SELF-EFFICACY: UNDERGRADUATE PROGRAM EVALUATION OF GENERAL

AND HEALTH EDUCATION CORE COMPETENCIES

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Authorization to Submit Dissertation

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Abstract

One of the general purposes of all university communities is effective teaching and learning. Learning disciplinary knowledge involves application and confidence to do. Undergraduate students with high levels of self-efficacy are more confident to perform program expectations and competencies. There are two descriptive studies found in this paper.

The first study examined the relationship between general self-efficacy and Health Science major program's goals relating to the profession's core competencies. The results found a significant moderate positive relationship between general self-efficacy and the seven core health education competencies within an individual Health Science program ($r = .364, .383,$ and $.376$). The study used two instruments; Schwarzer's General Self-Efficacy scale and 18 additional questions relating to the core competencies.

The second study examined general self-efficacy and the relationship between student perceptions of professional preparation and student reported experiential learning opportunities. This study examined three andragogically based university program areas: Family and Consumer Sciences Education, Recreation Management, and Health Science. The results found a significant moderate positive relationship between student perceptions about their program preparation and students reported experiential learning opportunities using Schwarzer's General Self-Efficacy scale. The research demonstrated the students entered the programs with a high level of self-efficacy (34.19 out of 40) and the rigors of higher education in the selected programs do not diminish student self-efficacy.

      Possible reasons for both of the results from both studies include age, church missionary experience, and the university's innovative mission. Additional factors include, a unique teaching and learning model, student-centered outcomes, and the belief in extraordinary possibilities in ordinary people.

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Chapter I: Background

Introduction

Health education and promotion involve a specific skill set used by health educators. Currently more than 55, 270 health educators work in settings including hospitals, state public health departments, nonprofit organizations, schools, universities, and businesses (U.S. Bureau of Labor Statistics, 2013). According to the Society for Public Health Education (SOPHE) (2013) health education is one of the fastest growing health professions in the United States. The role of the health educator has evolved over the last 200 years when it first appeared in the mid-1800 with school hygiene and physical activity education. By the late 19th century, specific academic programs were founded to train individuals and develop the role of a health educator (McKenzie, Neiger, & Thackaray, 2013).

Throughout the next 80 years, health education continued to grow to address disease and issues in public health but limited focus was placed on the responsibilities of a health educator. Then in 1979, the Role Delineation Project established a generic role for entry-level health educators and identified specific responsibilities, skills, knowledge and functions for the profession (McKenzie et al., 2013). In 1988, the National Commission for Health Education Credentialing (NCHEC) was established. From 1990 to the present, NCHEC provided competency-based national certification examinations for health educators (Sharma & Romas, 2008). An individual who meets the required health education training qualifications, successfully passes the certification exam, and meets continuing education requirements is known as a certified health education specialist (CHES) (Sharma & Romas, 2008).

In 1998 the National Health Educator Competencies Update Project (CUP) was developed to "re-verify the entry-level health education responsibilities, competencies, and subcompetencies and to verify the advanced-level competencies and subcompetencies" (Sharma & Romas, 2008, p. 12). The CUP model describes seven areas of responsibilities, 35 competencies, and 163 subcompetencies for health educators (Airhihenbuwa, et al., 2005). The seven areas of responsibilities (McKenzie et al., 2013; NCHEC, 2008b) are:

1. Assess individual and community needs for health education

2. Plan health education strategies, interventions, and programs

3. Implement health education strategies, interventions, and programs

4. Conduct evaluation and research related to health education

5. Administer health education strategies, interventions, and programs

6. Serve as a health education resources person

7. Communicate and advocate for health and health education.

In 2010 the leading organizations for health education known as NCHEC, SOPHE, and American Association for Health Education (AAHE), developed the Health Educator Job Analysis (HEJA) which described, "The contemporary practice of health educators in the United States" (NCHEC, 2010, p. 1). In this report, the committee developed six recommendations for the profession. The first recommendation states that "baccalaureate programs in health education should prepare health education graduates to *perform* all seven of the health education responsibilities, 34 competencies, and 162 subcompetencies identified as Entry-level in the 2010 hierarchical model" (NCHEC, 2010, p. 5). Currently health educators are encouraged to take the CHES exam and pass it in order to be called a

Certified Health Education Specialist but according to the leading bodies in the profession performance is becoming more important than just passing the CHES exam.

Set the Problem

Currently there are some 250 academic programs in universities and colleges throughout the United States to prepare health educators at the undergraduate and graduate levels (NCHEC, 2008a). One of these undergraduate programs is found on the campus of a private university in the northwest. The University has two emphases, Health Promotion and Public Health, in the Department of Health, Recreation, and Human Performance to prepare health educators. Upon completion of their Health Science degree, students have the option to take the CHES exam but it is not required. The program outcomes are centered on preparing students through experience and content application. This is done by providing applied learning experiences through contemporary approaches to learning and classroom instruction to build confidence or self-efficacy.

Higher education research emphasizes a number of learning and teaching principles. Student-centered and active learning are two of the most commonly discussed approaches for teaching while collaborative, experiential, and problem-based education are for learning. These contemporary approaches are the underpinnings of the University (hence forth to represent the university to be studied) developed "Learning Model" for instruction and student learning. Its constructs are *Prepare*, *Teach One Another*, and *Ponder & Prove*. At this University, active engagement in the learning process is key to developing confidence through involvement and participation (Institution Learning Model, 2013).

Confidence or self-efficacy, according to Bandura (1997; 1994) is defined as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave" (1994, p. 71). The strongest influence on self-efficacy belief is the experience of performance mastery (Glanz, Rimer, & Viswanath, 2008). The mission of the University is to build students to be lifelong learners. Health educators and the profession are asking the graduates "not what do you want to do, but what do you want to accomplish…your loyalty or your commitment is not to an institution, but to a cause, a value: a value that led you to a career commitment" (Green, 2012, p. 641). That value is something inside the person and not in a diploma or certification.

In addition to the University's mission, the Health Science program goals are centered on building individuals. Each goal is related to the seven core competencies developed by NCHEC. The University mission statement combined with the program goals are about providing experiences to build student self-efficacy. The current health promotion program at the University as well as the make-up of the University is unique in its purpose to build students individually.

Learning involves direct experience and the more mastery experience a person has the more it builds self-efficacy. Since the University's Health Science program does not currently use the CHES exam as a competency based assessment therefore, the purpose of this study is to evaluate the program's learning approach and its effect on general self-efficacy as well as its relationship with the core competencies.

Purpose Statement

The purpose of this descriptive study is to examine differences between junior and senior Health Science major (Health Promotion and Public Health emphasis) students' self-efficacy relative to the program's goals.

Research Subproblems

1. What relationship exists between Health Science students' General Self-Efficacy (GSE) scores and assessing/evaluating health education programs?

2. What relationship exists between Health Science students' GSE scores and planning, implementing, and administering health education programs?

3. What relationship exists between Health Science students' GSE scores and serving and communicating health education programs?

4. What relationship exists by gender between Health Science students' GSE scores and assessing/evaluating health education programs?

5. What relationship exists by gender between Health Science students' GSE scores and planning, implementing, and administering health education programs?

6. What relationship exists by gender between Health Science students' GSE scores and serving and communicating health education programs?

7. What relationship exists by class between Health Science students' GSE scores and assessing/evaluating health education programs?

8. What relationship exists by class between Health Science students' GSE scores and planning, implementing, and administering health education programs?

9. What relationship exists by class between Health Science students' GSE scores and serving and communicating health education programs?

10. What relationship exists with the interaction of class x gender between Health Science students' GSE scores and assessing/evaluating health education programs?

11. What relationship exists with the interaction of class x gender between Health Science students' GSE scores and planning, implementing, and administering health education programs?

12. What relationship exists with the interaction of class x gender between Health Science students' GSE scores and serving and communicating health education programs?

Statistical Sub Problems.

1. What relationship exists between GSE scores and assessing/evaluating health education programs?

2. What relationship exists between GSE scores and planning, implementing, and administering health education programs?

3. What relationship exists between GSE scores and serving and communicating health education programs?

Hypothesis

1. No relationship exists between Health Science students' GSE scores and assessing/evaluating health education programs.

2. No relationship exists between Health Science students' GSE scores and planning, implementing, and administering health education programs.

3. No relationship exists between Health Science students' GSE scores and serving and communicating health education programs.

4. No relationship exists by gender between Health Science students' GSE scores and assessing/evaluating health education programs.

5. No relationship exists by gender between Health Science students' GSE scores and planning, implementing, and administering health education programs.

6. No relationship exists by gender between Health Science students' GSE scores and serving and communicating health education programs.

7. No relationship exists by class between Health Science students' GSE scores and assessing/evaluating health education programs.

8. No relationship exists by class between Health Science students' GSE scores and planning, implementing, and administering health education programs.

9. No relationship exists by class between Health Science students' GSE scores and serving and communicating health education programs.

10. No relationship exists with the interaction of class x gender between Health Science students' GSE scores and assessing/evaluating health education programs.

11. No relationship exists with the interaction of class x gender between Health Science students' GSE scores and planning, implementing, and administering health education programs.

12. No relationship exists with the interaction of class x gender between Health Science students' GSE scores and serving and communicating health education programs.

Assumptions

The following assumptions apply to this study:

1. The students had the ability to respond accurately to the questions on the survey.

2. The students were not influenced by others and responded honestly and openly.

3. The instrument is valid and a reliable tool for measuring self-efficacy.

4. The current curriculum is based on the national core competencies and subcompetencies.

Delimitations

1. The study was delimited to only Health Science junior and senior students because they have taken the upper division experiential learning courses.

2. The study were delimited to an evaluation of the Health Science program.

3. This study does not question the NCHEC core competencies or subcompetencies.

Limitations

1. The population was limited to only Health Science majors with a Health Promotion and Public Health emphasis. This study cannot be generalized to all Health Science majors throughout the United States.

2. This is a study using Schwarzer and Jerusalem's (1995) General Self-Efficacy Scale (GSE). It used a modified version of the GSE to examine the seven core competencies compared to general self-efficacy. The modification may impact the results.

3. The institution in this study is a religious school sponsored by The Church of Jesus Christ of Latter-Day Saints and the students abide by an honor code.

4. The findings in this study may not apply to all Health Science offering institutions due to the fact that all students in this study will be one specific religion and abide by an honor code.

5. The researcher is a faculty member at the said institution in the Department of Health, Recreation, and Human Performance. The results can be biased.

6. Due to time restraints the data were collected in one semester.

Definition of Terms

The following terms will be used and defined in this study.

1. **<u>Health Education</u>**: "Any combination of planned learning experiences using evidence-based practices and/or sound theories that provide the opportunity to acquire knowledge, attitudes, and skills needed to adopt and maintain health behaviors" (American Alliance for Health, Physical Education, Recreation and Dance-AAHPERD, 2012, p. 19).

2. **<u>Health Education Specialist</u>**: "An individual who has met, at a minimum, baccalaureate-level required health education academic preparation qualifications, who serves in a variety of settings, and is able to use appropriate educational strategies and methods to facilitate the development of policies, procedures, interventions, and systems conducive to the health of individuals, groups, and communities" (AAHPERD, 2012, p. 18).

3. **<u>Health Promotion</u>**: "Any planned combination of educational, political, environmental, regulatory, or organizational mechanisms that support actions and conditions of living conducive to the health of individuals, groups, and communities" (AAHPERD, 2012, p. 19)

4. **<u>Learning</u>**: Learning involves change not only with the person but also with their ability to do. It enables the person to change their behavior "as a result of experience" (Haggard, 1963, p. 20).

5. **<u>Experiential Learning:</u>** The process whereby knowledge is created through the transformation of experience (Kolb, 1984).

4. **<u>Social Cognitive Theory</u>**: This is a theory developed by Albert Bandura on the potential human beings have. It "posits that human behavior can be explained as a triadic reciprocal causation. One angle of the tripod consists of the behavior, the second angle consists of environmental factors, and the third angle consists of personal factors such as cognitions, affect, and biological events" (Sharma & Romas, 2008, p. 174).

5. **<u>Self-efficacy:</u>** "A person's beliefs about his or her capacity to influence the quality of functioning and the events that affect his or her life" (Bandura, 1994, p. 2).

6. **<u>Andragogy:</u>** 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, Holton, & Swanson, 1998, p. 11).

Significance

Throughout the United States, the need for health educators continues to grow. According to the United States Department of Labor, employment of health educators is expected to grow by 21 percent which is faster than the average for all occupations through 2022. The reason for the need is "driven by efforts to improve health outcomes and to reduce healthcare costs by teaching people about healthy habits and behaviors and

utilization of available health care services" (U.S. Bureau of Labor Statistics, 2013). Although there is one set of competencies for university and colleges to follow and one accrediting body for undergraduate and graduate programs, there still seems to be a norm centered on content learning. Learning involves change not only with the person but also with their ability to perform through experience. It enables the person to change their behavior "as a result of experience" (Haggard, 1963, p. 20). The current University Health Science program uses experiential learning and teaching and focuses on building individuals. According to NCHEC (2010) in the HEJA 2010 Job Analysis Report, health education programs should be preparing "graduates to *perform* all seven of the health education responsibilities, 34 competencies, and 162 subcompetencies" of an Entry-level healthy educator. Performance should be about actually doing and applying through experience.

Research states there appears to be a correlation between experiential learning and self-efficacy. The present study evaluated the Health Science program at a private university in the northwest to measure first general self-efficacy and second the relationship between self-efficacy and the program goals. The profession, the Health Science program (including faculty), the University (including other departments and administration), and the students will benefit from the publication of these results.

The results can be important to the profession as they show the role self-efficacy plays in undergraduate program development as well as experiential teaching and learning. According to the governing bodies (NCHEC, SOPHE, & AAHE) there is a need for confidence in relation to performance. As the health education profession increases so does

the need for better prepared students through experience and perceived self-efficacy from their undergraduate education.

The results will also benefit the Health Science program by identifying possible variables that increase student perceived self-efficacy in relation to the core competencies and development of better teaching and learning experiences. The University is emphasizing Student Learning Outcomes and the results will assist in the development of better measurable program outcomes. In addition the University will benefit because the results support the Learning Model objectives and overall mission of building individuals through experience. These results provide more data on the effectiveness of the Learning Model principles and the role the constructs play in undergraduate learning and teaching.

Confidence "to do" developed through experiential learning is important for students to apply the seven core competencies (McKenzie et al., 2013) in Health Science. Students after graduation are highly successful in the field if they are able "to do" rather than just know. The results will help the students by providing better experiences and opportunities; therefore they will be better prepared for the profession. The students can learn more about their general perceived self-efficacy in relation to the professional competencies as a result of the findings. The Health Educator Job Analysis (NCHEC, 2010) 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" (NCHEC, 2010, p. 5). Thus if the Health Science program improves confidence to perform the competencies, the students will be better prepared to work as professional health educators.

Chapter II: Framework

Introduction

The purpose of this descriptive study is to examine the differences between junior and senior Health Science major (Health Promotion and Public Health emphasis) students' self-efficacy relative to the program's goals. This chapter provides an overview of the learning approach that makes up the University's teaching and learning method as well as the Health Science department's goals. Since the students are adult learners, andragogy will be addressed with its connection to experience. The experiential learning approach is both associated with the University's mission and Learning Model (*Prepare, Teach One Another, and Ponder & Prove*) (Institution Learning Model, 2013). The department's main goal is to build individual knowledge and abilities through experience. Learning is built upon experience, and the department, in conjunction with the University's teaching and learning approach, is unique in its aim. This chapter will also show the relationship between these learning approaches and self-efficacy introduced by Bandura in the Social Cognitive Theory.

Learning

Learning has always been a part of individual growth since the beginning of time. Researchers and theorists have spent countless hours defining *learning* and its counterpart *teaching*. Smith (1982) states that learning is

Used to refer to (1) the acquisition and mastery of what is already known about something, (2) the extension and clarification of meaning of one's experience, or (3)

an organized, intentional process of testing ideas relevant to problems. In other words, it is used to describe a product, a process, or a function (p. 34).

Learning is more than just acquisition or mastery of information or knowledge. It involves the individual and their experience with the process. According to Candy (1991) as referenced by Fink (2003)

> If learning is regarded not as the acquisition of information, but as a search for meaning and coherence in one's life and, if an emphasis is placed on what is learned and its personal significance to the learner, rather than how much is learned, researchers would gain valuable new insights into both the mechanisms of learning and the relative advantages of teacher-controlled and learner-controlled modes of learning (2003, p. 27).

Learning involves transformation and change (Burton, 1963; Crow & Crow, 1963; Gagne, 1965; Haggard, 1963; Harris & Schwahn, 1961) through experience. Viall (1996) builds off that notion describing learning as "changes a person makes in himself or herself that increase the know-why and/or the know-what and/or the know-how the person possesses with respect to a given subject" (p. 21). The challenge lies with the creation of experiences by the instructor so as to give the individual the opportunity to discover it for themselves. The key to learning lies in empowering student agency (Wehmeyer, 1996; 1998; Wehmeyer, Agran, & Hughes, 1998; Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000) so they can act for themselves rather than be acted upon.

Along with learning, teaching has always existed. Institutions of teaching and learning trace back to the Greeks where "Plato had his Academy devoted to truth largely for its own sake, but also truth for the philosophers who were to be kings" (Kerr, 2001, p. 7).

From the time of Plato up to today, the history of the higher education has been one of transformation. In the beginning universities were considered "a single community—a community of masters and students" (Kerr, 2001, p. 1). 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). It is important to understand the history of higher education so as to know who and what will reform it (Cohen & Kisker, 2010).

Universities that scatter the United States are categorized into research and academic institutions with the distinction lying mostly with the faculty (Cohen & Kisker, 2010). Faculty have the choice to devote the majority of their time in research or teaching. Regardless of the category, effective teaching and learning is one of the general purposes of all universities although the disciplines vary depending on the mission of the institution (Christensen & Eyring, 2011). Because teaching and learning is so important, assessment of effectiveness of the process is continually evaluated (Carnegie Foundation, 2014). However, the debate of effective learning and teaching lies with how faculty present information and whether the teaching strategies used are effective with the students.

Research in teaching and learning for adults is different from that of children. The process of teaching children is called pedagogy from the Greek pais, paidos, paid: the upbringing of a child and –agogus, agogy – leader of or teaching (Adler, 1998; Knowles et al., 1998). Generally pedagogical skills have focused on teachers and subjects, while students or children play a secondary role. An example of this is even found today in the organization of classrooms, from elementary school to institutions of higher education; rows and seats all centered on the instructor (Kerr, 2001).

Historically, learning and teaching has not always been pedagogically based. According to Knowles et al. (1998)

> All of the great instructors of ancient times—Confucius and Lao Tse of China, the Hebrew prophets and Jesus in Biblical times, Aristotle, Socrates, and Plato in ancient Greece and Cicero, Evelid and Quintillian in ancient Rome—were all teachers of adults, not children. Because their experiences were with adults, they developed a very different concept of learning/teaching process from the one that later dominated formal education. They percieved learning to be a process of mental inquiry, not passive reception of transmitted content (p. 35).

The approach to learning and teaching changed starting in seventh century Europe with the advent of conventional schooling. Schools were created to prepare young boys for a life in the priesthood through monastic and cathedral schools (Knowles, Holton, & Swanson, 2012). Knowles et al. (1998) argues that

> 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' (p. 36)

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. This model of education persisted and is the basis of our current educational system (Knowles et al., 1998).

The modern pedagogical model has become so pervasive in our educational system that some students and instructors are resistant to educational agency as well as learner-centered teaching. Weimer (n.d.) as referenced by Christensen & Eyring (2011) states "some students like being spoon-fed and criticize instructors who use anything other than 'teaching-as-telling' methods; they particularly resist pedagogical changes that create grading uncertainty" (p. 262). For some faculty members, the transition meant more work and they worried about not being able to cover important content as well as student's inability to be self-driven educationally (Weiner, n.d.; Christensen & Eyring, 2011).

Often student learning, as defined by pedagogy, consisted of vicarious substitution of the teachers' experience and knowledge and their way of presenting it (Lindeman, 1926). Hiemstra & Sisco (1990) and Knowles (1984) add to this notion by stating "the teacher has full responsibility for making decisions about what will be learned, how it will be learned, when it will be learned, and if the material has been learned" (1990, p. 1). However, Lindeman argues that we learn through what we do, and therefore all genuine education should inspire us to keep doing and thinking together (Lindeman, 1926) , and all education comes from experience (Dewey, 1938).

If pedagogy is the art and science of teaching children, what then would be the art and science of teaching adults? An alternate question might be: If pedagogy is teacher-centered then what is student-centered teaching? In 1926 Lindeman proposed the concept of *andragogy* and argued that this term is a better description of adult learning and centers more on the student's needs and interests (Lindeman, 1926). Knowles et al. (1998) built on that notion and argued that education for adults should describe education as life and life as education. Adult learning or andragogy, thus would involve building or transforming the

person through experience (Lindeman, 1926) and this would bring about better application of the information as well as increased student confidence.

Andragogy

The term andragogy was first credited in 1833 to German Alexander Kapp but it was Dusan Savicevic (1999) who researched its roots to both Greek, Roman, and 19th century Europe (Rachal, 2002). In the 1920's Lindeman coined the term *adult education* and was a mentor to the best known advocate of *andragogy*, Malcolm Knowles. Knowles inherited the term from Savicevic in the 1960s (Rachal, 2002). Modern researchers continue to develop the terms like Mezirow (1981) who emphasized the importance of self-directed learning and learner control in andragogy.

Like before mentioned, 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). That change or building is centered on experience through effective learning and teaching.

Lindeman states, as cited by Knowles et al. (1998, pp. 39-40) that there are four basic assumptions about learners, all of which have some relationship to 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.

As individuals learn and grow they need to rely on and use their experience as learning increases (Bower & Hollister, 1967; Bruner, 1961; Cross, 1981; Erickson, 1950, 1959. 1964; Getzels & Jackson, 1962; Iscoe & Stevenson, 1960; Smith, 1982; White, 1959;)).

With andragogy the emphasis is with and on building individuals who are lifelong learners. Teaching andragogically involves providing learning opportunities that are experientially based. Mezirow (1981) suggests teaching this way "must be defined as an organized and sustained effort to assist adults to learn *in a way that enhances their capability to function as self-directed learners*" (p. 21). He lays out twelve actions that adult educators must do to empower learning andragogically.

1. Progressively decrease the learner's dependency on the educator

2. Help the learner understand how to use learning resources - especially the experience of others, including the educator, and how to engage others in reciprocal learning relationships

3. Assist the learner to define his/her learning needs - both in terms of immediate awareness and of understanding the cultural and psychological assumptions influencing his/her perception of needs

4. Assist learners to assume increasing responsibility for defining their learning objectives, planning their own learning program and evaluating their progress

5. Organize what is to be learned in relationship to his/her current personal problems, concerns and levels of understanding

6. Foster learner decision making - select learner-relevant learning experiences which require choosing, expanding the learner's range of options, and facilitation by taking the perspectives of others who have alternative ways of understanding

7. Encourage the use of criteria for judging which are increasingly inclusive and differentiating in awareness, self-reflexive and integrative of experience

8. Foster a self-corrective reflexive approach to learning—to typifying and labelling, to perspective taking and choosing, and to habits of learning and learning relationships

9. Facilitate problem posing and problem solving, including problems associated with the implementation of individual and collective action; recognition of relationships between personal problems and public issues

10. Reinforce the self-concept of the learner as a learner and doer by providing for progressive mastery; a supportive climate with feedback to encourage provisional efforts to change and to take risks; avoidance of competitive judgment of performance; appropriate use of mutual support groups

11. Emphasize experiential, participative and projective instructional methods; appropriate use of modelling and learning contracts

12. Make the moral distinction between helping the learner understand his/her full range of choices and how to improve the quality of choosing vs encouraging the learner to make a specific choice.

Experience, therefore, plays an important role in andragogy as well as learning and teaching. 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 study. The participants are adult learners who are taught experientially.

Experiential Learning

Andragogy methodologies as before mentioned, often use experiential learning as one of the numerous teaching approaches focusing on experience (Knowles, 1980). According to Cronbach (1963) "learning is shown by a change in behavior as a result of experience" (p. 71). Mezirow (1994) adds to this by stating that "learning is…the social process of construing and appropriating a new or revised interpretation of one's experience as a guide to action" (pp. 222-223). There is a connection between what is learned and the person experiencing it. "We remember by reconstruing a new experience, drawing upon cues identified in prior learning and reinforced by use and/or their affective valence" (Mezirow, 1994, p. 223). There is a connection between andragogy methodology and experiential learning that empowers students to remember and apply meaning to the content learned.

Experiential learning origins are constructed out of the works of Dewey (1938; 1981; Miettinen, 2000), Lewin (1935; 1948), and Piaget (1983). 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) used their work as a foundation for the importance of experiential learning and teaching. Experience is the central role in the learning process and "knowledge results from the combination of grasping and transforming experience" (Kolb, Boyatzis, & Mainemelis, 1999, p. 2). Morrison and Brantner's (1992) research found, experiential learning accounts for over 70% of individual development and

has steadily gained popularity and acceptance in higher education teaching and learning (Kolb & Kolb, 2006).

Kolb (1984) states there are four basic elements to experiential learning. First, the student must be actively involved in the experience (concrete experience). Second, they must be able to reflect on the experience (observation and reflection). Third, the student must be able to analyze and conceptualize the experience (abstract conceptualization). Fourth, they must have the problem-solving skill to use the new ideas gained from the experience (active experimentation). These four elements connect to the importance the individual plays in the learning process.

Application of knowledge through active learning increases the chances a student can have a significant learning experience. Students that have these types of experiences are more apt to not only remember it but apply it in their daily life and profession (Fink, 2003). Confidence then plays an important role for the continuation of the use of that knowledge. 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.

The products of experiential learning are important as well as rewarding for the student. Ewert and Garvey (2007) state the outcomes of experiential learning include personal growth, moral growth, group development, and leadership development. For this study, only one element of Ewert and Garvey's list of experiential learning outcomes, personal growth, will be addressed. Personal growth is characterized by changes in self-concept, self-esteem, personal motivation, and confidence. Both personal growth and self-

efficacy are measures of understanding individual self-confidence (Bandura, 1982; 1986; 1991; 1994). The choice was based on the academic need to measure confidence level (Christensen & Eyring, 2011) of hands-on Health Science courses. The University has an innovative mission of developing personal growth and career readiness by building lifelong learners.

Albert Bandura (1986) emphasized confidence as 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 outcome of high self-efficacy and personal growth according to Bandura (1994) is that it

> Enhances human accomplishment and personal well-being in many ways. People with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than threats to be avoided. Such an efficacious outlook fosters intrinsic interests and deep engrossment in activities. They set themselves challenging goals and maintain strong commitment to them. They heighten and sustain their efforts in the face of failure. They quickly recover their sense of efficacy after failures or setbacks. They approach threatening situations with assurance that they can exercise control over them (p. 2).

Students who are confident have a brighter outlook on achieving personal accomplishments and better chance to lower stress and depression levels. 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 (Beauchamp et al., 2011, p. 12).

Self-Efficacy and the Social Cognitive Theory

In 1963, Bandura introduced the *social learning theory* and 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 supports 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.

- Situational 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 behavior.

Even though all nine constructs are important, one major component, self-efficacy (Bandura, 1977; 1982; 1986; 1994; 1997), is often studied to learn about confidence and applied to a number of related topics like 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).

Self-efficacy, according to Bandura (1997), is the "belief in one's capabilities to organize and execute the courses of action required to produce given attainment" (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 thinks, feels, behaves and even what motivates them. Bandura (1997) emphasizes 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. This 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. This 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 (p. 79).

Another andragogical factor is the importance agency plays in the development of self-efficacy. Pajares (1996) states "the beliefs that people have about themselves are key elements in the exercise of control and personal agency" (p. 543). Self-efficacy is relevant to the level of control a person has over their behavior and environment (Schwarzer & Luszczynska, n.d.). Bandura (2000) suggests that

"SCT adopts an agentic perspective in which individuals are producers of experiences and shapers of events. Among the mechanisms of human agency, none is more focal or pervading than the belief of personal efficacy. This core belief is the foundation of human agency. Unless people believe that they can produce desired

effects and forestall undesired ones by their actions, they have little incentive to act (p. 75).

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). There is a connection between experiential learning and teaching approaches centered on empowering individual agency. The approach to higher education with the student in mind builds self-efficacy and then "affects life choices, level of motivation, quality of functioning, resilience to adversity and vulnerability to stress and depression" (Bandura, 1994, p. 14).

The Institution's Teaching and Learning Framework

Brigham Young University-Idaho (BYU-I) (formerly referred to as "University") is a four year undergraduate university located in Rexburg Idaho. The mission of the 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 (Brigham Young University-Idaho, 2008).

In addition to the mission, BYU-I has a unique model for learning and teaching entitled the "Learning Model" (Brigham Young University-Idaho, 2007). The Learning

Model was established as a learning structure for instructors to give the students more control over their education by being an active participant rather than a spectator. The Learning Model (2007) includes three principles: (1) Preparing to Learn, (2) Teaching One Another, and (3) Pondering and Proving One's Learning. The Learning Model involves "instructors becoming responsible for dual competency, mastery of both the subject matter and the art of conveying it for maximum student learning" (Christensen & Eyring, 2011, p. 259).

The BYU-I Learning Model focuses on empowering students to take responsibility for their learning. Students are to be prepared, involved, engaged, reflective and able to prove their learning (Brigham Young University-Idaho, 2007). Student preparedness, involvement, and engagement are also the tenets of teaching through an adragogist methodology. As previously mentioned, adult 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). The mission of BYU-I and the Learning Model focus on building individuals and, according to Knowles et al. (1998) 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 their ability "to do". It enables the learner to change behavior "as a result of experience" (Haggard & Crow, 1963, p. 20).

In 2005, current university president Kim B. Clark, introduced three imperatives:

1. Raise substantially the quality of every aspect of the experience our students have.

2. Make a BYU-I education available to many more [students].

3. Lower the relative cost of education (Clark, 2005).

In addition to the Learning Model and mission, these imperatives and the implementation of them are what make BYU-I an "innovative university" (Christensen & Eyring, 2011).

Before coming to BYU-I, Clark then the dean of Harvard Business School, was drawn to a similar teaching method from C. Roland Christensen. 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).

This teaching and learning philosophy demonstrates effectively the use of andragogy as explained by Knowles et al. (1998) when they argued that the student is an active participant rather than a passive recipient.

Another component is in the introduction of "Foundations;" a new approach to general education (GE) classes. The Foundations program is intended 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 Foundations program gives the students a good grounding in education as well as confidence to progress.

An additional way 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, p. 72). Included in the honor code, students must live under a specific code of conduct, live in university approved housing, and attend church regularly. All of these institutional factors affect the participants of this study uniquely which could affect how students learn and "do" in their classes.

The final way involves sacrifice on the part of the faculty. Full time faculty teach three semesters or "tracks" per year and participate in rotation of Foundations teaching. Each faculty teach a minimum of 36 credits per year. The main focus is on education as BYU-I is not a research institution. 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).

These factors play in to the make-up of BYU-I and the unique nature of its educational model. When evaluating this university its theoretical framework is andragogically based. From the mission and Learning Model it is experientially based with the outcome of personal growth and confidence.

Framework of the Health Science Program

The Health Science program combined with the university learning initiative and mission, provide students with specific opportunities to do and not just know the information. Students are active participants in their education by coming to class prepared,

engaging in instructor-led discussions, teaching what they have learned, reflecting, and internalizing the information (Brigham Young University-Idaho, 2007). This model of learning provides experiences through active participation rather than passive learning through the instructor.

The Learning Model and mission are key in the experiential approach the Health Science program takes with its students. The purpose of this study is to evaluate the program's goals in relation to the professional competencies. The National Health Educator Competencies Update Project (CUP) was developed in 1998 to "re-verify the entry-level health education responsibilities, competencies, and subcompetencies and to verify the advanced-level competencies and subcompetencies" (Sharma & Romas, 2008, p. 12) for health educators. The CUP model describes seven areas of responsibilities, 35 competencies, and 163 subcompetencies for health educators (Airhihenbuwa, et al., 2005). The following seven areas of responsibilities (McKenzie et al., 2013) are:

1. Assess individual and community needs for health education

2. Plan health education strategies, interventions, and programs

3. Implement health education strategies, interventions, and programs

4. Conduct evaluation and research related to health education

5. Administer health education strategies, interventions, and programs

6. Serve as a health education resources person

7. Communicate and advocate for health and health education.

The Health Science program specifically focuses on building student confidence in each of the seven core competencies through experiences and the learning framework.

The Health Science program and its goals are structured around the seven core competencies. Each course objective is centered on different competencies and experiential learning. The following list of classes within the program includes a description and examples of the experiential learning opportunities the students have in relation to the core competencies.

1. HS 305 Health and Fitness Appraisal & Prescription addresses methodologies and techniques for evaluations of health and fitness values including body composition, maximal oxygen consumption, anthropometric measurements, blood values, blood pressure, stress, nutrition, posture, and lifestyle habits. It also includes the principles of health and fitness program prescription based on individual values and recommended improvements. Students are required to screen and then choose a client whom they will mentor and teach principles of health and fitness. They also have the opportunity to volunteer their time at the University Wellness Center performing health and fitness evaluations with other students and faculty.

2. HS 390 Program Planning and Implementation provides students with both a theoretical framework for and skill development in organizing, planning, implementing, and evaluating community, school, and worksite health interventions. Key topics include planning models, assessing population and setting needs, intervention theories, implementation practices, health communication, and budgeting. This course meets some requirements for preparation to take the CHES exam. Students as a group research, plan, and assemble a health promotion program based on the actual needs of a community, worksite, or school. They also evaluate and develop an implementation plan on one of the programs created by their peers.

The programs developed in this class can be implemented into the specific setting of choice.

3. HS 401 Community Health Methods is designed to give students practical experience and exposure in health promotion skills that an educator will use. Students engage in community projects with the Eastern Idaho Public Health District in Idaho Falls and the surrounding area. This class meets some requirements for preparation to take the CHES exam.

4. HS 420 Health Behavior Theories/Modes provides a basic and theoretical understanding of the social, emotional/mental, physical, and lifestyle factors related to human behavior. Practical strategies are used to identify barriers to behavior and to enhance and improve health. This class meets some requirements for preparation to take the CHES exam. Students use behavior models and theories to design interventions and work with diverse populations.

5. HS 472 Health Communication Methods is designed to give students exposure to different areas of communications and how to most effectively disseminate health information. It also teaches students how to administer programs in the both a school or worksite setting. Students are required to use various methods of communication (e.g. PSA's, PowerPoint's, and e-mail) as well as plan and prepare a health promotion presentation to be presented to members of the community.

6. HS 480 International Health explores the meaning of "health" as it applies to people of different cultures throughout the world. The class provides an international evaluation of the health status of different cultures, including morbidity and mortality rates. It evaluates health promotion methods used to create healthy

lifestyles and environmental concerns among these cultures. Students have the opportunity to eat ethnic food, participate in exercises that simulate living conditions in third world countries, create a health related intervention, and construct equipment (e.g. WAPI and rocket stoves).

7. HS 498 Internship provides students a job-related experience in a variety of settings (e.g. hospital, doctor's office, medical clinic, state health department, industrial/corporation, nursing home, etc.). This class is normally taken during the off track or senior year.

8. HS 499R Individualized Experiential Learning class is mentored Student Learning projects. The student can work on projects either associated with the university, domestically, or internationally according to field interest. The purpose of this class is to provide an opportunity to gain additional out of class experience specializing on specific topics.

Each class is designed to provide hands-on learning to perform the different competencies. For example the HS 390 Program Planning & Implementation class covers competencies one through four and six. The students not only learn the content but they are planning and assessing their own health promotion program within a specific setting with a target population. This experience gives each student the opportunity to develop a program that can be implemented through mentored student research or an internship. The purpose of this study is to assess the current Health Science program to see the relationship between GSE and program competencies.

Chapter III: Instrumentation

Introduction

The purpose of this descriptive study is to examine differences between junior and senior Health Science major (Health Promotion and Public Health emphasis) students' self-efficacy relative to the program's goals. This chapter provides an overview of the procedures, participants, instrument being used, research design, data, and analysis.

Procedures

An assessment of general self-efficacy as well as student program self-efficacy in undergraduate students majoring in Health Science was done using the General Self-Efficacy Scale (GSE) developed by Schwarzer and Jerusalem (1995) (see Appendix A) and a modified GSE associated with the seven core competencies of Health Education (see Appendix B). The assessment was administered through the BYU-I Qualtrics computer program to all Health Science juniors and seniors. The University of Idaho Institutional Review Board approved the study Exempt certification for IRB project #13-205 (see Appendix C). Once student consent was granted, the participants were able to complete the assessment.

The juniors were assessed at the beginning of the fall 2013 semester starting on October 15th, 2013. A reminder e-mail was sent out on November 4th and November 20th. The seniors were able to start on December 2nd. A reminder e-mail was sent out on the December 10th. Each participant was e-mailed a unique website code to take the assessment. The survey process took the participants 15-20 minutes on average. Upon completion the

students no longer had access to the instrument. The assessment was closed on December

20th. Students who participated were entered into a drawing for a Best Buy gift card.

Participants

The participants were junior (60-89 credits) and senior (90+ credits) undergraduate

students at Brigham Young University-Idaho in Rexburg Idaho. The participants were

Health Science majors with an emphasis in either Public Health or Health Promotion.

Protecting Participants

All participants were 18 years or older. Protection of participants was assured

through the University of Idaho IRB process. The National Institutes of Health (NIH) Office

of Extramural Research protocol was successfully completed by the researcher. The date of

completion was 05/22/2012 and the Certification Number is 924175.

Instrumentation

There were two parts of the instrument. The first included 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. Studies show the

GSE has high reliability, stability, and construct validity (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). The instrument

gathered participant's demographics such as, their year in college, gender, and emphasis.

The second part of the assessment included 18 questions to measure perceived self-efficacy toward the seven core competencies in relation to the Health Science program goals. Each question had a 5-point Likert scale using the following: 1=great, 2=much, 3=some, 4=little, and 5=none. The instrument was developed to measure the relationship between general self-efficacy and health education practical competencies. The following are the questions relating to each competency:

1. Assess individual and community needs for health education: (1) To what extent does the Health Science program prepare me to assess individual needs for health education? (2) To what extent does the Health Science program prepare me to assess community needs for health education?

2. Plan health education strategies, interventions, and programs: (1) To what extent does the Health Science program prepare me to plan strategies for health education? (2) To what extent does the Health Science program prepare me to plan interventions for health education? (3) To what extent does the Health Science program prepare me to plan programs for health education?

3. Implement health education strategies, interventions, and programs: (1) To what extent does the Health Science program prepare me to implement strategies for health education? (2) To what extent does the Health Science program prepare me to implement interventions for health education? (3) To what extent does the Health Science program prepare me to implement programs for health education?

4. Conduct evaluation and research related to health education: To what extent does the Health Science program prepare me to evaluate individual health promotion

programs? (2) To what extent does the Health Science program prepare me to conduct research in health education?

5. Administer health education strategies, interventions, and programs: (1) To what extent does the Health Science program prepare me to administer strategies for health education? (2) To what extent does the Health Science program prepare me to administer interventions for health education? (3) To what extent does the Health Science program prepare me to administer programs for health education?

6. Serve as a health education resources person: (1) To what extent does the Health Science program prepare me to serve as a health education resource person?

7. Communicate and advocate for health and health education: (1) To what extent does the Health Science program prepare me to communicate for health? (2) To what extent does the Health Science program prepare me to communicate for health education? (3) To what extent does the Health Science program prepare me to advocate for health? (4) To what extent does the Health Science program prepare me to advocate for health education?

Research Design

The study was a descriptive design using an action research framework. According to Stringer (2007) "action research is a systematic approach to investigation that enables people to find effective solutions to problems they confront in their everyday lives" (p. 1). The instrument is comprised of two parts. One being a general self-efficacy scale and the other being related to the seven core competencies of the profession. The scores of students were compared to evaluate the degree to which the students feel confident to meet the

Health Science program goals. The independent variables are gender and grade level. The

dependent variable is the self-efficacy score.

Data and Analysis

Correlations were used to examine relationships between GSE scores and each of the

subscales. Alpha was set at $p<.05$. Sums of the 10 general self-efficacy scores were used to

calculate a total GSE score. Questions were developed for each of the three subscale areas

comprising a total of 18 competency based scores: 1) Assess and conduct individual and

community needs for health education (four questions ranging in score from 4-20), 2) Plan,

implement, administer health education strategies, interventions, and programs (nine

questions ranging in score from 9-45), and 3) Serve and communicate as a health education

resources person and advocate (five questions ranging in score from 5-25). Meaningfulness

will be explained using coefficients of determination.

Chapter IV: Results

Purpose Statement

The purpose of this descriptive study is to examine differences between junior and senior Health Science major (Health Promotion and Public Health emphasis) students' self-efficacy relative to the program's goals.

Participants

Participants were 166 male and female Health Science majors. Because only 31 males participated in the study, the gender analyses was run with a random sample of 31 females from the overall data set.

Measure of general self-efficacy

The participants were 166 junior, and senior level students (n=31 males and 135 females) in one program area and two emphasis (Health Promotion and Public Health) within the university. For the General Self-Efficacy (GSE) scale, the participants scored 33.92 ± 3.66 with a possible range of scores between 10 and 40.

Instrumentation

The GSE had an inter-item reliability of a Cronbach alpha .83. The assessing/evaluating Cronbach alpha was .88, planning, implementing, and administering .97, and serving and communicating .91.

Statistical Hypothesis of Relationship

The purpose of this study was to examine general self-efficacy and its relationship with the Health Science program goals. These goals are associated with the seven health education core competencies. The second part of the assessment after measuring GSE included 18 questions to measure perceived self-efficacy toward the seven core competencies in relation to the Health Science program goals. Each question had a 5-point Likert scale using the following: 1=great, 2=much, 3=some, 4=little, and 5=none. The instrument was developed to measure the relationship between general self-efficacy and health education practical competencies.

In order to address this relationship there were twelve hypotheses formulated. Three of the hypotheses showed a positive relationship while the rest showed no relationships.

Hypothesis 1

1. No relationship exists between Health Science students' GSE scores and assessing/evaluating health education programs.

A significant relationship was found between Health Science students' GSE scores and assessing/evaluating health education programs $r = .364$, p $= .0001$, $r^2 = .132$. Reported scores of .364 show a moderately positive relationship. GSE scores account for approximately 13.2 % of participants assessing/evaluating health education program's scores. Approximately 87% of the variability was unaccounted for in this equation but could include such factors as active student participation, effective teaching strategies, and good traits. A discussion follows.

Hypothesis 2

2. No relationship exists between Health Science students' GSE scores and planning,
   implementing, and administering health education programs.

A significant relationship was found between Health Science students' GSE scores
and planning, implementing, and administering health education programs r = .382, p =
.0001, r^2 = .145. Reported scores of .383 show a moderately positive relationship. GSE
scores account for approximately 14.5 % of participants planning, implementing, and
administering health education program's scores. Approximately 85.5% of the variability
was unaccounted for in this equation but could include such factors as active student
participation, effective teaching strategies, and good traits. A discussion follows,

Hypothesis 3

3. No relationship exists between Health Science students' GSE scores and serving and
   communicating health education programs.

A significant relationship was found between Health Science students' GSE scores
and serving and communicating health education programs r = .376, p = .0001, r^2 = .141.
Reported scores of .376 show a moderately positive relationship. GSE scores account for
approximately 14.1 % of participants serving and communicating health education
program's scores. Approximately 85.9% of the variability was unaccounted for in this
equation but could include such factors as active student participation, effective teaching
strategies, and good traits. A discussion follows.

Hypothesis 4

4. No relationship exists **by gender** between Health Science students' GSE scores and assessing/evaluating health education programs.

No significant relationship was found **by gender** between Health Science students' GSE scores and assessing/evaluating health education programs $r = .027$, p = .835.

Hypothesis 5

5. No relationship exists **by gender** between Health Science students' GSE scores and planning, implementing, and administering health education programs.

No significant relationship was found **by gender** between Health Science students' GSE scores and planning, implementing, and administering health education programs $r = .05$, p = .673.

Hypothesis 6

6. No relationship exists **by gender** between Health Science students' GSE scores and serving and communicating health education programs.

No significant relationship was found **by gender** between Health Science students' GSE scores and serving and communicating health education programs r = .161, p = .216.

Hypothesis 7

7. No relationship exists **by class** between Health Science students' GSE scores and assessing/evaluating health education programs.

No significant relationship was found **by class** Health Science students' GSE scores and assessing/evaluating health education programs $r = -.023$, p = .765.

Hypothesis 8

8. No relationship exists **by class** between Health Science students' GSE scores and planning, implementing, and administering health education programs.

No relationship was found **by class** between Health Science students' GSE scores and planning, implementing, and administering health education programs $r = -.014$, p = .86.

Hypothesis 9

9. No relationship exists **by class** between Health Science students' GSE scores and serving and communicating health education programs.

No relationship was found **by class** between Health Science students' GSE scores and serving and communicating health education programs $r = -.060$, p = .448.

Hypothesis 10

10. No relationship exists with the interaction of **class x gender** between Health Science students' GSE scores and assessing/evaluating health education programs.

The relationship could not be run because of the large uneven sample sizes by gender.

Hypothesis 11

11. No relationship exists with the interaction of **class x gender** between Health Science students' GSE scores and planning, implementing, and administering health education programs.

The relationship could not be run because of the large uneven sample sizes by gender.

Hypothesis 12

12. No relationship exists with the interaction of **class x gender** between Health Science students' GSE scores and serving and communicating health education programs.

The relationship could not be run because of the large uneven sample sizes by gender.

Discussion of GSE

This study was designed to first examine general self-efficacy and then the relationship between the Health Science program goals and GSE. Along with the mission of the institution (Brigham Young University-Idaho or BYU-I) and the Learning Model, the program's goals are centered on student development and active participation associated with the profession's competencies. 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. 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 (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 (no standard deviation provided). A mean score of 33.92 ± 3.66 is 4.37 points higher than the mean score of all samples combined and 0.73 points higher than Costa Rica's general self-efficacy score of 33.19 (Scholz et al., 2002).

One reason as to why the general self-efficacy scores may be high is the make-up of BYU-I. According to Christensen & Eyring (2011), BYU-I has been identified as an innovative university due to the imperatives, mission, foundations classes, standards, faculty load, and unique learning model. One part of the institution's mission involves experiential learning which gives the students the opportunity to perform tasks rather than just learning content. According to Borzak (1981) and Clark, Threeton, & Ewing (2010) experiential learning "involves a direct experiential encounter with the learning event rather than simply a thought process associated with the learning" (Clark et al., 2010, p. 46).

Another reason may be the type of students attending BYU-I. The students are older (average age is 21.7 for the university and 21.4 for Health Science) (Bergstrom, 2014) and many of them have completed a church mission prior to attendance (41% have served an 18-24 month mission, nationally and abroad) (Wylie, 2014). The mission experience involves individual responsibility as well as self-drive. As part of their mission, the individual volunteers his or her time and places all other personal endeavors like education, sports, and relationships on hold. Of the 15,584 students on campus 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 are, *accepting responsibility for*

one's self and *making independent decisions*. Using these two measures, an argument can be made that a large number of the students are adults and not emerging adults. Thus an andragogical, experience centered approach would be called for and as this research shows, there is a correlation between higher self-efficacy and experientially taught courses.

The Health Science program is a part of the Department of Health, Recreation, and Human Performance. In the fall of 2013 there were 2,470 majors making it the largest department on campus. In the fall of 2013 there were 707 Health Science majors with the majority being either the Health Promotion or Public Health emphasis (Institutional Fact Sheet, 2013). Within those 707 majors, 69% were female while 31% were male (Bergstrom, 2014). Students choose this major to become a community health educator, health promotion specialist, worksite wellness specialist, health counseling, wellness coach, resort wellness specialist, lifestyle training specialist, epidemiologist, or on to graduate school in Physical and Occupational Therapy (Brigham Young University-Idaho, 2013).

Health Science is different than the medical model in that it is structured on prevention rather than treatment. Health Science and missionary work share the common variable of working with and helping people. Students upon returning from their mission continue to learn experientially by understanding and assessing populations to develop health promotion programs. According to Jarvis (1995) experiential learning is "actually about learning from primary experience that is learning through sense experiences" (p. 75). Health Science students learn experientially as Borzak (1981) states by "direct encounter with the phenomena being studied rather than merely thinking about the encounter, or only considering the possibility of doing something about it" (p. 9; Brookfield, 1983).

Discussion of Program Hypothesis

In this present study, we found correlations in three of the hypotheses concerning GSE and program goals.

Hypothesis 1

1. No relationship exists between Health Science students' GSE scores and assessing/evaluating health education programs.

A significant relationship was found between Health Science students' GSE scores and assessing/evaluating health education programs $r = .364$, p $= .0001$, $r^2 = .132$. Reported scores of .364 show a moderately positive relationship. GSE scores account for approximately 13.2 % of participants assessing/evaluating health education program's scores.

Evaluation and assessment are both important competencies for Health Education students to know and do. According to McKenzie et al. (2013) evaluation determines "the value and worth of a health promotion program or any of its components" (p. 373). Within the Health Science program there are two courses (HS 390 Program Planning & Implementation and HS 391 Research Methods & Program Evaluation) designed to provide hands-on experience assessing and evaluating programs. Students in these courses assess population and setting needs for effective comprehensive health promotion programs. They also evaluate programs and interventions to determine effectiveness as well as purpose. These classes in addition to the university mission and Learning Model may constitute the significant relationship reported between GSE and program assessment/evaluation.

Hypothesis 2

2. No relationship exists between Health Science students' GSE scores and planning, implementing, and administering health education programs.

A significant relationship was found between Health Science students' GSE scores and planning, implementing, and administering health education programs r = .382, p = .0001, r^2 = .145. Reported scores of .383 show a moderately positive relationship. GSE scores account for approximately 14.5 % of participants planning, implementing, and administering health education program's scores.

In addition to program evaluation, planning, implementation, and administering are crucial for health educators in the profession. Five of the seven core competencies are associated with program planning, implementation, and administering. Within the Health Science program there are five classes (*HS 390 Program Planning & Implementation, HS 401 Community Health Methods, HS 420 Health Behavior Theories/Models, HS 472 Health Communication Methods, and HS 498 Health Science Internship*) connected with these competencies. Each class is designed experientially to provide hands-on skills and help students to learn the content and apply it. The following addresses each class and an example of the experiences that show this relationship (Brigham Young University-Idaho, 2013).

ESS 305 Health and Fitness Appraisal & Prescription: Students screen and choose a client whom they will mentor and teach principles of health and fitness for an entire semester. They will have the opportunity to volunteer their time at the

University Wellness Center performing health and fitness evaluations on other students and university faculty.

HS 390 Program Planning & Implementation: Students research, plan, and develop a health promotion program based on researched needs in either a community, school, or worksite setting. Students also learn to take an existing program and design an implementation plan. By the end of the course students are able to plan and implement programs in a variety of settings.

HS 401 Community Health Methods: Students partner with the local health district (Eastern Idaho Public Health District) on administering programs according to state contract guidelines. The students also apply skills learned to implement interventions for both on campus health promotion and community building.

HS 420 Health Behavior Theories/Models: Students team up with Family and Consumer Science students to assess and redesign local grocery stores to make healthier options more available. The students also work with the Wellness Center and Student Activities to develop behavior modification interventions with *The Biggest Winner* competition. The competition is designed to help individuals lose weight by participating in a lifestyle change for thirteen weeks.

HS 472 Health Communication Methods: Students work in groups to implement communication strategies both on campus and in the community. They develop newsletters, poster campaigns, PSA's, and utilize computer software to promote health.

HS 498 Health Science Internship: All students in the Health Science program are required to complete an internship. Students seek a job-related experience at various settings like hospitals, doctor's office, medical clinics, state health departments, worksites, and nursing homes. Some students decide to work in other countries or for larger companies like the Centers for Disease Control. This experience is hands-on and associated with the specific area of interest the student is looking at going into following graduation.

The experientially based learning found in each of these classes is a factor in the positive correlation between GSE and the program goals. The Health Science program at BYU-I is focused on building individuals through multiple opportunities both inside and outside the classroom.

Hypothesis 3

3. No relationship exists between Health Science students' GSE scores and serving and communicating health education programs.

A significant relationship was found between Health Science students' GSE scores and serving and communicating health education programs $r = .376$, p $= .0001$, $r^2 = .141$. Reported scores of .376 show a moderately positive relationship. GSE scores account for approximately 14.1 % of participants serving and communicating health education program's scores.

Serving as a health education resource person and being able to communicate health related information are important and vital when working with diverse populations. As students progress through their major classes they are given learning opportunities that

provide them experience so they can serve as a resource for health education. Confidence is a key player in serving and communicating. The students need to have the ability to provide information and convey that information so different population can understand it as well as interpret it.

An example of this is in the project based experience students have in HS 472 Health Communication Methods class. The students work in groups to promote a health related topic. The purpose is not just to advertise using posters and pamphlets but to promote health for a behavior change. Some students develop a newsletter addressing specific health related topics individuals as well as stakeholders face in a worksite or school setting. Other students use a variety of strategies and resources to train peers on health issues through brownbag presentations. These and other types of projects account for the high self-efficacy among Health Science students.

The *Teach One Another* principle found in the Learning Model is important when addressing the competency of serving and communicating health information. Students are given multiple opportunities within classes to disseminate health information so others can understand and interpret the importance of it. One such example is research posters the students present at the end of HS 391 Research Methods and Program Evaluation class. Students spend the entire semester learning how to research and collect data. Upon completion of their research the students develop a poster and present their findings at the Student Research & Creative Works Conference. This gives the students the opportunity to communicate their findings and receive feedback from faculty mentors.

This study indicated a moderately positive relationship between GSE scores and program goals. According to NCHEC (2010), in the HEJA, "baccalaureate programs in health education should prepare health education graduates to *perform* all seven of the health education responsibilities, 34 competencies, and 162 subcompetencies identified as Entry-level in the 2010 hierarchical model" (p. 5). The competencies and Health Science program goals are broken down into program planning, implementation, evaluation, administration, serving, and communication. The results show the students have confidence in their ability to perform as a result of the experientially taught courses. This has significant meaning since the students' confidence is in relation to the purpose of the program.

According to Bandura (1994) perceived self-efficacy "enhances human accomplishment and personal well-being" (p. 2). Students with high self-efficacy are able to handle difficult challenges as learning opportunities rather than things to be avoided. As before mentioned, self-efficacy is developed by four main sources of influence (*mastery experiences, vicarious experiences, modeling influences, and social persuasion*). Mastery experiences are associated with success and failure. Bandura (1994) states that

> Resilient sense of efficacy requires experience in overcoming obstacles through perseverant effort. Some setbacks and difficulties in human pursuits serve a useful purpose in teaching that success usually requires sustained effort. After people become convinced they have what it takes to succeed, they persevere in the face of adversity and quickly rebound from setbacks (pp. 2-3).

Therefore students with high self-efficacy can handle difficult challenges better and continue to persevere in their degree program. The Health Science program aims to build

individuals through challenging experiences as well as provide opportunities to develop the tools to handle those challenges. The classroom is a place where they can make mistakes and correct them using those tools. Confidence to both do and continue to do in the face of opposition is evident for those with a high perceived self-efficacy. According to Kim B. Clark the president of the institution, students within their major programs will be "trained as well-prepared, active classroom learners, and they would expect to be challenged accordingly…as they progressed toward graduation" (Christensen & Eyring, 2011, p. 264).

Another important factor to consider when addressing self-efficacy is the learning environment both inside and outside the classroom. Bandura (2001) states that environment, which includes peers, can impact learning by simulating motivational, cognitive, and affective processes. One of the university imperatives outlined by Clark is "to raise substantially the quality of every aspect of the experience our students have" (Christensen & Eyring, 2011, p. 251). This is achieved through the three portions of The Learning Model (*Prepare, Teach One Another, and Ponder & Prove*) (Institution Learning Model, 2013). Students are encouraged to take an active part in their education as the learner and the teacher.

An example of this is in the relationship the instructor has with the students using The Learning Model. Within the *Teach One Another* principle, the student becomes the instructor and teaches others different principles. A key construct of this is in the way questions are asked to facilitate discussion and application. Instructors engage with the students to help them understand for themselves and therefore empower agency. An example of this is

The teacher invites a student who says, "I don't understand," to prepare a lesson and teach the class the next day. The student comes back with a lesson prepared; but before teaching, she says she still has several questions. After teaching, she never asks the questions. The teacher asks what the questions were. The student says she received answers to her questions while she taught (Brigham Young University-Idaho, 2007, p. 12)

Teachers at BYU-I are encouraged to prepare for each class with the students in mind. Christensen (2011) states that "in the style of learning, teaching success depends as much on knowing the students as in knowing the subject matter" (p. 259). Pearce (1996) argues that good teachers help students discover learning and "the skilled teacher does not want students who leave class talking about how magnificent and unusual the teacher is. This teacher wants students who leave talking about how magnificent the [subject] is!" (Pearce, 1996, p. 12). This philosophy is followed by the way Health Science instructors work hand-in-hand with their students on projects in HS 390 as well as HS 305 and HS 472. They are an extension and a resource to the student by way of availability and support. C. R. Christensen (1991b) argued that "great teaching not only engages students but makes them partners with the instructor in the learning process" (referenced in Christensen & Eyring, 2011, p. 258).

BYU-I's mission and program goals are centered on building individuals and not just providing an education. This cannot be achieved in the classroom alone therefore active participation by way of group discussions, religious participation (callings) during the week and on Sunday's, striving to help others through service, and utilizing the campus resources and facilities all factor into the learning environment.

Another factor that plays an important role in self-efficacy is the instructor. C. Roland Christensen, an advisor at Harvard Business School, stated that "every student teaches and every teacher learns" (Christensen, 1991a, p. 99). The university has adopted this motto and faculty strive to know the students, names, capabilities, personalities, and learning needs: "They use this knowledge to engage the students in teaching one another" (Christensen & Eyring, 2011, p. 161). Clark stated that "professors who went beyond merely teaching, become mentors to students in the spirit of Harvard's C. Rowland Christensen" (Christensen & Eyring, 2011, p. 252). This can be seen in the way faculty spend countless hours memorizing students names as well as working alongside mentoring them on projects.

An example of this mentored student learning is found in the HS 390 Program Planning and Implementation course. Students are placed into groups to plan a health promotion program in either a school, community or worksite setting. The instructor is an extension of the group. He works alongside them mentoring as well as leading them to the tools they need to succeed. By the end of the semester the students are able to plan, implement and evaluate any program in any setting because they did it experientially. The teaching and learning is evident in the level of confidence reported in the data collected through this study.

Steve Hunsaker, a faculty member at BYU-I, stated "I always dreamed of being a teacher, but I taught for a long time before I realized the difference between teaching and creating learning experiences" (Christensen & Eyring, 2011, p. 260). The university mission is to build individuals by teaching them to learn through experience. This framework of andragogy and experiential learning relates to the high self-efficacy measurements.

According to the Learning Model, students and teachers are encouraged to act for themselves and exercise agency (Institution Learning Model, 2013). Bandura (1997) states that self-efficacy pertains to a sense of control over one's environment and behavior. Instructors are encouraged to empower agency through meaning and application. Ken Bain (2004) in his book entitled What the Best College Teachers Do argues that

> Learners feel a sense of control over their education; work collaboratively with others; believe that their work will be considered fairly and honestly; and try, fail, and receive feedback from expert learners in advance of and separate from any summative judgment of their effort (p. 18).

Bandura (2000) states self-efficacy is the "foundation of human agency. Unless people believe that they can produce desired effects and forestall undesired ones by their actions, they have little incentive to act" (p. 75).

An example of this agency is found in the HS 499r Individualized Experiential Learning class as well as HS 498 Internships centered on mentored student research. Students are able to propose either their own project or an existing one to with for the semester. The student can often times travel and implement their program or evaluate the current program in that setting. Examples of the experiences are some students chose to teach youth at the local middle school health and nutrition. Other students have decided to take the program they developed in HS 390 and implement it in the setting. Two such students took their program to Paraguay and worked with the locals in a small village. They were able to see the challenges of working with an underprivileged population and teaching them health related skills. These are just a few of the projects students have chosen. These

two classes provide students with experiences using their degree rather than waiting after graduation to see what their degree will do for them.

In summary, this study showed a correlation between experientially taught classes and perceived self-efficacy. Health Science students self-efficacy was high in general and the program did not diminish that perception. The University and instructors as well as the make-up of the students were factors in the high self-efficacy. It can also be argued that the University innovation has key factors 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 experientially taught courses and the way they are taught in the Health Science program are directly connected to the profession's competencies. Students within the major reported high self-efficacy in the program's ability to prepare them to plan, implement, evaluate, assess, and administer health promotion programs. No relationships were found by gender or class in this study.

Implications for Future Research

Interpreting the results supports that program planning, implementation, evaluation, and serving as well as administering in health education show a significant relationship between GSE scores and program goals. GSE scores account for 13.2% of assessing/evaluating health programs, 14.5% for planning, implementing, and administering health education programs, and 14.1% for serving and communicating health education programs. The other 86.8%, 85.5%, and 85.9% respectively are unaccounted for but could

constitute variables other than GSE. These variables could include but are not limited to active student participation, effective teaching strategies, attendance, good traits, and all are under the umbrella of BYU-I whose purpose is to build individuals. These percentages account for the learning and teaching environment created by the mission, Learning Model, and teachers that make BYU-I unique and innovative as well as centered on the students.

Future research could identify and examine what specific influences within the percentages affect student self-efficacy. This data would have significant meaning to program evaluation and development of course outcomes. Each course in the Health Science program has projects, assignments, quizzes, tests, and discussions. Each one of these should have specific purpose and outcome tied to the course outcome. The course outcome is then tied to the core competencies, overall program/university goal of building individuals, and self-efficacy.

According to Schaub and Tokar (2005) self-efficacy and outcome expectations (another construct of the SCT), "affect the formation of vocational interests, which subsequently influence occupational goals, choice actions, and performance attainments" (p. 305). Since there is a significantly high general self-efficacy among Health Science students, interest in assessing occupational goals and actual occupation outcome would be important to evaluate. Since there are 707 Health Science majors (Institutional Fact Sheet, 2013), initial interest and eventual goal attainment would be beneficial as well as the role University Foundation courses play. The relationship between confidence and career attainment would be beneficial to the program and the development of additional self-directed application experiences. This would benefit the program to better prepare freshman and sophomores before they take their major courses.

The students within the Health Science program are unique and the results cannot be applied to other programs. However, the use of experiential learning techniques like mentored student research, projects based classes, practical application, and implementation/evaluation internships must be considered additions to the program outcomes. Self-efficacy and its relationship to experiential learning is related to the individual. Self-efficacy, the confidence "to do" a behavior, is vital to life-long learning. Fink (2003) describes this learning as "indirect or vicarious 'doing' experiences" (p. 109), which may include the program experiential learning techniques.

In addition to the current experiential learning program opportunities, additional variables could be introduced in the freshman and sophomore years. Once implemented additional research could look at specific variables and their relationship to perceived self-efficacy. This data could show a correlation to the current data on juniors and seniors.

Limitations

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. All students at BYU–I must follow the moral directives of the institution, live under a specific code of conduct, live in university approved housing, and attend church regularly. All of these institutional factors affect this population uniquely which could affect how students learn and "do" in their classes.

2. BYU-I students as members of the Church of Jesus Christ 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.

3. The study is limited because of the number of men enrolled in the Health Science program (31% of men compared to 69% women) (Institutional Fact Sheet, 2013; Bergstrom, 2014). This lack of men in the program excluded examining 9 of the stated hypotheses in this study. Thus we don't know if gender or class would be the same or different about program goals.

Future Directions

The Health Science department as well as the University with its experiential learning approach might be further studied especially considering the additional constructs of Bandura's SCT. Ewert and Garvey (2007) state the outcomes of experiential learning include personal growth, moral, group, and leadership development. BYU-I's administration has emphasized the importance of 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" (Morgan, 2014, p. 3). The outcomes are important to the students, programs, and the University. Future research could focus on this construct in relation to self-efficacy to ferret out if both the University and the Health Science program are supporting Student Learning Outcomes.

Since one construct of Experiential Learning (Ewert & Garvey, 2007), personal growth, was featured, there are numerous variables which can be introduced in further research. Since the university is a religious institution, moral development would be a good

construct to use and its relation to self-efficacy. The other two constructs, group and leadership development, would also be useful for further study. These two constructs are important principles in relation to the social construct important to the mission of the university and use of the Learning Model.

The Health Science program goals are tied to the professions' seven core competencies. These competencies are the foundation of the health education profession and related colleges/university's program outcomes. Undergraduate colleges and universities with Public Health/Health Promotion departments can benefit from this research as well as NCHEC to develop better teaching and learning strategies centered on experiential learning with the goal of building individuals. There are a number of research journals within the profession that address research (i.e. Health Education & Behavior, Health Promotion Practice, and Health Education Journal) but not teaching and learning. An added benefit to the university in this study is it being a teaching university and not a research institution. Education and students are at the forefront and an added variable to the significant high level of program and general self-efficacy.

Additional BYU-I departments other than Health Science can benefit from this study to examine the relationship between experiential learning and self-efficacy. The initial GSE assessment is not inclusive to just Health Science. Other departments within the university as well as outside the University can benefit from the GSE assessment.

Departments within the University can adapt the program efficacy measurement to their own professional competencies as well as outcomes. This measurement can be beneficial to identify variables and traits within the program that constitute perceived self-

efficacy. Student confidence, according to research, is linked to performance and career goals (Schaub & Tokar, 2005). This is important to all programs.

One factor discussed in this study that plays a significant role is in the make-up of the University itself. Although the University is a religious based institution, the GSE tool developed by Schwarzer and Jerusalem (1995) can be used with non-religious based institutions. There is also the factor of research based institutions compared to teaching universities like the one in this study. The same instrument can be used alike. As this study has shown self-efficacy is important in higher education. Future research could be done on the relationships between non-religious universities and religious ones not affiliated with the LDS church. Likewise research institutions and those devoted to just teaching.

In the fall of 2013 there were 15,584 students on campus and of those approximately 25% are in the Department of Health, Recreation and Human Performance. Not counted in this amount is the number of students taking online courses which was 2, 694 (Institutional Fact Sheet, 2013). Online instruction is growing and becoming a more popular form of higher education. In 2009 The University of Phoenix "enrolled 355,800 new students, roughly 150,000 more than the total enrollment of the ten campuses of the University of California" (Christensen & Eyring, 2011, p. 8). Due to the demand and current trends, online students at BYU-I will top 24,000+ by the fall 2017 (Clark, 2014). The future seems to be on the side of online learning and teaching. Future research could address online experiential teaching and learning and its relationship with student self-efficacy. This could also be done with current online Health Science programs and their ability to build confidence to perform the competencies in relation to on campus programs.

Chapter V: Undergraduate Student Self-Efficacy in Experiential Learning Programs:

a Group Study

Tom Anderson, Julie Buck, Cheryl Empey, and Jim Hopla

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, 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 et al., 1998, p. 36).

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, 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 (Lindeman, 1926). 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 (Lindeman, 1926), 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 (1926) states that 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). As individuals learn and grow the need to rely and use their experience in learning increases (Bower & Hollister, 1967; Bruner, 1961; Cross, 1981; Erickson, 1950; 1959; 1964; Getzels & Jackson, 1962; Iscoe & Stevenson, 1960; Smith, 1982; White, 1959). 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" (Knowles et al., 1998, 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 Brantner'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 (Beauchamp et al., 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:

1. Knowledge-learning facts and gaining insights related to an action, idea, object, person, or situation.

2. Outcome Expectancies-anticipation of the probable outcomes that would ensue as a result of engaging in the behavior under discussion

3. Outcome Expectations-value a person places on the probable outcomes that result from performing a behavior.

4. Situations Perception-how one perceives and interprets the environment around oneself.

5. Environment-physical or social circumstances or conditions that surround a person

6. Self-Efficacy-confidence in one's ability to pursue a behavior

7. Self-Efficacy to Overcoming Impediments-the confidence that a person has in overcoming barriers while performing a given behavior.

8. Goal Setting or Self Control- setting goals and developing plans to accomplish chosen behaviors.

9. Emotional Coping- techniques employed by a person to control the emotional and physiological states associated with acquisition of a new behavior (p. 144).

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 et al., 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" (NCHEC, 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, n.d.). Building on this philosophy, President Kim B. Clark, the current president of our institution known as Brigham Young University-Idaho (BYU-I), 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-I education available to many more [students].

3. Lower the relative cost of education (Clark, 2005).

What makes BYU-I 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 D)[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 D) 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 F) [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.

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

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, 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 F 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. Studies show the GSE has high reliability, stability, and construct validity (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 G).

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, 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 (Bandura, 1994; Dewey, 1938; Knowles et al., 2012). 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-I, 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-I 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-I 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 and 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)?

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-I'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-I 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 VI: 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-I.

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-I 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-I per semester with nearly 80 majors available (Brigham Young University-Idaho, 2013; Stevens, 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-I Mission Statement and Student Learning Outcomes. Following that challenge, Henry B. Eyring stated the result of this rethinking as the graduates of BYU-I 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-I will become… legendary for their capacity to build the people around them and to add value wherever they serve (Eyring, 2001).

When BYU-I 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-I. Four members of that cohort conducted an assessment of BYU-I students from three experientially based programs; Family & Consumer Sciences Education (FCS Ed), Health Sciences, and Recreation Management. We as instructors of BYU-I 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-I, three of us further studied GSE in BYU-I 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-I 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 (NCHEC, 2008b). 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-I 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-I, 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-I 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 do 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-I.

We have also learned that our students have a high general self-efficacy – we cannot verify it is so because of the BYU-I experience, but something in our student's past experiences raises their GSE above the norm and their experience at BYU-I 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-I.

There is much more that can be studied using GSE at BYU-I. The group study related specifically to Health, Recreation and FCS, yet there are many other programs within BYU-I which would benefit from a similar study. Are there certain programs currently at BYU-I 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-I 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-I 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-I, the Learning Model, and Student Learning Outcomes are what make BYU-I 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

General Self-Efficacy Scale (GSE) Individual Study

The following is a copy of the General Self-Efficacy Scale (GSE).
Ralf Schwarzer and Matthias Jerusalem (as cited in Rimmi & Jerusalem, 1999).

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 situations.	1	2	3	4
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 B

Core Competencies Questions

What is the relationship between Self-Efficacy (G.S.E) and health education practical competencies?

The following are the core competencies for health educators:

1. *Assess individual and community needs for health education*
2. *Plan health education strategies, interventions, and programs*
3. *Implement health education strategies, interventions, and programs*
4. *Conduct evaluation and research related to health education*
5. *Administer health education strategies, interventions, and programs*
6. *Serve as a health education resources person*
7. *Communicate and advocate for health and health education.*

Competencies # 1 & 4

1. ***Assess individual and community needs for health education***

    1. To what extent does the Health Science program prepare me to assess individual needs for health education?

        Great   Much   Some   Little   None

    2. To what extent does the Health Science program prepare me to assess community needs for health education?

        Great   Much   Some   Little   None

1. ***Conduct evaluation and research related to health education***

    3. To what extent does the Health Science program prepare me to evaluate individual health promotion programs?

        Great   Much   Some   Little   None

    4. To what extent does the Health Science program prepare me to conduct research in health education?

        Great   Much   Some   Little   None

Competencies # 2, 3, & 5

2. ***Plan health education strategies, interventions, and programs***

    5. To what extent does the Health Science program prepare me to plan strategies for health education?

Great   Much   Some   Little   None

6. To what extent does the Health Science program prepare me to plan interventions for health education?

Great   Much   Some   Little   None

7. To what extent does the Health Science program prepare me to plan programs for health education?

Great   Much   Some   Little   None

3. *Implement health education strategies, interventions, and programs*

8. To what extent does the Health Science program prepare me to implement strategies for health education?

Great   Much   Some   Little   None

9. To what extent does the Health Science program prepare me to implement interventions for health education?

Great   Much   Some   Little   None

10. To what extent does the Health Science program prepare me to implement programs for health education?

Great   Much   Some   Little   None

2. *Administer health education strategies, interventions, and programs*

11. To what extent does the Health Science program prepare me to administer strategies for health education?

Great   Much   Some   Little   None

12. To what extent does the Health Science program prepare me to administer interventions for health education?

Great   Much   Some   Little   None

13. To what extent does the Health Science program prepare me to administer programs for health education?

Great   Much   Some   Little   None

Competencies # 6 & 7

3. *Serve as a health education resources person*

14. To what extent does the Health Science program prepare me to serve as a health education resource person?

   Great   Much   Some   Little   None

4. *Communicate and advocate for health and health education*

15. To what extent does the Health Science program prepare me to communicate for health?

   Great   Much   Some   Little   None

16. To what extent does the Health Science program prepare me to communicate for health education?

   Great   Much   Some   Little   None

17. To what extent does the Health Science program prepare me to advocate for health?

   Great   Much   Some   Little   None

18. To what extent does the Health Science program prepare me to advocate for health education?

   Great   Much   Some   Little   None

Appendix C

IRB Approval Letter and Exempt Certification (13-205)

University *of* Idaho

September 3, 2013

To: Sharon Stoll
Cc: Jim Hopla

From: Traci Craig, PhD
Chair, University of Idaho Institutional Review Board
University Research Office
Moscow, ID 83844-3010

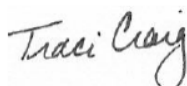Title: 'General and core competency self-efficacy in Health Science undergraduate students'

Project: 13-205

Approved: 08/30/13
Expires:

On behalf of the Institutional Review Board at the University of Idaho, I am pleased to inform you that the protocol for the above-named research project is approved as offering no significant risk to human subjects.

This approval is valid for one year from the date of this memo. Should there be significant changes in the protocol for this project, it will be necessary for you to resubmit the protocol for review by the Committee.

Traci Craig

Traci Craig

University of Idaho

September 5, 2013

To: Sharon Stoll
Cc: Jim Hopla

From: IRB, University of Idaho Institutional Review Board

Subject: Exempt Certification for IRB project number 13-205

Determination: August 30, 2013
               Certified as Exempt under category 2 at 45 CFR 46.101(b)(2)
               IRB project number 13-205: General and core competency self-efficacy in Health
               Science undergraduate students

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 D

General Self-Efficacy Scale (GSE) Group Study

The following is a copy of the General Self-Efficacy Scale (GSE).
Ralf Schwarzer and Matthias Jerusalem (as cited in Rimmi & Jerusalem, 1999).

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 situations.	1	2	3	4
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 E

Additional Questions (Group Study)

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).

Appendix F

IRB Exemption Certification Letter (13-145)

University *of* Idaho

Office of Research Assurances (ORA)
Institutional Review Board (IRB)

June 3, 2013

875 Perimeter Drive, MS 3010
Moscow ID 83844-3010

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

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

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

University of Idaho Institutional Review Board: IRB00000843, FWA00005639

Appendix G

Letter of Permission (GSE)

Freie Universität Berlin

Fachbereich Erziehungs-
wissenschaft und Psychologie
- Gesundheitspsychologie -

Professor Dr. Ralf Schwarzer
Habelschwerdter Allee 45
14195 Berlin, Germany

Fax   +49 30 838 55634
health@zedat.fu-berlin.de
www.fu-berlin.de/gesund

Freie Universität Berlin, Gesundheitspsychologie (PF 10),
Habelschwerdter Allee 45, 14195 Berlin, Germany

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