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Outcomes Assessment of an Outdoor Orientation Program Through Means-end Theory

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Through Means-end Theory

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Abstract

There is a lack of research investigating the effectiveness of outdoor orientation programs. Specifically, there is an absence of research examining what program elements contribute to student development and how those elements support that growth. Programs have relied on anecdotal evidence of outcome achievement but these indicators do not sufficiently identify the processes that specifically influence participant development. This study uses means-end theory to assess an outdoor orientation program at a large public university. Participant interviews identified meaningful features of their program experience and explained what outcomes were achieved as a result of those specific features. Laddering and means-end analysis were used to generate a hierarchical value map and identify participant development trends. The findings revealed that adventure elements were the most meaningful features and contributed to a diverse set of outcomes. Additionally, results showed that participants attributed growth to other features; however, they were not highlighted as the most meaningful. Conclusions drawn from the study indicate that the outdoor orientation program studied is successful in assisting student transition. Additionally, the study demonstrated that means-end analysis provides clear and detailed data associations for future investigation within this program. Additional empirically designed research examining individual program elements is required to expand upon results and develop broader conclusions regarding outdoor orientation program elements.

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Chapter One: Introduction

Problem Statement

Across the range of wilderness adventure experience programs there remains a clear need for research to investigate specific program components and the influence on participant outcomes (Ewert & McAvoy, 2000; Kalisch, Bobilya, & Daniel, 2011; McKenzie, 2000; 2003). Particularly within higher education, there is an absence of research investigating outdoor orientation program (OOPs) effectiveness through outcomes or evidence-based studies (Davis-Berman & Berman, 1996; Galloway, 2000). In order for institutions to effectively implement programs that positively impact student development, educators need to assess OOPs beyond documenting the value of the experience and begin to collect empirical data that demonstrates the presence of outcomes achievement as a result of specific experiential education practices (Ewert & Sibthorp, 2009; Gass, 2005; Henderson, 2004).

College and university personnel are concerned about the retention of students, and in response, invest substantial resources into orientation programs in with the intention of aiding the transition to college and increasing commitment (Perrine & Spain, 2008; Veenstra, 2009). While studies indicate that students who participate in an extended orientation receive many benefits, including higher GPA and increased intrapersonal connection (Barefoot, 2000; Barefoot, Warnock, Dickinson, Richardson, & Roberts, 1998), the benefits associated with outdoor orientation programming are minimally documented at best. Programs vary in length, content, and objectives, and "the evidence that orientation programs increase retention is scarce and often methodologically flawed" (Perrine & Spain, 2008, p. 156). Some studies have indicated

OOPs have positive results (Bell, 2006; Frauman & Waryold, 2009; Gass, 1987, 1990; Gass, Garvey, & Sugerman, 2003) but there is an absence of replication. Despite this under-researched issue, the number of OOPs is growing within the United States (Bell, Holmes, & Williams, 2010). As this trend in higher education continues to grow and diversify, there is an increasing need for colleges to research and assess the benefits of OOPs.

Rationale of Study

It is important to investigate whether or not outdoor orientation programs meet the needs of matriculating students and the orientation program goals set by institutions. Wilderness adventure studies have found a need to expand the educator's understanding of how and why program elements contribute to specific program outcomes (Ewert & McAvoy, 2000; Hattie, Marsh, Neill, & Richards, 1997; McKenzie, 2000; 2003). Priest (1999) and Sibthorp, Paisley, and Gookin (2007) stated that adventure programs continue to rely on descriptive or anecdotal evidence rather than investigate what elements lead to specific participant development and program outcomes. The absence of research literature extends to outdoor orientation programs, a subcategory of wilderness adventure. Further outcome and evidence-based studies are needed to examine OOPs elements to better understand how and what elements support student development.

This study examines an outdoor orientation program through the lens of means-end theory, validating the application of means-end theory as an effective outcomes assessment tool in experiential education, and in particular, within an outdoor orientation model. Outcomes-based research can provide educators with a better understanding of how and why program elements influence student development. McKenzie (2000) stated

that a qualitative study of adventure education outcomes to gather in-depth data about program characteristics seems necessary before a quantitative study can be useful in the examination of outcomes achievement. A qualitative outcomes-based study utilizing means-end theory can illuminate the salient features of the outdoor orientation establishing the foundation for subsequent quantitative methods (McKenzie, 2000).

Outcomes-based research has gained momentum over the past twenty years as experiential education programs continue to build a body of knowledge and address needs for accountability and presence of change within participants, e.g. academic performance (Gass, 1987) and self-efficacy (Propst & Koesler, 1998; Jones & Hinton, 2007). Measuring achievement, skill sets, knowledge, behavior, or social development, outcome-based research identifies the extent to which programs have an impact on participants (Hattie et al., 1997; McKenzie, 2000). Program assessment often references participant outcomes as a rationale for continuation, but these indicators do not sufficiently identify the processes that specifically influence the participant development (Sibthorp, Furman, Paisley, Gookin, & Schumann, 2011). In order to effectively assess program mechanisms and develop comprehensive programming that delivers the most effective intervention, practitioners are in need of theory driven and research-based practices that demonstrate the presence of outcomes achievement and the associated practices that lead to those outcomes (Henderson, 2004). Through the collection of evidence measuring outcomes linked to processes, a better understanding of program impact is expected to lead to improved program design and implementation.

It is anticipated that the present research study will contribute to the field of experiential education and the development of outdoor orientation programs at higher

education institutions. It addresses the need to conduct research regarding outdoor

orientation program outcomes and demonstrates the application of means-end theory as a

theoretical lens by which to conduct outdoor orientation assessment. Overall, the present

study is expected to provide valuable information to program educators clarifying the

impact of program practices and the extent of outcomes achievement.

Background of the Study

Experiential education is a philosophy and education methodology that

emphasizes the process in which educators engage learners in direct experiences with the

environment and facilitate focused reflection to enhance knowledge creation (Martin,

Cashel, Wagstaff, & Breunig, 2006). John Dewey (1997), a prominent American

philosopher of the early 20th century, described the experiential process as one that

should lead to intellectual, moral, and personal growth and result in affective qualities

that encourage continued self-directed growth. Dewey noted that not all experiences are

(equally) educational and that any experience that effectively restricts or narrows growth

or discourages further experience is not educational or productive. From this philosophy,

the concept of outdoor education emerged where the participant relationship to others and

the environment was central to the learning experience (Priest, 1999).

Outdoor education has grown to encompass a broad range of activities

incorporated into two disciplines: (1) adventure education and (2) environmental

education (Martin et al., 2006). Adventure education employs growth and challenge and

support models within an environment of novelty, risk, and uncertainty in order to

facilitate positive learning opportunities for participants (Priest & Gass, 2005). A pioneer

of adventure education within experiential programming, Kurt Hahn, established the

Outward Bound School in 1941 which continues to utilize challenge in the outdoors as an integral element of the education process (McKenzie, 2003). Various organizations and schools have adopted models similar to Outward Bound for adventure education, but exposure to elements of uncertainty, risk, challenge, and the wilderness in conjunction with adventure activities remain common characteristics (Raiola & O'Keefe, 1999).

Outdoor education first appeared as a college orientation experience at Dartmouth College in 1932, but was not formalized until the development of a 21-day program at Prescott College (Miner & Boldt, 1981). Prescott College partnered with Outward Bound to create the first outdoor orientation that integrated the Outward Bound experience into the orientation structure in order to better prepare students for the college transition (Bell et al., 2010). The positive experiences with outdoor orientation at Dartmouth and Prescott Colleges laid the foundation for numerous public and private universities to develop their own programs. Developed independently of a nationally organized body of standards and practices, these programs reflected the diversity of local leadership and institutional interests (Bell, Holmes, Vigneault, & Williams, 2008).

A body of research has emerged concerning the outcomes of wilderness experience programs, especially those programs offered by Outward Bound and the National Outdoor Leadership School (NOLS). Literature reviews from Hattie et al. (1997), McKenzie (2000), and Dawson and Russell (2012) concluded that outcomes gained from wilderness experiences positively influenced individuals and groups. Despite the research foundation supporting wilderness experiences, researchers still confront what Ewert (1983) called a "black box," or the wide acceptance of the model working but lacking evidence regarding the mechanisms and processes. Sibthorp et al. (2007) found

that this phenomenon persists, and that many adventure programs continue to rely on descriptive or anecdotal evidence without reference to specific outcomes or mechanisms of development.

According to the Association for Experiential Education (AEE, 2011), wilderness orientation programs constitute one of the most studied areas of adventure education, but it also lacks a reliable body of evidence addressing program outcomes and processes. At the same time, outdoor orientations are gaining momentum as a foundation experience through which students can jumpstart their educational engagement (Davis-Berman & Berman, 1996). A census conducted by Bell et al. (2010) found an average of ten new outdoor orientation programs begin each year despite what Dunderstadt (2006) described as a financially risk-averse trend that is prevalent within higher education. The growth in programming is indicative of the perceived developmental potential that lies in integrating learning outcomes within a wilderness experience. Therefore, aligning outdoor orientation programs with practices developed from outcomes and evidence-based research is necessary to foster continued support and implementation within higher education.

Statement of Purpose

This study investigates the outcomes for first-year student participants of an outdoor orientation at a large four-year public research university. The lack of research demonstrating the presence of outcomes achievement attributed to specific experiential education practices presents the need to assess outdoor orientation programs for effective design and implementation. This study builds on previous research of wilderness adventure education that implemented means-end theory (e.g., Goldenberg, Klenosky,

McAvoy, & Holman, 2002; Holman, Goldenberg, McAvoy, & Rynders, 2003; Lien & Goldenberg, 2012), but previous studies have not addressed outdoor orientation programs within higher education. Through applied theory and outcomes-based research, the present study collects evidence to explain patterns of participant development. From student interviews utilizing a laddering methodology, participant identified outcomes were analyzed via means-end theory to determine the presence of outcome achievement and identify the program elements associated with outcomes.

Research Questions

In order to provide a better understanding of outdoor orientation outcomes, the current study investigated what outcomes participants achieve, how these outcomes are achieved, and what features promote participant development. The guiding research questions are:

1. In what ways did student development goals of outdoor orientation programs influence students' transition to college?

2. Which program features, if any, do students attribute to their experiences and development?

3. What are participants' perceptions of the outdoor orientation program and what outcomes do they assign to the experience?

4. In what ways do program learning and development features align with student participants' perceptions of program impact?

Design, Data Collection, and Analysis

The current study was conducted at a large public research university. According to institutional data the 2012 cohort consisted of approximately 2700 first-time freshman

of a total student population of nearly 33,000 enrolled students. The outdoor orientation program began in 1990, and over the course of the past 11 years, 472 first-year students have participated in the program. Approximately 100 students, representing 2% of the incoming class, were anticipated to participate in the current program. The investigation addressed program participants from the years 2010, 2011, and 2012.

The researcher was the sole individual responsible for collecting and analyzing data. An invitation to participate in the study was sent by the researcher to the 192 undergraduate students who participated in the outdoor orientation program between 2010 and 2012. The researcher conducted individual interviews with participants from each program year. Interview questioning followed means-end theory modeling constructed of open-ended questions and prompts. Data was collected between June 1 and July 31, 2013.

All data collection was compliant with the human subject research and institutional research board policies of Grand Valley State University. Interviews were recorded on a digital device and transcribed using Dragon® software. Participants of the outdoor orientation program were not required to participate in the study, and all interviews were conducted on a voluntary basis. Individuals were not required to provide any identifying information in order to protect the identity of participants in the study.

Following data collection, the researcher analyzed and coded interview responses according to a means-end theory hierarchy. Laddering allowed the researcher to identify attributes, consequence, and values within the responses and explore relationships within a hierarchical value map. The researcher explored relationships between participant

outcomes identified through laddering with current program practices and anticipated program participant outcomes.

Definition of Terms

      Adventure Education – A learning experience where personal and interpersonal relationships and adventure activities are central to the learning experience and opportunity for growth (Priest, 1999).

      Adventure Orientation Programs – Adventure-based orientation programs that integrate several key characteristics:

- Focuses on interpersonal development

- Occurs in unfamiliar or novel environments;

- Is built around small groups of seven to 12 students led by two or three leaders;

- Presents challenging activities designed to develop group support;

- Has participants work toward specific and intended goals;

- Focuses on the transfer of lessons from the experience to the participant's life. (Priest & Gass, 2005).

      Attributes - The program or environmental features or characteristics of a program that define what a participant experience may entail (Goldenberg et al., 2002).

      Consequences – The functional, psychological, or social outcomes that result from program participation (*attribute*) that may be direct or indirect, and positive or negative (Goldenberg et al., 2002).

      Experiential Education – An education philosophy and methodology focusing on engaging the learner in direct experience with the environment and focused reflection on the experience (Martin et al., 2006).

Outcomes-based Research – The measurement of a presence of change in a participant as a result of a program or intervention as defined within specific outcomes, variables, or elements (Henderson, 2004).

Outdoor Recreation – Set in the outdoor environment often incorporating but not limited to hiking, kayaking, climbing, or a combination of outdoor activities (Priest & Gass, 2005).

Outdoor Orientation Programs – Synonymously used with wilderness orientation programs (WOPs) and adventure orientation. The term OOPs has been adopted by the Association for Experiential Educators. An alternative to traditional orientation programing, OOPS are designed to facilitate student transition to college through an outdoor recreational experience (Bell et al., 2010).

Retention – The number of full-time students that enroll in fall and return to the same college the following year. Most schools focus particularly on first-year to second-year rates. (Knapp, Kelly-Reid, & Ginder, 2011).

Values – Deeply held beliefs about the desired end state individuals hope to achieve from participating in a program (Goldenberg et al., 2002).

Wilderness Experience Program (WEP) – A program defined by the centrality of the wilderness environment to the delivery and impact of the program experience. WEPs primarily focus on three areas: education, personal growth, and therapy. (Dawson & Russell, 2012).

Delimitations of the Study

The current study is delimited to student participants of an outdoor orientation at single university during the years 2010, 2011, and 2012. Participants were recruited from

multiple stages in the college progression in order to explore the possible impacts and value at varying periods of time beyond program completion. The inclusion of older students minimizes the confounding variable of intervening experiences as means-end theory allows students to assign meaning to experiences and determine the appropriate associations. The length of time between completion of the program and administration of the study mitigates post-course euphoria (Ewert & Sibthorp, 2009).

The researcher chose to utilize means-end theory as a method of producing more authentic data free of influence from authority. Through open-ended interviews participants will identify program features and outcomes free of suggestion that would be present within a numerical value survey. Interviews rather than an open question survey was the method of choice so that the researcher may develop a more rich body of data employing continuous and reverse lines of questioning. External validity is limited as research was conducted at one institution and outdoor orientation programs vary broadly according to geography, resources, and maturity. Similarities in methodology to Goldenberg et al. (2002) and Lien and Goldberg (2012) provides for comparative examination of results highlighting how outcomes are achieved.

Limitations of the Study

As with many outdoor orientation programs, the target program is a voluntary experience and not required for all attending students. Self-selection bias remains a limitation of many outdoor orientation studies as student responses reflect the decision to participate. Additionally, the researcher must assume that participants answer interview questions honestly and not feel obliged to respond positively. Yet, the laddering methodology attempts to mitigate some self-reporting bias as participants do not receive

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suggestions or prompts regarding program features. The use of interviews limits

researcher influence on which attributes the participant identifies as most salient. During

the categorization of laddering levels, means-end analysis is susceptible to researcher

subjectivity. Although subsequent abstractions are organized according to the researcher

perspective, the means-end analysis provides the lens through which participant response

can be effectively organized to identify essential associations and linkages. The risks of

intervening situational variables or social desirability during the interviews (Ewert &

Sibthorp, 2009) are not easily managed, but despite these limitations the research stands

as a useful exploration of program practices and participant outcome achievement.

Chapter Two: Literature Review

Introduction

The research literature [on adventure education]…has been uni-dimensional; it has focused on outcome issues (self-concept, locus of control, etc.) and has held a blind eye to their relationship to programmatic types of issues (…activity mix, instructional staff.) In essence, we have discovered an educational black box; we know something works but we don't know why or how. (Ewert, 1983, p. 27)

Although written 30 years ago, the black box that Ewert refers to remains a central focus of adventure education research. Sibthorp et al. (2007) noted that many adventure-based programs continue to rely on this phenomenon where participation is assumed to lead to participant development without understanding the specific features of an adventure program that lead to this development. Although some studies have researched the relationships between some adventure program characteristics and outcomes (e.g., Hattie et al., 1997; McKenzie, 2003, Sibthorp et al., 2007), the relationships between many program features remain under-researched and unidentified because the variables tend to be difficult to control (Ewert & Sibthorp, 2009). Although incomplete, researchers can plan to meet desirable outcomes by drawing upon existing evidence and established critically-reviewed theoretical frameworks (Berry, 2011). This chapter will present background literature on outdoor adventure programs, related research findings, and the theoretical underpinnings for new student orientation programs and assessment.

Outdoor Education

Outdoor education is an experiential model that takes place primarily in a natural outdoor setting. The learning in outdoor education is centered on the relationship between people as well as the natural environment (Martin et al., 2006). Common features of outdoor adventure programs include: an outdoor setting, although not necessarily a remote wilderness; small groups ranging in size up to 16; and the requirement of skill mastery to meet the physical and/or mental challenges presented (Goldenberg et al., 2002). Challenges may involve group dynamics, problem solving, communication, decision making, or leadership development skills framed within an adventure activity (Hattie et al., 1997). Employing an experiential model, educators purposefully engage with learners in direct experience and reflection in order to foster knowledge creation, skill development, and clarify values (Martin et al., 2006). Acknowledging the potential for student development, universities have incorporated outdoor education features into orientation programs as first observed at Dartmouth and Prescott colleges (Bell et al., 2010).

Outdoor Orientation Programs

Most universities or colleges develop orientation programs for incoming students in an effort to facilitate their ease of transition into the institution (Gass, 1987). While specific purposes of programs may vary between schools, studies show orientation programs provide benefits to students during this period of transition including personal growth (Davis-Berman & Berman, 1996), increased social networks (Gass et al., 2003) and sense of place (Austin, Martin, Mittelstaedt, Schanning, & Ogle, 2009). Research has documented that orientations provide information and experiences to help reduce anxiety

about college (Robinson, Burns, & Gaw, 1996). Additional studies show that orientation programs help students adjust socially and academically (Barefoot, 2000; Gass, 1986; Robinson et al., 1996) as well as facilitate realistic expectations towards college life (Barefoot, 2000).

Outdoor orientation programs (OOPs) share the same goals as traditional orientations in that the program helps facilitate the transition to the collegiate environment. OOPs are distinct in that they use adventure experiences in an outdoor setting as part or through all of the experience for small groups of incoming students (Bell et al., 2010). Dartmouth College is regarded as the first to have adopted the OOP model although the focus was directed towards an orientation to the Dartmouth Outing Club (Hooke, 1987). In 1968, Prescott College formalized the wilderness experience incorporating Outward Bound USA curricular and program features into their orientation design (Miner & Boldt, 1981). By 2010, a census of university programs reported more than 160 OOPs in operation with a stable rate of new programs replacing those retired (Bell, 2011). A longitudinal survey conducted by Gass et al. (2003) emphasized how these OOPs can have significant positive impact over the course of the participant's education particularly in taking advantage of the new university experience.

Retention/Attrition

Of the many issues facing higher education institutions, retention is perceived as a critical issue and is a leading reason for instituting orientation programming (Perrine & Spain, 2008). Despite the rising rates of enrollment over the past twenty years, student attrition continues to be a problem at many institutions of higher education (Snyder & Dillow, 2013). Specifically, first-year to second-year retention remains an area of focus

for university professionals; from 1983 through 2012 the mean national freshman retention rates for both public and private 4-year institutions was below 67% (ACT, 2013). For some students attending university was not a meaningful decision while others may not have been adequately prepared for the environment. As a strategy to address issues of transition, orientation programs have been a leading intervention tool for universities (Tinto, 2007).

Several studies have addressed the impact of outdoor orientations programs following the subsequent success of participating students, primarily through analysis of grade achievement and year to year retention (e.g., Brown, 1998; Galloway, 2000; Gass, 1990). Studies by Gass (1990) and Brown (1998) were longitudinal assessments and found that students who participated in outdoor orientations had significantly higher rates of retention from year one to two than those limited to just on-campus programming. Galloway (2000) highlighted that there remains a substantial gap in the literature regarding the overall effectiveness of programs pertaining to academic transition and retention amplified by the lack of assessment within these areas. Ewert and Shellman (2003) noted that outdoor orientation programming offers one strategy to facilitate retention particularly in the areas of social skills and establishing support networks.

Social integration

In a study of 57 programs, Galloway (2000) identified that the prevailing purpose of OOPs were social in nature intending to increase social networks, peer adjustment, and small group skills. Research has shown that participation provides social benefits including increased friendship formation (Devlin, 1996), social integration (Bell, 2006), and improved connections with peers (Bell & Holmes, 2011). Gass et al. (2003)

documented positive effects within participant social skills such as developing social networks, whereas Galloway (2000) noted improved adjustment and small group skills. In a study exploring *sense of place*, the connection formed with community, place, and environment, Austin et al. (2009) found that OOPs participation fosters community development and supported previous findings regarding social benefits. The researchers argued that these results indicate a positive relationship between the development of sense of place and the social benefits attributed to participation in an outdoor orientation program. Additionally considering a study from Jacobs and Archie (2008) which found that sense of community also positively impacts retention, Austin et al. (2009) concluded that sense of place and social benefit outcomes as elements of social integration require continued attention. While interpersonal development encompasses a substantial focus of adventure programming and requires further exploration regarding student retention, personal development is also central to the learning experience (Priest, 1999).

Self-Concept

Self-concept has been one of the most predominant individual outcomes investigated within adventure programs. Perceived through changes in independence, confidence, self-efficacy, self-awareness, and self-understanding, adventure programs have demonstrated positive effects on participants' self-concept and their ability to engage challenging situations successfully (Hattie et al., 1997). In developing self-control, or the management of self in response to environmental stimuli, participants are challenged within an unpredictable wilderness environment facilitating active behavior modification and the employment of greater self-control (Martin et al., 2006). Fostered

through adventure activities, the increasing self-concept equips participants with the self-knowledge to manage new challenges (McKenzie, 2003; Propst & Koesler, 1998).

One of the distinctive features of wilderness programming is the intentional transfer of leadership responsibilities from trainers to participants. Through assuming positions and roles within the program, sharing responsibilities, and teaching fellow students, participants engage in active practice of leadership (Sibthorp. 2003). Eich (2008) unequivocally highlighted that the experiential aspect of leadership education is an essential and significant attribute of a successful program. Through experience students will develop a greater sense of self-efficacy, alongside increased understanding of group dynamics and interpersonal interaction. Propst and Koesler (1998) noted that the observation, practice, and feedback processes integrated within a NOLS expedition significantly increased self-efficacy and that the effects persisted beyond program participation. Peer-modeling can foster this positive development but McKenzie (2003) and Sibthorp (2007) found that instructors play a significant role influencing course outcomes.

Trust

Outdoor instructors, as noted by Shooter, Paisley, and Sibthorp (2010), are the common denominator to all programmatic outdoor education experiences. Programs rely on the instructors to establish a supportive, developmental atmosphere. Fundamental to establishing that dynamic is the ability for the leaders to build trusting relationships with the participants and model that practice during the expedition (Shooter et al., 2010). Research shows that as the outdoor leaders teach and encourage participants to engage in productive expedition behavior, the connection between individual responsibility and

group benefit is perceived and strengthened (Shooter et al., 2010). Through initial modeling and continued interpersonal interaction, expedition behavior is reinforced encouraging the formation of trust among group members (Martin et al., 2006). Trust development serves as a foundation for reflection and leadership development as participants share a common experience and have established the interpersonal relationships that permit honest and meaningful interaction when participants return from the expedition experience (Hattie et al., 1997). While the foundation for this development is significantly influenced by the instructor, the group characteristics considerably influence the quality and range of participant outcomes.

Group Composition

Group members shape group identity and performance; thus, the interactions between group members are likely to be a key factor in influencing outcomes (Berry, 2011). From an integrationists point of view an individual's behavior is heavily influenced by the surrounding community. Mead (1934) suggested that an expedition will influence the collective attitude more so where the community is initially unfamiliar. Strong feelings of mutual dependence fostered during the achievement of shared goals are suggested to create social bonds between participants (Kimball & Bacon, 1993). Additionally, a sense of interdependency, reciprocity, and caring for the community can emerge as important characteristics of the group (Witman, 1995). Beames (2010), drawing from Cooley's (1962) conceptualization of groups, encapsulated this observation that expedition groups may be particularly powerful as daily interaction necessitates strong norms of reciprocity, inter-reliance, and valuing groups needs above the individual.

McKenzie (2000) noted that few adventure education studies have identified how group composition influences the program outcomes. Hattie et al. (1997) found that the effects of adventure programs are equally effective for both males and females across a broad range of outcomes. Berry (2011) also suggested that it is more effective to plan programs for mixed groups and utilize opportunities which challenge attitudes and behaviors that reinforce gender stereotyping. An early study from Walsh and Golins (1976) suggested groups of seven to fifteen participants would foster a sufficient balance of diversity, adversity, and group cohesion. Carron (1990) also found larger groups tended to demonstrate poorer social and psychological outcomes, while Hattie et al. (1997) affirmed this strategy that smaller group sizes are also more effective when planning experiential programs. Understanding group influence remains important as adventure programs seek to maximize outcomes that will lead towards learning transfer beyond the program.

Overlearning

Overlearning, or the mastery of a skill beyond familiarity, has been shown to impact learning transfer (Burke & Hutchins, 2007; Sibthorp et al., 2011) as connected to continued practice and presence of feedback. Active learning and participation, inherent to an adventure experience, also provides greater opportunity to remain engaged and attentive increasing learning outcomes and transfer (Burke & Hutchins, 2007; Haskell, 2001).

Considering research from Sibthorp et al. (2007), which identified the benefits of an extended expedition, overlearning is most likely to occur in the environment in which it can be practiced. Group isolation, an essential feature of a wilderness experience as

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identified by Beames (2004), focuses participant energies and learning within their community and the current experience. The longer duration for an adventure program, then, creates repeated opportunities for participants to actively engage new skills whereas short-term trips may only reach competency and rely on an open environment to facilitate transfer learning that accompanies mastery.

Expedition Length

An investigation conducted by Sibthorp et al. (2007) in conjunction with NOLS quantitatively assessed the benefits of participating in a wilderness expedition. Most significantly, variance in perceived gains could only be explained through the length of the trip, with longer trips corresponding to reports of higher gains. The length of expedition positively influenced the gains in five of the six course outcomes including expedition behavior and sense of self-concept (Sibthorp et al., 2007). This NOLS study demonstrated consistency with the meta-analysis from Hattie et al. (1997) which reviewed additional studies that examined expedition length.

Long term trips also reinforce the accepted environment in which participants are encouraged or must use the skills they have learned and hold each other accountable for using those skills. Accountability emphasizes skill application and promotes learning transfer (Burke & Hutchins, 2007). The addition of peer modeling and accountability in conjunction with peer support fosters an ideal environment in which leadership learning can be optimized. While expedition length provides a suitable period in which participants can practice and apply newly learned skills and knowledge, experiential education recognizes that reflection is an important step in the learning process towards mastery and knowledge creation (Dewey, 1997).

Reflective Practice

Reflection has been effectively attributed to supporting and fostering learning within the educational experience, and studies indicate it is equally powerful within the adventure program experience (Priest & Gass, 1997). Elements of self-reflection or within a group setting have demonstrated positive effects on the long-term impact of an adventure course (Gass, 2003; Gassner, 2008). Individual or group reflective practices contribute to learning immediately during the course and as studies suggest foster ongoing making meaning beyond the initial expedition experience (Gassner & Russell, 2008).

Sibthorp et al. (2011) noted "specifically in the context of adventure education, Gass (1999) and Luckner and Nadler (1997) posited that intentional use of reflection activities involving metaphor can facilitate transfer of learning" (p. 113). The incorporation of reflection as a process for individual growth and a mechanism of learning has emerged as a central theme within wilderness adventure programming. Growth and development can occur where reflection is absent, but research suggests that adventure programs that intentionally integrate constructed reflection activities positively affect the depth of development (Araki & Okamura, 2006).

Additionally, Sugerman, Doherty, Garvey, and Gass (2000) highlighted the impact that reflection has in supporting participants who are less disposed to spontaneous reflection. Participants are better equipped to make-meaning of their experiences as they are exposed to new ideas from other participants and actively engaged in extracting meaning from the experience (Sugerman et al., 2000). While reflection does not assure a positive experience within the program, studies by Priest (1996), and Araki and Okamura

(2006) do indicate that the reflective activities positively promote understanding, meaning-making, and an enhanced learning experience.

Solo/Autonomous Experience

A solo experience is defined as a predetermined period of time in which program participants are isolated from their full program group providing for the opportunity to independently reflect and interact with the environment (Bobilya, 2004). Risk factors and program expectations define the extent of a solo experience, but existing designs have included anything from multi-hour journal reflections to autonomous traveling groups within the program period. Programs studied by Daniel (2007) and Kalisch, Bobilya, and Daniel (2011) utilized multi-day autonomous elements while both overnight autonomy and hourly periods of isolation were studied by (Bobilya, Akey, & Mitchell, 2011). Aligned with prior research on learning mechanisms (see Sibthorp et al., 2011) and high quality attributes (see Eich, 2008), autonomous experiences create the space for students to take ownership, make decisions, and establish interpersonal relationships.

Programs may utilize varying techniques to facilitate a solo/autonomous experience but research indicates that the presence of the element is consequential and often the most influential component of participant learning and growth (Bobilya, 2004; McFee, 1993). Within a spiritually oriented 20-day expedition through a private liberal arts college, the solo emerged as the most significant component (Daniel, 2007). Participants through Outward Bound Singapore also identified the solo and autonomous section as the most influential component towards their individual and professional development (Gassner & Russell, 2008). Describing the solo experience, participants

linked the solo to feelings of independence and self-reliance accompanying knowledge

creation and enhanced personal awareness (Goldenberg, McAvoy, & Klenosky, 2005).

Theoretical Framework

While adventure education has identified a number of patterns and practices that

have been linked to positive developments, Henderson (2004) commented that theories

are needed to frame explanations for the patterns observed as well as shape the direction

of research to better explain these results. The following theories provide a framework to

understand the existing body of knowledge and continue the line of inquiry into outdoor

orientation outcomes beyond indicators into practice and process.

Astin's Theory of Involvement. Astin's (1984; 1999) theory of involvement

remains one of the most-utilized models to describe involvement and engagement within

higher education. Astin characterized involvement as the level of physical and

psychological energy devoted to the academic experience (e.g., high involvement

corresponding to considerable energy dedicated to social and academic activities and low

involvement reflecting little energy spent on campus engaging socially or academically).

Astin (1999) emphasized that involvement was an active concept, one that is defined

more so by the individual's actions rather than feelings. In pedagogic terms, his theory

argues that in order for a particular program to achieve its intended outcomes it must

elicit student investment and energy in the developmental process. Rather than passive

receptors, student must be active participants in the learning and developmental process.

Instead of focusing attention on content or resources presented by the educators, the

approach should be concerned with the behavioral mechanisms that facilitate how a

student becomes engaged.

Results from a number of studies (e.g., Astin, 1973; Barefoot, 2000; Gardner, 2001) identified a number of patterns that reinforced the premise from Astin's theory that high involvement observed as student time translated to greater investment and increased retention. Astin (1999) concluded that living on campus, honors programs, campus employment, and extracurricular collegiate activities all positively impacted the student experience, success, and likelihood to persist. Upcraft (1995) expanded on the theory stating that students were more likely to succeed with increased quantity and quality of involvement. Although Astin argued for greater quality over quantity of time, the increase of opportunities to be actively involved including start of year activities benefit student engagement. The quality and quantity of student engagement remains important particularly in consideration of the student's ability to persist year to year within higher education.

Tinto's Theory of Retention. Student retention is one of the most widely studied and broadly debated areas within higher education. With a substantial body of literature covering more than four decades, there are numerous theoretical models that are presented as a more nuanced and accurate representation of the complex experiences and processes that shape student persistence. Spady's (1971) model described the interaction between student characteristics and campus environment, and Pascarella (1985) assessed students in relation to direct and indirect effects of an institution's environment. Prior to the 1970's, student success was perceived as a reflection of student characteristics such as motivation and ability. That perspective began to change as educators began to review and take into account the academic and social systems within an institutional environment (Tinto, 2007). Tinto (1975; 1988) introduced a longitudinal model that

established an explicit connection between environment, including first-year experience

and student retention. Extended orientations along with a wide range of programs were

adopted in order to address and enrich first-year transition experiences as significant

features of student engagement (Upcraft, Gardner, & Associates, 1989, as cited in Tinto,

2007).

Although our understanding of the experience of students has been greatly

expanded, Tinto (2007) reiterated, "There is much that we have not yet done to translate

our research and theory into effective practice" (p. 2). The challenge remains for

universities to realize the gap between research and theory and then implement new

practice that makes engagement significant to the student and in varying environments.

Tinto (2007) suggested that one step is for institutions to investigate and understand what

helps students persist and succeed; recognizing why students leave does not directly

explain how to help others remain. Work from Astin (1984) and Kuh (1999) has

conceptualized and underscored social and academic integration but it has not examined

the practices that are established to support these aims and ultimately student

engagement.

Tinto (2007) expanded upon this issue stating that institutions need to move

beyond identifying effective practices towards fully implemented programs with the

support and planning to endure. Programs have and need to continue to provide empirical

evidence that resources committed toward their implementation are yielding long-term

benefits. Additionally, research is needed that illuminates effective practices that lead to

successful programs and thus contributes to program longevity. The focus should shift

from what types of programs are successful to how and why programs have been

successful (Tinto, 1990). Tinto (2007) concluded that the essential elements of a successful program are at this point unavailable, but the qualitative and quantitative documentation of the common elements of successful programs is necessary to lead towards future program institutionalization. The identification of elements that contribute to successful adventure programs can be isolated though the use of applied theory such as means-end theory as demonstrated by Goldenberg, Klenosky, O'Leary, and Templin (2000).

Means-End Theory. Means-end theory was first developed by Gutman within the business and marketing field as an approach to investigate the meanings that individuals associate with the products and services they consume (Gutman, 1982; Reynolds & Gutman, 1988). The theory aims to characterize the relationships between the products, the experienced outcome, and the values underlining the individual's decisions. Focusing on the interrelations of product meaning at three levels of abstraction – *attributes*, *consequences*, and *values* – means end theory relates these meanings in a means-end chain model (Gutman, 1982). The levels of abstractions are described as: attributes – the relatively concrete characteristics of a product or service; consequences – the outcomes associated with the experience of the product or service; and values – the highly abstract concepts that describe desired end-states (Goldenberg et al., 2000). The means-end model can also be represented as a hierarchical value map or ladder where dominant connections are represented graphically highlighting linkages between levels of abstraction (Goldenberg et al., 2000).

Reynolds and Gutman (1988) summarized the process as one in which the rationale underlying consumer choices, concerning products containing attributes

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essential towards achieving a desired outcome, are reduced from why the outcome is

important to the motivating personal values. The linkages between product and

perceptual process of consumers are useful in creating a more direct understanding of the

consumer decision-making (Reynolds & Gutman, 1988). Initially used in research to

understand consumer behavior regarding purchasing decisions (e.g. tennis racquets,

greeting cards, skiing destination), the theory was also applied in service or less

traditional settings such as recycling behavior or use of interpretive park services

(Goldenberg et al., 2000).

Goldenberg et al. (2000) first extended this approach to examine the experience of

participating within an adventure recreation activity – a ropes course – as a method of

assessing benefits and outcomes of the programming. The relationships drawn between

the abstract values found in participants suggested that the ropes course program

facilitated participant cooperation to accomplish presented tasks, which yielded feelings

of satisfaction and fulfillment. Means-end theory was also utilized in the examination of

the outcomes associated through participation in an Outward Bound Program.

Goldenberg et al. (2005) examined five specific program elements demonstrating how

mean-end modeling conceptualizes the outcomes perceived by participants and how the

outcomes contribute to personal development and values. The study was the first to apply

means-end theory to a multi-day wilderness setting program reinforcing the applications

available within the approach.

The means-end approach has also been employed towards outcomes examination

in few other related studies. McAvoy, Holman, Goldenberg, and Klenosky (2006)

examined an integrated wilderness adventure program which paired participants with

disabilities and those without highlighting the programming created a lasting impression and transferred into participant lives. Leading national programs, Outward Bound and NOLS, were compared by Goldenberg and Pronsolino (2008) with results that indicated many similar attributes and outcomes between programs. Conversely, means-end data from Goldenberg and Pronsolino (2008) also identified different specific themes that suggested program emphasis and philosophy, such as interpersonal relationships and skills development, affected outcomes and emerged differently within participant consequences and values. A longitudinal study from Goldenberg and Soule (2011) further demonstrated the use of mean-ends theory in identifying elements of a NOLS course that correspond to long-term impact and development.

Means-end theory is a theoretical frame that assists researchers to gain a better understanding beyond just what outcomes of outdoor adventure programs are achieved, but also how and why the outcomes are realized. A few studies have examined the outcomes linkages associated with wilderness adventure programs, but this study examines the outcome-attribute associations within an outdoor orientation program.

Chapter Three: Methodology

Introduction

The purpose of this study was to investigate the practices of an outdoor orientation program through means-end theory assessing what program elements and mechanisms are attributed to participant development. Program assessment often references participant outcomes as evidence of effectiveness but these results do not sufficiently indicate the specific mechanisms that influenced and ultimately facilitated the participant development. The research study was guided by the following questions:

1. In what ways did student development goals of outdoor orientation programs influence students' transition to college?

2. Which program features, if any, do students attribute to their experiences and development?

3. What are participants' perceptions of the outdoor orientation program and what outcomes do they assign to the experience?

4. In what ways do program learning and development features align with student participants' perceptions of program impact?

This chapter describes the methodology used in this study to gather and analyze data regarding participant outcome achievement within a single outdoor orientation program. First the research design will be presented followed by the sampling procedure and participant recruitment. Next, the interview instrumentation is explained in the context of means-end theory application. A description of data collection and analysis will conclude the chapter.

Research Design

This study was conducted at a public research university that offered an outdoor orientation program (OOP) for entering first-year students prior to the start of the academic year. The study commenced June 1st and ran until July 31st during which time the convenience sample of 192 undergraduate students were invited through their institutional email to join the study. Invitations were only made available to students who participated in the orientation program during the years 2010, 2011, and 2012. Students were invited to complete an interview in person on campus, via video conference, or telephone according to their availability. Three interview schedules were ultimately started, however only two were completed as the third was unable to continue. Remaining incomplete, the third interview was excluded from the data.

Grounded in means-end theory (Gutman, 1982; Reynolds & Gutman, 1988), the current study used an approach first developed within the business and marketing field to explore the outcomes and the program features that outdoor orientation program participants perceived as leading to those outcomes. The theory abstracts three levels of relation the participant has with the target service or product, focusing on the relationship between the individual, products, experienced outcome and underlining values. Goldenberg et al. (2000) demonstrated the application of means-end theory to outdoor adventure examining participant experience and outcomes during a high-ropes course program. Further studies have demonstrated the value of employing this theory and practice as method of examining participant outcomes and the experiences that contributed to those perceived outcomes (Goldenberg et al., 2002; Goldenberg et al., 2005; Goldenberg & Pronsolino, 2008; Lien & Goldenberg, 2012).

This study used a means-end interview design to explore the outcomes and the program features that OOP participants perceived as leading to those outcomes. Interviews were selected as a method of data collection for the case study for the 'richness' of the communication possible and the ability to convey nuance and subtlety (Gillham, 2000). Means-end data was obtained using a qualitative research technique known as laddering. Laddering involves asking a series of open-ended questions that begin with the participant first identifying the attributes of an experience that were important to them (Reynolds & Gutman, 1988). Subsequent questions or prompts ask the participant to explain why a particular attribute was important. Each following response is then subjected to a similar "Why is that important?" line of questioning. The string of "Why is that important?" questioning continues until the respondent repeats their previous response or is unable to provide a meaningful answer (e.g. "I don't know," or "Just because."). Conversely, the interviewer can also pursue lines of inquiry regarding why an attribute is unimportant.

Reynolds and Gutman (1998) refer to this process as laddering, one that allows participants to translate concrete attributes or experiences into meaningful associations from outcomes into values. Allowing participants to identify the meaningful attributes and outcomes facilitates a more open and undirected response that could be missed through researcher bias. The laddering method is applied for each attribute identified at the start and during the interview. The dialogue transcript is then a representation of the thought progression from attribute to consequence (outcome) and the associated values as defined and perceived by the participant.

Participants

The target population for the study was undergraduate students at a large, public research university who participated in an elective outdoor orientation. There are approximately 2,700 first-time freshman within a total student population of nearly 33,000. Over the course of 11 years, participant populations have fluctuated between 15 and 40 representing less than 1% of the incoming class. The sample was limited to 192 students who participated in the program during the years 2010, 2011, or 2012, and participants were invited to voluntarily participate in the study. The sample yielded two participants identifying as upperclassmen currently enrolled at the institution. One participated in the OOPs in 2010 while the other participant attended in 2011.

Data Collection and Analysis

The study commenced June 1st and ran until July 31st during which time 192 undergraduate students were invited through their institutional email to join the study. Invitations were only made available to students who participated in the orientation program during the years 2010, 2011, and 2012. Invitations outlined the purpose of the study and offered the opportunity to meet in person on campus or via video-conference. Participants were informed that their participation would be anonymously documented and identities protected in compliance with Institutional Review Board and human research protocols. Students were invited to complete an interview in person on campus, via video conference, or telephone according to their availability. Three interview schedules were ultimately started, however only two were completed as the third was unable to continue. Remaining incomplete, the third interview was excluded from the data. All interviews were recorded for transcript documentation and run through Dragon

NaturallySpeaking voice transcription software. Prior to coding, transcripts were reviewed to confirm accuracy to original dialogue.

The interviews were selected for the case study for the "richness" of the communication possible and the ability to convey nuance and subtlety that can be lost when using questionnaires (Gillham, 2000.). Unstructured interviews also provided the open environment in which the participant had more control over the topic and direction of the conversation (Knight, 2002). In contrast, the use of a structured interview or questionnaire can be interpreted as having undue influence on the subject of investigation, indicating that some topics hold more importance than others (Knight, 2002). Operationally removing the researcher from the topic selection allows the participant to select attributes unbiased by program or researcher interests. Open structure followed by the use of laddering allowed participants to self-identify the most salient experiences through which the researcher could then explore in rich detail examining the self-constructed associations. The interest in eliciting participant attribute-consequence-value associations then guides the researcher's use of the laddering interview process.

Participant responses were coded according to the means-end hierarchy: attributes, consequences, and values. The analysis began with a summary of the critical elements through which a summary table of the connections was constructed. Interviews allowed participants to identify attributes free of researcher influence. Subsequent abstractions are identified and subject to researcher perspective. From the dominant connections a hierarchical value map was created to visually represent prominent patterns and associations identified within the data.

In order to develop data reliability a number of practices were utilized to establish credibility and dependability reflecting strategies identified by Shenton (2004) for developing trustworthiness in qualitative research projects. A review of adventure education studies and the available outdoor orientation outcome research was used develop an appropriate approach, means-ends questioning, which reflected previously established methods examined by Goldenberg, Klenosky, McAvoy & Holman (2002). Means-end questioning inherently builds in structures that support credibility including iterative questioning and tactics to help ensure honesty in informants. Research protocols additionally helped establish an environment in which participants were provided the freedom to express their thoughts freely and frankly, were considered credible sources of information and retained the right to withdraw from the study without question. The researcher also supported credibility though the development and an early familiarity with the culture of the participating organization (Shenton, 2004). An extended observation of the case study program promoted an improved understanding of the structure and culture beyond generalized OOPs practices and program documentation.

During interviews, the researcher employed back-briefing of the interview with the participant in order to confirm that the researcher understood their account and was accurately identifying initial means-end hierarchies. According to Guba and Lincoln (as cited in Shenton, 2004) these member-checks can be considered the most important provision to bolster a study's credibility. Combined with iterative questioning embedded in means-end questioning, this process allows the researcher to bracket prior adventure experience and suppositions in deference to the participants' perceptions. During data analysis as the researcher utilizes familiarity of the program and prior experience to better

understand the data the process continues to revisit the participant identified features in order to reinforce accuracy.

Summary

This study was conducted to assess an outdoor orientation program through means-end theory identifying if outcomes from the program can be linked to specific program elements. Means-end theory was first introduced as a marketing-advertising tool and later demonstrated in an outdoor adventure application by Goldenberg et al. (2000). Interviews were analyzed using a laddering technique to abstract connections and determine dominant patterns and associations. Hierarchical value maps were created to visualize significant relationships and address research questions.

Chapter Four: Results

Introduction

      This chapter presents the findings of the qualitative study. The chapter begins with a description of the context in which the study was conducted. Next, the findings of the study are presented in reference to the research questions previously outlined in chapter one. The chapter concludes with a summary of the findings and analysis.

Context

      The study was conducted at a public research university that offered an outdoor orientation program for entering first-year students prior to the start of the academic year. The program is elective and fee-based which includes all essential adventure and camping equipment, food, and program time with adventure outfitters. The cost of participation has fluctuated depending on additional university financial assistance and the selection of adventure activities.

      The week preceding the start of the university orientation, three teams, each consisting of approximately 18 students, a faculty member, a student peer-advisor, and a trip leader embark on a six-day outdoor adventure trip. Peer-advisors and faculty members are associates of the office providing the outdoor orientation program. Trip leaders are recruited based on outdoor trip experience, first-response and risk management qualification but are often associated with the university. The program is geared towards incoming students of all experience levels. Staff and adventure outfitters provide introductory instruction to assist novice students while also introducing opportunities to challenge experienced students. Adventure outfitters are organizations independent of the university while staff members are faculty, staff, and student

employees of the school. Each trip is located in a separate campsite, all within a four

drive of the university campus. Students learn basic camping skills, plan and purchase

trip food, cook their own meals, and sleep in tents.

Trip activities include a team development course and adventure activities

including orienteering, white-water kayaking, rock climbing, and hiking. Past years have

also included white-water rafting. Trip itineraries also include an open day during which

participants are free to choose their activities. Past activities have included sports games,

swimming, historical town tours, and wildlife nature walks. In addition, students are

engaged in activities and discussions that help prepare for the transition to the university.

Discussion topics include personal goals, leadership roles, and learning how to be

productive members of the trip community and later, communities within the university.

Findings

The findings of this study will be organized according the research questions and

presented alongside hierarchical value maps portraying the data associations identified.

Outdoor orientation programs operate on the premise that students who participate will

meet other new students and will better transition into the university environment. This

section discusses program features that participants identified as having an impact on

their experience and what kind of development they perceived as having occurred.

1.) *Which program features, if any, do students attribute to their experiences and*
    development?

A difficulty of means-end interviewing is the overlap of attributes and

consequences when examining laddering associations. Outcomes such as experiential

learning and challenge can also be analyzed as attributes of the program. In this section

attributes were determined by participant perceptions of program and not researcher

coding. Participants in the study expressed that the primary adventure elements of the

program were the most meaningful features of the whole experience. These include

whitewater kayaking, rock climbing, rappelling, and whitewater rafting. The adventure

elements were credited with stimulating a broad range of outcomes but a substantial

amount of time was spent explaining the dynamics around secondary features such as

setting up camp, cooking, and buying groceries. Table 1 reflects the frequency (*N)* of

attributes to which consequences were assigned by participants. Instructors were not

mentioned as a top three most meaningful features of the program, yet their involvement

appeared to have as many connections to student development as the highlighted

adventure components.

   An interesting outlier discovered pertains to the only attribute reported as an

undesirable experience. One participant reported that sleeping outside was meaningful to

the extent that he felt it detracted from his experience. The negative reaction shared

implied that the student perceived being outdoors as a significant feature of the program.

Table 1

Outcome Achievement by Feature

Attribute (Feature)	*N* Value
Rafting	7
Kayaking	5
Rock Climbing/Rappelling	5
Instructors	5
Free Day	4
Grocery Shopping	3
Camp Setup	3
Camp Cooking	2
Group Experience	1
Goal Setting	1

Note. N = Number of references made to outcome achievement

2.) *What are participants' perceptions of the outdoor orientation program and what*

outcomes do they assign to the experience?

Overall, participants expressed that this was the first time that they had

participated in many of these activities and that the novelty of the experience was an

attraction for them to participate in the program. The ideas of challenge, adventure, and

fun surfaced in their expectations and participants remarked that challenge and fun were

outcomes they experienced as result of program features. Table 2 lists the most

commonly identified outcomes (*N* value) as a result of participating in the program.

Interpersonal relationship formation was the most frequently identified outcome and was

also assigned the most associations (*A* value) to program attributes. Across the eight

consequences most referenced, multiple attribute associations were identified.

Table 2

Outcome-Attribute Association

Consequence (Outcome)	*N* Value	*A* Value
Interpersonal Relationships	9	7
Trust	7	4
Teamwork	6	3
Relativism – Diversity of Knowing	5	4
Empowerment	5	4
Leadership Learning	5	3
Overcoming Challenge	5	3
Applied Skills	4	4
Self-Discovery	4	3

Notes. *N* = Number of references made to outcome achievement
A = Number of attributes associated to outcome achievement

Results indicate that the program was significant to the participants and that

program attributes had a positive impact on their experience. Although participants

referenced adventure elements as the most meaningful attributes, Figure 1 illustrates that

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outcomes such as *interpersonal relationships, trust,* and *leadership learning* had strong

associations to other elements such as the free day, instructors, and cooking. One

participant remarked that instructors "were a big part of me getting into these things [new

experiences]." Considering the number of outcomes associated with the new adventure

elements, his statement highlights an unrealized importance of capable instructors who

are able to facilitate positive engagement with the adventure activities.

Figure 1.
Note: The density of the lines corresponds to how often the attributes were linked to
consequences. Boxed texts represent the consequences and the texts inside ellipses
correspond to the attributes.

Participants described outcomes that covered a range of development including

new skills, self-development, cognitive awareness, and social improvement. Statements

such as "If the whole group is waiting to eat, and I don't know how to cook, I think it's

better if I just fulfill my role," suggest that self-awareness and group dynamics were both engaged leading to a better understanding of leadership and the individual. The diversity of outcomes suggests that participants will ascribe varying qualities to their experience. The concentration associated with adventure elements indicates that despite this diversity the primary design elements of the orientation can have a significant impact on participant experience outcomes.

Some outcomes were tiered inside other outcome-attribute associations where participants observed a chain of consequences originating with a single program element. Outcomes such as respect appeared this way as mean-end chains from whitewater rafting lead to learning about others and diverse cultures and perspectives [relativism] which contributed to developing respect for others in addition to building trust within the program community.

> "And because I got to know them on a different level…What their values are versus mine," lead to "You want to treat people how they want to be treated, not necessarily how you want to be treated because everyone is different, so knowing that helps you build relationships. Because I'm not going to treat you in a disrespectful manner if I know that about you."

Participant perception of these outcome chains reinforces their observations as to which program features were meaningful.

3.) In what ways did student development goals of outdoor orientation programs influence students' transition to college?

The goals for this outdoor orientation program are organized into three thematic groups: (a) facilitate an ease of transition into the first year through adventure activities

with fellow classmates; (b) meet future classmates in a fun and supportive community; and (c) feel connected to the university community before your first day of class. While students agree that the program was a positive experience, Figure 1 illustrates the specific features that students identified as contributing to the overall positive outcome. Many programs state that social engagement is a primary outcome for participation, and the network of program elements associated with interpersonal development supports this position for the program studied. Two students described in seven examples that the adventure elements within the program contributed to their social development but facilitated experiences such as goal setting discussions and practical events like setting up camp also contributed to two means-end association chains. Participants did not explicitly mention that spending the time with other first-year students was a critical element, but the value of peer connections was implied in outcome achievement of interpersonal relationships.

Outcomes of trust, teamwork, and overcoming challenges were credited with fostering deeper connection intellectually and socially with program participants. In response to accomplishing goals such as an organized camp set-up one participant remarked, "We all did this together. We got to chit-chat and bond in setting up camp. And hey, we can do this. What's next?" The sense of group bonding, particularly in reference towards future collective achievements, suggests that community building and strong connection were being formed. While internal community connections appear to be strong, there was not explicit mention of connection to the broader university. Outcomes of self-discovery and confidence were linked to increased openness to try new

experiences and explore their new community, but direct links were not established by participants.

The perceived openness of participants stemming from increased confidence and self-discovery is revealing of their positively aligned disposition toward transitioning into a new environment. Growth in interpersonal relationships also contributed to the participants' overall sense of capacity to engage new challenges, people, and learning in an unknown setting. Participants also highlighted that tangible outcomes [applied skills] such as budgeting, goal setting, and learning to ask sources of knowledge were valuable contributions in preparation for being independent at a university. The network of outcomes appears to successfully confirm the outdoor orientation participants are benefiting from essential program elements and are better equipped to handle the period of transition.

4.) *In what ways do program learning and development features align with student participants' perceptions of program impact?*

Participants commented that the strongest outcome, *interpersonal relationships,* provided a significant benefit to their college experience. Participants felt more secure knowing students before arriving and additionally described a sense of improved confidence engaging with other students in the interest of developing relationships. Outcomes such as budgeting, openness to new experience, and respect were noted for their immediate growth and long-term implications. Participants remarked that these new skills and knowledge were unexpected and useful as they continued though their college experience.

One participant noted how metaphors developed from the challenged encountered during the OOP helped frame the approaching transition in terms of overcoming and navigating unforeseen challenges as well as exploring the new possibilities awaiting. The OOP was "a shorter version of what was going to occur over the next 4 years" introducing teamwork or different skills such as leadership and listening that might be applied later on at the university. Additionally a participant highlighted the benefits of a free day as an "opportunity to talk about what was coming next so we know we aren't just plunged into it." The participant remarked that the orientation helped put this next stage in perspective. "We were also realizing that the trip was coming to an end and we were about to all embark on a new journey, which was college." References to overall program participation emphasized that self-discovery was a part of exploring individual comfort zones. Combined with the diverse modes of experiential learning the OOP experience contributed to the participant's well-being and feeling of preparation.

Summary

This study used data collected through means-end oriented interviews to investigate the outcomes of participating in an outdoor orientation program and identify features that participants observed as contributing to these outcomes. Utilizing a laddering interview technique to extract means-end associations, participants identified adventure elements as the most meaningful attributes of the program although analysis uncovered additional compelling attributes. Participants described a variety of outcomes associated with particular attribute engagement. The most commonly referenced outcomes were connected to more than three attributes suggesting that outcomes are achieved across attributes. The mean-ends data provides clearer participant association

between program elements and outcome achievement. Data suggest that students perceive the overall experience and specific elements as positive and one that benefits their transition to college, although it is unclear whether all program objectives are achieved and whether unassociated outcomes are intentional.

Chapter Five: Conclusion

Summary of the Study

The current study was conducted to investigate the outcomes of an outdoor orientation program for entering first year students at a large public university. There are increasing numbers of outdoor orientation programs being launched (Bell et al., 2010) but there is an absence of research investigating outdoor orientation program effectiveness through outcomes or evidence-based studies (Davis-Berman & Berman; Galloway, 2000). Outdoor education has historically relied on descriptive or anecdotal evidence to explain participant development instead of investigating what elements lead to specific program outcomes (Priest, 1999; Sibthorp et al., 2007). In order to maximize the impact of outdoor orientations, there is a need to expand the educator's understanding of what and how program elements contribute to specific outcomes (Ewert & McAvoy, 2000; McKenzie, 2000, 2003).

This study examined an outdoor orientation program through the lens of means-end theory, utilizing a laddering interview technique and means-end analysis to identify program features that participants found meaningful. Through laddering, participant outcomes could be described in detail and clearly associated to program elements they perceived as having impact. Participants were interviewed in an open format asking them to identify the most meaningful elements of their experience followed by why they were important and what outcomes they perceived as a result of the encounter. Responses were organized into means-end ladders and then coded according to the level of association: *attribute*, *consequence*, or *value*. Outcome associations were modeled through a hierarchical value map and compared to participant descriptions of development and

experience. Data analysis revealed that participants found adventure elements the most meaningful and that these features were strongly associated with multiple outcomes, often with overlap. Additional attributes were also revealed to have significant impact and outcome associations.

Conclusions

These results are indicators that help explain the features of the outdoor orientation program studied that specifically influence participant development. As a case study this data speaks to the experience of a small sample but the study provides the foundation for further program assessment and examination of outcomes utilizing means-end analysis. Additionally, this qualitative study can provide a better understanding of what and how program elements contribute to student development in preparation for a quantitative study examining outcomes achievement and association (McKenzie, 2000) Through the collection of evidence measuring outcomes linked to processes, a better understanding of program impact supports improved program design and implementation with the program.

Based on the findings, I conclude that essential elements of this outdoor orientation program, namely outdoor adventure, did have a significant impact on student development and preparation to transition into college. Specifically these elements were attributed to the development of interpersonal relationships, increased trust of self and others, and greater cognitive development, namely openness to other sources of knowledge. Apart from positive associations to adventure features, the study also revealed that secondary features can have meaningful positive impacts on student

outcomes. The inclusion of grocery shopping provided opportunity for peer learning while cooking promoted leadership learning.

The most prominent non-adventure attribute that appeared was instructors. Instructors were credited with facilitating associations with trust development, both self and others, in addition to leadership learning and interpersonal relationships. These data demonstrate that this outdoor orientation program had a multi-faceted impact on student development and also highlights that less prominent features are also influencing student outcome achievement. The study demonstrated means-end theory as an investigative and assessment tool by which outdoor orientation program attributes were analyzed to reveal the range and association of outcomes that students perceived to emerge.

Discussion

As a case study this investigation is limited in its broader implications for wilderness adventure, but it reinforces existing literature findings and demonstrates the application and utility of means-end theory as an assessment tool for university outdoor orientation programs. Results from the study highlight opportunity to reassess practice and continue to refine practice that will best support hybrid programming integrating student development, retention, and experiential learning.

Findings from the study reflect the results of studies conducted examining wilderness adventure and outdoor education programming. Galloway (2000) found that the dominant objectives of OOPs were social in nature, and that programs contribute to social networking, interpersonal skills, and community development. This study reinforces this claim; however data did not reveal connections between the OOPs attribute and stronger university community connection. Instead, the data showed

significant internal program community connection. This deviation requires additional attention particularly regarding programs where university community is explicitly identified as a program objective. This discrepancy may be due to the small sample size, and follow-up assessment can focus on differentiating community development in order to accurately determine if program attributes are promoting this outcome.

Wilderness expedition literature indicated that instructors have a significant impact on program performance and participant development (Shooter, et al., 2010). Although outdoor orientation is a subset of wilderness adventure, there was lack of research describing the impact of orientation instructors on student development particularly when expeditions are not integrated into program design. Results from this study highlight that themes of trust and self-discovery were closely attributed to the instructors' ability and facilitation. Additional investigation may help differentiate the specific practices that participants associate as positive instruction. Currently, the research is focused on an environment that although similar does not necessarily match the broad range of outdoor orientation options. The specific goals of outdoor orientation require more specific and well defined instructor attributes to promote successful program outcomes.

Participant remarks concerning adventure elements, empowerment to try new experiences, and comfort zone navigation, demonstrate that the theoretical foundations of experiential learning are present and active. However higher education, in regards to orientation programming, is predominantly preoccupied with student engagement and retention as described by Astin (1999) and Tinto (2007). While previous literature (e.g. Davis-Berman, 1996; Gass, 1990; Lien & Goldenberg, 2012) and participant statements

suggest that the outdoor orientation program was supportive in their transition into college the need to identify and refine practices remains significant. As an experiential program, there is lack of emphasis on experiential practice. Means-end data has outlined program features from the case study that can be isolated and examined to determine the best practice for continued positive outcomes. Further investigation and program adjustment should make use of data to also intentionally modify and examine what experiential learning practices are being utilized.

The results from the study highlight how the application of means-end theory and laddering can isolate and identify the outcome attribute associations of program participation. As students' perceptions and observations are not compromised by leading words in survey assessments, educators have a clear perspective on what program elements are having meaningful impacts on students. Demonstrated with a small sample, OOPs coordinators can adopt similar assessment models to investigate and examine whether their program features are effective and align with program objectives. Expanded means-end analysis can contribute to practitioner knowledge and identify best practices supported with evidence-based research.

Recommendations

Implications for practice in outdoor orientation programming are limited by the scope of the investigation. The findings suggest that adventure elements are perceived as essential to the student experience. The novelty and challenge of the adventure becomes the foundation for multiple outcome chains. Programs should examine adventure elements and identify development trends that accompany those experiences as a rationale for retaining specific adventure activities. While outcome overlap may support

more robust development, examining the patterns may reveal the need to adjust adventure offerings to better address program goals or contribute to broader student development.

The use of mean-end theory appears to be a valuable assessment tool. Development assessment buzzwords such as communication and collaboration were less present while other more nuanced descriptions of concepts such as learning from others and leadership received more attention. These responses suggested that participant answers were more authentic and not prompted by exposure to these ideas in the assessment. This might suggest programs should utilize means-end interviews or surveys to build data that is more descriptive and accurate to the student experience. This information can then be applied towards refining program design and practice that is more aligned to student outcomes and successful attainment of program goals.

Based on the research design and results of the study, the researcher has recommendations for future research regarding participant outcomes of outdoor orientation programs. First, the researcher recommends replicating this study across multiple institutions with similar goals and program designs. The replication should also increase the sample size to develop a more robust perspective on attribute-outcome patterns. Second, comparative studies investigating instructor practices should be conducted. Human variables are difficult to manage, and programs are in need of more descriptive practices that specifically support higher education outdoor orientation programming. Lastly, this study and other case studies provide the foundation to pursue larger quantitative or mixed methods research. Results from this investigation highlight specific attributes that have a strong positive impact on student development. Additional research should be conducted to generate empirical data that confirms or challenges

findings from smaller studies. Practitioners select adventure elements based on a wide

range of inputs and variables, and rigorous evidence of outcome achievement should be a

primary consideration in the selection for program design.

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<center>**Appendix A**</center>

DATE: May 30, 2013

TO: Kristofer Cortez
FROM: Grand Valley State University Human Research Review Committee
STUDY TITLE: [456020-1] Outcomes Assessment of an Outdoor Orientation Program
REFERENCE #:   3-174-H
SUBMISSION TYPE: New Project

ACTION: APPROVED
EFFECTIVE DATE: May 30, 2013
REVIEW TYPE: Exempt Review

Thank you for your submission of materials for this research study. The Human Research Review Committee has reviewed your submission and approved your research plan application under **Exempt Review**. **This approval is based on an enrollment of participants 18 years of age or older** with no greater than minimal risk to research participants. All research must be conducted in accordance with this approved submission.

Evidence of cooperation from George Mason University was not provided in this submission. Please do so in future protocol submissions.

Please insert the following sentence into your information/consent documents as appropriate. All project materials produced for participants or the public must contain this information.

> ***This EXEMPT research protocol has been approved by the Human Research Review Committee at Grand Valley State University. File No. 13-174-H.***

Exempt protocols do not require formal renewal. However, we do confirm on an annual basis that the research continues to meet the criteria for exemption and that there have been no significant changes in activity or key personnel. By May 30, 2014, please complete the brief ***Continuing Review Application Form***, available in your IRBNet Project Designer, or from our website, www.gvsu.edu/hrrc, and submit this form via IRBNet.

Once study enrollment and data analysis have been concluded, please complete the ***Closed Protocol Reporting Form*** on our website, and upload a saved copy to IRBNet.

This project remains subject to the research ethics standards of HRRC policies and procedures pertaining to exempt studies.

Please note the following in order to comply with federal regulations and HRRC policy:

1. Any revision to previously approved materials must be approved by this office prior to initiation. Please use the *Change in Protocol* forms for this procedure. This includes, but is not limited to, changes in key personnel, study location, participant selection process, etc.
2. All UNEXPECTED PROBLEMS and SERIOUS ADVERSE EVENTS to participants or other parties affected by the research must be reported to this office within two days of the event occurrence. Please use the UP/SAE Report form.
3. All instances of non-compliance or complaints regarding this study must be reported to this office in a timely manner. There are no specific forms for this report type.

If you have any questions, please contact the HRRC Office, Monday through Thursday, at (616) 331-3197 or hrrc@gvsu.edu. The office observes all university holidays, and does not process applications during exam week or between academic terms. Please include your study title and reference number in all correspondence with this office.

Consent Form

Title: Outcomes Assessment of an Outdoor Orientation Program

Researchers: Kristofer Cortez

Faculty advisor: Dr. Donald Mitchell, Jr.

Purpose: This study is provide valuable information to outdoor orientation education educators clarifying the impact of program practices. The study will identify participant outcomes and what features of the experience facilitated these outcomes.

Reason for Invitation: You have been invited to participate in this study according to your participation in an outdoor orientation experience prior to your attendance at a university.

Procedures: Participants will be asked open-ended questions related to your experience as a participant of an outdoor orientation program. The interview will take approximately one hour on-campus at George Mason University. To ensure accurate collection of information, interviews will be recorded. Transcripts of the audio files will be made for permanent record. All information collected will be used only for the purposes of the current study and will remain confidential.

Risks: This study presents minimal risk to the participants. At no point in the reporting of the results of this study will you be identified by name. All materials will be kept in a confidential and locked storage drawer, to which only the researchers have access. Upon completion of data analysis, data (including audio files and transcripts) will be kept in confidential storage for at least three years before being deleted and shredded.

Potential Benefit to You: No personal benefits are anticipated.

Potential Benefits to Society: Participants will be contributing to a better understanding of and more effective outdoor orientations.

Voluntary Participation: Participation in the interview is completely voluntary. You may end your participation at any time, and you may refuse to answer any question without consequence.

Privacy and Confidentiality: Your name will not be given to anyone other than the research team. All information collected from you or about you will be kept confidential to the fullest extend allowed by law. In very rare circumstances specially authorized university or government officials may be given access to our research records for purposes of protecting your rights and welfare.

Research study results: If you wish to learn about the results of this research study you may request that information by contacting: Kristofer Cortez Phone: 231-288-5295 Email: cortezkr@gvsu.edu

Payment: There will be no payment for participation in the research.

Agreement to Participate: By signing this consent form below you are stating the following:

- The details of this research study have been explained to me including what I am being asked to do and the anticipated risks and benefits;
- I have had an opportunity to have my questions answered;
- I am voluntarily agreeing to participate in the research as described on this form;
- I may ask more questions or quit participating at any time without penalty.

I have been given a copy of this document for my records.

If you have any questions or concerns about your participation in this study, you may contact Kristofer Cortez. Phone: 231-288-5295. Email: cortezkr@gvsu.edu.

If you have questions about your rights as research participants that have not been answered by the investigators, please contact the **Research Protections Office** at Grand Valley State University, Grand Rapids, MI. Phone: (616)331-3197 Email: hrrc@gvsu.edu

Appendix C

GRAND VALLEY
STATE UNIVERSITY
www.gvsu.edu

Information Sheet

OUTCOMES ASSESSMENT OF AN OUTDOOR ORIENATION PROGRAM

Thank you for participating in this study. Your participation is very important in better understanding the effective practices that are utilized within outdoor orientation at universities.

From previous research we know that participation in extended orientations has been associated with benefits including higher GPA and increased interpersonal connections (Barefoot et al., 1998; Barefoot, Warnock, Dickinson, Richardson & Roberts, 2000). The benefits of an outdoor orientation are less well documented, although some studies indicate positive results (Bell, 2006; Gass, 1990). In order for universities to more effectively conduct outdoor orientation programming, research is needed to demonstrate the presence of outcomes as a result of specific program practices (Ewert & Sipthorp, 2009; Gass, 2005). We hope not only better understand the benefits of an outdoor orientation, but identify what practices might be (in)effective in supporting student development.

Additional Research:

Barefoot, B. O. (2000). The first-year experience: Are we making it any better? *About Campus, 4*(6), 12-18.

Barefoot, B. O., Warnock, C., Dickinson, M. Richardson, S. & Roberts, M. (1998). *Exploring the evidence: Reporting outcomes of first-year seminars*. Columbia, SC: University of South Carolina, National Resource Center for the First-Year Experience and Students in Transition.

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