Adventure Education Learning Mechanisms Across Populations: Qualitative Results from the National Outdoor Leadership School

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Introduction

In addition to the outcomes of adventure education, it is important to understand the process of how students learn in these settings (Ewert & McAvoy, 2000; Hattie, Marsh, Neill, & Richards, 1997; Henderson & Fox, 1994; Klint, 1999). Adventure education research has not thoroughly addressed the processes of student learning. There is little support for claims of specific mechanisms that might work differently in determining a targeted learning outcome.

This study is a replication and extension of the work done by Paisley, Furman, Sibthorp, and Gookin (2008), except with a larger sample size and a different qualitative coding scheme. A large sample of adventure education students was surveyed to find out which of the organization's six standard outcomes the students learned most about, and then what techniques, circumstances, or pedagogies were most important to learning that particular outcome. These data were linked with pertinent course information to provide relationship information about how students learn differently given these varying factors.

Methods

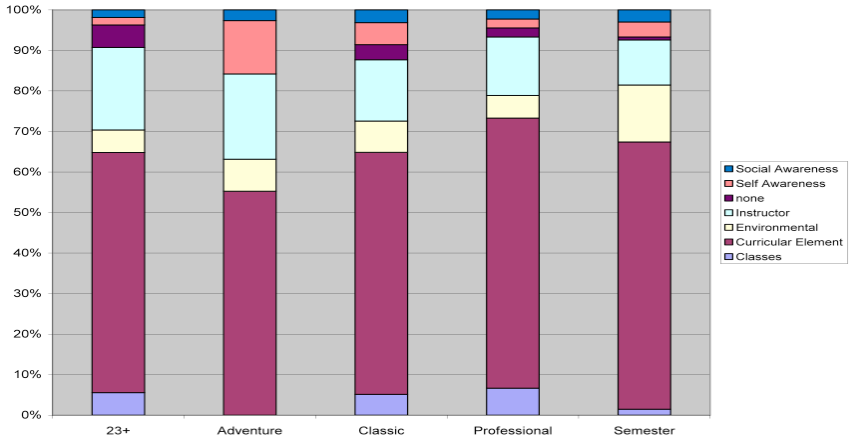
During 2006, 1804 students from a variety of different NOLS courses completed the NOLS Outcome Instrument. This study focuses on two separate questions from these instruments: Q1) Of the following 6 stated outcomes of a NOLS course (Communication, Environmental Ethics, Expedition Behavior, Leadership, Outdoor Skills, or Risk Management) which one did you most learn? Given this response, Q2) how did you best learn this outcome? Students answered this second question in an open-ended written format. After these data were collected, the responses were coded. The results were then enumerated for ease of presentation. Course data were attached to each response, allowing for analysis of the qualitative responses in terms of one of five different NOLS-defined course types: adults ("23+"), 15-17 year olds ("Adventure"), 18-22 year olds ("Classic"), educator and instructor training courses ("Professional"), and courses of an extended duration ("Semester").

The students' qualitative responses went through three levels of coding (Marshall & Rossman, 2006, p. 159) until the data presented six distinct and exhaustive themes of the processes of learning: classes, curricular element, environmental, instructor, self awareness, and social awareness. Classes were operationalized as "formal classes, consistent across course types, including LNT, WFR, and contrived scenarios." Curricular element was operationalized as "student experienced curricular activity, including leader of the day, independent student group travel, medium/activity specific skills, and general experience of a group expedition." Environmental was operationalized as "non-human environmental factors, including awareness of ecological dynamics." Instructor was operationalized as "instructor initiated examples, modeling, processing, or feedback from course instructors or group members." Self awareness was operationalized as "personal insight and understanding, including reflection and self-reliance." Finally, social awareness was operationalized as "observation, interpretation, and realization of surrounding social dynamics."

Results

1677 participants returned usable data. Some participants were removed from this analysis because they left their response blank, or the response did not address the question (6% of the sample). While the response to question one showed that, across course types, students

reported learning most about outdoor skills (37%), leadership (21%), expedition behavior (13%), communication (12%), risk management (12%), and environmental ethics (4%), the larger purpose of this study was to find out how students on different course types learned these various outcomes. Coded results of how participants learned show that curricular elements of adventure education courses are paramount to all course types' learning, supporting the integral experiential nature of these programs. All course types showed that instructors were secondarily influential, followed by formal classes. In regards to the various outcomes learned, there was some general variation by course types. An example of outdoor skills below illustrates that while most NOLS course types learn similarly, Adventure students cite classes as being less influential, and self awareness as being relatively more influential in their learning.



Discussion

This particular study has its most relevance in that learning mechanisms have not been examined within one adventure education organization, and with a population large enough to consider course types, outcomes, and learning mechanisms. Of the numerous findings, an interesting component is that the curricular elements of NOLS courses continue to provide the best mechanism for learning, as all course types had curricular elements accounting for at least 45% of the way the students learned best. Design of courses remains paramount, while implementation (as seen in the Instructor code) is second in mechanisms of student learning. An implication for the adventure education field is that with itinerant instructors (Guthrie, 2002),

organizational curriculum should be sufficiently strong to support quality student experiences. Classic, Professional, and Semester students all learned remarkably similarly. Classic and Semester courses have very similar populations, locations, and activities, with one of the only structural changes being the students' duration on courses. One might expect different primary ways of learning for these different course types, but very little variation exists in this coding scheme.

Environmental factors accounted for very little of Adventure students' best learning mechanisms, suggesting an age-appropriate developmental paradigm where students have difficulty learning outside of immediately relevant circumstances. 23+ courses reported instructor influences higher than all others, indicating possibly a developmental stage where students are more receptive to forming relationships with instructors. In addition, 23+ samples reported classes having less influence than other groups, and remarkably low self awareness and social awareness learning mechanisms.

There are limitations to this study. Because of the way the data were collected, pedagogical techniques that may have been very influential in student learning may be underrepresented in these data, as the question only asked students to consider how they best learned one specific outcome. Despite its limitations, this study continues to address questions of how students learn on adventure education courses and offers additional insight into the process of adventure education.

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