Adventure Programs' Effect on Self-Efficacy of Business Students

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Abstract

The following studies address self-efficacy in two different settings. Study one addresses the use of adventure programs and its effect on the self-efficacy of its participants. Self-efficacy and adventure programs have been the focus of numerous studies. However, one area lacking in research is the study of adventure programs effect on self-efficacy within the university setting with regards to business students. The purpose of this quasi-experimental study was to assess the effect of a selected adventure program on self-efficacy in adult learners to meet the challenge of the integrated business core at a private institution located in the Northwest. Results showed a significant difference was found by time on business students' general self-efficacy scores who participated in an adventure program. Results also showed a significant difference was found with the interaction of time on business students' scores regarding their personal ability to set-up a company organization who participated in an adventure program. However, results did not show increase in one's ability in selecting a business product, overcoming failure, or having a successful business. Study two, addressed general self-efficacy of students in three university programs, Family & Consumer Sciences Education, Health Sciences, and Recreation Management. The purpose of this descriptive study was to examine general self-efficacy, and the relationship between student perceptions of professional preparation and student reported experiential leaning opportunities. It was found the general self-efficacy of these students to be quite high. A significant moderately strong positive relationship was also found between student perception's about their program preparation and student reported experiential learning opportunities.

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Chapter 1: Adventure Programing

Introduction

The word adventure often conjures up thoughts of treks across unexplored landmasses and trips through uncharted waters. Adventure is the impulse in us that makes us break our bonds with the familiar and seek greater possibilities; it is the curiosity of people to see the other side of the mountain (Raiola & O'Keefe, 1999). Many practitioners and researchers agree that it contains elements of uncertainty, excitement, real or perceived risk, effort, and interaction with the natural environment (Gregg, 2007; Bunting, 1990; Priest, 1999). The very elements of adventure are those same elements that educators have tried to capture from the very beginning.

The history of adventure in education emerged, in part, "from a variety of interrelated programs in both organized camping and outdoor education" (Ewert & Garvey, 2007, p. 21). Organized camping was used as early as the nineteenth century for the purpose of educating young boys how to live simply, by cooking, doing chores and participating in games (Ewert & Garvey, 2007; Raiola & O'Keefe, 1999) and early in the twentieth century for instruction and personal growth of young women (Raiola & O'Keefe, 1999). L.B. Sharp (1947), a notable advocate of outdoor education stated that much, if not most, of the material in all subject matter areas that school youth study about in school can actually be seen and experienced firsthand, outside the classroom. He continues by saying "That which can best be learned through direct experience outside the classroom, in contact with native materials and life situations, should there be learned" (p. 43). The concepts of outdoor education combined with organized camping

provide the optimal environment for adventure education. One agency often associated with adventure education programming is Outward Bound, and while other programs existed earlier, the establishment of the Outward Bound school in 1964 is considered to be the start of adventure education in the United States (Gilbertson, Bates, McLaughlin, & Ewert, 2006). Adventure education is often defined as a range of activities that employ risk and challenge, in a variety of settings, to attain a variety of educational goals (Hirsch, 1999).

The benefits of adventure education programming can be found in numerous studies and publications. Webb (1999) describes benefits in three different stages, recreational, skill, and character. The specific character development benefits are self-confidence, self-concept, self-efficacy, independence, acceptance, appreciation, respect, trust and empathy (p. 4). Ewert and Garvey (2007) describe the positive changes that have been thoroughly researched in adventure education, which are, moral development, personal growth, group development, and leadership development. More recently, a study on all-girls programs found the benefits of adventure education programming to be feelings of safety and comfort, increased connection to others, and freedom from stereotypes (Whittington, Nixon-Mack, Budbill, & McKenney, 2011).

Because of all the benefits of adventure education, many business organizations have fostered adventure programming to improve leadership, team cohesiveness, and so forth. Research supports this in both past and present (Gass & Priest, 2006; Kass & Grandzol, 2012; Mendel, 1993; Priest S. , 1998). However a study by Kelly (1996) of corporate adventure training on group dynamics and individual self-actualization of mid-level managers showed the changes were not statistically significant in group function or

self-actualization. Although Kelly's study shows no statistically significant changes, it should be noted the adventure programs did not have a negative affect either (1996).

Business organizations are not the only business minded groups to use adventure programming for their benefit. Research within academia on the benefits of adventure programs for students enrolled in collegiate business programs is also evident. In a study by Kass and Grandzol (2012), those students enrolled in an MBA-level Organizational Behavior course using an adventure program component increased in levels of self-efficacy, leadership motivation, and emotional intelligence. A study by Holt (2009) shows adventure programs, specifically a wilderness experience, developed leadership skills of university business students.

Setting the Problem.

The business department at BYU-Idaho began a new integrated course in the Fall of 2001 called Integrated Business Core (IBC). The course was designed in a cohort model, meeting approximately three hours a day, for the entire semester. IBC has two distinct characteristics: (a) multiple course integration, and (b) student run companies (Bell, 2010). The courses currently taught are: (a) Corporate Finance, (b) Organizational Behavior, (c) Marketing, and (d) Operations/Supply Chain Management. Students are assigned to teams within the program and the teams are asked to develop a business idea for their company. Once ideas are developed, proposed and approved by the faculty, the teams begin steps necessary to run and operate the business for eight weeks. In order to foster team development, leadership development, and efficient team dynamics each IBC cohort spends three days off campus at the university outdoor learning center participating in adventure programs. The programs consist of numerous high ropes course

elements, low ropes activities, team initiatives, outdoor games, team challenges, outdoor cooking, and camping.

Even though research shows adventure programming improves team cohesiveness and leadership (Holt, 2009), does it in a group of college upper level business students who usually have higher levels of self-efficacy (Anderson, Buck, Empey, & Hopla, 2014)? How can one measure change over time to evaluate the effectiveness of the programs supporting positive components of leadership? This research argues self-efficacy is such a measure. One of the important benefits of adventure programming is improvement of self-efficacy (Beezley, 2012; Caulkins, White, & Russell, 2006; Ewert, 1989; Odello, Hill, & Gomez, 2008; Russell & Walsh, 2011; Russell & Walsh, 2011; Webb, 1999; Wolf & Mehl, 2011)

Considering the above, the present study helped answer the question of what effect adventure programs had on the self-efficacy of business students enrolled in a private university.

Problem Statement.

The purpose of this quasi-experimental study was to assess the effect of a selected adventure program on self-efficacy in adult learners to meet the challenge of the integrated business core at a private institution located in the Northwest.

Statistical Subproblems

1. What effect with the interaction of time does participating in a university adventure education program have on student's self-efficacy according to the general self-efficacy scale (GSE)?

2. What effect by gender does participating in a university adventure education programs have on student's self-efficacy according to the GSE?
3. What effect with the interaction of time by gender does participating in a university adventure education programs have on student's self-efficacy according to the GSE?

Hypotheses

1. No difference exists with the interaction of time (pre, post, post post) on business student's GSE scores who have participated in an adventure program.
2. No difference exists by gender on business student's GSE scores who have participated in an adventure program.
3. No difference exists with the interaction of time (pre, post, post post) by gender on business student's GSE scores who have participated in an adventure program.
4. No difference exists with the interaction of time (pre, post, post post) on business student's scores regarding their personal ability to set-up a company organization who participated in an adventure program.
5. No difference exists with the interaction of time (pre, post, post post) on business student's scores regarding their personal ability to choose a business product who have participated in an adventure program.
6. No difference exists with the interaction of time (pre, post, post post) on business student's scores regarding their personal willingness to try again if something fails within their company who have participated in an adventure program..

7. No difference exists with the interaction of time (pre, post, post post) on business student's scores regarding their personal belief they will have a successful business who have participated in an adventure program.

Limitations

The current study was bounded by the following limitations:

1. The sample size was 90 students because of the enrollment cap established by course faculty.
2. The program was a three-day, two-night experience.
3. The study included all students enrolled in the cohorts during the Fall semester and not the students enrolled in the cohorts for Winter and Spring semesters.
4. The sample consisted of more men than women because the enrollment of men is higher than enrollment of women in this course.
5. The sample consisted of students enrolled in a private university located in a Northwest community.

Delimitations.

The current study was bounded by the following delimitations:

1. The study was conducted in a private university located in the Northwest.
2. The participants participated in a three-day residential outdoor adventure program using challenges courses, team building activities, outdoor cooking, and camping.
3. The measurement consisted of the General Self-Efficacy Scale (GSE) to measure self-efficacy.
4. All participants took a pretest and posttest to measure self-efficacy.

Definition of Terms.

The following terms will be used within the study:

1. Adventure Education: activities that employ risk and challenge, in a variety of settings, to attain a variety of educational goals (Hirsch, 1999).
2. Adventure Programming: the deliberate use of adventurous experiences to create learning in individuals or groups, which result in change for society and communities (Priest, 1999).
3. Self-Efficacy: belief in one's capabilities to organize and execute the courses of action required to produce given attainment (Bandura, 1997).
4. Adult Learner: one who is gaining knowledge by skill, instruction or experience while performing the social roles typically assigned by the culture to those it considers to be adults, while at the same time essentially responsible for his or her own life (Knowles, 1980).
5. Integrated Business Core (IBC): A selection of integrated business courses taught at a Northwestern university. The courses are as follows, Marketing Management, Marketing Strategy Research, Organization Effectiveness, and Financial Management.

Significance of the Study

With a consistent 5-year turn over within department chairs (by design) and a 7-year turn over with college deans at our institution, program elements championed by the current leadership are vulnerable to this change. What one dean or department chair sees as integral to a program, such as a 3-day, off-campus adventure program experience, may

fall victim to new leadership if evidence does not support positive outcomes as a result of the program. There is a need to examine the effects of adventure programs on self-efficacy specific to the university involved in this study. The benefits for those participants involved in the study, according to the null hypothesis, should have higher self-efficacy after participating in the adventure program. Individuals with increased general self-efficacy should have the confidence to set challenging goals and maintain strong commitment to reaching them. It was also expected the increase in self-efficacy would translate into how students approach difficult tasks, including course projects. Those with high self-efficacy welcome hard tasks and challenges as oppossed to treating thems as threats to be avoided (Bandura, 1994). It was anticipated the students success in this course would be greatly determined by their increased levels of self-efficacy, which in turn would improve their confidence and ability to perform the challenging tasks set forth in their course.

The results of this study should also benefit the university outdoor center where the adventure program is located. The center operates its programs based on adventure education ciriculum; such as camping, low and high ropes courses, team building activities, and is available to any university or community entity wanting to have an adventure educational experience. Any positive evidence supporting adventure education should help validate the existance of the program to the university's core leadership. In turn, the administration at the unversity should also benefit by demonstrating validation to the board of directors, which allocate funds to support the different university departments.

Chapter 2: What is adventure programming?

Literature Review

Adventure education emerged, in part, "from a variety of interrelated programs in both organized camping and outdoor education" (Ewert & Garvey, 2007, p. 21). The idea of organized camping being used for more than recreational purposes is not new. As stated in Chapter 1, organized camping was used as early as the nineteenth century for the purpose of educating young boys how to live simply, by cooking, doing chores and participating in games (Ewert & Garvey, 2007) and early in the twentieth century for instruction and personal growth of young women (Raiola & O'Keefe, 1999). The American Camping Association (2013) states the main reasons why parents send their children to camp is to experience improved self-confidence, improved self-esteem, and improved social skills. Outdoor education is yet another contributing element of adventure education. The outdoors can be a venue for learners to develop relationship building, values formation and increasing sensitivity and awareness of the environment (Gilbertson et al., 2006).

Adventure education can be seen as the product of both organized camping and outdoor education. Not all organized camping produces an element of adventure often associated with outdoor summer camps, such as canoeing, horse back riding, and challenges courses. Some camps are housed on university campuses where dorm rooms and cafeteria food are the norm. Similarly, not all outdoor education gives opportunity to engage in elements of adventure, where risk and challenge can be found in every activity. Adventure education is the product of outdoor education and organized camping, where risk and challenge come together to produce positive outcomes for growth. Adventure

education as defined by Spacht and Hirsch (1995) is an activity or program that distinguishes a set of outdoor pursuits characterized by challenge and risk motivated by educational objectives. Risk is a foundational core within adventure programming. It is an element that cannot be taken out of the programming. It is the presence of risk which allows participants to make decisions which balance dangers and personal competence to achieve positive outcomes (Grant, Thompson, & Boyes, 1996). Adventure programming is the deliberate use of adventurous experiences to create learning in individuals or groups, which result in positive change for society and communities (Miles & Priest, 1999). A study by Vlamis, Bell and Gass regarding the effects of college adventure programs showed an overall increase in developmental tasks such as developing autonomy and developing purpose among college students (2011).

Positive outcomes of adventure programming

The idea of adventure and its positive benefits have been supported as early as the writings of Plato and Aristotle. They both agreed to the idea of adventurous experiences leading to increased virtues such as wisdom, bravery, temperance and justice, as cited in Steihl and Parker (2007). Early research supports numerous positive benefits and outcomes of adventure programming. Darst and Armstrong (1980) state the following benefits of outdoor adventure: (a) gains in self-confidence, enhance ability to cope, (b) personal sense of confidence, (c) release from tensions and complexities of modern life, (d) increased knowledge about oneself and the environment, (e) cohesiveness, and (f) cooperation, compassion and respect. Other benefits of adventure are: (a) improved self-concept, self-efficacy, self-actualization, self-expression, (b) compassion, cooperation, respect for others, communication, (c) improved academic abilities, value clarification,

problem solving skills, and (d) improved strength, coordination, balance, and endurance (Ewert, 1989; Webb, 1999).

Ewert and Garvey (2007) more recently listed moral development, group development, leadership development, and personal growth as positive outcomes of adventure programs. Personal growth is characterized by changes in self-concept, self-esteem, personal motivation, and confidence. Confidence is a key component in one's belief in their ability to perform a learned task, which is also known as self-efficacy.

What is self-efficacy?

Self-efficacy is a personal perception and therefore is not measured by anyone else other than him or herself. Perceived self-efficacy is defined as "belief in one's capabilities to organize and execute the courses of action required to produce given attainment" (Bandura, 1997, p. 3). It is essentially one's judgment of his/her ability to perform a specific activity (Harrison & McGuire, 2008). Perceived self-efficacy is concerned with what one believes they can do. Self-efficacy beliefs determine how one feels, thinks, motivates themselves, and behaves (Bandura , 1994).

Perceived self-efficacy enhances personal well-being and human accomplishment in many ways. Those people with high assurance in their capabilities

- approach difficult tasks as challenges to be mastered rather than threats to be avoided
- foster intrinsic interest and deep engrossment in activities
- set themselves challenging goals and maintain strong commitment to them
- heighten and sustain their efforts in the face of failure

- quickly recover their sense of efficacy after failures or setbacks
- attribute failure to insufficient effort or deficient knowledge and skills which are acquirable
- approach threatening situations with assurance that they can exercise control over them (Bandura, 1994, p. 2)

Those with low assurance in their perceived self-efficacy

- shy away from difficult tasks
- have low aspirations and weak commitment to the goals they choose to pursue
- when faced with difficult tasks, they dwell on their personal deficiencies, on the obstacle they will encounter, and on adverse outcomes
- slacken their effort and give up quickly
- slow to recover their sense of efficacy following failure
- view insufficient performance as deficient aptitude (Bandura, 1994, p. 2)

Perceived self-efficacy is often confused with self-esteem. However, perceived self-efficacy is not concerned with the judgments of self-worth, as is the case with self-esteem; rather self-efficacy is concerned with judgments of personal ability (Bandura, 1997). One's belief regarding their self-efficacy can be developed by four main sources of influence: (1) mastery experiences that serve as indicators of capability; (2) vicarious experiences; (3) verbal persuasion and social influences that one possesses certain capabilities; and (4) physiological and affective states from which people partly judge their capability, strength, and vulnerability to dysfunction (Bandura, 1997, p. 79). If self-efficacy can be developed by these main sources, then one could deduce the programs

which include these aspects would be highly encouraged. One such area is adventure programming. Although one may deduce this conclusion, empirical research to support this assumption would be called for to measure whether adventure programming actually could improve self-efficacy to meet a challenge.

Adventure programming and self-efficacy.

Adventure programming is the deliberate use of adventurous experiences to create learning in individuals or groups, which result in change for society and communities (Miles & Priest, 1999). Typically the adventurous experiences involved are in an outdoor setting and use the natural environment as part of the teaching tools. Priest (1999) states adventure programming is concerned with two relationships, interpersonal and intrapersonal. Interpersonal relationships signify how people get along in a group such as communication, cooperation, trust, conflict resolution, leadership influence, and problem solving. Intrapersonal relationships refer to how an individual gets along with self such as self-concept, spirituality, confidence and self-efficacy. Adventure programming does not cause change; it highlights a need to change and supports any personal decisions to make change (p. 112).

As stated earlier, self-efficacy can be developed through four main sources: mastery experiences, vicarious experiences, verbal persuasion/social influences, and reducing people's stress reactions and misinterpretations of their physical state (Bandura, 1997). Adventure programs give participants opportunity for mastery experiences. Take for example someone who is able to successfully participate in a week long backpacking trip which they were not sure they could ever do. Mastery is required in the unfamiliar physical environment; it provides an abundance of new tasks that require learning by

doing (Sibthorp, 2003). Successes build a strong belief in one's personal efficacy (Bandura, 1994).

Adventure programs also provide opportunities of creating and strengthening self-belief of efficacy through vicarious experiences. Often times a quiet, yet confident climber can set the tone for fellow participants. If they succeed in reaching the top of the climb without too many challenges, their fellow observers' confidence will be improved. Bandera (1994, p. 3) states "seeing people similar to oneself succeed by sustained effort raises observers' beliefs that they too possess the capabilities to master comparable activities to succeed".

Verbal persuasion and social influences are other common practices with the field of adventure programming. People who are persuaded verbally that they possess the capabilities to master given activities are likely to mobilize greater effort and sustain it than if they harbor self-doubts and dwell on personal deficiencies when problems arise. To the extent that persuasive boosts in perceived self-efficacy lead people to try hard enough to succeed, they promote development of skills and a sense of personal efficacy (Bandura, 1994, p. 3).

Some may challenge this notion, pointing to the popular concept in the adventure programming profession *challenge by choice*. This philosophy, coined by Project Adventure and used by many adventure program practitioners, "focuses on allowing students to choose the level of experience that supports their optimal learning" (Panicucci, 2007, p. 41). As opposed to coaxing people into taking on difficult tasks, challenge by choice provides participants with the right to choose the level of challenge that best supports their learning goals (p. 41). However, verbal persuasions, through a

warm voice of encouragement do not cross the boundaries of challenge by choice, they sustain it.

Adventure programs also give participants the opportunity to reduce one's stress reaction, which is the fourth way of modifying self-beliefs of efficacy (Bandura, 1994). Adventure activities use stretch-zone experiences as a means of learning. Panicucci (2007) states of the three zones in which people exist (comfort, stretch and panic) learning occurs when people are in their stretch zone. Stretch zone is defined as a place where interest in piqued, senses are enlivened, and some disequilibrium exists. The more time one spends in their stretch zone, the more comfortable they become, thus reducing one's stress reaction. Panic zone is a place where stress is so high that information cannot be integrated and high adrenaline makes it impossible to settle into a learning environment (pp. 38-39). Those who have a high sense of efficacy are likely to view their state of affective arousal, which the researcher categorizes as the stretch zone, as an energizing facilitator of performance (Bandura, 1994).

To date, numerous research studies have been done on adventure education programs and Bandura's self-efficacy theory. One such article, written by Sibthorp (2003) was meant to determine if adventure program participants' antecedent factors and perceptions of characteristics of their experience, and changes in their self-efficacy are related. The study found perceptions of personal empowerment and learning relevance were found with changes in reported self-efficacy; however, the direct link between the antecedent factors and the changes in self-efficacy was not supported.

One of the first studies was conducted by Brody, Hatfield, and Spalding (1988). Their interests focused on perceived self-efficacy development of participant in high-risk

activities, particularly rappelling as well as everyday potentially stressful situations. The study found that self-efficacy was enhanced after participation in rappelling and other high-risk activities; however the study did not find an increase of self-efficacy in everyday, potentially stressful situations. Another study examined a female adolescent wilderness therapy program in which the participants spent six to twelve weeks backpacking in a wilderness environment. Those participating in the experience felt the backpacking experience increased a person's sense of self-efficacy. They also noted that through this experience, their self-efficacy could transfer to other aspects of life (Caulkins, White, & Russell, 2006). Beezley (2012) examined a women's only backpack trip to determine if these types of programs contribute to improvements in psychosocial function. Her study found numerical increases in either self-efficacy or self-esteem; however the increases were not significant enough to make a conclusive argument.

Additional research shows the use of low ropes adventure programming to be statistically significant on improving measures of abstinence self-efficacy for individuals with substance abuse disorders (Clem, Smith, & Richards, 2012). Other studies addressing the use for clinical therapy also support improvement on client self-efficacy through use of adventure programs (Russell & Walsh, 2011; Wolf & Mehl, 2011). Probst and Koesler (1998), in their study of a multi-week outdoor adventure course, showed significant positive effect on immediate and long term self-efficacy within its studied population. Hart and Silka (1994) developed a model specifically looking at use of ropes course adventure programs and it effect on self-efficacy. The model emphasizes using ropes courses as a learning laboratory. Although a number of studies have focused on multi-day programs, a shorter half-day program study on self-efficacy also shows the

adventure course appeared to have a significant positive effect on self-efficacy; the increase remained over a six-week period (Odello, Hill, & Gomez, 2008). The amount of research, which supports adventure programming and its positive effect on self-efficacy, is vast, yet research addressing the specific questions in this study have not been studied. The intent of this study is to assess the effect of a selected adventure program on self-efficacy in adult learners enrolled in an integrated business core at a private institution.

Who is the adult learner?

One may have a tendency to reason if adulthood begins at the age of 18 and this individual is enrolled is some form of education, then they would be an adult learner. However, is the age of adulthood 18? It may be so accordingly in some countries, but not in all. Many would argue the age of adulthood is not determined by age alone. According to Malcolm Knowles (1980, p. 24) one is considered an adult by meeting the following criteria; performing the social roles typically assigned by the culture to those it considers to be adults—the roles of parent, worker, responsible citizen, etc. Two, the individual perceives himself or herself to be essentially responsible for his or her own life.

Now that a base line for adulthood has been established, although still somewhat subjective, what is an adult learner? Mezirow (1994, p. 222) defines learning as the "social process of construing and appropriating a new or revised interpretation of the meaning of one's experience as a guide to action". Therefore, the adult learner is, one who is construing a new or revised interpretation of the meaning of one's own experience while performing the social roles typically assigned by the culture to those it considers to be adults, while at the same time essentially responsible for his or her own life.

Andragogy is adult learning. Adult learners are self-directed, their learning is performance-centered, and they pull heavily from their accumulated and ever increasing reservoir of experience (Knowles, 1980, pp. 43-44). Lindeman (as cited in Ozuah, 2005), who wrote extensively about andragogy in the early 20th century stated, "I am conceiving adult education in terms of a new process by which the adult learns to become aware of and to evaluate his experience".

The purpose of this quasi-experimental study is to assess the effect of a selected adventure program on self-efficacy in adult learners to meet the challenge of the business integrated core at a private institution located a private institution. The population to be studied in this research is university aged students. The question needs to be asked, are university aged students in this study adult learners? Research performed by Arnett (1994, p. 223) finds that "most college students consider themselves neither adolescent nor entirely adult, but engage in a process of cognitive, emotional, behavioral, and role development past adolescence that will ultimately lead to adulthood. It was noted earlier that an adult learner is one who meets two criteria: performing the social roles typically assigned by the culture to those it considers to be adults—the roles of parent, worker, responsible citizen, and so forth. Two, the individual perceives him or herself to be essentially responsible for his or her own life. Based on these criteria do university students qualify as adult learners? In an article written by Jeffrey Arnett (2000), Arnett proposes a new theory of development from the late teens through the mid-twenties. He argues "this period, *emerging adulthood*, is neither adolescence nor adulthood but is theoretically and empirically distinct from them both". He continues his argument by saying these individuals have "left the dependency of childhood and adolescence, and

having not yet entered the enduring responsibilities that are normative in adulthood" (p. 469). So what are the characteristics that matter most to emerging adults, which give them a subjective sense of attaining adulthood? A study conducted by Arnett (1998) concludes the top two criteria for transition into adulthood are, *accepting responsibility for one's self* and *making independent decisions*. Using these two measures for determining ones transition into adulthood, an argument can be made the majority of the students in the university being studied are adults and not emerging adults. Support for this decision stems from the population in the present study. The program is an upper division course, many of the students are married, and many of them have spent 18 months to 24 months providing missionary service away from home and university, thus they are adults in accepting responsibility and making independent decisions.

What is the Integrated Business Core?

A number of institutions of higher education use a course similar to Integrated Business Core (IBC) in their business classes to give hands on experience in running a business (Bell, 2010). The University of Oklahoma (2013) gives their students the opportunity of hands on real-world training through market analysis, management of employees, legal implications and selling of products. The Integrated Business Experience of the University of Central Missouri (2013) is similar in philosophy. They feature cross-discipline concept, team-based learning, and immersion in a real business experience just as the institution in the present study.

The business course in the present study is designed in a cohort model, meeting approximately three hours a day; for the entire semester. IBC has two distinct characteristics: (a) multiple course integration, and (b) student run companies (Bell,

2010). The courses currently taught are: (a) Corporate Finance, (b) Organizational Behavior, (c) Marketing, and (d) Operations/Supply Chain Management. Students are assigned to teams within the program and the teams are asked to develop a business idea for their company. Once ideas are developed, proposed and approved by the faculty, the teams begin steps necessary to run and operate the business for eight weeks. In order to foster team development, leadership development, and efficient team dynamics, each IBC cohort spends three days off campus at an Outdoor Learning Center where they participate in adventure programs. The goals of the adventure program for IBC are

- build company/group cohesion
- develop the company/group as a whole
- provide student leadership opportunities
- to get to know one another
- identify personalities
- overcome inhibitions so that in turn they can transfer this over to their company and teams
- fine tune their organization and company product.

In order to help accomplish these goals the students actively participate in programs consisting of numerous high ropes course elements, low ropes activities, team initiatives, outdoor games, team challenges, outdoor cooking, and camping. The question at hand is thus, does participation in adventure programming increase the general self-efficacy of these IBC students? Does this assumed increase in self-efficacy transfer into other aspects in life, particularly do the students believe they can perform confidently in their IBC company business?

Summary.

The importance of adventure and its positive benefits have been supported as early as Plato and Aristotle. They both supported the significance of adventure, which lead to increases in virtues such as wisdom, bravery, temperance and justice (Stiehl & Parker, 2007). The idea of using adventure as an educational tool and a means for improving personal growth, moral development, group development and leadership is not a new concept. As a proven outcome of many adventure programs, self-efficacy is an important ingredient to the success of any one individual. The confidence to do and to perform learned accomplishments can play a major role in whether one succeeds throughout their education, career, and life in general. It is intended to examine university students enrolled in an integrated business course to determine if an adventure program they participate in builds and increases their perceived self-efficacy to meet the challenge of the IBC program.

Chapter 3: Methods

Purpose Statement

The purpose of this quasi-experimental study is to assess the effect of a selected adventure program on self-efficacy in adult learners to meet the challenge of the integrated business core at a private institution located in the Northwest.

Participants.

Participants were undergraduate students enrolled in a northwest university. Students are Business Majors enrolled in the Fall 2013 semester IBC course. The adventure program is required of all IBC students. The outdoor experience level of participants ranges from little outdoor experience to those with large amounts of outdoor experience. Students were given a list of 13 outdoor activities. From this list of 13, they were asked to mark which activities they had experienced. A final option was provided for the student to list any additional outdoor activity they participate in not in the original. Numbers of IBC students are 90 for the Fall 2013 semester. Each participant was asked to participate in the study.

Protecting participants.

Institutional review board approval (see Appendix A) was attained from University of Idaho and assigned #13-203. Institutional review board approval from BYU – Idaho is a reciprocal agreement with the University of Idaho. All participants signed a consent form detailing the specifics of the study. All participants were required to sign a participant agreement form from the university's outdoor learning center prior to participation in the program. The researcher has completed the National Institutes of

Health, Protecting Human Research Participants course (see Appendix B). Participation in this research was voluntary, although participation in the adventure component of IBC is a requirement for the course. There was a brief meeting explaining the details of the study where time was given for questions regarding the research. Participants were given gear and equipment list prior to the program. They were responsible for preparing for the elements as they presented themselves.

Outdoor Programs.

Students arrive at the outdoor learning center the morning the program begins. They are set up into companies of twenty students. Each company is divided into 3 separate learning teams. These learning teams are together throughout the entire adventure program. They create a menu, and cook as a team. They camp together in the same campsite. During day one and two, teams rotate through each activity, joining together with other teams throughout the day. On the morning of day three, company meetings are held. Companies discuss and recap the outing, plan for follow-up meetings on campus and continue the process of organizing their company business.

The following activities are used during the IBC adventure program:

1. Get to Know You Games, and Ice Breakers – a series of activities whose purpose is to learn the names of the participants and the staff. Activities are also meant to break the ice within the group members so they feel more comfortable being around people they do not know very well. One activity, for example involved a company holding hands in circle. A hula-hoop is placed on the arms. The goal is to pass the hula-hoop around the group as fast as possible without breaking hands.

This is done numerous times, each time the group tries to decease the time it takes to pass the hula-hoop around the circle.

2. Jewell Box Construction – Small teams are created from the company. Each team is given the materials, tools, and instructions to build a wooden box the size of a small foot-locker. They are to carry this jewell box everywhere they go throughout the duration of their adventure program. Important and essential items are to be kept in the box.
3. Team Wall – The team wall is a wall made out of wood. It is twelve feet high and ten feet wide. There is a platform for standing on the backside of the wall about 8 feet high. The goal is to get every team member up and over the wall. The only resources that can be used are team members. They can be used to lift teammates up or they can stand on the platform and reach down and help the team member over the wall.
4. Inclined Log/Horizontal Log – This is a high element ropes course where climbing ropes are used to belay the participant as they climb up an inclined log about 20 feet off of the ground. The participant then moves over to the horizontal log 20 feet off of the ground, walks across the log, and then is lowered back down to the ground by a belay team. Group members participate as belay team members.
5. Spider's Web – This activity looks much like a spiders web made out of stretch rope placed vertically between two posts. The web is close to 12 ft. wide and 6 ft. high. The ropes makes an assortment of different shapes. The challenge is to pass through the participants through the different shapes without touching the rope.

6. Power Pole – The Power Pole is also a high element ropes course where climbing ropes are used to belay the participant as they climb up utility pole. The pole has industrial sized staples for foot and handholds. The goal is to climb the pole and stand on the top, after which the harnessed climber jumps off of the pole. They are caught by the belayers and their ropes.
7. Prouty's Landing – This activity is a rope swing suspended between two trees. The goal is to get the entire team to swing over a bar a foot off of the ground and land on a small platform on the other side of the bar. Team members may not touch any part of the ground except the platform. Team members must all stay on the platform until the entire team has swung across the imaginary abyss.
8. Colter's Run – The activity is a handcart pull around a ½ mile course. The teams run the course as quickly as they can. They are also required to build a fire and boil a can of water in a #10 tin can.
9. Giant Swing – The Giant Swing is another high element ropes course. A team member puts on a climbing harness, climbs a small A-frame ladder, and clips into a hanging cable suspended between two utility poles. A haul rope is attached to the climber and the climber proceeds to be pulled up by the teammates 30 feet off of the ground. The team member then releases themselves and swings back and forth until they swinging is complete.
10. Two nights of camping – The participants bring their own tents and sleeping bags, jewell boxes, and camping equipment. They pull all their equipment in a handcart up to their campsite. Campsites are located anywhere from ½ mile to a mile from

the parking lot. They camp for two nights. They are in charge of making all breakfasts and dinners for their group. Lunch is provided.

11. Handcart pull – The adventure activities are located ½ mile to 1 mile away from the campsites. The participants are required to pull their handcart with them everywhere they go. Items in the handcart are the group's jewell boxes, extra layers of clothing for warmth, and extra food to snack on.
12. Team relays, tag games, and group activities – This section is comprised of numerous team activities. For example, teams compete against each other to see who can build the highest structure built out of playing cards.

It is important to note, group debriefing is held throughout the adventure program. Faculty and facilitators trained in group facilitation lead discussion meant to bring connection of activities into real world connections. Connections typically relate to but are not limited to business applications, team dynamics, decision making, trust, and cooperation.

Assessment procedures.

The following procedures were followed during the study:

1. The General Self-Efficacy Scale (GSE) was administered before the adventure based program began (see Appendix C). An additional four Likert-type questions were asked to assess the business students and their judgment of personal ability regarding different aspects of running the student run business (see Appendix D).

2. The outdoor adventure program took place in two different groups. The scheduled program dates for group one took place September 30-October 2, 2013. The scheduled program dates group for group two took place October 2-4, 2013.
3. Students arrived at the Outdoor Learning Center at 8 AM to begin the program. There was a short orientation meeting; shortly thereafter, Ice-Breaker and Get-to-Know-You type activities began. The students then participated in a team-work building project. The rest of the day was divided up into different ropes courses and team challenges. The ropes courses used was the Inclined Log/Horizontal Log, Power Pole, handcart pull, Team Wall, Prouty's Landing, and Trust Fall. Each group rotated through these activities throughout the three-day program. Other team initiatives and group activities were used throughout the program as well. During the evening, students set up camp using tents and tarps and cooked meals over camp stoves and open pit fire.
4. A debrief after each rotation was used to help make connections between activities and group dynamics, business applications, team development, leadership development, effective team dynamics, etc.
5. The General Self-Efficacy Scale (GSE) was administered on campus shortly after the adventure based program concluded (see Appendix C). An additional four Likert-type questions were asked to assess the business students and their judgment of personal ability regarding different aspects of running the student run business (see Appendix D).
6. The GSE was administered the last week of the semester as the IBC course was concluded see Appendix C). An additional four Likert-type questions were asked

to assess the business students and their judgment of personal ability regarding different aspects of running the student run business (see Appendix D).

General Self-Efficacy Scale (GSE)

This study examined general self-efficacy traits. The general self-efficacy scale is reliable and stable (Laganger, Kraft, & Roysamb, 2000; Schwarzer, Mueller, & Greenglass, 1999). The study used the general self-efficacy scale developed by Ralf Schwarzer and Matthias Jerusalem (as cited in Rimmi & Jerusalem, 1999). The 10-item general self-efficacy Likert type scale was developed for the purpose of defining one's perceived self-efficacy. The possible range of scores for the GSE is 10-40. Ajzen argues that one should not essentially be interested in individual's actions on specific occasions, but rather focus on such phenomena as "regularities in behavior, consistent patterns of action, and response tendencies (as cited in Laganger et al., 2000, p. 54). Studies show that the GSE has high reliability, stability, and construct validity (Laganger et al., 2000; Schwarzer et al., 1999). The scale has been used in numerous research projects, where it typically yielded internal consistencies between 0.75 to 0.91 (Schwarzer et al., 1999).

An additional four Likert-type questions developed by the researcher were asked to assess the business students and their judgment of personal ability regarding different aspects of running the student run business, these questions used a seven-point scale. The four Likert-type assessment questions were:

1. To what extent do you believe in your ability to set-up your company organization? 1=very unable, 2=unable, 3=somewhat unable, 4=not sure, 5=somewhat able, 6=able, 7=very able

2. To what extent do you believe in your ability to choose a product for your business? 1=very unable, 2=unable, 3=somewhat unable, 4=not sure, 5=somewhat able, 6=able, 7=very able
3. To what extent do you believe in your willingness to try again if at first something does not work within your company? 1=very unwilling, 2=unwilling, 3=somewhat unwilling, 4=not sure, 5=somewhat willing, 6=willing, 7=very willing
4. To what extent do you believe you will have a successful IBC business? 1=very unsuccessful, 2=unsuccessful, 3=somewhat unsuccessful, 4=not sure, 5=somewhat successful, 6=successful, 7=very successful

Data Analysis

The research used a quasi-experimental design. A quasi-experimental design uses non-randomized selection of multiple groups or multiple waves of measurement for one group (Trochim & Donnelly, 2008). Even though the term was not coined until later, Stouffer (1950) and Campbell (1957) placed a special emphasis on quasi-experiments in their studies focusing on study design and validity of experiments in social science. More recently numerous studies have used quasi-experimental designs as well (Hartwell, et al., 2012; Mayer, et al., 2013; Robitaille, et al., 2012).

This study used three waves of measurement for one group, specifically a pre, post, and post-posttest measurement. The independent variable of the study was the adventure program with a categorical variable of gender. The dependent variable was the GSE total scores. Results of all students were examined to determine if there was a difference in self-efficacy between pre, post, and posttest measurement. A one-way repeated measure

of variance was used to examine differences within and between effects as well as interaction. Experiment wise error rate will be held at $p<.05$.

Chapter 4: Results, Discussion, Limitations, and Implications

Purpose Statement:

The purpose of this quasi-experimental study was to assess the effect of a selected adventure program on self-efficacy in adult learners to meet the challenge of the integrated business core at a private institution located in the Northwest.

Participants were 80 (males = 69; females = 11) business major students enrolled in IBC. These students did have some earlier outdoor experiences. These business students had experiences on average of 6.21 $\pm$ 1.1 types of outdoor experiences before the intervention with a median score of 6.0 types of outdoor experiences, and the mode was three types of outdoor experiences. Thus the students in this study were not novices to the outdoors.

Statistical Hypotheses GSE, H1

1. No difference exists with the interaction of time (pretest, posttest, and post posttest) on business students' GSE scores who have participated in an adventure program.

   A significant difference was found by time on business students' GSE scores who participated in an adventure program Wilks' Lambda $F(2,71) = 10.44$, $p = .0001$, partial $eta^2 = .23$. GSE scores significantly increased from the pretest ($M = 33.34 \pm 4.39$), to the posttest ($M = 34.12 \pm 3.47$) to the posttest (35.54 ± 3.09). Pretest GSE Cronbach is .83, posttest GSE Cronbach is .82, and Post Posttest GSE Cronbach is .79.

2. No difference exists by gender on business student's GSE scores who have participated in an adventure program.

   The analysis was not run because there were only 11 women in the data set.

3. No difference exists with the interaction of time by gender on business student's GSE scores who have participated in an adventure program.

   The analysis was not run because there were only 11 women in the data set.

Statistical Hypotheses Comp Org, H4

4. No difference exists with the interaction of time (pretest, posttest, and post posttest) on business student's scores about their personal ability to set-up a company organization who participated in an adventure program.

   A significant difference was found with the interaction of time on business students' scores about their personal ability to set-up a company organization who participated in an adventure program Wilks' Lambda $\underline{F}(2,71) = 10.05$, $\underline{p} = .0001$, partial $eta^2 = .22$. Scores significantly increased from the pretest ($M = 5.79 \pm .79$), to the posttest ($M = 6.1 \pm .61$) to the posttest ($6.24 \pm .57$).

Statistical Hypotheses Product, H5

5. No difference exists with the interaction of time (pretest, posttest, and post posttest) on business students' scores regarding their personal ability to choose a business product who have participated in an adventure program.

   No significant difference was found with the interaction of time on business students' scores regarding their personal ability to choose a business product who participated in an adventure program Wilks' Lambda $\underline{F}(2,71) = 3.01$, $\underline{p} = .055$,

partial eta^2 = .07. Scores did not significantly increase from pretest (M = 5.86 $\pm$ .94), to the posttest (M = 6.13 $\pm$ .69) and the posttest to the post posttest (6.04 $\pm$ .75).

Statistical Hypotheses Try Again, H6

6. No difference exists with the interaction of time (pretest, posttest, and post posttest) on business students' scores regarding their personal willingness to try again if something fails within their company who participated in an adventure program.

   No significant difference was found with the interaction of time on business students' scores regarding their personal willingness to try again if something fails within their company who participated in an adventure program Wilks' Lambda $F(2,71) = .435$, $p = .64$, partial eta^2 = .01. Scores did not significantly increase from pretest (M = 6.27 $\pm$ .71), to the posttest (M = 6.34 $\pm$ .78) and the posttest to the post posttest (6.35 $\pm$ .71).

Statistical Hypotheses Business, H7

7. No difference exists with the interaction of time (pretest, posttest, and post posttest) on business students' scores regarding their personal belief they will have a successful business who have participated in an adventure program.

   No significant difference was found with the interaction of time on business students' scores regarding their personal belief they will have a successful business who participated in an adventure program Wilks' Lambda $F(2,71) = .084$, $p = .92$, partial eta^2 = .002. Scores did not significantly increase from pretest

(M = 6.31 $\pm$ .74), to the posttest (M = 6.35 $\pm$ .78) and the posttest to the post posttest (6.34 $\pm$ .74).

Discussion of findings.

The purpose of this quasi-experimental study was to assess the effect of a selected adventure program on self-efficacy in adult learners to meet the challenge of the integrated business core at a private institution located in the Northwest.

Hypothesis one is supported. The adventure program which business students participated in at the BYU – Idaho Outdoor Learning Center appears to have increased their GSE, and the increases were held over 14 weeks. It is true that our business students have a high GSE in general. The score of 33.34 is high as indicated by comparison to a study examining the psychometric properties of the GSE Scale, 25 samples were taken, each from a different country with a total of 19,120 participants (Scholz, Gutierrez-Dona, Sud, & Schwarzer, 2002). The mean score for general self-efficacy was 29.55 ± 5.32. The highest values were found for the Costa Ricans and Danes, 33.19 and 32.87 respectively. A mean score of 33.34 ± 4.39 is higher than the mean score of all samples combined and higher than Costa Rica's general self-efficacy score of 33.19 (Scholz et al., 2002).

The potential reasons why our general self-efficacy scores are high may be due to a variety of factors, i.e., the students are older and many have completed a church mission prior to attendance, 62.8% of them have served an 18-24 month missions, nationally and abroad (Wylie, 2014). As part of this mission, the students have no contact with family and friends beyond mail. They are responsible for their own financial

resources and make decisions based on their own independence. Another reason for the higher general self-efficacy scores may be due to their marital status, of 15,584 students enrolled in the fall 2013 semester, 26.5% of them were married (Institutional Fact Sheet, 2013). Though we did not ask this question in our demographics, we believe this is true of our sample as well. A study conducted by Arnett (1998) concludes the top two criteria for transition into adulthood are *accepting responsibility for one's self* and *making independent decisions*. Using these two measures for determining ones' transition into adulthood, an argument can be made that a large number of the students attending this university are adults and not emerging adults.

This study also supports the notion of general self-efficacy increase, as a result of adventure programming, which is consistent with other research on adventure programming and self-efficacy (Beezley, 2012; Caulkins, White, & Russell, 2006; Ewert, 1989; Odello, Hill, & Gomez, 2008; Webb, 1999).

This is positive information for our business program because higher general self-efficacy translates into a number of behavior characteristics important for the success of the business student. Business students should be able to approach difficult tasks as challenges to be mastered, rather than threats to be avoided. They should have the ability to set challenging goals and at the same time, maintain a strong commitment to them. The BYU – Idaho business student should have heightened and sustained effort in the face of failure and the ability to quickly recover after setbacks. All of these attributes are what Bandura (1994) described as characteristics of those with high self-efficacy and each of them are strong qualities to have for future success.

Unfortunately for hypothesis two and three, the number of women enrolled in these business classes were so low that data could not be run. We were hopeful there would be enough women business majors enrolled in the IBC program, but with only 11 female students, the numbers were too few to run. Reasons for this are discussed in more detail in later sections, but female percentage in this major do not reflect the true female to male percentages at BYU-Idaho which are 54.3 percent and 45.7 percent respectively (Institutional Fact Sheet, 2013). The number of females in this study equal 12 percent, or 11 out of 90. Even though this study did not have sufficient female numbers to run the data other research argues that adventure programming has great potential to improve both self-efficacy and self-esteem for women students (Ahmad-Basra, 2009; Beezley, 2012; Caulkins, White, & Russell, 2006)

Hypothesis four is supported. It appears the adventure program at the BYU – Idaho Outdoor Learning Center gave our business students more confidence to set up a company organization (*mean pre test score = 5.79, mean posttest score = 6.1, mean post posttest score = 6.24*). Setting up a company is a courageous activity, and as the study found, experiencing an adventure program increases self-efficacy, which in turn gives one the confidence to attempt courageous activity.

The intent of using adventure programming was to benefit the students through fostering team development, leadership development, and efficient team dymanics. One could surmise the importance team development, team dynamics, and leadership development have in company organization, and by means of adventure programs, these key factors are improved (Holt, 2009; Ng, 2001), thus giving one confidence in setting up a company organization.

Hypothesis five (*mean pre test score = 5.86, mean posttest score = 6.13, mean post posttest score = 6.04*), hypothesis six (*mean pre test score = 6.27, mean posttest score = 6.34, mean post posttest score = 6.35*), and hypothesis seven (*mean pre test score = 6.31, mean posttest score = 6.35, mean post posttest score = 6.34*), were not supported. In hindsight, the questions that we asked should not have been supported through an adventure programming experience. These three hypotheses were focused on selecting a business product, overcoming failure, or having a successful business. GSE is a perception one has in their ability to execute a specific activity (Bandura, 1997), but self-efficacy by itself does not inform one of certain skills and tools to manage a business, or create strategies to financially run a business. Adventure programming would not inform students as to what it takes to be successful in a business and thus GSE as a measure of one's perceived ability would not measure one's absolute ability.

In summary, general self-efficacy improved after the adventure program, the judgment of one's ability and the confidence of what one can do. However, self-efficacy does not necessarily give one more knowledge. Self-efficacy does not take the place of education about certain variables and the variables in this research are product selection, overcoming failure, and having a sucessful business.

Discussion, Limitations, Implications and Conclusion

The idea of using adventure as an educational tool and a means for improving personal growth, moral development, group development and leadership is not a new concept. The Business Department at BYU – Idaho began a new academic program (IBC) in the Fall of 2001. IBC spends three days each semester at the BYU – Idaho Outdoor Learning Center, participating in adventure programs to help build group

development and leadership. The benefit, however, of the adventure program at the outdoor learning center has never been measured.

It was decided to measure participant self-efficacy at the BYU – Idaho Outdoor Learning Center as a means to determine positive benefits of the adventure programs. In general, research supports self-efficacy as a positive outcome of adventure programs. Caulkins et al. (2006) in a study examining a six to twelve week backpacking wilderness therapy program for women found that female participants felt the adventure experience increased their self-efficacy. Not only was there an increase in self-efficacy, but the increase was transferable to other aspects in life.

In yet another study specific to low ropes adventure programming, the abstinence self-efficacy for individuals with substance abuse disorders was measured. It was found there was a statistically significant improvement in measures of abstinence self-efficacy (Clem, Smith, & Richards, 2012). This is significant to the BYU – Idaho study because low ropes adventure programming is a part of their adventure program.

Many studies of the effects of adventure programming focus on multi-day programs; however, other studies showed improved self-efficacy in shorter half-day programs. In a study by Odello et al. (2008), shorter half-day adventure programs had a significant positive effect on self-efficacy. The positive effect remained over a six-week period.

The question of long-term effects is an important variable that must not be ignored. Although a number of studies support positive effects of self-efficacy in adventure programming, is the effect long term? Probst and Koesler (1998) in their study of a multi-week outdoor adventure course showed significant positive effect on long-term self-efficacy.

Another study of great interest is that of Kass and Grandzol (2012). Their research population consisted of graduate students enrolled in a collegiate business program. Their findings suggest a business course using an adventure program component increases self-efficacy along with increases in leadership motivation, and emotional intelligence. This is of interest to BYU – Idaho's program because the study population also consists of business students participating in an adventure program.

Although research supporting the positive effect adventure programs have on participant's self-efficacy is vast, the specific program at BYU – Idaho has never been evaluated for improvement in self-efficacy, and therefore investigation into such appeared needed. The present study supports self-efficacy as an important ingredient to the success of any one individual. The confidence to execute specific attainments can play a major role in whether one succeeds throughout their education, career, and life in general.

The purpose of this quasi-experimental study was to assess the effect of a selected adventure program on self-efficacy in adult learners to meet the challenge of the integrated business core at a private institution located in the Northwest. The study was intended to measure self-efficacy before the adventure program, shortly after the program, and at the end of the semester. The GSE scale was used to measure general self-efficacy. An additional four questions were asked to help assess the business students and their judgment of personal ability regarding different aspects of running the student run business.

The adventure program consists of numerous high ropes course elements, low ropes activities, team initiatives, outdoor games, team challenges, outdoor cooking, and

camping. Each member of IBC is required to attend the three-day, off campus program. A total of 90 students attended the Fall, 2013 program.

This present study supports earlier research that adventure programs increase the general self-efficacy of students enrolled in a business course (Kass & Grandzol, 2012). It also supports that adventure programs can benefit the student in the set-up of the company organization. However, it was not shown that adventure programs increase one's ability in selecting a business product, overcoming failure, or having a successful business.

Also of interest is the fact that the students who were a part of this intervention had earlier outdoor experience. They were not novices, yet there was still an effect on self-efficacy. This supports the notion that outdoor adventure programming is a worthy experience for everyone from novices to those more experienced.

Limitations of the study:

1. The study is limited to a private, church related and church directed university in Southeast Idaho. Because of the structure of the university, generalizing to other universities should be cautioned. Even though the design of this study should overcome much of this concern, we must note that the university structure itself is a limiting factor in generalizing results. All students at BYU –Idaho must follow the moral directives of the institution, must live under a specific code of conduct, must live in university approved housing, must attend chapel regularly. All of these institutional factors affect this population uniquely therefore data about this population should not be generalized to other university populations..

2. BYU-Idaho students as members of the Church of Latter Day Saints are not typical students. Many have served an 18 month mission which demands mature practice and application of self and resources. Though many other college students in other institutions have experiences like the mission, it is not a general expectation of all the population. Thus the population does not appear typical of other universities, and the results of this study should be cautioned as to generalizing to all college populations. .
3. The study is limited because of the number of women enrolled in the IBC program. The IBC female to male percentage is not representative of the overall BYU – Idaho female to male percentage.

Implications

As a result of the study the following recommendations are suggested:

1. The IBC program at BYU – Idaho should continue to use adventure programming for its business students. This study along with others (Beezley, 2012; Odello, Hill, & Gomez, 2008; Russell & Walsh, 2011; Stiehl & Parker, 2007; Vlamis, Bell, & Gass, 2011; Wolf & Mehl, 2011) has shown positive outcomes of adventure programming.
2. The BYU – Idaho Outdoor Learning Center should continue to offer adventure programming to the BYU – Idaho business students involved in the IBC program.
3. Business students in other universities should participate in adventure programs, by doing so levels of self-efficacy should increase.

4. Business students in other universities should participate in adventure programs for the purpose of identifying company organization, which could help develop team cohesiveness and team building.
5. BYU – Idaho should consider using adventure programming for other majors throughout the university. It would appear that considering the present research and the literature of adventure programming, that all majors at BYU-Idaho could benefit from the experience both personally and professionally.

Recommendations

As a result of the study the following recommendations for further research are suggested:

1. It is recommended to study programs with a larger population of female participants. Since there were few women in the study, not enough data could be collected to run an analysis. One may wonder why women do not choose this major? Are women intimidated by a high percentage of male classmates, therefore choose programs that are more gender diverse? Is it possible that women are intimidated more than men by the adventure programming they know they will have to attend and thus shy away from the business major? We must also remember that at BYU – Idaho more women tend to major in historically traditional caring programs such as; Child Development, Family and Consumer Science, Education, and Nursing. Few women are choosing majors in Business. As reported earlier, in the Fall of 2013, male students comprised of 45.7 percent of the student body and female percentages were 54.3 (Institutional Fact Sheet, 2013). The female population (12 percent) in this IBC course does not reflect the

true percentages of female to male at the university. The choice of major at BYU – Idaho is self-directed. Perhaps in time, women will choose more diversified programs. Also, perhaps BYU-Idaho business department should actively recruit more women.

2. It is recommended to investigate relationship among all the hypotheses that showed no significant results. Hypothesis five, six, and seven all showed increased scores from pretest to posttest, however this was not the case from posttest to post posttest. Is there a correlating variable among these added questions? Why would a student feel their ability to select a business product, overcome failure, or have a successful business increases from pretest to posttest, yet not increase from posttest to post posttest. By identifying correlations among these questions we may be able to begin to understand the core variable, and then create a hypothesis that will provide a more significant answer. One may also question whether the decrease in score, or non-significant increase, occurs by a lack of long-term benefits of the adventure program, or is it from the instruction of the faculty throughout the semester, or perhaps the assessment questions we developed were worded poorly and should be asked differently. It would also be beneficial to study program assessment as a complementary strategy in self-efficacy improvement.
3. It is recommended to study adventure programs and their effect on self-efficacy in the corporate world. Would there be similar results, or does the non-academic corporate connection create different variables with different results?

4. As this study was specific to BYU – Idaho students, it is recommended to investigate multiple universities and the effect their adventure programs have on the GSE of its students. Are the results of this study specific to this university? Would the results of numerous universities be different?
5. Our research indicates the GSE scores of the business students enrolled in IBC are high compared to other studies. Are they high only in this discipline, or are GSE scores of other majors near the same levels? Is this a university wide mean? If so, what are the reasons for levels of high GSE? It would informative to study other universities and the GSE scores of their students. Would there be a difference in scores? Would there be unanticipated correlations? What variables at the university level increase GSE?

Concluding statement.

The purpose of the study was to assess the effect of a selected adventure program on self-efficacy in adult learners to meet the challenge of the integrated business core at a private institution located in the Northwest. Evidence shows, by a thorough literature review and a valid and reliable study, a significant difference was found by time on business students' GSE scores who have participated in an adventure program. Increases in GSE scores were measured after participation in an adventure program. A significant difference was found with the interaction of time on business students' scores about their ability to set-up a company organization who participated in an adventure program. Adventure programs can benefit the student in the set-up of the company organization. However, it was not shown that adventure programs increase one's ability in selecting a business product, overcoming failure, or having a successful business.

Chapter 5: Undergraduate Student Self-Efficacy In Experiential Learning Programs: a Group Study

Introduction

We teach at a private, church sponsored university in the Northwest. As a group, our purpose was to research the value of experiential education for students who are taught andragogically and to measure self-efficacy through such a teaching platform.

The mission of our institution has four main elements and centers on student development and participation, as well as providing a learning atmosphere that facilitates individual growth. The first is to build testimonies of the restored Gospel of Jesus Christ and encourage living the Gospel's principles. The second is to provide a quality education for students of diverse interests and abilities. The third is to prepare students for lifelong learning, employment, and their roles as citizens and parents. The last is to maintain a wholesome academic, cultural, social, and spiritual environment (Mission of Institution, 2008).

Our institution, with an undergraduate educational focus, uses the Learning Model: Prepare, Teach One Another, and Ponder/Prove, where students are involved and responsible for their own learning (Institution Learning Model, 2013). The model could be argued to be or at the very least include the tenets of experiential learning. Students are to be prepared, involved, engaged, reflective and able to prove their learning. Student preparedness, involvement, and engagement are also the tenets of teaching through an adragogist methodology. As previously mentioned, andragogy in the realm of education is known as adult learning. Adult learners, as opposed to pedagogical learners, "are self-directed, their learning is performance-centered, and they pull heavily from their

accumulated and ever increasing reservoir of experience" (Adler, 1998, pp. 43-44). Knowles, Holton, and Swanson (1998) state, a key element to adult learning is the person, not the subject matter. Learning involves change not only with the student i.e. the adult learner, but also with the ability "to do". It enables the learner to change behavior "as a result of experience" (Haggard & Crow, 1963, p. 20).

Our three programs, Family & Consumer Sciences Education (FCS Ed), Health Science, and Recreation Management, in which we teach, specifically represent the mission of our institution and are the focus of this study. Our programs follow the experiential component of the institution's Learning Model and are intended to build student self-efficacy through experiential learning courses.

We chose to examine student's self-efficacy and their confidence "to do" using the General Self-Efficacy scale (GSE) developed by Schwarzer and Jerusalem (1995) as well as examine the relationship between student perceptions and student reported experiential learning opportunities.

Background of the Study

For hundreds of years the American university has been one of change. In the beginning it was viewed as a community of masters and students. Today the university is "a whole series of communities and activities held together by a common name, a common governing board, and related purposes" (Kerr, 2001, p. 1).

One of the general purposes of all university communities is effective teaching and learning of disciplinary knowledge. Disciplines vary depending on the mission of the institution (Christensen & Eyring, 2011). Some institutions are large, centered on

research with multiple disciplines to supporting their mission. Other institutions are less research focused and their mission is directed toward a greater teaching emphasis. In either case, teaching and learning are priorities for both undergraduates and graduate students. Because teaching and learning are so important, assessment of effectiveness of the process is continually evaluated (Carnegie Foundation, 2014). However, the debate about effective assessment can be focused on different aspects of the teaching and learning process from how instructors present information to whether the teaching strategies used are effective within the community.

Interestingly, research on teaching and learning at the adult level is highly informed from the educating of children, which often is translated to the university or college setting. For example, in seventh century Europe, schools were created to prepare young boys for life in the priesthood (Kerr, The uses of the university, 2001).

> Since the indoctrination of students in the beliefs, faith, and rituals of the church was the principle mission of these teachers, they developed a set of assumptions about learning and strategies for teaching that came to be labeled '*pedagogy*,' literally meaning 'the art and science of teaching children.' Pedagogy, or teacher-directed instruction, places the student in a submissive role requiring obedience to the teacher's instructions. It is based on the assumption that learners need to know only what the teacher teaches them. The result is a teaching and learning situation that actively promotes dependency on the instructor. The model of education persisted throughout the ages well into the twentieth century and has been the basis of organization for our educational system (Knowles, Holton III, & Swanson, 1998).

The process of teaching children is called pedagogy from the Greek pais, paidos: the upbringing of a child and -agogy – teaching (Adler, 1998). Generally pedagogical skills in the teaching of children have focused on teachers and subjects, where students play a secondary role. An example of this is the organization of traditional classrooms, from elementary school to institutions of higher education; rows and seats all centered on the instructor (Kerr, The uses of the university, 2001).

Historically, educators have questioned if *pedagogy* was an apt term for teaching all adults. Though learning concepts may be closely related, how an adult comes to learning and relates to the teacher may be very different. Since pedagogy is the art and science of teaching children, what then would be the art and science of teaching adults?

Andragogy

Lindeman (1926) proposed the concept of *andragogy* and argued that this term is a better match of what actually occurs in adult learning, which centers on the student and their needs as well as interests. He built on the notion of andragogy and argued that education for adults should describe education as life and life as education (p. 9). Adult learning, thus would involve building or changing the person through life's experience.

If education is life, as noted by Lindeman (1926) and Knowles (1980), then life is also education. Often student learning, as defined by pedagogy, consists of vicarious substitution of the teachers' experience and knowledge for teaching application. However, Lindeman argues that psychology teaches us we learn through what we do, and therefore all genuine education should inspire us to keep doing and thinking together. Thus, according to Lindeman, experience is the adult learners living textbook (pp. 9-10),

and all education comes from experience (Dewey, 1938). Lindeman as well as Knowles would argue that most adult learners are self-motivated and willing “to do”, and experience assists in development of confidence in making change.

According to Knowles et al. (1998), adults therefore would and do learn differently than the adolescent or child. Typical pedagogical instruction aimed at children teaches to subject matter and not to the student. In contrast, adult learning or andragogy is more than acquisition of knowledge; it “emphasizes the person in whom the change occurs or is expected to occur. Learning is the act or process by which behavioral change, knowledge, skills, and attitudes are acquired” (Knowles et al. 1998, p. 11).

Lindeman (Lindeman, The meaning of adult education, 1926) statesthat the andragogical model is predicated on four basic assumptions about learners, all of which have some relationship to our notions about a learner’s ability, need, and desire to take responsibility for learning. The assumptions are:

1. Adults are motivated to learn as they experience needs and interests that learning will satisfy.
2. Adults’ orientation to learning is life-centered.
3. Experience is the richest source for adults’ learning.
4. Adults have a deep need to be self-directing (1926).

Individual differences among people increase with age (Knowles et al. 1998; Merriam, Caffarella, & Baumgartner, 2007). As individuals learn and grow the need to rely and use their experience in learning increases (Bower & Hollister, 1967; Cross, 1981; Iscoe & Stevenson, 1960; Smith, 1982; White, 1959; Bruner, 1961; Erickson, 1950;

Erickson, 1959; Erickson, 1964; Getzels & Jackson, 1962). Experience, therefore, plays an important role in andragogy. According to Knowles et al. (1998) "the richest resources for learning reside in the adult learners themselves. Hence, the emphasis in adult education is on experiential techniques…to adults experience is who they are" (p. 66). Andragogy and its relationship with experiential learning are vital to this present group study, for our participants are adult learners who are taught experientially.

Experiential Learning

Andragogy methodologies often use experiential learning as one of the numerous teaching approaches focusing on experience (Knowles, 1980). The notion of experiential learning is not a new or revolutionary idea in education. In 1938, Dewey argued that all genuine education comes from experience and the best classroom teaching utilized hands on experience (Dewey, 1938). Forty years later, Kolb (1984) stated experiential learning is the process whereby knowledge is created through the transformation of experience. Experience is the central role in the learning process (Kolb, Boyatzis, & Mainemelis, 1999, p. 2) and as Morrison and Branter's (1992) research found, experiential learning accounts for over 70% of individual development. Experiential learning has steadily gained popularity and acceptance in higher education and "serves as a valuable resource for learning and teaching" (Kolb & Kolb, 2006).

According to Kolb (1984) and Smith (2011), there are four basic elements to experiential learning: concrete experience, observation and reflection, abstract conceptualization and active experimentation. First concrete experience, the student must be actively involved in the experience. Second observation and reflection, they must be able to reflect on the experience. Third abstract conceptualization, the student must be

able to analyze and conceptualize the experience. Fourth active experimentation, they must have the problem-solving skill to use the new ideas gained from the experience.

O'Connell (2005) argued that after learning a concept, student application of knowledge in their environment provides an opportunity to practice a new insight. Once the student has used this new knowledge in a social setting, they can improve confidence and are more motivated to repeat the new skill.

Experiential Learning and Self-Efficacy

The rewards of experiential learning come in several forms. Ewert and Garvey (2007) state the outcomes of experiential learning include personal growth, moral, group, and leadership development. For this present study, we focused on collecting data from only one element of Ewert and Garvey's list of experiential learning outcomes: personal growth. Personal growth was chosen because of its innate relationship to self-efficacy. Both, personal growth and self-efficacy are measures of understanding individual self-confidence (Bandura, 1982; 1986; 1991; 1994). Our choice was based on the academic need to measure success (Christensen & Eyring, 2011) of our hands-on courses. Our institution has an innovative mission of developing personal growth and career readiness.

Personal growth is characterized by changes in self-concept, self-esteem, personal motivation, and confidence. As Bandura (1986) so aptly noted in his ground breaking work in *Social Cognitive Theory* (SCT), confidence is a key component in one's belief and ability to perform a learned task, which is also known as self-efficacy. Self-efficacy simply refers to a judgment a student makes about his or her ability to accomplish a specific future task (Bandura, 1982).

The judgment of being able to accomplish a task appears to affect many activities. Beauchamp, Rhodes, Kreutzer, and Rupert (2011) described a study conducted with students who ran a race. They illustrated through their results that students who were "experientially-primed" with more running experience reported significantly higher levels of self-efficacy and desire to participate in physical activity compared to the students who were more "genetically-primed" in good physical condition (2011, p. 12).

Self-Efficacy and the Social Cognitive Theory

Albert Bandura's 1963 *social learning theory* described three important influences on learning: imitation, reinforcement patterns, and self-control (Bandura & Walters, 1963). In 1986, Bandura renamed the social learning theory, *social cognitive theory* (SCT) by adding the construct of *Self-Efficacy*. SCT (Bandura, 1986) has a core set of determinants through which knowledge and information is transferred into practice. The theory has nine constructs (Bandura, 2004) which support the application to andragogical learning. The nine constructs are:

- Knowledge-learning facts and gaining insights related to an action, idea, object, person, or situation.
- Outcome Expectancies-anticipation of the probable outcomes that would ensue as a result of engaging in the behavior under discussion
- Outcome Expectations-value a person places on the probable outcomes that result from performing a behavior.
- Situations Perception-how one perceives and interprets the environment around oneself.

- Environment-physical or social circumstances or conditions that surround a person
- Self-Efficacy-confidence in one's ability to pursue a behavior
- Self-Efficacy to Overcoming Impediments-the confidence that a person has in overcoming barriers while performing a given behavior.
- Goal Setting or Self Control- setting goals and developing plans to accomplish chosen behaviors.
- Emotional Coping- techniques employed by a person to control the emotional and physiological states associated with acquisition of a new (p. 144) behavior.

Though all components of this model are important, one major component, self-efficacy (Bandura, 1977; 1982; 1986; 1994; 1997), is often studied to learn about confidence and applied to academics (Schunk, 1991; 1996), career development (Betz, 2006; Betz & Hackett, 1981; Betz, Klein, & Taylor, 1996; Betz & Schifano, 2000; Lent, 2005; Lent, Brown, & Hackett, 1994), and health (Bandura, 1991; Bandura, Reese, & Adams, 1982; Bandura, Taylor, Williams, Mefford, & Barchas, 1985). Self-regulated learning has been effectively applied to education in addition to the preceding topics (Cleary & Zimmerman, 2004; Zimmerman, 2000).

Bandura (1997) described self-efficacy as the "belief in one's capabilities to organize and execute the courses of action required to produce given attainment" (Bandura, 1997, p. 3). Harrison & McGuire (2008) state that self-efficacy is one's perception of his/her ability to perform a specific activity. The main idea supporting self-

efficacy is the perception of one's belief in one's own ability "to do". Self-efficacy beliefs determine how one feels, thinks, behaves and even what motivates. There are four ways self-efficacy is developed:

1. Mastery Experience-enabling the person to succeed in attainable but increasingly challenging performances of desired behaviors. The experience of performance mastery is the strongest influence on self-efficacy belief.
2. Social Modeling, Vicarious Experience-Showing the person that others like themselves can do it, which should include detailed demonstrations of the small steps taken in the attainment of a complex objective.
3. Improving Physical and Emotional States, Physiological States-Making sure people are well-rested and relaxed before attempting a new behavior, which can include efforts to reduce stress and depression while building positive emotions—as when "fear" is re-labeled as "excitement."
4. Verbal Persuasion, Social Persuasion- Telling the person that he or she can do it. Strong encouragement can boost confidence enough to induce the first efforts toward behavior change (Bandura, 1997, p. 79).

We believe our institution's learning platform is highly effective in providing experiences which develop self-efficacy. As a student centered institution social modeling through group work, student internships and student lead discussions provide opportunities to demonstrate mastery experience.

Set the Problem

Currently our students are expected to meet not only program expectations but in two of our programs, students must meet credential expectations. Thus, our undergraduate students are facing challenges in the areas of program confidence and degree expectations. These challenges often result in student dropout, student professional attrition, and lack of degree application. Research shows individuals with high levels of self-efficacy are more confident in their ability to perform a certain task, or accomplish a difficult challenge (Bandura, 1994; Caulkins, White, & Russell, 2006; Cervone & Peake, 1986; Hechavarria, Renko, & Matthews, 2011).

Our institution's Learning Model includes experiential learning. The more we can study and investigate undergraduate students and their confidence to succeed, the more we can effect changes and improve programming. Understanding the relationship between experientially taught courses and the value the students receive from taking these courses will bring further understanding about the learning experience, for both the student and for us the educators.

Considering the above, the present study should help answer the question regarding the relationship between student perceptions of professional preparation and experientially taught courses. It will also help to measure general self-efficacy.

Purpose Statement

The purpose of this descriptive study was to examine general self-efficacy and the relationship between student perceptions of professional preparation and student reported experiential learning opportunities across three university program areas.

Hypothesis

No relationship exists between student perceptions of professional preparation and student reported experiential learning opportunities across three university programs area.

Significance of Study

One of our programs, FCS Ed, lies in the field of Career and Technical Education. In general, a connection exists between experiential learning and self-efficacy in Career and Technical Education (CTE) programs. These programs have traditionally required experiential learning modes for their hands-on trades and rely heavily on experience (Clark, Threeton, & Ewing, 2010). In FCS Ed, a (CTE) course of study, educators are advised to build students' self-efficacy. Measuring whether FCS Education actually does so would be beneficial in supporting the future of the program within the mission of the institution. In addition, if we find that self-efficacy improves we know that our students are being well served.

The connection to experiential learning and self-efficacy within the field of recreation is also evident (Ewert, 1989; Webb, 1999). Recreation Management programs tend to support experiential learning methods. However, an investigation into the correlations between self-efficacy and programs typically associated with experiential

learning, such as Recreation Management, would be of benefit to the students and faculty within the program and administration.

Confidence “to do” developed through experiential learning is important for students to apply the seven core competencies (McKenzie, Neiger, & Thackaray, 2013) in Health Science. Students after graduation are highly successful in the field if they know how “to do” rather than just know. The Health Educator Job Analysis which describes the practice and scope of Health Science states, “Baccalaureate programs in health education should prepare health education graduates to *perform* all seven of the health education responsibilities” (National Commission for Health Education Credentialing, 2010, p. 5). Thus if our program in Health Science does improve self-efficacy, we know we have served the students well and prepared them for the profession.

Our institution of higher education appears to be different in the way it models and describes higher education. In 1997, President David A. Bednar challenged the faculty in his first all-employee meeting after becoming president to ponder about how we think and to set goals so high that we cannot imagine reaching the results through our existing processes (Worrell, (Unpublished Manuscript) History of Ricks College and Brigham Young University-Idaho: The Bednar years (1997-2004), n.d.). Building on this philosophy, President Kim B. Clark, the current president of BYU-Idaho, introduced three imperatives in his inaugural address which outlined this vision.

1. Raise substantially the quality of every aspect of the experience our students have.
2. Make a BYU-Idaho education available to many more [students].
3. Lower the relative cost of education (Clark K. B., Innagural Address, 2005).

What makes BYU-Idaho different is the way the imperatives are implemented. The first is the use of the student centered Learning Model. The Learning Model includes three principles: (1) preparing to learn, (2) teaching one another, and (3) pondering and proving one's learning (Institution Learning Model, 2013). The Learning Model involves "instructors becoming responsible for duel competency, mastery of both the subject matter and the art of conveying it for maximum student learning" (Christensen & Eyring, 2011, p. 259). Clarke followed a similar teaching method from C. Roland Christensen during his days at the Harvard Business School. Christensen argued:

> Great teaching not only engages students but makes them partners with the instructor in the learning process. That partnership requires a teaching and learning 'contract' running both between instructor and student and also among the students themselves. The contract includes the course syllabus, with its assignments and grading standards, but goes much further. It embodies the expectation that students and instructors will come to class prepared to teach one another in an environment of mutual trust and respect (Christensen & Eyring, 2011, pp. 258-259).

The partnership demonstrates effectively the use of andragogy as explained by Knowles et al. (1998) when he argued that the student is an active participant rather than a passive recipient.

The second way is in the introduction of "Foundations;" a new approach to general education (GE) classes. The Foundations program is designed to train students as "well prepared active classroom learners, and they would expect to be challenged

accordingly in non-Foundations courses as they progressed toward graduation" (Christensen & Eyring, 2011, p. 264).

The third way addresses the quality outside of the classroom, which includes the university honor code or rules and regulations for conduct around campus. It is not only the responsibility of the individual to follow the rules but it is the responsibility of each person to help each other honor the standards (Brigham Young University-Idaho , 2013).

The fourth way involves sacrifice on the part of the faculty. Faculty teaches three semesters or "tracks" per year and participates in rotation of Foundations teaching. Christensen and Eyring (2011) state:

> The sacrifice of working year-round for the sake of creating a third semester truly equivalent in quality to the other two was permanent. So was supporting the university's decision to raise average class sizes. Though the Learning Model and the carefully designed Foundations courses allowed this to occur without negative impact on the student learning experience, it increased the faculty's burden in grading and student advising. Defying tradition required more than just innovation; it also required working harder (p. 273).

Our programs follow the above model. It is anticipated that our students would increase their ability "to do".

Procedures

The effect of experiential education on self-efficacy in undergraduate students enrolled in the three programs; health science, FCS Ed., and recreation management was measured using the General Self-Efficacy Scale (GSE) developed by Schwarzer &

Jerusalem (1995) (See Appendix C)[1]. We first wanted to know how our students performed on a general self-efficacy scale. We then wanted to know how the university students perceived the knowledge and value of their program in accomplishing their experiential courses.

We emailed all registered students in the three different program areas of: Family and Consumer Science, Health Sciences, and Recreation, and invited them to participate in the student assessment. The e-mail invitation included a hot-link to the Qualtrics (2002) site at our institution. Our Qualtrics tool included the GSE scale (see Appendix C) and our six questions of experiential learning plus some general demographic information. The University of Idaho Institutional Review Board approved the study Exempt certification for IRB project #13-145 (see Appendix E) [1]. Once student consent was granted, the participant was able to complete the instrument. Upon completion the student no longer had access to the instrument. Every two weeks following the initial distribution, a reminder e-mail was sent to only those who had not yet completed the assessment. The instrument was open for six weeks.

Participants

Participants were undergraduate students from a private church sponsored university in the northwest majoring in three programs of study, FCS Ed, Recreation Management, and Health Sciences. A convenience sample was taken of 561 students from the three programs with 13% from FCS Ed, 17% from Recreation Management, 61% from Health Science and with 9% unusable. Of the final sample, 19% freshman,

[1] Scott Bergstrom stated reciprocal approval to conduct study at BYU – Idaho.

23% sophomore, 24% junior, and 33% senior level students completed the assessment. Final participants included 311 students (n= 69 males and 242 females).

Protection of Subjects

All participants were 18 years old or older. Protection of participants was assured through the University of Idaho IRB process (see Appendix E for IRB number). Students were informed of their rights and gave their consent.

Instrument

Our study used the General Self-Efficacy scale (GSE) developed by Ralf Schwarzer (Schwarzer & Jerusalem, 1995; Rimm & Jerusalem, 1999). The 10-item general self-efficacy Likert type scale defines one's perceived self-efficacy. The possible range of scores for the GSE is 10-40 with 40 being the highest score possible. The participants answered each question using the following scale of: 1=not at all true, 2=barely true, 3=moderately true, and 4=exactly true. Ajzen argues one should not essentially be interested in individual's actions on specific occasions, but rather focus on such phenomena as "regularities in behavior, consistent patterns of action, and response tendencies (as cited in Laganger, Kraft, & Roysamb, 2000, p. 54). Studies show the GSE has high reliability, stability, and construct validity (Laganger et al., 2000; Schwarzer, Mueller, & Greenglass, 1999). The scale has been used in numerous research projects, where it typically yielded internal consistencies between 0.75 to 0.91 (Schwarzer et al., 1999). A letter of permission can be found in the appendix (see Appendix D).

The instrument gathered three sets of data: demographics, GSE scores, and student perceptions. Participant demographics gathered basic information such as: major, gender, and year in school.

In addition to the GSE scale, we designed six additional questions to assess student perceptions in regards to experiential courses and/or experiences. Five questions assessed values and perceptions regarding experiential learning. We anticipated these five questions would inform us about the relationship between experiential learning and perceptions of professional preparation. A sixth question was added to assess the frequency of experiential application. The six Likert-type additional questions were:

1. To what extent do your experiential courses help you feel confident in preparing a lesson? 1=Great, Much=2, Some=3, Little=4, None=5.
2. To what extent do the experiential courses prepare you to design or apply the concepts you have learned? 1=Great, Much=2, Some=3, Little=4, None=5.
3. To what extent do you value your program? 1=Great, Much=2, Some=3, Little=4, None=5.
4. To what extent do you believe experiential learning improves your knowledge to perform in your profession? 1=Great, Much=2, Some=3, Little=4, None=5
5. To what extent do you value your hands-on learning in your courses? 1=Great, Much=2, Some=3, Little=4, None=5
6. How many times in the last month did you apply hands-on practice? (Never, Less than once a month, Once a month, 2-3 times a month, Once a week, 2-3 times a week, Daily).

Scores for the first five experiential learning self-efficacy results were then compared to the number of times the students reported experiential learning application.

Data and Analysis

The study used descriptive assessment methods. All data were analyzed using descriptive statistics and Pearson Correlation techniques in SPSS version 19.0. Five hundred and sixty-one students (561) agreed to participate in the study. Of the 561 students, 327 students met the criteria of currently being enrolled in Family & Consumer Sciences, Health Sciences, or Recreation. All data were then screened for incomplete information and answers. Those who did not answer both assessments were removed from the data set (16 assessments were removed) for a final sample size of 311.

Results

The purpose of this descriptive study was to examine general self-efficacy and the relationship between student perceptions of professional preparation and student reported experiential learning opportunities across three university program areas.

Measure of general self-efficacy.

The participants were 311 freshman, sophomore, junior, and senior level students (n=69 males and 242 females) in three program areas within one university. For General Self-Efficacy the participants scored 34.16 ± 3.66. Possible ranges of scores runs between 10 and 40.

Statistical hypothesis of relationships.

No relationship exists between student perceptions of professional preparation and student reported experiential learning opportunities across three university programs areas.

A significant moderate positive relationship was found between student perceptions about their program preparation and students reported experiential learning opportunities across three university program areas r=.336, p=.0001, r^2=.11, n=311. Mean personal perceptions about their knowledge and preparation in their programs=21.76±2.9; mean reported experiences= 4.87 ± 1.66. Program experiences account for approximately 11% of the variability in program self-efficacy. Approximately 89% of the variability in personal perceptions about preparation in their programs is unaccounted for in this equation.

Discussion

Our study set out to first to examine general self-efficacy and then the relationship between student perceptions of professional preparation and student reported experiential learning opportunities across three university program areas. In order to address this relationship we hypothesized the following: no relationship exists between student perceptions of professional preparation and student reported experiential learning opportunities across three university programs area.

The institution's mission (Mission of Institution, 2008) and the Learning Model (Institutional Learning Model, 2013) center on student development and participation. It also provides a learning atmosphere which facilitates individual growth. The purpose of

the courses within our programs is to build students' confidence to perform through experiential learning opportunities.

In our study, generally, we found self-efficacy is quite high when students enroll in their major program courses of FCS Ed, Recreation, and Health Science. The scale we used has a high of 40. Our students scored a 34.16 ± 3.66. In a seminal study examining the psychometric properties of the GSE Scale, 25 samples were taken, each from a different country with a total of 19,120 participants (Knowles M. , The modern Practice of adult education, 1980). The mean score for general self-efficacy was 29.55 ± 5.32. The highest values were found for the Costa Ricans and Danes, 33.19 and 32.87 respectively (no standard deviations reported). A mean score of 34.16 ± 3.66 is 4.61 points higher than the mean score of all samples combined and 0.97 points higher than Costa Rica's general self-efficacy score of 33.19 (no standard deviations reported) (Scholz et al., 2002).

As researchers and professional practitioners, this has significant meaning to us. Since self-efficacy is a measure of one's perception of the confidence and ability "to do", we believe that perhaps students self-select these programs because they have confidence they can meet the rigors of the program and also the mission of the university. It would appear students choose one of the three programs because they were confident they could be successful in accomplishing the specific degree. The confidence appears to stay at a high level throughout their time at the university.

The potential reasons why our general self-efficacy scores are higher may be because our university students on average are older; many have completed a church mission prior to attendance, and a high percentage of the population are defined as no

longer emerging adult, but adults. Our students are enrolled in a private, religious institution in which 62.8% of them have served an 18-24 month missions, nationally and abroad (Wylie, 2014). As part of this mission, the students have no contact with family and friends beyond mail. They are responsible for their own financial resources and make decisions based on their own independence. Of the 15,584 students enrolled in the fall 2013 semester, 26.5% of them are married (Institutional Fact Sheet, 2013). A study conducted by Arnett (1998) concludes the top two criteria for transition into adulthood, these criteria are, *accepting responsibility for one's self* and *making independent decisions*. Using these two measures for determining ones' transition into adulthood, an argument can be made that a large number of the students at our university are adults and not emerging adults. Thus an andragogical, experience centered approach would be appropriate.

The student GSE scores maintain approximately the same level throughout their four year program of study. The correlation informs us that our programs and the way the programs are taught are not eroding our student's confidence "to do" their academic experiences, rather our programs keep our student self-efficacy at a high level where they can be successful and accomplish their degrees.

Our university has been identified as an innovative university (Christensen & Eyring, 2011). One of the missions of our institution is for students to be involved in experiential learning. We wondered how students perceived the knowledge and value of their program in accomplishing their experiential courses. The five additional questions informed us there was a positive relationship between the general self-efficacy and program outcomes.

The five additional questions examined the relationship between the experientially based courses and the confidence the participants have as a result. According to the literature (Ewert, 1989; Webb, 1999) there is a connection between experiential learning and self-efficacy; for this purpose we wanted to examine three experientially taught programs and self-efficacy.

The first two questions addressed the confidence the participants had to use the knowledge they learned from their experientially taught course while questions three and five addressed the value placed on the program and the hands-on learning in the courses. Question four addressed experiential learning as a way to improve their knowledge to perform in their different professions.

In analyzing these questions in relation to the number of times the students reported experiential learning, we discovered there also appears to be a moderately strong relationship in what they perceive is their ability to know and perform the program requirements. A moderately strong relationship means there is a correlation between the student perceptions about their program preparation and student reported experiential learning opportunities. In other words, the students believe their experiential learning was of value to their professional preparation.

As professors in these programs this informs us our programs are building students' confidence to teach program content, confidence to apply attained knowledge, and confidence to perform in their future profession. We therefore reject our hypotheses: no relationship exists between student perceptions of professional preparation and student reported experiential learning opportunities across three university programs area,

because there is a relationship between student perception of preparation and experiential learning opportunities.

In summary, we learned the students entered the programs with a high level of self-efficacy. We also found the rigors of higher education in three specific baccalaureate program did not diminish student self-efficacy. We have stated potential reasons for this such as life experiences including age, missionary experience and marriage. We also argue university innovation as a key factor such as (1) a student centered university, (2) beliefs in extraordinary possibilities in ordinary people, (3) experientially focused learning model, (4) inspired inquiry and innovation, and (5) the understanding of the learning and teaching process (Christensen & Eyring, 2011; Institution Learning Model, 2013).

Implications for Future Research

We originally believed that our programs, because of their intention and teaching methodology, would build self-efficacy. Our results did not necessarily find such, but our results did provide a descriptive view of our students, our programs, and student perceptions about their experiential learning experience. Our students and university are unique and different and the difference has meaning for future research. These findings have several implications for both planning curriculum to include experiential learning and assessing self-efficacy, mainly for the purpose of enriching the teaching and learning experience within undergraduate universities.

Educators new to experiential learning may question the academic value of this type of educational practice. Our research demonstrates our students come to us with high

levels of self-efficacy and our educational programs do not degrade or improve the high level of self-efficacy of students as they travel through an experiential learning environment in Family and Consumer Sciences Education (FCS Ed.), Health Science and Recreation Management courses. The connection between experiential learning and self-efficacy is not new (Dewey, 1938; Knowles, Holton, Swanson 2012; Bandura, 1994). Experience is the very medium to demonstrate our level of learning. Self-efficacy, the confidence "to do" a behavior, is paramount to life-long learning. Fink (2003) describes this learning as "indirect or vicarious 'doing' experiences" (p. 109), which may include group work, case studies, simulations or role-playing to name a few. Experiential learning provides the medium to engage in activities within the classroom without risks inherent in a real situation. These experiences help to build and maintain self-efficacy among freshman through senior students at our innovative university.

Our students are uniquely different and because they are, the results cannot be applied to other programs. However, the use of experiential learning techniques used at BYU – Idaho, such as group work, case studies, internships, and externships must be considered additions to effective curriculum planning. Educators and program planners can benefit from adding self-efficacy assessment into their evaluation of students in their programs. The knowledge can lead to better implementation of learning experiences to build and maintain self-efficacy levels among all ranks of undergraduate students. The GSE scale, with the six additional questions that we developed, should be used by other curriculum researchers in experiential programs to determine experiential learning self-efficacy.

Limitations of the Current Study

Because our institution is religious focused, based, and directed, there are limitations in applying the results to the greater secular world. Our students are older and many of them have had life changing adult experiences. Over 25 percent of the student population in fall semester 2013 were married (Institutional Fact Sheet, 2013). Enrollment statistics from fall semester 2013 reveal 6415 students (41%) had spent 18 – 24 months serving a proselyting mission for the Church of Jesus Christ of Latter-Day Saints (Wylie, 2014). These individuals often learn a new language and culture while living thousands of miles from home. They must be articulate, focused, and directed in their mission. They also are completely independent and success or failure is in their own hands, which sort of event is a maturing experience intellectually, morally, and spiritually. Thus our students come to university as mature adults and their self-efficacy scores support the power of their life experiences.

At the same time, our institution's Learning Model is unique and innovative. Christensen and Eyring (2011) wrote a national best seller contrasting BYU – Idaho with Harvard. These unique differences are contrasted through the use of a DNA metaphor. Other institutions often pattern themselves after Harvard for its sustainability and quality of education. In 2000 BYU-Idaho administration made distinct changes to their DNA by announcing that it would no longer follow a traditional higher educational model. It was to become a four-year university and serve only undergraduates using a year-round track system designed to serve as many students as possible. The "ordinary student" was to receive a "first-class education" (Christensen & Eyring, 2011, p. 27). Along with this announcement came the elimination of all intercollegiate athletic programs and faculty

tenure tracks. Emphasis was placed on the scholarship of teaching and learning. The institution's goal was to offer a high quality education to more students at a decreased tuition cost. These drastic changes were seen as "genetic engineering". Christensen and Erying recognized that "some may doubt" the use of such a unique place as a model for other institutions (p. 28). We disagree. We don't doubt because we have been a part of the experience.

Another limitation of our study is that we evaluated only three programs in our university. We don't know if the self-efficacy levels would be the same throughout other programs; that is something that should be measured. We intuitively believe that the general missionary experience of our students would equate to higher levels of GSE, but research should measure whether this is true. Also, our six questions about perception should also be used within the general university populations to see if our phenomenon in our programs also exists across the university.

Because of the limitations listed above, we also would welcome others to use our interpretation of the GSE with its six additional questions in more secular university programs. Would a general student, not in an intense 18-24 month religious mission experience, have the same level of GSE or would their scores mimic the earlier work of Schwarzer et al. (1999) and Laganger et al. (2000)?

Future Directions

Our innovative institution with its experiential focus might be further studied, especially considering the other constructs of Bandura's Social Cognitive Theory (1986). These might include: outcome expectations, knowledge, outcome expectancies, goal setting, and self-control. Morgan, (2014) conducted research on the "outcome

expectancies" construct in relation to program and course outcomes. Outcomes are important to the students, programs, and the university.

BYU-Idaho's administration has placed an emphasis on Student Learning Outcomes and their connection with the mission statement; this too would be an important area for study. The Student Learning Outcomes give an increased understanding of what it means to "know," "do," and "become". Future research could focus on outcome expectancies in relation to self-efficacy to ferret out if our institution is supporting Student Learning Outcomes.

Given that we focused on one outcome of Experiential Learning, personal growth, (Ewert & Garvey, 2007) other outcomes could be studied to identify relationships between experiential learning and general self-efficacy. Garvey (2007) states the outcomes of experiential learning include personal growth, moral, group, and leadership development. Since BYU-Idaho is a religious institution, moral and leadership growth in relation to self-efficacy would be an appropriate study. These outcomes are important to the Learning Model and mission of the University.

Chapter 6: White Paper

From inside an Innovative University: Connecting the Dots of Learning and Teaching

On Tuesday, June 20, 2000, the president of Ricks College, David A. Bednar, called together the college community for an important announcement from LDS Church President Gordon B. Hinckley. President Hinckley announced that Ricks College would henceforth become BYU-Idaho.

The announcement changed the future and direction of the university. The institution would emphasize undergraduate education, only award baccalaureate degrees, and faculty rank would not be part of the academic structure. BYU – Idaho would "operate year-round incorporating innovative calendaring and scheduling, intercollegiate athletics would no longer be a part of the university, and educational costs would be lowered to provide greater access to more students" (Christensen & Eyring, 2011, p. 228). Currently, over 15,500 students are enrolled at BYU – Idaho per semester with nearly 80 majors available (Brigham Young University-Idaho , 2013; Stevens, BYU-Idaho releases enrollment figures for Fall Semester 2013, 2014).

The majors vary depending on the mission of the institution (Christensen & Eyring, 2011). Some institutions are large and research centered with a multitude of disciplines to support their mission. Other institutions are not as research focused and their mission is toward a greater teaching emphasis. Whichever is the case, teaching and learning is a central focus whether the student is a graduate student or an undergraduate student. Because teaching and learning is so important, assessment of effectiveness of the process is continually evaluated (Carnegie Foundation, 2014). However, the debate of

effective assessment can be focused on different aspects of the teaching/learning process from how instructors present information to whether the teaching strategies used are effective within the community.

In his first all-employee meeting as president of Ricks College, David A. Bednar, invited his colleagues to think about how we think and set goals so high that we cannot imagine reaching the results through our existing processes (Worrell, n.d). The aim is found in the unique BYU-Idaho Mission Statement and Student Learning Outcomes. Following that challenge, Henry B. Eyring stated the result of this rethinking as the graduates of BYU-Idaho will become:

> …natural leaders who know how to teach and how to learn. They will have the power to innovate and improve without requiring more of what money can buy. Those graduates of BYU – Idaho will become… legendary for their capacity to build the people around them and to add value wherever they serve (Eyring, 2001).

When BYU – Idaho made the decision to move toward an innovative model, it also had a duty to prepare the faculty to meet the mission and needs of the university. One of the needs was to improve the education of its faculty and offer additional professional development. It was at this juncture that the University of Idaho was solicited to provide terminal degrees to a cohort of local educators from southeast Idaho.

Our Study

In 2011, the cohort began its journey through the Ed.D program from the University of Idaho at its institution, BYU – Idaho. Four members of that cohort conducted an

assessment of BYU – Idaho students from three experientially based programs; Family & Consumer Sciences Education (FCS Ed), Health Sciences, and Recreation Management. We as instructors of BYU –Idaho wanted to first examine student self-efficacy and their confidence "to do" using a general self-efficacy scale (GSE) developed by Schwarzer and Jerusalem (1995), as well as examine the relationship between student perceptions and student reported experiential learning opportunities among freshman, sophomores, juniors, and seniors. Literature shows individuals with high levels of self-efficacy are more confident in their ability to perform a certain task, or accomplish a difficult challenge (Bandura, 1994; Caulkins, White, & Russell, 2006; Cervone & Peake, 1986; Hechavarria, Renko, & Matthews, 2011).

As a result of our assessment of 311 students we found self-efficacy is generally quite high when students enroll in their major program courses of FCS Ed, Recreation, and Health Science. The scale used has a high point of 40. The students scored a 34.16 ± 3.66 and when compared to others the result is quiet high (Scholz, Gutierrez-Dona, Sud, & Schwarzer, 2002). The data we gathered on general self-efficacy matched additional data that we collected in related research of GSE of our programs. In studies measuring the self-efficacy of business students and health science students, students scored a 33.34 ± 4.39 and 33.92 ± 3.66 respectively.

We learned that the students who entered our programs had a high level of self-efficacy. We also found the rigors of higher education in a baccalaureate program did not diminish student self-efficacy. We believe the potential reasons for these scores are due to age, missionary experience and maturity level of the students. We also argue university innovation as a key factor such as (1) a student centered university, (2) beliefs in

extraordinary possibilities in ordinary people, (3) experientially focused learning model, (4) inspired inquiry and innovation, and (5) the understanding of the learning and teaching process (Christensen & Eyring, 2011; Institution Learning Model, 2013).

The student GSE scores, though not longitudinal data appear to maintain approximately the same level throughout their four-year program of study. The correlation informs us that the programs and the way the programs are taught are not eroding student's confidence "to do" their academic experiences, rather the programs keep student self-efficacy at a high level where they apply as well as be able to perform competencies.

As a part of our global study of self-efficacy at BYU-Idaho, three of us further studied GSE in BYU-Idaho students and major programs. Our personal areas of study echo the notion that measuring self-efficacy in various forms will provide a perspective into the student's confidence "to do". In one of our related studies, we focused on self-efficacy of BYU-Idaho students. Research was conducted regarding the effect a three-day adventure program had on self-efficacy of 90 business students. Adventure programming is the deliberate use of adventurous experiences to create learning in individuals or groups, which result in positive change for society and communities (Miles & Priest, 1999). Pretest, posttest, and post posttest general self-efficacy scores were measured using the GSE scale developed by Schwarzer and Jerusalem (1995). Results showed a high self-efficacy score initially (33.34 ± 4.39), and subsequent increased score following the posttest (34.12 ± 3.47) and post posttest (35.54 ± 3.09), which shows that once again our business students' GSE is high. It also shows adventure programming should increase GSE scores of the business students as well. However, it was not shown adventure

programs increase one's ability in selecting a business product, overcoming failure, or having a successful business.

A second study was designed to first examine general self-efficacy and then the relationship between the Health Science program goals and GSE. The study assessed 166 junior and senior students majoring in Health Science with 31 male and 135 females participating. Along with the mission of the institution and the Learning Model, the program's goals are centered on student development and active participation associated with the profession's seven core competencies (National Commission for Health Education Credentialing, 2010). The purpose of the program and its experiential based courses is to build students' confidence to perform through opportunities. The GSE assessment showed that self-efficacy is high for Health Science students in their junior and senior year. Out of a scale of 40, the students scored a 33.92±3.66. The second part of the study showed a significant relationship between Health Science students GSE scores and assessing/evaluating ($r = .364$), planning/implementing/administering ($r = .382$) and serving/communicating ($r = .376$) health education programs.

A third study examined the differences between freshman through senior FCS Ed. students on *personal teaching (PTE)* and *general teaching self-efficacy (GTE)*. Of the participants, 53 scored above average on their PTE. PTE mean scores were 11.37-12.74, which was a reverse scoring on a range from 6-30. The lower the number, the stronger ones positive perceptions, relative to teaching self-efficacy which translates into being high PTE score. GTE scores accounts for approximately 12.8% of the variability in one's personal teaching self-efficacy scores. The GTE mean scores were recorded as 16.8 to 20.25 on a 6-30 scale. They were average or above average scores. No significant change

occurred as they proceeded from freshmen to seniors in their teacher preparation program but there were numerically differences in scores. Understanding these differences could be important to FCS Ed. instructors, to the BYU-Idaho FCS Ed. program and to FCS Education in general. The FCS teacher with high self-efficacy is expected to have: (1) Greater commitment to teaching (2) greater levels of planning and organizing; (3) decreased teacher burnout; and (4) utilization of a wider variety of teaching materials (Garvis, Twigg, & Pendergast, 2011).

As a cohort of educators, one of our personal studies was not focused on education at BYU-Idaho, however, the purpose of the study was about GSE and its results also informs us about the importance of education and we have included it. A Diabetes Self-efficacy scale (DSES) assessment was given to 12 women with gestational diabetes mellitus (GDM) in three Southeast Idaho locations. A trend occurred in which the participants' level of self-efficacy increased with more visits to the certified diabetes educator. The participants' positive descriptive comments indicated a correlation with the instructor influence on perceived self-confidence to perform diabetes self-care practices. The information demonstrates the importance of including self-efficacy assessment as part of a teaching program and asking for anonymous comments from participants to inform instructors of their influence with students.

General Comments

Our general study and each of our individual studies provides a lens to view the unique qualities found in students, how they see themselves, and their relationships with their instructors. Our studies inform us of the importance of education and the importance of life experiences in developing self-efficacy.

Because BYU-Idaho is a unique place and because our students are unique what we have learned is not generalizable to other populations. But what we have learned is place and experience does affect a student's ability "to do". We have also learned an intended intervention appears to affect an increase in self-efficacy (the adventure program study). If we value GSE growth, more experiences like Adventure Education should occur for all of our students at BYU-Idaho.

We have also learned that our students have a high general self-efficacy – we cannot verify it is so because of the BYU-Idaho experience, but something in our student's past experiences raises their GSE above the norm and their experience at BYU-Idaho does not erode the level. We believe this phenomenon of raised GSE is tied to the choice of religious mission, age, marital status, and perhaps the nature of their religious beliefs. Our students in health education and FCS are immersed in experiential courses, which they value, and believe they are prepared to meet the goals of their programs and future professions. All of this is linked to the confidence to do as measured by GSE but is also linked to the experiential nature of what we do at BYU-Idaho.

There is much more that can be studied using GSE at BYU-Idaho. The group study related specifically to Health, Recreation and FCS, yet there are many other programs within BYU-Idaho which would benefit from a similar study. Are there certain programs currently at BYU – Idaho which score lower in GSE, or are the scores relatively the same throughout? If other programs do score lower, are there any relationships between low GSE scores and student GPA. The same could be asked of programs with the highest levels of GSE, are there relationships between high levels of

GSE and student GPA? Although valid and intriguing, these questions are out of the scope of our study.

BYU-Idaho has been identified as an innovative university (Christensen & Eyring, 2011) with a unique DNA. We have seen firsthand what Eyring stated about the graduates of BYU-Idaho as being “legendary.” Teaching and learning are not just acquisition of knowledge but transformation of the individual. The transformation comes from within and those students can become “legendary” as well as leaders who are loyal and committed “not to an institution, but to a cause, a value” (Eyring, 2001).

The results from our studies show that the mission of BYU-Idaho, the Learning Model, and Student Learning Outcomes are what make BYU – Idaho both a unique and innovative university. We as instructors, by applying the mission of the university, empower students with significant learning experiences. These experiences not only build individual self-efficacy but develop our students to be lifelong learners.

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Appendix A: IRB Approval, Tom Anderson

University of Idaho
Office of Research Assurances (ORA)
Institutional Review Board (IRB)
875 Perimeter Drive, MS 3010
Moscow ID 83844-3010

Phone: 208-885-6162
Fax: 208-885-5752
irb@uidaho.edu

August 20, 2013

To: Sharon Stoll
Cc: Tom Anderson

From: IRB, University of Idaho Institutional Review Board

Subject: Exempt Certification for IRB project number 13-203

Determination: August 20, 2013
Certified as Exempt under category 2 at 45 CFR 46.101(b)(2)
IRB project number 13-203: Adventure Programs' Effect on Self-Efficacy of Business Students

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This study may be conducted according to the protocol described in the Application without further review by the IRB. As specific instruments are developed, each should be forwarded to the ORA, in order to allow the IRB to maintain current records. Every effort should be made to ensure that the project is conducted in a manner consistent with the three fundamental principles identified in the Belmont Report: respect for persons; beneficence; and justice.

It is important to note that certification of exemption is NOT approval by the IRB. Do not include the statement that the UI IRB has reviewed and approved the study for human subject participation. Remove all statements of IRB Approval and IRB contact information from study materials that will be disseminated to participants. Instead please indicate, "The University of Idaho Institutional Review Board has Certified this project as Exempt."

Certification of exemption is not to be construed as authorization to recruit participants or conduct research in schools or other institutions, including on Native Reserved lands or within Native Institutions, which have their own policies that require approvals before Human Subjects Research Projects can begin. This authorization must be obtained from the appropriate Tribal Government (or equivalent) and/or Institutional Administration. This may include independent review by a tribal or institutional IRB or equivalent. It is the investigator's responsibility to obtain all such necessary approvals and provide copies of these approvals to ORA, in order to allow the IRB to maintain current records.

This certification is valid only for the study protocol as it was submitted to the ORA. Studies certified as Exempt are not subject to continuing review (this Certification does not expire). If any changes are made to the study protocol, you must submit the changes to the ORA for determination that the study remains Exempt before implementing the changes. The IRB Modification Request Form is available online at: http://www.uidaho.edu/ora/committees/irb/irbforms

Appendix B: NIH Certificate of Completion for Tom Anderson

Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Thomas Anderson** successfully completed the NIH Web-based training course “Protecting Human Research Participants”.

Date of completion: 05/01/2012

Certification Number: 914160

Appendix C: General Self-Efficacy Scale

Read each of the statements below and circle the response that best fits your personal belief.

Instrument: General Self-Efficacy Scale (GSE)

	Not at all True	*Barely True*	*Moderately True*	*Exactly True*
1. I can manage to solve difficult problems if I try hard enough.	1	2	3	4
2. If someone opposes me, I can find means and ways to get what I want.	1	2	3	4
3. It is easy for me to stick to my aims and accomplish my goals.	1	2	3	4
4. I am confident that I could deal efficiently with unexpected events.	1	2	3	4
5. Thanks to my resourcefulness, I know how to handle unforeseen	*1*	*2*	*3*	*4*

situations.				
6. I can solve most problems if I invest the necessary effort.	*1*	*2*	*3*	*4*
7. I can remain calm when facing difficulties because I can rely on my coping abilities.	*1*	*2*	*3*	*4*
8. When I am confronted with a problem, I can usually find several solutions.	*1*	*2*	*3*	*4*
9. If I am in trouble, I can usually think of a solution.	*1*	*2*	*3*	*4*
10. I can usually handle whatever comes my way.	*1*	*2*	*3*	*4*

Appendix D: Assessment of Business Student's Ability to Run a Business

The additional four Likert-type questions asked to assess the business students and their judgment of personal ability regarding different aspects of running the student run business, these questions used a seven-point scale (Personal Study).

1. To what extent do you believe in your ability to set-up your company organization? 1=very unable, 2=unable, 3=somewhat unable, 4=not sure, 5=somewhat able, 6=able, 7=very able
2. To what extent do you believe in your ability to choose a product for your business? 1=very unable, 2=unable, 3=somewhat unable, 4=not sure, 5=somewhat able, 6=able, 7=very able
3. To what extent do you believe in your willingness to try again if at first something does not work within your company? 1=very unwilling, 2=unwilling, 3=somewhat unwilling, 4=not sure, 5=somewhat willing, 6=willing, 7=very willing
4. To what extent do you believe you will have a successful IBC business? 1=very unsuccessful, 2=unsuccessful, 3=somewhat unsuccessful, 4=not sure, 5=somewhat successful, 6=successful, 7=very successful

Appendix E: Assessment Questions Measuring Student Perceptions Regarding Experientially Taught Courses

The six assessment questions asked to determine student perceptions in regards to experiential courses and/or experiences (Group Study).

1. To what extent do your experiential courses help you feel confident in preparing a lesson? 1=Great, Much=2, Some=3, Little=4, None=5.
2. To what extent do the experiential courses prepare you to design or apply the concepts you have learned? 1=Great, Much=2, Some=3, Little=4, None=5.
3. To what extent do you value your program? 1=Great, Much=2, Some=3, Little=4, None=5.
4. To what extent do you believe experiential learning improves your knowledge to perform in your profession? 1=Great, Much=2, Some=3, Little=4, None=5
5. To what extent do you value your hands-on learning in your courses? 1=Great, Much=2, Some=3, Little=4, None=5
6. How many times in the last month did you apply hands-on practice? (Never, Less than once a month, Once a month, 2-3 times a month, Once a week, 2-3 times a week, Daily).

Appendix F: IRB Approval, Tom Anderson, Julie Buck, Cheryl Empey, Jim Hopla

University of Idaho
Office of Research Assurances (ORA)
Institutional Review Board (IRB)
875 Perimeter Drive, MS 3010
Moscow ID 83844-3010

Phone: 208-885-6162
Fax: 208-885-5752
irb@uidaho.edu

June 3, 2013

To: Sharon Stoll
Cc: Julie Buck, Cheryl Empey, Tom Anderson, Jim Hopla

From: IRB, University of Idaho Institutional Review Board

Subject: Exempt Certification for IRB project number 13-145

Determination: June 3, 2013
Certified as Exempt under category 2 at 45 CFR 46.101(b)(2)
IRB project number 13-145: Experiential learning and self efficacy in undergraduate students

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This study may be conducted according to the protocol described in the Application without further review by the IRB. As specific instruments are developed, each should be forwarded to the ORA, in order to allow the IRB to maintain current records. Every effort should be made to ensure that the project is conducted in a manner consistent with the three fundamental principles identified in the Belmont Report: respect for persons; beneficence; and justice.

It is important to note that certification of exemption is NOT approval by the IRB. Do not include the statement that the UI IRB has reviewed and approved the study for human subject participation. Remove all statements of IRB Approval and IRB contact information from study materials that will be disseminated to participants. Instead please indicate, "The University of Idaho Institutional Review Board has Certified this project as Exempt."

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This certification is valid only for the study protocol as it was submitted to the ORA. Studies certified as Exempt are not subject to continuing review (this Certification does not expire). If any changes are made to the study protocol, you must submit the changes to the ORA for determination that the study remains Exempt before implementing the changes. The IRB Modification Request Form is available online at: http://www.uidaho.edu/ora/committees/irb/irbforms

Appendix G: Letter of Approval for GSE Scale Use

Freie Universität Berlin

Fachbereich Erziehungs-
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Permission granted

to use the General Self-Efficacy Scale for non-commercial reseach and development purposes. The scale may be shortened and/or modified to meet the particular requirements of the research context.

http://userpage.fu-berlin.de/~health/selfscal.htm

You may print an unlimited number of copies on paper for distribution to research participants. Or the scale may be used in online survey research if the user group is limited to certified users who enter the website with a password.

There is no permission to publish the scale in the Internet, or to print it in publications (except 1 sample item).

The source needs to be cited, the URL mentioned above as well as the book publication:

Schwarzer, R., & Jerusalem, M. **(1995)**. Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston, *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp.35-37). Windsor, UK: NFER-NELSON.

Professor Dr. Ralf Schwarzer
www.ralfschwarzer.de