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Effective Learning in Adventure-Based Education: Setting Directions for Future Research

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ABSTRACT: There is research evidence that adventure-based programs are effective vehicles for education. Research has failed to clarify, however, how adventure-based programs create an environment for effective growth and change. By extrapolating from studies on effective traditional classroom education, educators may begin to address this issue. Through a literature review, this article identifies and explores five characteristics known to exist in both the adventure-based learning environment and the effective traditional classroom setting. They are: (1) small learning group size; (2) cooperative learning environment; (3) communication of high expectations for students; (4) building on student success; and (5) creating an identifiable classroom culture reflecting positive, supportive values.

During the past twenty years, a number of labels have been applied to adventure-based education programs. “Stress-challenge” (Bernstein 1970) and “survival training” (Adams 1969; Clifford and Clifford 1967; and others) were popular terms in the early stages of program development. They lost much of their popularity because they reflected a limited aspect of the total program and placed a sometimes misguided emphasis on a high degree of personal risk (Meier 1980).

Terms incorporating “wilderness” (Cardwell 1978; Lowenstein 1975; and others) and “outdoor” (Parker and Meldrum 1973; Senosk 1977; Wade 1975) increased in popularity beginning in the mid-1970s. However, they implied an environmental constraint not always consistent with program settings and content popular today.

Of greater current use are terms focusing on the concept of adventure: “adventure programs” (Dawson 1979); “adventure-oriented programs” (Buell 1981; Iida 1975); “high adventure programs” (Spacht 1980); “adventure education” (Bagby 1980; Cousineau 1978); “adventure-based education” (Walsh and Golins 1976); and “adventure-based experiential education” (McArthur 1978; Wells 1978).

Kylloe (1980) defines such programs as “planned programs of situational adventure experiences developed to
provide optimum growth and learning opportunities for individuals and groups” (p. 5). According to Wood and Gillis (1979) they contain three common elements: (1) stressful experiences which occur in (2) an educational framework, and which (3) are based on the Outward Bound model. Critical elements of the Outward Bound model, as described by Walsh and Golins (1976) are: (1) a neutral physical environment where contrast exists, with arbitrary and consequential rules that are not man-made but that must be accepted; (2) problem-solving tasks; and (3) a small group social environment that promotes individual decision making within an atmosphere of group support. These elements are usually incorporated into a series of outdoor experiences in wilderness settings, including but not limited to rafting, rappelling, expediti- oning or participating in an extended solo.

**Adventure-based Education Program Effectiveness**

There is research evidence that adventure-based programs are effective vehicles for education (Iida 1975; Shore 1977; Ewert 1983). Students in these programs learn; that is, they are changed and grow as a result of their experiences. Research has failed to address or clarify, however, why these programs educate or how they achieve their effectiveness. For example, Ewert (1983) reviewed approximately fifty studies relating Outward Bound programs and self-concept. He concluded that “A powerful suggestion is made that Outward Bound does something 'good' to or for the participant, but like electricity, we know it does something, but we're not sure how it does it” (p. 27).

The question remains: “How do adventure-based education programs create an environment for effective growth and change?” By turning to what research reveals about effective education in the traditional, indoor classroom and extrapolating results, educators may begin to answer this question and to find clues indicating avenues for future research directed at adventure-based programs themselves.

Extrapolating the bases for adventure-based program success has been made possible only within the past fifteen years, as research on the effective traditional classroom has become solidified. Behling (1981) stated that only a decade ago, educators reading educational research often found that the end result of the research produced “no significant difference.” With considerable funding in recent years, the U.S. Office of Education, the National Institute of Education, the National Science Foundation, other public agencies, and private foundations have brought researchers into the field who have produced an impressive accumulation of findings. Herbert Walberg and his associates have called these events the “Quiet Revolution.” In a selective summary of ten years of educational research, they identified more than 2,700 research findings related to effective schools and effective classrooms. (p. 1)

**Findings**

Through a review of the literature on effective learning in the traditional classroom setting, several factors common to the adventure-based setting were identified. Among those receiving considerable attention in the literature were (1) small learning group size, (2) cooperative as opposed to competitive learning environment, (3) communication of high expectations for students, (4) building on student success, and (5) creating an identifiable classroom culture reflecting positive, supportive values. Other factors receiving less attention in the literature were the amount of engaged learning time (Corcoran and Hansen 1983; Everson 1982; Good, Biddle, and Brophy 1983); direct experience (Moser 1980); task variety (Rosholtz and Wilson 1980); and attractiveness of the learning environment (Corcoran and Hansen 1983; Santmire 1984; Poysner 1983).

**Learning Group Size**

Research findings tend to show a positive correlation between small learning group size, characterized by small class or school size, and learning effectiveness (Glass and Smith 1979; Gump 1980; Mergendoller 1982). In a major study of school size and effectiveness, Gump (1980) concluded that

> in terms of actual setting behavior, the small school produced much more responsible or central position behavior than did the large school. Further, the setting satisfactions of the small school students emphasized gaining competence in meeting challenges and gaining success in small group activity. (p. 562)

Glass and Smith (1979) conducted an extensive meta-analysis of seventy-six studies of class size and student achievement and found a positive relationship between the two (Behling 1981, 8). Mergendoller (1982), in reporting on findings regarding the organizational features of secondary schools which facilitate adolescent development, commented that “small schools facilitate social-cognitive development, identity formation, the establishment of multiple and diverse friendships and autonomous self expression” (p. 10).

These findings provide a clue to the effectiveness of adventure-based education programs, whose primary unit is the small group. Walsh and Golins (1976), writing on the adventure-based process, labeled this small-group orientation the “ten-group,” further defining it as

the small group social environment which promotes individual decision-making within an atmosphere of group support; individuality within a cooperative framework; reciprocity, where strengths and weaknesses can be traded off and each member contributes to the problem-solving group of alternatives. (In Riggins 1983, 59–60)
Cooperative Orientation/Supportive Environment

Research on cooperative vs. competitive learning groups reveals the positive influence of cooperative learning on achievement and student self-esteem (Aronson, Bridgeman, and Geffner 1978; Covington and Beery 1976; Good, Biddle, and Brophy 1983; Johnson, Skon, and Johnson 1980; Sharan 1980; Slavin 1980; Stinson 1984). Covington and Beery (1976) found that an important advantage of the cooperative structure is the emphasis placed on students taking charge of their own learning. As a result, students assume more responsibility for their goals, performance standards, levels of aspiration, and the pace at which they learn.

The use of cooperative structures necessitates mutual accommodation. A key ingredient in the process, according to Stinson (1984), is creating a situation in which it is imperative that students treat each other as resources. The learning process is structured so that individual competitiveness is incompatible with success; furthermore, it is so designed that success can occur only after cooperative behavior has occurred. (p. 186)

Johnson, Skon, and Johnson (1980) concluded their study of cooperative and competitive goal structures by commenting that the cooperative classroom setting produces superior performance. They felt it generates three valuable processes: (a) the development of superior problem-solving strategies; (b) interaction which benefits low-ability and medium-ability students; and (c) achievement motivation enhanced by group work.

Few descriptions better characterize the adventure-based education experience. At its core lies a set of problem-solving tasks requiring dependence on the total group’s resources for successful accomplishment. The Outward Bound mission statement (1980) underscores this process, proposing that learning is most effective: “when people engage in and reflect upon experiences in challenging environments in which they must make choices, take responsible action, acquire new skills, and work with others” (Miner and Bolt 1981, 348). The basis of instruction (Richards 1976) places students into positions (a) where the only resources they have to overcome new problems are basic, personal skills, (b) with others for whom the situation is equally new and frequently bewildering, and (c) when they must rely on their own initiative, resourcefulness, and determination to find a solution.

High Expectations

A number of literature surveys have identified high teacher expectations as central to effective learning (Corcoran and Hansen 1983; Colorado State Department of Education 1982; Good 1980). Teacher expectations create a type of self-fulfilling prophecy for students. Bridges (1979) cited Rosenthal’s Harvard University study entitled “Pygmalion in the Classroom” which demonstrated that “a teacher’s expectation of his pupils’ intellectual functioning and competence can come to serve as an educational self-fulfilling prophecy” (pp. 18-20).

Studies on student motivation have also linked instructor expectations and effective learning (Aronson, Blaney, Stephen, Sikes, and Snapp 1978; Walberg and Ugurolu 1979). For example, Marshall, Weinstein, Sharp, and Brattesani (1982) found that challenge was central to the perception and expectation of high achievement. Students perceive high achievers as receiving more difficult tasks. Furthermore, students given less work or easier work may come to see themselves as less capable than others of accomplishing more challenging tasks.

From its beginnings adventure-based education has been imbued with a sense of motivating students through high ideals reflected in attainable expectations. Movement founder Kurt Hahn’s students were evaluated on their sense of justice and their ability to follow what they believed to be the right course in the face of various physical and psychological obstacles, as well as on their academic prowess. His earliest school rule focused on the: “ability to affect what [the student] has recognized to be right, despite hardships, despite dangers, despite inner skepticism, despite boredom, despite mockery from the world, despite emotion of the moment” (North Carolina Outward Bound Instructor’s Manual 1980, 9). This philosophy continues to be pervasive throughout the adventure-based education movement.

Success

Numerous studies have found effective classrooms to be built on successful student experiences (deCharms 1976; Deci, Nezlek, and Sheinman 1981; Everson 1983; Katz 1967). Everson (1983) found that “if students are unsuccessful more than 60 percent of the time (in other words, if they have a success rate less than 40 percent), they have a negative relationship to learning the task at hand” (p. 7). Research by both deCharms (1976) and Katz (1967) suggested that students are more likely to be motivated when they are able to praise themselves and feel good about their performance because they have achieved or exceeded the goals they set. Deci, Nezlek, and Sheinman (1981) summarized their study with the statement that “when the classroom fosters (a) feelings of competence and (b) a sense of self-control, intrinsic motivation is enhanced” (p. 180).

The adventure-based education experience focuses on successfully responding to personal and interpersonal challenges contained within the circumstances and tasks confronting students. These tasks vary, from navigating river rapids or rappelling down cliffsides, to maintaining a solo for three days, preparing meals for fellow crew members, or maintaining effective interpersonal
communication under stressful circumstances. Like the challenges, rewards for success are immediate and inherent within the experiences themselves.

Furthermore, success is predicated on the fact that the adventure-based experience, like the effective classroom, is highly regulated, controlled, and purposefully sequenced (Cohen 1982; Lowenstein 1975; Medrick, in Shore 1977; Rosswork 1984). As Walsh and Golins (1976) have stated, “adventure-based program problems are to be planned, programmed and managed” (p. 7).

**Underlying Culture**

Creating a classroom culture which identifies and shapes student experience has also been identified as contributing to effective learning (Colorado State Department of Education 1982; Firestone and Wilson 1984; Ruttar 1979; Wilson and Lasley 1984).

Firestone and Wilson (1984) commented that

> ... the entire classroom context in which these implemented variables operate and influence each other must also be taken into account. When classroom variables are considered together, many of them act in an additive fashion, thereby increasing their impact. (p. 301)

The physical isolation, intensity, and degree of student immersion characteristic of adventure-based programs likely intensifies the additive impact of factors identified in this report. As participants and leaders have alluded, that the sum effect of the adventure-based experience is far greater than the accumulative impact of its individual components.

**Conclusion**

It appears that factors germane to adventure-based education have been found to contribute to effective education in the traditional classroom setting. Inferentially, then, there appears to be research evidence supporting the educational merit of adventure-based programs and providing suggestions regarding the source of their effectiveness. Further documenting these factors may strengthen adventure-based program support. Additionally, the findings suggest future directions for potentially fruitful research relative to the adventure-based education process. By focusing in these areas, researchers and educators may be led toward a more direct and complete understanding of adventure-based program dynamics.

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