program. In addition, an alternative model was tested to compare the direct (non-mediated) impact of participant expectations on development, and relationships between perceptions of on-program experiences and participant development were explored.

**Methods**

**Participans**

Participants in this study were 190 co-ed adolescent (13-18 years) participants in a three-week long commercial adventure program, which specializes in international adventure education courses using a small-group experiential learning model. Most of the participants in these programs are upper-middle-class Caucasians from North America. The programs involve SCUBA diving, hiking, and other adventure activities specific to the course location (e.g., sailing in the Caribbean, rafting in Ecuador, canyoneering in Australia). Each “group” consists of 10-15 participants grouped by age cohort (e.g., 12-13 years together, 14-15 years together), gender balanced (approximately equally numbers of male and female participant in each group), and two or three outdoor leaders skilled in experiential education techniques, group management, and the activity base for the program. All of these programs include traditional adventure
education processes such as, full-value contracts, leadership responsibilities, and structured feedback and debriefings; a typical program involves a couple of days of orientation and group setup. Subsequently, the participants take on leadership roles and assume increasing course responsibilities, which included activity selection and scheduling, necessary chores (e.g., cooking & cleaning), and daily goal-setting sessions. All of these courses have six general learning themes that are stressed through course design and staff training: (a) Leadership; (b) Teamwork; (c) Openness to New Ideas, Beliefs, and Cultures; (d) Sense of Self; (e) Initiative and Work Ethic; and (f) Environmental Stewardship. These are, essentially, targeted course outcomes.

Measures

Two existing instruments were used in this study: the Characteristics of the Experience Scale (CES) (Sibthorp, 2001), and the LEQ (Neill et al., 2003). The CES is a 15 item scale that measures participants’ perceptions along 5 domains: (a) personal empowerment (sub-scale included in model [see Figure 1]), (b) group functioning, (c) group empowerment, (d) instructor support, and (e) learning relevance (sub-scale included in the model [see Figure 1]). The LEQ is a 24-item scale that can be scored for a composite value of life effectiveness (overall LEQ score included in the model [see Figure 1]) or as eight individual subscales: Active Initiative, Achievement Motivation, Emotional Control, Intellectual Flexibility, Self-confidence, Social Competence, Task Leadership, and Time Management. It was decided that the eight domains of the LEQ could serve as an adequate measure for the targeted course outcomes as it would provide insight into five of the six course themes, omitting only Environmental Stewardship. For this study, a "lie" scale was imbedded in the LEQ to eliminate students with obvious response biases. Psychometrics for both of these scales has been previously published, and the instruments exhibit acceptable levels of validity and reliability (Neill et al., 2003; Sibthorp, 2001). Internal consistency, assessed with Cronbach’s alpha, for this dataset was .82 for the CES, and .92 for the LEQ.

As no existing instrument could be located to assess adventure program participant’s expectations, the program’s learning themes were used to create four items to measure program expectation (included in the model—see Figure 1). The items were all similar in design; an example item is, “from this course I expect to improve my leadership skills.” These items were scored on an eight-point Likert-type scale, ranging from definitely false to definitely true. Internal consistency, assessed with Cronbach’s alpha, was .90 for this study’s sample.
Procedures

All enrolled program participants (approximately 450) were emailed an invitation to participate in the study. One hundred ninety self-selected participants (e.g., a convenience sample) completed a pretest of the LEQ approximately three weeks before arriving at their course locations. At this same time, data were collected on participant expectations for learning. This initial sample was 55% female and had a mean age of 15.8 years. After course completion, but before departing for home, the students were administered paper versions of the LEQ (as a posttest) and the CES. All responses were anonymous and the participants were asked to supply the last four digits of their home phone number during both the pretest and posttest to match the two sets of responses. Inspection of posttest data, which was available for all program participants, did not indicate systematic differences between the study participants and those who had not completed the pretest.

Data Analysis

Data were entered, cleaned, screened for univariate outliers, and formed into 145 matched pairs; 45 study participants had not completed both the pretest and posttest questionnaires, or could not be adequately matched (i.e., the last four digits of their phone number were incomplete). One participant was deleted for incomplete pretest data, seven were deleted for incomplete posttest data, and ten were deleted because they did not meet the a-priori cut-off value for the imbedded lie scale. Additionally, three posttest and two pretest multivariate outliers were deleted from the analysis, as determined by elevated Mahalanobis distances (Tabachnick & Fidell, 1996), leaving a usable sample size of 122. This matched sample was 60% female, with a mean age of 15.9 years.

Initially, two path analyses using LISREL 8.5 were used to examine the hypothetical relationship posited by Sibthorp (2003). Because of the moderate sample size, the LEQ was used only as a global measure in the path analyses. The included variables were participant expectations for learning, perceptions of personal empowerment, and learning relevance as measured by the CES, and life effectiveness as measured by the LEQ. The first analysis (Figure 1) tested the mediating roles of perceptions of personal empowerment and task relevance; the second analysis (Figure 2) tested the direct impact of expectations on life effectiveness.

Partial correlations were then used to further examine relationships between the data sets. This was done in order to learn more about the specific relationships between the five subscales of the CES, and the eight subscales of the LEQ, without violating the sample size limitations necessary for path analysis. For the partial correlations, each domain of the CES experience variables was correlated to the overall LEQ score at
posttest (with the variance explained by the overall LEQ pretest removed from the analysis.) Partial correlations essentially looked at relationships between two variables controlling for a third variable (in this case controlling for the pretest scores). Thus, the premise is to determine if the CES variables explain any more of the LEQ posttest variables than the LEQ pretest variables alone. The characteristics of the experience variables, accounting for over 5% of the variance in the LEQ posttest, were then tested against the LEQ sub-scales in an effort to determine which characteristics of the experience were most related to specific developmental outcomes as measured by the LEQ sub-scales.

**Results**

The initial path model tested included five observed variables (the four proposed in Figure 1, plus the pretest score of the LEQ): (a) expectations, (b) perceptions of personal empowerment, (c) perceptions of learning relevance, (d) the pretest composite score of the LEQ, and (e) the posttest composite score of the LEQ. The pretest LEQ score is included in the statistical model (see Figure 3) so that the variance in the LEQ posttest score can be understood in terms of both the initial level of life effectiveness (pretest) and the impacts of the mediating variables (personal empowerment and learning relevance). Standardized path coefficients are reported in parentheses below; these can be approximately interpreted as regression $\beta$ weights or correlations. The expectations variable significantly predicted both perceptions of personal empowerment (.24) and perceptions of learning relevance (.18). The LEQ pretest score (.39) and the perceptions of personal empowerment (.29), significantly predicted the LEQ posttest score. The hypothesized relationship between perceptions of learning relevance and the LEQ posttest score (.12) was not significant at $p < .05$. Overall, model fit was moderate to good (Tabchnick & Fidell, 1996) ($\chi^2 = 5.30, df = 3, p = .15; RMSEA = .080$).

To test the alternative hypothesis, a direct path was added to the model between expectations and the LEQ posttest score (see Figure 4). This path was not significant, with a standardized coefficient of -.15. Overall model fit was comparable ($\chi^2 = 2.40, df = 2, p = .15; RMSEA = .041$).

The partial correlations between the CES subscales of Personal Empowerment, Learning Relevance, and Group Empowerment were all significantly ($p < .05$) related to the posttest LEQ score, with the LEQ pretest variance removed (see Table 1). Group Functioning and Instructor Support variables explained little of the LEQ posttest variance, therefore, they were not considered in further analysis. The Group Empowerment variable, despite statistical significance, was also dropped from further investigation because it accounted for less than
5% of the variance of the LEQ posttest score (the *a-priori* cut-off).

The Personal Empowerment and Learning Relevance scores of the CES were then compared to the sub-scale posttest scores of the LEQ controlling for the variance explained by the sub-scale pretest scores (see Table 2). The following partial correlations were statistically significant (*p < .05*) and accounted for more than 5% of the variance in the LEQ posttest sub-scales. Personal Empowerment was related to Active Initiative (*r*₁₂ = .23), Emotional Control (*r*₁₂ = .24), Task Leadership (*r*₁₂ = .24), Achievement Motivation (*r*₁₂ = .25), and Social Competence (*r*₁₂ = .26). Learning Relevance was related to Active Initiative (*r*₁₂ = .23) and Emotional Control (*r*₁₂ = .25). These results support the idea that perceptions of Personal Empowerment and Learning Relevance were important in predicting participant development as measured by the LEQ. The use of partial correlations shows that these relationships remain significant even when the amount of variance explained by participant's LEQ pretest is controlled. That is, Personal Empowerment and Learning Relevance contribute additional explanation beyond that provided by the LEQ pretest.
Discussion

The fit of the model tested (Figure 3) seems to support the premise that personal empowerment plays an instrumental role in the development of life effectiveness; the role of perceived learning relevance is less clear. Given the complexity of the developmental process on adventure education programs, the limited ability to predict adventure program development is not surprising. Recent meta-analyses of adventure program outcomes (e.g., Cason & Gillis, 1994; Hans, 2000; Hattie, Marsh, Neill, & Richards, 1997) have found typical effect sizes of only moderate magnitude (.38-.31), and it is likely that such analyses suffer from an inflationary bias created by the propensity to publish only statistically significant findings. With such moderate effect sizes, it is important to ascertain which programmatic perceptions can make programs more developmentally significant to participants. Perceptions of personal empowerment do seem to play a role in the realization of developmental outcomes measured by the LEQ.

The importance of participant empowerment has been documented in education literature and hypothesized in adventure programs (e.g.,
Table 1
Partial Correlation Coefficients Between CES Sub-scales and LEQ Posttest Controlling for the Pretest LEQ Score

<table>
<thead>
<tr>
<th>CES sub-scales</th>
<th>Peer Support</th>
<th>Instructor Support</th>
<th>Group Empowerment</th>
<th>Personal Empowerment</th>
<th>Learning Relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posttest LEQ score (life effectiveness)</td>
<td>.10</td>
<td>.15</td>
<td>19*</td>
<td>.36*</td>
<td>.24*</td>
</tr>
<tr>
<td>CES sub-scales</td>
<td>Peer support</td>
<td>--</td>
<td>.10</td>
<td>.16</td>
<td>.14</td>
</tr>
<tr>
<td>Instructor support</td>
<td>--</td>
<td>.44*</td>
<td>.37*</td>
<td>.19*</td>
<td></td>
</tr>
<tr>
<td>Group empowerment</td>
<td>--</td>
<td>.32*</td>
<td>.24*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal empowerment</td>
<td>--</td>
<td>.35*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at p < .05.

Table 2
Significant Partial Correlations Between the Personal Empowerment and Learning Relevance Scores of the CES and the Posttest LEQ Sub-scale Scores (controlled for LEQ pretest)

<table>
<thead>
<tr>
<th></th>
<th>Active Initiative</th>
<th>Emotional Control</th>
<th>Task Leadership</th>
<th>Achievement Motivation</th>
<th>Social Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal empowerment</td>
<td>.23*</td>
<td>.24*</td>
<td>.34*</td>
<td>.25*</td>
<td>.26*</td>
</tr>
<tr>
<td>Learning relevance</td>
<td>.23*</td>
<td>.25*</td>
<td>Ns</td>
<td>ns</td>
<td>ns</td>
</tr>
</tbody>
</table>

*Significant at p < .05; ns did not meet a-priori cutoff for interpretation.
Hyde-Hills, 1998; Kimball, 1991; Wilson, 1995). The perception of personal empowerment can be manipulated by creating more participant involvement in decisions and responsibilities related to the program. It is evident through the partial correlations that perceived empowerment can play a role in a myriad of developmental outcomes. In this study, it was most related to the measure of Task Leadership, perhaps because many of the empowerment strategies (e.g., decision-making, acceptance of personal responsibility) overlap with on-program leadership. Thus, using student leaders might be another way to foster perception of empowerment, which, in-turn, might have developmental benefits to program participants.

Perceptions of learning relevance, while not significantly related to development in this study, can also be enhanced by making clear linkages between what is being learned on the program and how this learning can be applied to life outside of the recreational program. This type of learning transfer has often been considered essential in experiential programs as participants are encouraged to reflect on the applications beyond the experience to aid learning transfer (Luckner & Nadler, 1997; Priest & Gass, 1997). Despite the findings of this study, task value or relevance is still considered important in traditional educational settings (e.g., Eccles & Wigfield, 2002) and warrants additional study.

The alternative model (Figure 2) did not support Ewert’s (1988) premise that expectations have a direct impact on participant development. However, given this study’s limitations, the direct impact of participant expectations on participant development through adventure programming cannot be dismissed. Additional testing and more studies are needed to ascertain the role that participant expectations play in adventure education.

The partial correlations seemed to indicate that perceptions of personal empowerment and perceptions of learning relevance were, for this sample, the characteristics of the experience variables most related to the development of life effectiveness. While individually, the strengths of the relationships between these variable sets are weak, cumulatively, program perceptions seem to have the potential to impact participant growth and development.

While no definitive conclusions can be drawn regarding variables that were not related, it is interesting to note that the LEQ sub-scale measuring self-confidence was neither related to personal empowerment nor learning relevance. Such sense-of-self variables (e.g., self-confidence, self-esteem, and self-concept) have long been stalwarts of adventure education outcome research. Also interesting was the lack of relationship between both support variables (Instructor Support and Group Functioning) and the life effectiveness outcome scores. This is surpris-
ing in light of the abundance of theoretical literature that upholds the importance of these support variables in successful adventure programming (Priest & Gass, 1997; Schoel, Proudy, & Radcliff, 1988).

One interesting limitation of this study is the sample. Participants in this program did not know each other before the program began, and few would continue meaningful relationships with group members after program completion. Thus, program goals were focused on individual growth and personal development. It would be interesting to compare the results of this study to those of a program that focuses on group growth—for example, group cohesion or increased trust in a family unit or corporate group where the group entered into the program as an existing group and left as a group that would continue to interact. It is possible that the perceptions of group functioning during the experience would provide a better index of group cohesion, trust, or group functioning post program. It is also possible that group empowerment is a better predictor of group-oriented outcomes than individual outcomes. Other study limitations include a small sample size, the age range of the participants (13–18 years of age), only including participants in one adventure program, and the limited number of variables included in the model. Future studies should seek larger samples drawn across programs and populations, and should include additional variables thought to contribute to participant development such as, program length, program mission, group cohesion, and others dependent on the intentional design(s) of the programs in the study.

Ultimately, research needs to continue dissecting adventure-based experiential education programs to better ascertain which programmatic variables are most related to developmental outcomes. While there is little argument that the relative importance of programmatic factors will depend on desired participant outcomes, which programmatic factors are most related to specific outcomes remains under-investigated. While the recreation and leisure fields continue to advocate intentional program design for adventure, wilderness, and camping programs (Henderson, 2001; Sibthorp, Paisley, & Hill, 2003), research that informs practice is lacking. Research that investigates the relationships between programming decisions and intended outcomes will allow programming to become more targeted and less enigmatic, and will lead to theoretical or conceptual generalization that may apply across populations, activities, and programs.
Footnotes

1 One of the anonymous reviewers considered it necessary to remind the readers that they must square the reported r-values and standardized coefficients to get an index of the percent of shared variance.

2 The negative value of this coefficient is a manifestation of the suppression effect due to shared variance with the LEQ pretest score. Removal of the pretest score from the model reveals a non-significant .05 standardized coefficient between the Expectations variable and the LEQ posttest.

References


