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# Exceptionally Employable: A Study of the Value of Contrasting Educational Modalities within Christian Liberal Arts Universities in Preparing Students for Employment Suitability

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Exceptionally Employable: A Study of the Value of Contrasting Educational Modalities  
within Christian Liberal Arts Universities in Preparing Students for Employment

Suitability

Sam Heinrich

Submitted to the College of Business

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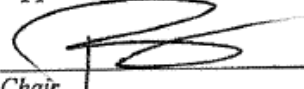
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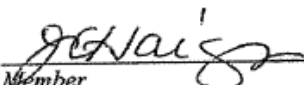
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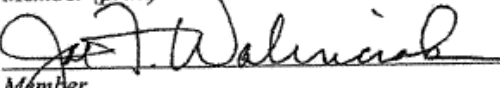
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## Abstract

The purpose of this study was to investigate differences in suitability of employment of unique student groups (academic clusters) at four geographically dispersed Christian higher education universities (CHEU) as represented broadly by membership in and association with the Council of Christian Colleges and Universities (CCCCU). The four academic clusters identified for this study were Residential Traditional Students (RTS), Deferred Professional Students (DPS), Accelerated Traditional Students (ATS) and Other Students. This research used a quantitative quasi-experimental method with an emailed, survey instruments designed to measure the impact of a student's educational experience on employability through self-efficacy and employment experience. Yorke and Knight (2007) developed the Self Efficacy Questionnaire (SEQ) and Employment Experience Questionnaire (EEQ) related to the Understanding, Skills, Self-Efficacy and Metacognition (USEM) model of employability which extends employability beyond a simple definition of gaining a job and measure values desired by prospective employers. Higher education is influential in impacting employability through development of the whole person.

An invitation was sent to 1,749 possible participants who had graduated within the last 12 months or were within 15 credit units of graduation for their bachelor's degree at the four participating CHEUs. A total of 290 participants completed all parts of the survey. The study used a series of ANOVAs to compare employability of participants using different academic clusters and to compare employability among participants from the four institutions involved in the study. Pearson  $r$  correlations were also conducted to

determine the relationship between employability and the constructs of proportionate attendance at a CHEU, number of authentic learning experiences, and years of work experience in the context of pursuing a degree.

CHEUs are unique organizations that integrate a study of the liberal arts with professional applied studies and these institutions make significant value claims that impact their brand and marketing messages regarding their ability to enhance employability. The modern day definition of liberal arts has taken some departure from its original roots, and current graduates of a liberal arts education are expected to balance the philosophical study of a rich liberal arts core with applied coursework, authentic learning, and internships in a more holistic curriculum design (Maier, 2014). Hiring managers care less about a job candidate's degree and more about their ability to communicate, think critically, exercise a strong work ethic, work in teams, demonstrate initiative, utilize strong interpersonal skills, solve problems and conduct analysis. All these skills are honed in a liberal arts education (Gehlhaus, 2007). Many employers are concerned that educational institutions are not adequately preparing graduates for the complex needs of an increasingly global market place, including a broad understanding of human culture and the physical and natural world. Ewest and Kliegl (2012) asserts the marginalization of the liberal arts is a contributing factor to the recent lapses in moral and ethical behavior of business leaders. Higher education is a mature industry with calls for reform that demands innovation and flexibility to reduce the cost and time associated with earning a bachelor's degree (Spellings, 2006). CHEUs have adapted their approach to the disruptive demands for change by offering nontraditional online and reduced face-to-face requirements that is often completed over an accelerated time period.

The research findings concluded that there are differences in employability among participants from unique universities and limited differences among the participants from the four academic clusters. A statistically significant positive correlation was determined between the percentage of education obtained from a CHEU and self-efficacy. The number of authentic learning experiences for RTS participants and years of work experience for DPS participants were not found to have a strong correlation with employability. Age of the participants was found to have an inverse but weak relationship in explaining employability. The findings conclude that institutional differences exist in terms of employability scores despite a common association and imply that institutional choice matters.

The findings indicated that DPS participants relied more on their experience outside of education to inform them of their unique capabilities to perform in an educational setting, but discounted their own work experience and the value of the education in preparing them for enhanced careers. These findings imply DPS participants may tend to be utilitarian in their educational pursuits and discount the impact of formal education; but also diminish the value of their own work experience in preparing them for career advancement. DPS participants may be more cynical towards completing their degree and resent outside requirements to complete a degree for advancement.

The group of Other Students is composed of participants that is more likely to have attended multiple schools and accumulated credits through flexible means. This group of students indicated the highest overall employability scores for valuing workplace experience, academic awareness, and critical independence. This findings

suggest Other Students may have an inflated bias of their own capabilities, but also represent a growing population of students CHEUs must consider. RTS participants are another group of younger students that participated in the highest average number of authentic learning experiences, but reflected an inverse relationship with some measures of employability suggesting authentic learning experiences may make other courses appear to be less relevant in preparing students for employment.

CHEUs face several important implications and potential challenges related to the study that impact their identity, strategic operations, and marketing messaging. CHEUs prioritize operational and capital resources in favor of residential programs and charge more for a residential experience. If employability is undifferentiated regardless of academic programs, students will increasingly be drawn towards the less expensive and more flexible nontraditional models of education and the identity of the institutions challenged. Brand equity could be threatened by movement towards a more utilitarian learning experience and a reduction in the influence of brand communities on the sustaining aspects of fund raising and future recruitment. An opposite, but related challenge is associated with the evidence of differences in employability among the academic clusters revealed in the study. The validity of value claims to enhancing employability and the reputation of the institution with prospective employers of graduates and other societal constituents could also impact brand equity and challenges consistency in the institutions strategic approach and messaging to each academic cluster.

This pioneering research has extended the efforts to identify and measure the connection between Christian higher education and employability, but additional research is needed to gain additional insights on the unique characteristics of employability.

Additional qualitative and quantitative studies should be conducted with more emphasis on the perspectives of employers in identifying the perceived gaps in employability of graduates. Research is also needed to reconcile the goals of education that are perceived to fall outside of employability. If education is in fact a societal priority, it should be provided in such a way that propels society forward in all endeavors.

*Keywords:* Christian higher education, CCCU, employability, suitability for employment, Self-Efficacy Questionnaire, Employment Experience Questionnaire, USEM, traditional- residential based education, nontraditional education, andragogy, authentic learning, branding in higher education, brand communities, brand equity, and Integrated Marketing Communication



## **Dedication**

This dissertation is dedicated to my father Samuel Richard Heinrich who was the most highly educated influence in my life despite having to leave school after eighth grade to assist on the family farm. My father had 11 siblings in an age when one of the benefits of a large family was cheap labor. Samuel Richard always desired to be an attorney and tended to feel a little insecure around those with a more formal education. He made up for it by sending six children to college and growing a biotech agriculture business from the ground up. My father passed away in 1997, but would be extremely proud of each of his children and their educational pursuits. Thanks Dad for the sacrifice and example; you provided a way for me to freely pursue my dreams of education and calling.

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## CHAPTER 1- INTRODUCTION

### Background and Overview

A mid 30-year-old student who is nearing graduation in a non-traditional program shares his career path has been limited due to a lack of a degree. “I hope by going back to school and finishing my degree I will be able to obtain a management position in the Consumer Packaged Goods (GPG) industry I have worked since high school.” Another traditional student who is in their junior year sees education as opening career doors as she pursue a degree in Accounting with the hope of becoming a CPA. “I am the first in my family to be able to go to college and believe my degree will open career options that have not be available to my parents and other relatives before me.” Many students consider one of the core purposes in obtaining an undergraduate degree from an institution of higher education is to improve one’s suitability for employment and enhance an individual’s opportunities for career success. This research utilizes the USEM model of employability developed by Yorke and Knight (2007). The USEM model addresses four distinct characteristics possessed by highly prized job candidates including:

- evidence of powers of *understanding*, typically in the form of a good first degree;
- what are often called ‘*skills*,’ both general and subject-specific, and implying the capacity to use them appropriately in context;

- *efficacy beliefs* and other personal qualities; and
- *metacognition* or the ability for personal reflection on learning how one learns best.

Efficacy beliefs relating to one's confidence in their own abilities and one's education experience influences other personal qualities. York and Knight (2007) state that self-efficacy relates to personal manner, disposition for completion of tasks, a propensity to taking initiative, the persistence to stick to difficult tasks, a willingness to learn from past experiences, and an ability to thrive in stress. Self-efficacy relates to the confidence one holds that they can make a difference in situations through persistence and strategic thinking while self-theories relate to the ability of an individual to identify the specific elements that contribute to the malleability of one to make change, grow and evolve.

Understanding the characteristics of job seekers that employer's value among job candidates is important to all of society and the role education plays in this process is critical to higher education. This research considered various models of employability. A simplistic defense of employability relies on a self-supporting basis in the actual obtaining of a job. Institutions of higher education frequently boast of the high percentage of their undergraduates that have found employment or are pursuing a graduate degree. Although obtaining a job is compelling evidence of suitability for employment, landing a job is subject to external forces that may limit understanding of the suitability for employment. Macroeconomic cycles that result in tight labor markets may lead to high unemployment; at the same time shifts in industry demand as a result of disruptive innovation may lead to market distortions and a temporary misfit of job skills

relative to job opportunities. Discriminatory practices in the work place may also lead to misleading interpretation of desired characteristics of job seekers. These elements of employability are certainly real and important, but they tell us less about the intrinsic human characteristics and personal qualities of job seekers that make them desirable by employers, regardless of market cycles and other factors.

The USEM model put forth by Yorke and Knight (2007) does not ignore the desired skills valued by employers, but the model goes further and allows us to consider the less obvious elements of human development; the development of the entire person. Suitability for employment was used in this research as measured using the USEM model rather than employment itself as a more robust measurement of the innate characteristics of job seekers.

Institutions of higher learning have historically claimed the ability to enhance their graduates' suitability for employment and a well-documented link between levels of education and employment persist, but a connection that institutions of higher education hold with some degree of tension. Some in higher education may see employability as a competing objective over more essentially valued aims of fostering a pursuit of knowledge and fundamental truth (Knight & Yorke, 2004).

More specifically, Christian higher education universities (CHEU) have recognized and embraced their role in influencing the employability of students. The Council of Christian Colleges and Universities (CCCCU) represents many Christian institutions of higher learning. The CCCC is an international association of "intentionally Christian colleges and universities" composed of 185 members and affiliates located in 25 countries. The mission of the CCCC is "to advance the cause of

Christ-centered higher education” and to help the member and affiliates “by faithfully relating scholarship and service to biblical truth” (“Council for Christian Colleges & Universities - About CCCU,” n.d.). The notion of supporting the promotion of service by the CCCU to its affiliates emphasizes the importance of employability. Many CHEUs were originally designed to serve traditional age students (18-25 year-olds) who also lived on campus. A complete education at these schools included a heavy emphasis on co-curricular activities and a liberal arts core curriculum as an integral part of the educational experience. A consistent value proposed by CHEUs is their ability to enhance a graduate’s employability.

Examples of the claims of a few CHEUs’ include employability in their mission include William Jessup University (WJU), a private Christian liberal arts university in northern California. WJU was established as a Bible school in 1939 and has evolved to a full liberal arts university in 2002 when the relocated to Rocklin, California. Dr. John Jackson describes the school as a 70 year-old start-up (Jackson, 2012b). Dr. Jackson describes three core outcomes that the university seeks to provide for students including: quality liberal arts education, spiritually thriving students and exceptionally employable graduates (Jackson, 2012a). Another institution that emphasizes the education of the whole person is John Brown University (JBU) founded in 1919 by evangelist John Brown who felt God wanted him to establish a Christian College in Northwest Arkansas. The mission of John Brown University is “to prepare people to honor God and serve others by developing their intellectual, spiritual and professional lives” (“JBU facts 2014-2015 - About - John Brown University,” n.d.). The language of JBU’s mission statement emphasize education of the head, heart and hand as prominently displayed throughout the

university. Two other CHEUs that express an emphasis on employability and professional skills are George Fox University (GFU) located in Newberg, Oregon and Point University (Point), located near Atlanta, Georgia. GFU aims to prepare students “spiritually, academically and professionally to think with clarity, act with integrity, and serve with passion” (“The vision, mission, and values of George Fox University,” n.d.). Point University emphasizes their role “in preparing students for their chosen profession”, in “equipping the next generation to take their faith into the marketplace”, and urges students “to erase the lines between who they are and what they do” (“About Point,” n.d.).

WJU, JBU, GFU, Point and other CCCU member colleges and universities tend to articulate mission statements that would describe their core objectives in comparable language, stressing the education of the whole person including academic (head), spiritual (heart) and vocational readiness (hand) which are all important elements contributing to employment suitability.

Emerging educational delivery models raise questions concerning the validity of the claims by CHEUs pertaining to suitability of employment. In the last 20-30 years there has been a significant shift away from traditional residential based, face-to-face, education to various forms of distance aided and nontraditional delivery methods of education including: online, hybrid, distance learning, accelerated and other technology aided delivery methods. The number of students taking at least one online course has increased from 1.6 million in 2002 to 6.1 million in 2010. Over this period, total enrollment in degree granting institutions has increased 18% to 19.6 million while online enrollment has increased 381% (Allen & Seaman, 2011). There are several reasons for

these shifts. The number of institutions offering higher education has increased from 977 in 1900 to 4,182 at the turn of the twenty-first century (Altbach, Gumport, & Berdahl, 2011). In addition, the number of institutions offering education using nontraditional methods is increasing. In 2011, nearly 80 percent of public institutions, 55% of nonprofit and 70% of for-profit institutions indicate online (technology aided) education is critical to the institutions long-term strategy (I.E. Allen & Seaman, 2011). This interest in technology aided program delivery is accelerating as one in five institutions that offer online courses initiated this process since 2007. Institutions are expanding technology aided courses because students are demanding them (Van Der Werf & Sabatier, 2009) .

The adult population has been an important factor in these program delivery shifts. In 2011, 21% of the 25 to 34-year-olds in the United States had started college but not completed their programs (Schatzel, Callahan, Scott, & Davis, 2011) which represents a significant new market of potential students. Since the mid-1990s more than 31 million students have enrolled in college but left before completing a degree (Shapiro et al., 2014). Adult learners have increased by 20% annually from 1990 to 2007 and are anticipated to incur double-digit growth rates through the year 2020. Students in the age range of 25 to 44 are anticipated to be the fastest growing demographic over the next decade. About 30% of all adults were enrolled in accelerated and fast track learning in 2005 with the proportion expected to continue to increase (Van Der Werf & Sabatier, 2009).

Despite the growth of adult students, higher education finds itself in a state of crisis with questions related to the value of education compared to the costs. According to a recent report, college enrollment declined by approximately 2% in 2015 to a total of



18.6 million with approximately 5.5 million studying fully or partially online (National Student Clearinghouse Research Center, 2015). Although the same report indicates 60% of all jobs require some post-secondary education, 111 million adults in the United States have not earned a college degree (Kelly, 2015). Kelly (2015) indicates most people see increasing cost as prohibitive despite their strong desire to earn a degree. Higher education costs have increased 40% in excess of inflation since the early 2000s.

The growth of nontraditional programs has been influenced by several factors including an increase in for-profit institutions with their market-focused emphasis (Altbach et al., 2011); alternative approaches to access education through online and other technologies (I.E. Allen & Seaman, 2011); an increase in demand by all students, including traditional age students who are developing a preference for more convenient and flexible educational options (Aslanian, 2005); and a change in the educational funding model due to a decrease in government spending (Anctil, 2008) and greater demands for accountability (Spellings, 2006). These forces continue to impact the ways in which higher education is delivered and represent disruption of historical operations and opportunities for new sources of revenue.

CHEUs are not immune to the disruptive forces that have led to the innovations associated with nontraditional delivery models and have sought opportunities to profit from the evolving models of education. Many CHEUs launched degree completion programs in the early 1990s to capitalize on the emerging population of adults seeking to finish their degrees, relying upon accelerated or technology aided models, which allow students to finish their degrees while working full time. Entry into these nontraditional programs helped CCCU institutions expand into new markets while providing needed

funds to support their residential campuses and co-curricular programs more closely aligned to their historical focus of residential education. Like most innovations, nontraditional education initially provided high profit margins and fast growth opportunities.

Early adult programs had three primary enrollment requirements including at least two years of acceptable prior transfer credit, minimum age requirements between 23 and 25, and significant work experience along with evidence of satisfactory prior academic success and progress. Over time, market forces have led to less restrictive admissions criteria including the elimination of prior college experience, age restrictions and prior work experience. As the population demographics of students attending nontraditional programs becomes amorphous, questions arise concerning the institutions abilities to provide the same outcome for all students, regardless of the delivery method employed and the proportion of the total degree taken at the subject institution.

CHEU institutions that offer both traditional and nontraditional programs face an issue of equivalency in the value of the education delivered through a traditional or nontraditional program model. This distinction is important in validating the claims of the institution pertaining to their role in equipping students to become suitable for employment. Related to this question of equivalency through contrasting methods is the connection between work and education and the application of theoretical concepts learned in the classroom to the real world of work. Traditional residential programs have attempted to replicate actual work experience with internships, case studies, capstones, start-up incubation, and interventions into an organization to help solve a problem or exploit an opportunity. Broadly speaking, this area of study is called authentic or applied

learning and is an important component of the curriculum. Authentic learning is a deeper level of learning that replicates the ambiguity that students will face in their chosen careers (Lombardi & Oblinger, 2007).

Andragogy learning theory is based on teaching adults and assumes adult learners enter the education experience with their own derived work-related context acquired through actual work experience (Knowles, 1988). Accelerated and technology aided programs face challenges in building the same rich authentic learning experiences associated with traditional residential models of education due to limits of time and face-to-face engagement. As the population of learners becomes less segmented and more traditional aged learners opt for nontraditional models of education, it becomes more challenging to provide the rich authentic learning experience for learners who graduate with a degree, but very little in terms of real life application. The value of either work experience or replicated work experience through authentic learning is an important topic as it pertains to institutional claims of fostering suitability of employment for their graduates.

Purveyors of a Christian liberal arts education also find themselves challenged by a rising dissent of students in terms of their perceptions of the value of a Christian education and more importantly a Christian liberal arts education. This lack of appreciation for a traditional liberal arts education is manifesting itself in evolving trends for student preferences. Growth in nontraditional programs and attendance in courses outside of the major are increasing as students seek greater diversity in their educational experience. Many nontraditional students value the flexibility of delivery methods that emphasize convenience and may prefer vocational and certificate programs over a more

comprehensive liberal arts education (Van Der Werf & Sabatier, 2009). Students are expressing greater demands to limit courses to those that help fulfill their career objectives (Aslanian, 2005; Selingo, 2013). Many institutions have begun a practice of allowing students to consolidate credits from multiple universities. This practice will continue as institutions adapt to the needs of students. With the heavy emphasis on accelerated programs and reduction of non-core courses, many institutions have begun offering a three-year bachelors program that will greatly reduce the overall cost of a degree (Van Der Werf & Sabatier, 2009). These forces tend to create a utilitarian student in which education becomes a commodity (Aslanian, 2005). Students are not convinced that a liberal arts education is necessary for their success and many question the value of a liberal arts education over a more technical education focusing on the development of work applicable skills (Van Der Werf & Sabatier, 2009).

While the value of a broadly based liberal arts education is being challenged, many in the CCCU would argue that without a Christian context, there is no such thing as a liberal arts education (Holmes, 1987). Despite the apparent lack of value for the liberal arts, employers are increasingly indicating they value graduates who possess not only technical skills but the type of critical thinking and collaborative abilities that are often honed within the liberal arts (Urgo, 2010).

Despite the popularity of nontraditional delivery programs questions remain whether the learning obtained is as effective as residential-based education and provide the same desired institutional outcomes. Is it possible that nontraditional delivery methods have educational value outside of mere convenience and flexibility that can be extended to all students regardless of age? Younger students, who have historically

utilized traditional residential programs in their educational pursuits and are adapting their educational appetite towards nontraditional delivery methods, provide a unique glimpse in the compelling benefits of nontraditional delivery models. Moreover, the claims of CHEUs which have held themselves out as unique molders of emerging adults through a comprehensive curricular and co-curricular training centered in a four-year residential experience may be threatened if such outcomes can be delivered at a fraction of the cost through nontraditional delivery models and alternative approaches of accumulating credit units. Is it possible to achieve the aspirational outcomes claimed by these institutions using nontraditional methods that limit co-curricular experiences and courses in residency to as few as 25% of the total credits required for a bachelor's degree?

CHEUs that offer both traditional and nontraditional programs while claiming to provide the same outcomes for all students face critical questions of whether these claims are consistently valid. This issue is important as it challenges the brand identity of CHEUs as a distinctive(s) of the unique product of a Christian higher education. Organizations seek to differentiate themselves from competitors on the basis of cost leadership or product differentiation (Barney & Hesterly, 2009). A pre-eminent role of marketing is to educate and persuade customers of the value and ultimate benefits of the product (Armstrong & Kotler, 2010). This research identified the aspects that lead students to gain suitability of employment through a study of self-efficacy and employment experience in the context of different educational delivery models, CHEUs have gained insights on the relationships between the various facets of education and

suitability for employment. This evidence is valuable for marketing messaging and channel distribution strategies.

## **Definitions of Terms and Constructs**

### *Suitability, Employability and Exceptionally Employable*

For purposes of this study the terms suitability for employment, employability and exceptionally employable are synonymous and represent the qualities an undergraduate student, nearing or recently having completed their degree, possesses which *ceteris paribus* increases their demand by prospective employers. Suitability of employment rather than actual employment was emphasized due to the shifting elements of labor markets subject to business cycles. Employability measurements that are dependent on securing a job are vague and provide limited understanding of what a graduate may have gained from their educational journey (Pool & Sewell, 2007).

### *SEQ and EEQ Questionnaires*

Suitability for employment was measured using the Self-Efficacy Questionnaire (SEQ) and Employment Experience Questionnaire (EEQ) designed by Professors Peter Knight and Mantz Yorke (Yorke & Knight, 2007). The authors' developed these instruments based on their experience while participating in the Enhancing Student Employability Co-ordination (*sic*) Team (ESECT). The Higher Education Funding Council for England (HEFCE) funded the ESECT project with the purpose of helping higher education enhance student employability. ESECT's work began in 2002 and was completed in 2005 ("ESECT ToolKits," n.d.).

The SEQ measures a student's sense of self-efficacy, defined by the authors as the student's confidence that they can make a difference in the situations they face by enacting specific behavior. Individuals with a high sense of self-efficacy believe they can control the outcomes by the behaviors they exhibit, rather than being mere pawns with little influence on the results and possess a sense of personal agency. Individuals who develop a high sense of self-efficacy through their academic programs are valued by employers and possess a higher suitability for employment.

The EEQ is the second questionnaire that was used in the study and was developed with consideration of number of facets of higher education contained within the USEM model of employability: Understanding, Skills, Efficacy, and Metacognition. These four areas constitute qualities of student attainment valued by employers (Yorke & Knight, 2007).

#### *Traditional and Nontraditional Undergraduate Education Experience*

The criteria, which compose a traditional educational experience, include a residential four-year degree experience filled with rich curricular and co-curricular experiences. Nontraditional programs have two defining characteristics: (a) they are generally accelerated in terms of the number of weeks for each course compared to traditional courses with a limited number of classroom hours and (b) nontraditional educationally delivery is partially or fully reliant on technology and may entail distance learning. Some students employ nontraditional education to complete their degree after beginning a course of study using a traditional model. Degree completion programs generally utilize nontraditional methods designed to help students complete a degree while attending school part-time. Degree completion programs are built around

providing an education that is convenient and flexible to enable participants to complete a degree with minimum disruption to the other elements of their life (I.E. Allen & Seaman, 2011). The lines are becoming blurred between traditional and nontraditional education as traditional institutions seek ways to become more flexible in meeting evolving student needs by allowing students to swirl units from other institutions, easing residency requirements, and offering selective courses in an online, hybrid or accelerated nature (Selingo, 2013).

For purpose of this study, education modalities were defined as follows:

- **Traditional Christian education** is defined as full time attendance in a CHEU while living in residency and attending classes scheduled over at least a 14-week period with classroom meetings at least one time a week.
- **Nontraditional education** is defined as nonresidential attendance in face-to-face or fully online courses scheduled over no more than an eight-week period with classroom meetings of no more than one time a week and technology assisted using a Learning Management System as a key component to support the course.
- **Other education** entails community colleges, other full time non-CHEU (public or private), credit by examination, credit by experience, competency based credit, credit by advance placement or any other means in which credit units may be earned.

For purpose of this study, participants in the study will self-identify their academic cluster using the following guidelines:



- **Traditional students/programs (Residential Traditional Students)** are students aged 25 and under who have received at least 75% of their undergraduate academic program as full-time **residential** students at a CHEU.
- **Nontraditional students/programs (Deferred Professional Students)** are those students over age 25 who have received at least 50% of their undergraduate academic programs through accelerated, online or other **nontraditional education**.
- **Traditional students/Nontraditional programs (Accelerated Traditional Students)** are those students under age 25 who have received at least 50% of their undergraduate programs through accelerated, online or other **nontraditional education**.
- **Other students (Other Students)** are students who do not fall into one of the other three categories.

#### *Liberal Arts and Christian Liberal Arts*

The term *liberal arts* is evolving and has come to represent something quite different from its original context. Liberal arts is derived from liberal education, which entailed study involving classical languages grounded in Aristotle's three basic philosophies of ethics, metaphysics and natural philosophy or science as well as a grounding in logic (Altbach et al., 2011). Liberal arts education has evolved to include graduates who are human, interdisciplinary and have the ability to think critically (Ewest & Kliegl, 2012). The idea of liberal arts seems somewhat amorphous and may mean different things to different audiences. Business education has historically been considered professional education but is the leading degree offered at most independent

liberal arts colleges and universities (Ewest & Kliegl, 2012). Business degrees in aggregate are the most popular degree program with over two times the enrollment of any other degree program (Altbach et al., 2011).

The term *Christian liberal art* educated is a particular focus of liberal arts that involves educating the complete person within a specific context. A complete education of a person should include reflection and thinking; training in how to value and assess; and an appreciation of their role as a responsible agent (Holmes, 1987). Holmes also suggests that a *true* liberal arts education must flow from a true worldview.

For purposes of this study Christian liberal arts refers to the approach taken by CHEUs. Participants in the study will be asked to self-identify the percentage of their education that has been accomplished at a CHEU.

#### *Authentic Learning and Work Experience*

Authentic learning relates to experiential learning that connects learning theory with applied practice in the real world. Authentic learning experiences can include learning vehicles such as internships, case studies, capstones, start-up incubation, and consultations involving interventions into an organization to help solve a problem or exploit an opportunity. Both traditional and nontraditional programs may employ authentic learning to help students gain a better context of educational theory in applied practice. For purposes of this research, applied learning was limited to capstone courses, internships and curricular or co-curricular practicums. Participants were asked to identify the number of authentic learning experiences they have engaged during their undergraduate program.

Nontraditional programs point to the value learners achieve by attending school at the same time they are engaged in full time work. Adult learning theory suggests this context uniquely allows students the opportunity to experience greater transformation due to the immediate opportunity to practice learning in the real world (Knowles, 1988). Traditional and nontraditional students may both benefit from the simultaneous practice of working and attending courses made more accessible through emerging nontraditional delivery methods. This study considered the impact of working prior to and during the pursuit of a degree (within the context of seeking a degree) to help measure the relationship that working while attending school has on employability.

### **Statement of Research Problem**

The research identified the differences in employability among students utilizing different academic cluster that attend different CHEUs located in various parts of the country and determined the relationship between employability and the factors: CHEU proportionate attendance, number of authentic learning experiences for RTS participants, and work experience within the context of pursuing a bachelor's degree for DPS participants. The consistency of employability for all students of the institutions regardless of their chosen model of education influences the reputation and brand of the institution. In addition, the incremental impact of a CHEU education on employability is an important distinctive related to the value claims of other CCCU member and affiliated colleges and universities. If students can substitute a portion of their undergraduate programs from less expensive non-CHEU, accumulate units through credit by examination, or earn units in high school through credit by advanced placement with no

effect on the student's employability, demand for a CHEU education is likely to falter and undermines the aspirational claims of CHEUs.

### **Purpose of the Study and Research Hypothesis**

One of the importance purposes of Christian higher education is to help prepare students to contribute to the workforce. Understanding the presence of variables that correlate to higher levels of employability will help Christian higher education institutions shape their value proposition to remain relevant, competitive and sustainable in an increasingly competitive environment. The purpose of this study was to investigate differences in employability among students associated with unique academic clusters and attending comparable CHEUs using survey instruments designed to measure the impact of a student's educational experience on employability through self-efficacy and employment experience. The study identified the impact of the proportion of one's total education received from a CHEU to determine if there is a correlation between enrollment in units from a CHEU and employability. The study also compared the impact of authentic learning and work experience in the context of education for RTS and DPS respectively. The research hypotheses tested were as follows:

H1: There is a difference in suitability of employment among *Residential Traditional Students, Deferred Professional Students, Accelerated Traditional Students* and *Other Students*.

This hypothesis assumed there is a difference in employability based on the manner and modality in which a student pursues a degree that holds ramifications related to the value proposition for the different institutions considered in this study.

H2: There is a difference in suitability of employment among respective clusters of students from one Christian liberal arts university in comparison to others in the research.

This hypothesis compared the suitability of employment among students from the four participating institutions to determine if differences persist regardless of common affiliations between the four Christian liberal arts institutions. This information helped to determine if institutional choice is important when it comes to suitability of employment.

H3: There is a positive correlation between the percentage of a students' education received from a Christian liberal arts university and suitability for employment.

This hypothesis assumed one of the values of a Christian higher education is the manifestation of a higher suitability for employment by students. This relationship is important to the value proposition of Christian higher education.

H4: There is a positive correlation between suitability of employment and number of authentic learning experiences for *Residential Traditional Students*.

This hypothesis assumed that authentic learning experiences are an important component of education that manifest in higher employability.

H5: There is a positive correlation between suitability of employment and number of years of work experience in the context of education for *Deferred Professional Students*.

In a similar manner to authentic learning experience, students that work while they learn are able to apply abstract concepts in real time.

## **Significance of the Study**

The claims of a connection between employability and pursuit of an undergraduate degree are widely publicized and a core value of institutions of higher learning. CHEUs frequently publish graduate employment placement rates as an evidence of the institution's achievement. Employers, however, seem to be expecting more from graduating students beyond technical skills and are calling for educators to provide a more holistic education, normally associated with the liberal arts (Hart Research Associates, 2010). Employers are seeking employees who can hit the ground running and translate past experiences into productive work without going through an extensive orientation and training process (Harvey, 2000). Although initial jobs may be ones the graduate could have obtained without a degree, employers value the ability of graduates to grow the job and in turn expand the companies which employ them. Higher education builds personal qualities in the form of soft skills and transformative personal qualities valued by employers (Knight & Yorke, 2004).

The value of education is also a societal priority. One of the important priorities of governments is to encourage higher education to make a contribution to society by impacting the employability of undergraduate students due to the impact of human capital on national security and economic well-being (Yorke & Knight, 2007).

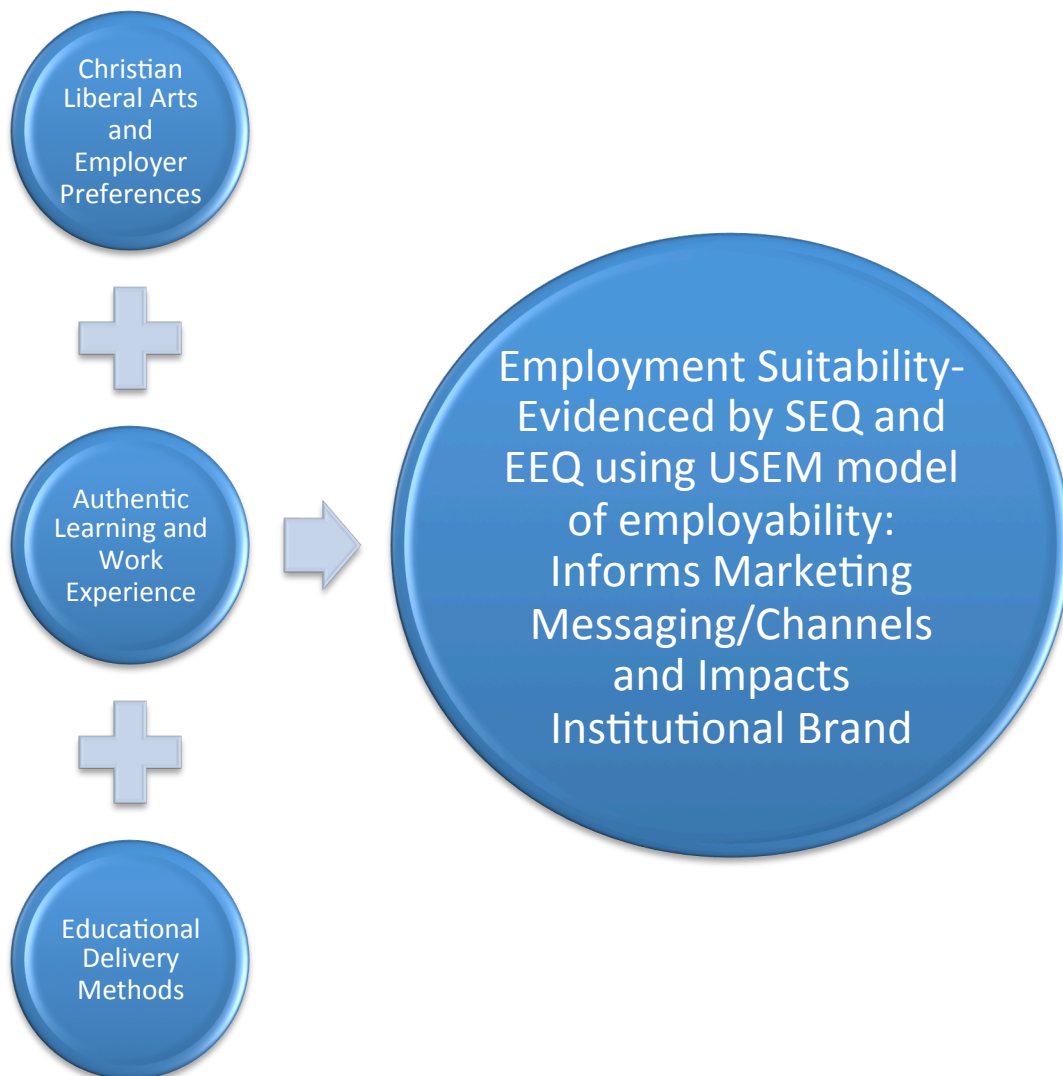
CHEUs are facing two significant issues related to enhancing student employability that threaten their value proposition. The first pertains to the contribution and importance of a liberal arts education and more specifically a Christian liberal arts education. The second relates to the veracity of claims that *all* graduates, regardless of the traditional or nontraditional means they utilize in seeking their degree, acquire equal

achievement of employability. There is an emerging debate over the equality of educational outcomes including employability for traditional and nontraditional educational modalities with some employers and students continuing to question the equivalency of an online education (Bidwell, 2013).

The implications of the role of Christian liberal arts and competing modalities of education on student employability have implications for the value claims of CHEUs that affect their brands. Branding messages are important because they suggest a promise to meet customers' expectations (Judson, Aurand, Gorchels, & Gordo, 2009). It is important to these institutions, employers they serve, and society in general that claims be validated concerning consistent employability of all graduates regardless of: the modality of their education, work experience while attending school, amount of authentic learning they complete and alternative means in which student's accumulate units necessary to complete a degree through other institutions and means of accumulating credit towards their degrees. The insights gained from this study help participating institutions in the study and others comparable institutions to identify elements of the educational process that relate to employability.

## CHAPTER 2- LITERATURE REVIEW

### Literature Map



*Figure 1.* Literature Map.



## **Christian Liberal Arts and Employer Preferences**

**Evolving definition of liberal arts.** Modern American liberal arts institutions find their foundation in the mid-1600s following the Reformation. The three initial colonial colleges were Harvard College, the College of William and Mary, and Yale College, all which sprung from and were supported by their contributing denominations and teaching a curriculum with the aim of providing their students a liberal education “which meant facility with classical languages, grounding in the three basic philosophies of Aristotle—ethics, metaphysics, and natural philosophy or science—and a grounding in logic” (Altbach et al., 2011, p. 39). Many institutions claim to provide a liberal education in which they promise to educate the whole person; help form habits of reflective thought; create life-long learners; excel in humanities, arts and sciences; and cultivate social values (Delucchi, 1997). Liberal arts colleges can also be identified by their commitment to an education ideal that includes a residential full-time education of 18 to 24 year-old students with roughly 20 majors in the arts, humanities, sciences and physical sciences and a focus of study that is less focused on professional preparation and the job market (Breneman, 1990). Chambliss and Takacs (2014) suggests students should defer selection of their major until the second semester of their sophomore year in “valorizing the flexibility of thinking that presumably comes with studying a variety of fields and perspectives” (p. 60).

Since 1975 there has been a decline in the number of bachelor’s degrees in the arts and sciences as students have increased their pursuit of vocational and professional degrees. The combined number of traditionally viewed degrees in the liberal arts is less

than those awarded in business (Altbach et al., 2011). The traditional liberal arts college is being replaced by professional colleges and universities that have a strong vocational and professional focus (Breneman, 1990). Factors that have influenced this transition include the changing demands of students who are more interested in personal economic well-being than pondering deep societal challenges; rise in prominence of private institutions with high tuition and high aid; and the expanding role of the federal government as a preeminent source of higher educational funding through grants, scholarships and loans (Altbach et al., 2011). The modern day definition of liberal arts has taken some departure from its original roots. Today's graduates of a liberal arts education are expected to balance the philosophical study of a rich liberal arts core with applied coursework, authentic learning, and internships in a more holistic curriculum design (Maier, 2014). Breneman (1990) calls institutions "liberal arts minus" that claim to be liberal arts universities and colleges but award more than 60% of their degrees in professional fields such as engineering, business, education, nursing, computer science and agriculture with the liberal arts relocated to a required general educational core. Mair (2014) emphasizes as a liberal art distinction the low ratio of students to full-time faculty and their mentoring role in helping students transition to adulthood.

**Christian liberal arts.** Unlike those that recoil from the notion of a liberal arts education in tandem with professional and vocational areas of study, Christian liberal arts institutions see compatibility between essence and function. The Christian recognizes meaning in the existence and reflections related to creation but also acknowledges fulfillment in life is enhanced through clarity of purpose often found in our vocation (Holmes, 1987). Birthright endowments given by God are given the opportunity to

flourish within meaningful professional life (Palmer, 1999). Christian liberal arts is designed to move beyond religious training, vocational preparation and pietist cultural settings to enable and prepare Christians to exist in the world of ideas and fulfill the commission to impact the world (Holmes, 1987). Scott (2007) indicates the choice of vocation and that of *calling* is one of an inner conviction that provides significance as meaningful service and is directed towards an important corporate identity that includes individuals and a larger collective body. Mair (2014) emphasizes that Christian liberal arts institutions provide the space for faculty mentoring gifted in vocational discernment in helping students work out vocational calling.

**Employers' preferences for liberal arts.** Modern society debates whether a liberal arts education is worth its cost (Spellings, 2006). The challenge in valuing a liberal arts degree is the difficulty in monetizing values which are difficult to measure, such as the impact of the student's experience on others and society (Urgo, 2010). Vocational opportunities are also influenced by completion of a liberal arts degree. Employers indicate that most hiring managers care less about a job candidate's degree and more about their ability to communicate, think critically, exercise a strong work ethic, work in teams, demonstrate initiative, utilize strong interpersonal skills, solve problems and conduct analysis. All these skills are honed in a liberal arts education (Gehlhaus, 2007).

Liberal arts degrees are especially important in light of the recent ethical failures in banking and other industries. The recent focus on technical skills in business education have led to graduates that have become detached from society needs; lacking in ethical behavior; and failing to possess the writing, critical thinking, cultural awareness

and collaborative skills often associated with the liberal arts (Ewest & Kliegl, 2012). Hart Research Association (2010) interviewed 302 employers with at least 25 employees to determine their aptitudes for job preparedness their employees received from their educational institutions in the wake of the great recession of 2007-09. Employers pointed to a need for educational institutions to help teach and develop a broad range of skills often associated with a liberal arts education in tandem with specific in-depth skills and knowledge associated with a particular major or occupation. “Employers want their employees to use a broader set of skills and have higher levels of learning and knowledge than in the past to meet the increasing complex demands they will face in the workplace” (p. 1). Many employers bemoan that educational institutions are not adequately preparing graduates for the complex needs of an increasingly global market place, including a broad understanding of human culture and the physical and natural world. Ewest and Kliegl (2012) assert the marginalization of the liberal arts is a contributing factor to the recent lapses in moral and ethical behavior of business leaders.

More recently, Hart Research Associates (2013) specifies 93% of employers surveyed indicate they are more concerned with a candidates’ ability to think critically, clearly communicate, and solve problems than the specifics of their degree and they believe educators should focus on five key learning outcomes: “critical thinking, complex problem solving, written and oral communication, and applied knowledge in real world settings” (p. 2). Although students with traditional liberal arts degrees often are forced to take lower initial salaries they often catch or exceed the salaries of those with a professional degree in the first few years of employment (Gehlhaus, 2007).

## **Authentic Learning and Work Experience**

**Definition and characteristics of authentic learning.** The gap between knowing and doing has been a traditional challenge facing all levels of education (Resnick, 1987). In the last two decades the emphasis on education has shifted from an accumulation of knowledge to an integration of knowledge, skills and personal attitudes as employers' demands have escalated in their expectations for competencies among recently graduated job candidates (Gulikers, Bastiaens, & Martens, 2005). Companies articulate that although students have a lot of knowledge, they lack the skills and are not trained or experienced to address real world problems (Bastiaens & Martens, 2000). Authentic learning is designed to help address these concerns by stimulating student engagement and providing opportunities to obtain the necessary experience graduates will need in their professional practice (Herrington & Oliver, 2000).

Authentic learning is a special type of learning that focuses on solving real-world complex problems using “role-playing exercises, problem-based activities, case studies, and participation in a virtual community of practice” (Lombardi, 2007, p. 2). Renzulli, Gentry, and Reis (2004) indicate four criteria that should be met by authentic learning: (a) students should investigate problems that occur in real life that solicits an emotional commitment as important to the student, (b) the problem should be open-ended and subject to multiple approaches, (c) students should be driven by the desire to initiate change and improvement in the status quo, and (d) the exercise focuses on an audience that exists in the real world. Other key elements of authentic learning is the student are placed in the unique position of researcher and initiates the learning with the instructor taking a role of mentor or consultant (Rule, 2006). The traditional pre-adult model of

education places teachers in the center of the classroom as dispensers of knowledge, whereas authentic learning places the responsibility for fettering out new knowledge squarely on the student with the instructor relegated to the role of mentor and advisor (Bastiaens & Martens, 2000).

Lombardi (2007) indicates that education has traditionally addressed easily obtained skills such as remembering, understanding and applying, and ignored the more important skills of analyzing, evaluating and creating. She indicates that higher education should seek to achieve all four domains of learning including *cognitive capacity* related to problem solving; *affective capacity* related to valuing and empathy; *psychomotor capacity* related to the application of physical activity; and *conative capacity* related to the will to act and commit.

Authentic learning occurs at the nexus of workplace or real world problems; issues that are personally important to inquiring students and academic processes of inquiry and research. Seven characteristics of authentic learning include learning that is student centered; accessing of both academic and non-academic resources; students as inquirers engaged in a scientific process; original data drawn from the real world; activities that promote lifelong learning beyond completion of an assignment or course; legitimate review of the process, product or performance; and elements of community collaboration (Callison & Lamb, 2005). Lombardi (2007) stresses the *portability* of skills acquired from authentic learning including: the *judgment* to discern reliability; the *patience* to endure longer solutions; the ability to *synthesize* and recognize patterns; and the *flexibility* to integrate across diverse cultures and disciplines.

Four reoccurring themes that emerge from the literature include (a) real world problems that are found in the work place and have an audience beyond the class room, (b) the use of metacognition to address open-ended questions, (c) the processes entails a community of learners, and (d) students are compelled through the strength of their own personal interest in the exploration and control of the process (Rule, 2006). The research reinforces the value of authentic learning as an instrument of learning designed to help students apply complex concept to real world problems.

**Real world problems in context.** Real world problems may seem obvious as we are surrounded with the type of intractable challenges which constantly distract us from achieving our idealized societal objectives, but to properly achieve the ends of authentic learning the exercise must have a possibility of impacting lives beyond the student investigator(s) (Renzulli, Gentry, & Reis, 2004). Using resources beyond those normally found in the school itself increases the chances of real-world impact (Callison & Lamb, 2005). Abstract knowledge acquired in education is difficult to retrieve and apply to real-life situations (Herrington & Oliver, 2000). For authentic learning to be effective, the task itself must be located either physically or virtually within a context that replicates the real world environment to help move students from knowing to doing.

When learning is separated from the application context, learners begin to see education as an end unto itself rather than a means to apply to real world situations (Cole, 1990). Cognitive apprenticeship is based on the theory of “situated cognition or situation learning” and argues students learn best when they are engaged in a real-world setting and have access to others with relevant experience and knowledge as perceived experts (J. S. Brown, Collins, & Duguid, 1989). Resnick (1987) promotes the idea of “bridging

apprenticeships” to help fill the gap between theory acquired in the educational process and practice needed in the real world. In order for authentic learning to be effective, it must replicate real world issues and occur within a real world context through simulation or applied practice. “The activity in which knowledge is developed and deployed, it is now argued, is not separable from or ancillary to learning and cognition” (Brown et al., 1989, p. 32).

**Metacognition and open-ended questions.** Metacognition is defined as thinking about one’s own thinking and is an important element in authentic learning with vocational implications as students consider their knowledge gaps (Scott, 2000). Students with exposure to metacognition processes outperform their peers who did not enjoy such benefits (Kramarski, Mevarech, & Arami, 2002). Educational processes that foster creativity and critical thinking facilitate students’ exploration with the type of ambiguous problems found in real life (Rule, 2006). Thinking out loud and reflecting on the process are educational practices that encourage students to challenge presuppositions and enable students to expand on their own capabilities to solve complex problems with unique solutions (Block & Israel, 2004).

**Community.** Authentic learning requires interaction and discourse among a community of learners as well as enculturation in the community that surrounds the real life situation. The learning community is able to poise new hypotheses and critically examine competing explanations through collaboration and exploration while at the same time students are exposed to the specific language, culture and social mores of the community in which the applied learning occurs (Rule, 2006). Situated learning (J. S. Brown et al., 1989) enables the apprentice to observe the practices and move from the



peripheral to the intimacy of membership. Enculturation may not seem to have a lot to do with learning, but it is foundational to our personal development as we assume different roles in life. The socialization process builds on the premise that learning is as much social as cognitive. Authentic learning is a high tech evolution of apprenticeships in which learners are called into their trades through immersion (Lombardi, 2007).

Another important aspect of community implies that authentic learning apprenticeships are less effective when separated from the abstract application of knowledge (Wineburg, 1989). Authentic learning exercises must be more than simple company training (Bastiaens & Martens, 2000). Authentic learning exercises that provide exposure to both a community of learners and the culture of the context appear necessary to move from knowing to doing.

**Student empowerment and autonomy.** Authentic learning experiences must represent an issue of personal importance to the learner if they are to be empowered and effectively apply abstract thinking to real world situations. Renzulli et al. (2004) indicates the nature of the task must be applicable to the learner's personal frame of reference and sufficiently open-ended to engage the student. Lombardi (2007) indicates that learners look for connections when they approach a subject for the first time and determine the relevance to their own situation and experience. Callison and Lamb (2004) indicate authentic learning must be student centered. Lombardi (2007) stresses authentic learning experiences require a sustained investigation entailing a substantial investment in time and intellect by the student/researcher. Motivation for the student is imperative to maintain the patience required for ambiguous problems.

When students have greater levels of autonomy and are required to direct their own learning they are more likely to be invested in an authentic learning project.

Callison and Lamb (2004) indicate authentic learning requires the students to serve as scientific apprentices which obligates the student to design the process for gathering and assessing information. Rule (2006) indicates the teacher assumes the role of mentoring and helping the student procure resources rather than merely disseminating knowledge.

### **Educational Delivery Methods**

Since the mid-1980s, there has been a significant shift away from traditional residential, face-to-face education in favor of various forms of distance aided education including online, hybrid, distance learning, accelerated and other technology aided delivery methods. Higher education has become what is known in the business world as a mature industry and is subject to an infusion of new innovation if individual institutions are to survive and thrive (Spellings, 2006).

**Traditional residential education.** It is difficult to define the traditional residential experience because what is entailed varies among the participants and there is an intangible element of higher education that remains elusive (McKeown, 2012).

According to Altbach et al. (2011), the modern American university derives its roots from the European university model, first established in the twelfth century in Italy and France in which the preeminent element was the autonomy and central focus of the professor. A dividing aspect of modern day education relates to what some call the full educational experience in which students are immersed 24 hours a day in curricular and non-curricular activity designed with some care to assisting emerging adults become

contributing members to society. Three aspects of a traditional educational experience include educational, social, and extracurricular aspects (McKeown, 2012).

Increasing employability of students is an important priority of higher education. Forty-seven percent of the public believe the purpose of education is to accrue workplace needed skills and 50% of college presidents see the primary role of education to provide specific training for a career or profession (Taylor et al., 2011). Popular models of employability emphasize the importance of acquiring skills necessary for success in the workplace (Pool & Sewell, 2007; Yorke & Knight, 2007). Students have a general sense that a college degree will lead to additional life-time earnings, regardless of the degree they choose (Taylor et al., 2011).

Students are also interested in the social aspects of their education experience facilitated through a traditional residential experience. Friendships and relationships are important to students, and many comment that they were able to succeed in challenges due to encounters with the right person, reinforcing the notion that much of college is about more than academics (Chambliss & Takacs, 2014). The full college experience goes beyond intellectual and includes a social component (McKeown, 2012). Around 40% of the public and about half of college presidents believe the primary purpose of education is to help students grow personally (Taylor et al., 2011). Many students see college as a rite of passage where they develop their own sense of personal responsibility and form lifetime relationships leading to persistent networks which extend well beyond their time at school (McKeown, 2012).

Extracurricular components of the college experience are also important to the full college experience. Participation in fraternity and sororities, club membership,

college sports, service projects, and participation in cultural events may all contribute to one's college experience and provide an important element of adult formation (McKeown, 2012). Greek house members are more likely than nonmembers to contribute in community service, complete college, and become leaders in society (Dukceovich, 2003). Extracurricular participation is also important in the development of brand communities where alumni are more likely to contribute to their alma mater, wear brand apparel and recommend the institutions to others (Judson et al., 2009).

With all of the potential advantages of traditional education, there remain questions concerning the cost and value of an undergraduate degree. Secretary of Education Spelling (2006) called for educational reforms in her report about the state of U.S. higher education:

...this commission believes change is overdue. But when it comes—as it must—it will need to take account of the new realities that are sometimes overlooked in publish discussions about the future of higher education...As higher education evolves in unexpected ways, this new landscape demands innovation and flexibility from the institutions that serve the nation's learners. (p. xi)

**Shifting supply forces in higher education.** Higher education has experienced dramatic growth over the last 100 years in the number of institutions of higher learning increasing from 977 in 1900 to 4,182 in 2000 (Altbach et al., 2011). In 2013 the number of institutions claiming to be colleges or universities had swelled to over 5,000 with annual revenues of \$490 billion, total assets of \$900 billion and employing 3.5 million people (Selingo, 2013).

The advancement of for-profit universities and colleges in higher education has contributed to the increase in the number of institutions. Once thought of as fledging upstarts intent on selling the university brand to a global audience (Altbach et al., 2011), for-profits now hold a strong and influential position in higher education. The University of Phoenix boasted a student population of nearly 400,000 in 2009 with revenues in excess of \$3-billion. For-profit colleges experienced a 410% increase in the number of bachelor's degrees granted over the 10 year period ended 2005-6 (Van Der Werf & Sabatier, 2009). Students are seeing education more and more from a consumer perspective and care little about the distinctions that preoccupy academic establishments such as whether the institutional identity is for-profit or nonprofit and whether classes are delivered online or in a traditional classroom (Spellings, 2006).

In the last few years, for-profit institutions have experienced contracting enrollment. Enrollment has declined year over year for the last six consecutive semesters from fall 2013 to spring 2016 with drops ranging from a low of .4% in fall-2014 to a decline of 13.7% in fall 2015, while enrollment has been stable with relatively small changes of between .3% declines to 2% increases for 4-year public and private non-profit institutions. Overall year-over-year enrollment declined 1.4% in spring 2016 (National Student Clearinghouse Research Center, 2016).

In spring 2016 there were a total of 18.3 million students enrolled in higher education with 42% in four-year public, 31% in two-year public, 20% in four-year private, and 7% in four-year for-profit (National Student Clearinghouse Research Center, 2016). Although the for-profit institutions share of national enrollment has declined,

their innovative approach to educational delivery continue to influence the way education is delivered.

The expansion and availability of technology manifesting itself through podcast, email, online classes and open-source learning management systems have enhanced nontraditional education methods. These newer approaches have given students attractive, convenient alternatives to traditional educational models. In 2011, nearly 80% of public institutions, 55% of non-profit and 70% of for-profit institutions indicate online (technology aided) education is critical to the institutions' long-term strategy (I.E. Allen & Seaman, 2011). The number of institutions that offer online courses is also increasing quickly as one in five institutions that offer online courses initiated this process since 2007. Institutions are expanding technology aided courses because students are demanding them (Van Der Werf & Sabatier, 2009) .

**Defining technology enhanced education.** The term online education has become ubiquitous as a representation for a range of nontraditional educational delivery methods that utilize various technologies in their course management. Delivery methods of education now fall in four categories including:

- Traditional- no online technology is used and content is delivered in writing or orally.
- Web facilitated-between 1% and 29% of content is delivered online and may use a course management system (CMS) or web pages to post syllabus and assignments.
- Blended/hybrid- between 30% and 79% of content is delivered online with a substantial portion of content delivered through technology and may typically use

online discussions with a reduction of the number and time period of face-to-face contact with students.

- Online- in excess of 80% of the course is delivered through technology aided devices (Allen & Seaman, 2011).

**Adjunct instructors and nontraditional education.** Traditional education has historically been centered on tenured professors and their autonomy in influencing the curriculum (Altbach et al., 2011). Chambliss and Takacs (2014) indicate faculty who invite students into their home can become lifetime role models and they along with others encountered during college are more important than the programs because the people are alive, dynamic and can adjust to varying needs and interest of individuals in the community. “Students said their best teachers are: (1) exciting; (2) skilled and knowledgeable; (3) accessible—easy to find, available, and approachable; and finally (4) engaged” (p. 47). At the core of liberal arts education is the relationship between professors and the students they shape and mentor (Maier, 2014), but educational institutions like many other industries have increasingly gone to part-time, temporary labor to combat rising costs (Bettinger & Long, 2010). Part time non-tenure track adjunct instructors are paid a fraction of their full-time counterparts and generally receive no benefits (Bichsel, 2016). As of 2011, part time instructors slightly exceed full time faculty engaged in teacher higher education (National Center for Educational Statistics, 2012).

Nontraditional education is frequently delivered online and requires considerable time and effort in the development of curriculum that may be prescribed and reused for future sessions of the course. Faculty report the effort for development of curriculum and

the process of teaching of an online course are greater than a comparable traditional course; sense a lack of overall support from their institutions in their development efforts; and question whether student outcomes are equivalent in an online delivery. At the same time instructors are motivated to meet student access issues, and less-experienced instructors may be motivated by additional compensation, pedagogical advantages, and opportunities for professional development (Seaman, 2009).

Adjunct instructors' impact on student outcomes is not a well-researched topic. Ehrenberg and Zhang (2005) stress the use of part-time adjuncts is associated with lower persistence and graduation rates among students. Bettinger and Long (2006) found adjuncts can have a particularly negative impact on second-year persistence indicating the sensitivity of first-year students to part-time instructors as 35% of introductory courses at selective colleges are taught by part-time instructors or graduate students. Despite concerns about retention and graduation, Bettinger and Long (2010) found older practitioner instructors, who are likely to have greater professional experience, have a significant impact in positively influencing student interest in specific disciplines leading to students shifting their selection of major or taking additional courses related to the adjunct's professional field. These findings on adjunct instructors are consistent with what is often observed with traditional full-time faculty. Chambliss and Takacs (2014) in their eleven-year longitudinal study of Hamilton College report that alumni indicate a few faculty members had a disproportionate impact on their overall experience at the college. These findings seem to indicate that impactful faculty have less to do with the full time status and more to do with personal characteristics and qualities.



**Factors impacting growth in nontraditional programs.** Online and technology aided courses have continued to grow at a pace well in excess of traditional education. This growth was initially fueled by the quest to reach nontraditional audiences such as minorities, rural populations, woman and working adults (Altbach et al., 2011). Nontraditional education has given access to diverse groups of students who through social, cultural or economic reasons were traditionally challenged in accessing higher education (Schuetze & Slowey, 2002).

The adult population has been an important factor in these program delivery shifts. In 2011, estimates indicate 21% of the 25-34 year olds in the United States had started college but not completed an undergraduate degree. This group is represented by about eight million individuals who may return to college (Schatzel et al., 2011). The number of adult learners increased from 1990 to 2007 by an annual growth rate of 20% and is projected to continue to grow at a double digit rate through 2020. Students in the age range of between 25 and 44 are anticipated to be the fastest growing group over the next decade (Van Der Werf & Sabatier, 2009). Overall, 111 million adults in the United States do not hold a college degree and see cost as the primary obstacle (Kelly, 2015). Although many students are anxious to begin a course of study many struggle to complete their program. Over the last 20 years, 31 million students having enrolled in college but left without receiving a degree or certificate (Shapiro et al., 2014) and 400,000 United States students drop out of their programs every year (Selingo, 2013).

Adult learning theory is linked to nontraditional education. Adults are a diverse group and it is difficult to arrive at any single metaphor that accurately represents this population of students (Kiely, Sandmann, & Truluck, 2004). Adult learning has been

described as a multi-colored and multi-faceted kaleidoscope (MacKeracher, 2004) and a maze that must be navigated to determine the unique credos of individual adult learners (Merriam, 1988). Adult learners require a unique approach to education that differs from the pedagogical theories utilized in the education of children. Knowles (1988) introduced the term andragogy as the “art and science of teaching adults” (p. 20) and identifies six characteristics uniquely manifest in adult learners:

- tend to see themselves as more responsible, self-directed and independent;
- possess a more diverse stock of knowledge and experience from which to draw;
- developmental and real-life responsibility determine readiness to learn;
- have a problem-solving centered context and relate education to their current life situation;
- possess a strong need-to-know orientation of the reasons for learning concepts; and
- tend to be more internally motivated (Knowles, 1988).

Technology also serves to decrease the differences associated with age. Younger students are pursuing nontraditional programs and find they have more in common with adults than a few years ago. Many younger students value the features of nontraditional programs for the same reason as older adults (Aslanian, 2005). In general, students are attempting to reduce the amount of time invested in their education as fulltime students have reduced their weekly commitment to education from 40 hours in 1961 to about 25 today, and the number one reason for leaving school is given as the need to work (Altbach et al., 2011).

One of the essential prevailing themes of emerging student demand for higher education is the need for flexibility and convenience. More students are demanding online, part-time, the opportunity to take courses from multiple universities, and limitations on course requirements. The number of students taking at least one online course has increased from \$1.6 million in 2002 to \$6.1 million in 2010 and total enrollment in degree granting institutions increased only 18% while online enrollment increased 381% (Allen & Seaman, 2011).

Traditional four-year institutions of higher education face flat or declining enrollment (National Student Clearinghouse Research Center, 2016; Schatzel et al., 2011). Students are looking for new options reflecting their changing needs. Students want to start courses at various times in the year and be able to interrupt their education with no penalty. Students are demanding three-year programs, technology aided and stronger vocational emphasis. Some institutions predict traditional residential enrollment will decline to about half of total enrollment in higher education by the year 2020 (Van Der Werf & Sabatier, 2009).

Another important factor for the nontraditional learner is options in curriculum and course selection. Many nontraditional students see less value in a broad liberal arts education and are opting for vocational and certificate programs. Nontraditional students value educational options which provide flexible program design (Van Der Werf & Sabatier, 2009). In 2005, the number of adult students enrolled in non-degree courses was 30%. This proportion will continue to increase as students seek flexibility to select only those courses that help fulfill their career objectives (Aslanian, 2005). Many institutions have begun a practice of allowing students to consolidate credits from

multiple universities. This practice, known as *swirling* (Van Der Werf & Sabatier, 2009), will continue as institutions adapt to the needs of students with many students opting for a cafeteria approach and taking courses from multiple institutions before obtaining a degree or credential (Spellings, 2006). With the heavy emphasis on accelerated programs and reduction of non-core courses, many institutions will seek to offer a three year bachelor's program which will greatly reduce the overall cost of a degree (Van Der Werf & Sabatier, 2009). These forces tend to create a utilitarian buyer mentality in which education becomes a commodity (Aslanian, 2005).

Another factor supporting online and nontraditional education is the rising cost and declining perception of value of a traditional education. Over the last decade, tuition and fees have outpaced inflation by an average rate of 4.2% at private four-year institutions and the tuition cost of the most expensive private institutions is on pace to exceed \$70,000 by the year 2020 (Van Der Werf & Sabatier, 2009). Cost increases for traditional higher education have outpaced personal income. Although lower-income families have experienced the greatest challenge in meeting college costs, all income categories have seen an increase in the percentage of their income going to education (Vander Schee, 2010). Government is also asking questions related to accountability for cost increases and the value of student outcomes as well as the true cost of college education where most students pay less than the official price before scholarship and discounts (Spellings, 2006).

Nontraditional programs including accelerated, online and distance learning in the past have been less susceptible to price issues due to their convenience, flexibility and access. The University of Phoenix charges essentially the same amount for online

courses as other program offerings and offers no institutional aid other than financial aid. At about \$14,000 a year for tuition in 2009-10 for-profit institutions are equal or higher to most public and many private non-profit institutions (Krakovsky, 2010). The average private institution listed tuition was \$23,000 in 2008-09 but on average students received institutional aid of 42% (Vander Schee, 2010). Cost increases are an important factor driving the growth of nontraditional education; however, nontraditional students are less interested in tuition rates and more interested in convenience, flexibility, accelerated programs and relevant courses. As online and nontraditional education becomes more accessible, there will be added pressure to lower prices due to increased competition and alternatives for students.

A rising level of comfort with technology by average consumers is also supporting the growth in online and technology aided education as evidenced by the explosion of social media. At the end of 2015 there were a total of 1.96 billion social media users, led by 1.5 billion Facebook users (Vaynerchuk, 2016). Social media plays a place not only in the classroom in delivering curriculum in an interesting and engaging manner, but in the recruitment process to initially engage and inform prospects.

Online and technology aided courses currently coexist with the traditional physical university. Traditional universities with a physical presence and virtual universities or some combination of the two are the alternative means for delivering nontraditional education (Roszkowski & Reilly, 2005). Students are expressing an increasing demand for technologically delivered education but institutions will continue to need a physical presence to assuage the concerns students may have over the institutions legitimacy. There is evidence the most popular form of learning will come

from a hybrid combination which utilizes the many benefits of technology with the difficult to replace personal interaction of face-to-face learning (Van Der Werf & Sabatier, 2009). Clinefelter and Aslanian (2015) report about half of online students are open to attending low-residence classes; many are interested in on-campus activities, classes and residences, and about a fourth find optional on-campus courses attractive.

### **Employability and Suitability for Employment**

Employability relates to the accumulation of unique qualities valued by employers. Employability goes beyond the ability to land a job. Employability is based on a candidate being suitable for employment regardless of the unique circumstances surrounding a job search. Employment is subject to many external factors including shifting economic cycles and discrimination in the workplace. Suitability of employment rather than actual gaining employment is emphasized due to the shifting elements of labor markets subject to business cycles (Knight & Yorke, 2004). Employability measurements that are dependent on securing a job are vague and provide limited understanding of what a graduate may have gained from their educational journey (Pool & Sewell, 2007). To be effective, higher education must foster the development of core or personally transferable skills that can be useful in multiple contexts such as the ability to work with others, communicate, and solve problems (Bennett, Dunne, & Carré, 1999).

Knight and Yorke (2004) identified seven potential meanings of employability including (a) getting a job; (b) possessing desired vocational skills; (c) possessing key skills known sometimes as soft or interpersonal skills; (d) formal past work experience; (e) non-formal or voluntary work experience that replicates work experience; (f) skillful

career planning and interview techniques; and a holistic combination of achievements, understanding and personal attributes that contributes to gaining a position and finding fulfillment in one's work. A more comprehensive definition of employability must address more than the simple process of gaining a job.

**Models of employability emphasized in higher education.** One of the earlier models of employability is the DOTS model developed in the United Kingdom (Law & Watts, 1977). The DOTS model is valued for its simplicity and ability to communicate a meaningful basis for employability for non-experts, especially students and their parents (Pool & Sewell, 2007). The DOTS model consists of four parts: (a) decision learning, related to developing decision making skills; (b) opportunity awareness, knowing the emerging work opportunities and minimum qualifying standards; (c) transition learning, ability to effectively search for and present oneself in an effective manner; and (d) self-awareness, related to one's personal awareness of interest, abilities and values.

Although the DOTS model continues to be popular, a major shortcoming relates to self-fulfilling aspects of work and the long-term sustainability of employment. The mechanistic aspects of the model fail to fully embrace the more sophisticated aspects of employability related to social, political and interpersonal elements of work (McCash, 2006). Law (n.d.) in a briefing published by the National Institute for Careers Education and Counselling (NICEC) provides a response to DOTS critics from one of the original authors. In the brief, Law adds four stages of learning: (a) sensing, related to knowing oneself and the world of work; (b) sifting, an inner conversation of findings, comparing alternatives, and opening communication with others; (c) focusing, identifying the factors that are personally attractive, envisioning other possibilities for exploration, and

appreciation for the process as leading to a valuable outcome; and (d) understanding, explaining past action, anticipating the impact of future action, and supporting one's intended future action in communicating to others. These four aspects of learning relate to each component of the new DOTS model and help to reinforce that employability must include getting and keeping fulfilling work.

Bennett et al. (1999) proposed a model that emphasized five elements: (a) knowledge of disciplinary content; (b) skills needed in the discipline; (c) awareness of the workplace; (e) experience in the workplace; and (f) general or generic skills. This model includes many of the aspects of the DOT model, but suffers from some of the same inadequacies regarding personal manner. Pool and Sewell (2007) proposed their "CareerEDGE" model which provides five components of employability including: (a) developmental learning needed for one's career; (b) experience one gains from work and life; (c) degree specific knowledge, understanding and skills; (d) general skills; and (f) emotional intelligence. According to the authors, the role of higher education should be to provide these five components and the opportunity for reflection and evaluation; leading to crucial employability qualities of self-efficacy, self-confidence and self-esteem.

Yorke and Knight (2007) offer another model of employability in the USEM model. The four components of the USEM model include a broad base of *understanding* or knowledge, which emanates from a strong undergraduate degree; general and specific *skills* and the ability to use them; *self-efficacy* beliefs in recognizing and properly valuing what makes one effective as well as other interpersonal qualities; and *metacognition* in reflecting on how one best learns. The USEM model shares the simplicity of the DOTS



model, but takes into account personal aspects of the employed important to gaining fulfilling work that is sustainable similar to the CareerEDGE model and Bennet et al's (1999) five aspect model. The USEM model focuses on the aspects of individual workers known to be broadly valued by employers (Yorke & Knight, 2007).

**Comparison between USEM and CareerEDGE.** USEM and CareerEDGE are the most robust employability models with consideration for individual skills and personal dynamics. One important aspect of both models related to generic skills. Pool and Sewell (2007) see generic skills as core skills that are transferable. Bennet et al. (1999) defines these skills as: "...the skills which can support study in any discipline, and which can potentially be transferred to a range of contexts, in higher education or the workplace" (p. 76). Generic achievement falls at the other end of the spectrum from literacy and is based on the concept of self-efficacy and metacognition in which students individually begin to recognize and practice the specific skills that lead to broad measure of success, regardless of the context (Knight & Yorke, 2004). Generic skills include creative and flexible, independence and autonomous, strong communication skills, ability to collaborate and work well with others, decisive and responsible, ability to work with numbers, good organization and time management skills, technologically proficient, and enterprising and entrepreneurial (Pool & Sewell, 2007). Yorke and Knight (2007) see skills as the ability to integrate what one knows with what one does and relates closely to the concept of authentic learning.

Pool and Sewell (2007) reference Emotional Intelligence (EI) or Emotional Quotient (EQ), popularized by Goleman (1995) as another element of their employability model. EI relates to one's ability to correctly judge the emotions of oneself and others

and properly interpret and manage the emotions relative to the complexity of the circumstances. Emotional Intelligence carries a significant weight in popular models of employability given the rising emphasis on softer skills and the greater likelihood for human interaction in the workplace (Goleman, 1995). The USEM model also recognizes Emotional Intelligence as an important element contained within the other personal qualities of the *efficacy* aspect and emphasize the need for graduates to have well developed emotional intelligence competencies to enhance their employability (Knight & Yorke, 2002).

Pool and Sewell (2007) include *career development learning* as an element of their employability model and emphasize academic programs should help students become more self-aware of their unique interest in seeking positions that suit their personal manner to obtain personal fulfillment. In addition, the ability to communicate effectively through applications, resumes and personal interviews are essential job seeking skills inherent in any concept of employability. Experience in work and life are additional elements of the CareerEDGE model, emphasizing the advantage graduates with life experience have over those without. Life and work experience should be facilitated through the curriculum to fully enhance a student's employability (Pool & Sewell, 2007). The USEM model includes both career development learning and experience in work and life as *skills* one should acquire through the educational journey (Yorke & Knight, 2007).

**Self-efficacy and theories of self.** The CareerEDGE model infers students reflect and evaluate on the five core elements of the model in a process that leads to self-efficacy, self-confidence and self-esteem (Pool & Sewell, 2007). USEM includes

efficacy and metacognition as comparable elements of the two models (Yorke & Knight, 2007). Self-efficacy and metacognition relate to motivation, and theories of self. Self-theories are based on the premise that individuals have different ways of organizing meaning from their experiences, and these beliefs about themselves can influence how they view and act in situations leading to disparate outcomes despite facing identical situations (Dweck, 2000). Theories of self suggest that a major factor of employability has to do with one's personal beliefs and individuals' approaches to circumstances in their world.

Knight and Yorke (2004) indicate personal qualities pervade employability in things such as interpersonal contact, disposition to complete a task, taking of initiatives, and the ability to sustain a difficult task. These qualities are important in influencing one's employability. Personal qualities may also impact the ability to acquire discipline specific content and the development of all skills valued by employers represented by such qualities as a willingness to learn and patience to endure the anxiety of ambiguity (Yorke & Knight, 2007). Efficacy beliefs that are particularly relevant to employability include mastery experience, vicarious experiences through social models, and social persuasion (Bandura, 1997). Mastery experience occurs when individuals are granted autonomy to conduct a task independently and according to Bandura (1997) is the most effective way of creating a strong sense of self-efficacy.

Vicarious experiences occur in education through the social process as students see each other succeed and draw from each other's personal experience in clarifying activity that leads to success. Student presentations and alumni visits can all serve as vicarious experiences to help reinforce effective action necessary for success. Social

persuasion may occur in higher education through mentoring as students are encouraged of their personal mastery of a specific activity (Bandura, 1997).

Pool and Sewell (2007) add self-confidence and self-esteem to self-efficacy as manifestations of employability. Self-confidence relates to one's personal manner and behavior. Goleman (1995) indicates people with self-confidence have presence as they present themselves with self-assurance. Self-confidence is considered a life-long trait that remains stable over time. Although the trait may be somewhat static, situational self-confidence can be developed through an intentional approach (Norman & Hyland, 2003). Self-esteem is seen as self-respect and exhibited through an accurate personal reflection. Without a realistic perspective of attributes and weaknesses, individuals can be plagued by overconfidence and discrepancies between perceptions and capabilities (Owens, 1993). Having a high level of self-esteem suggests the ability for graduates to connect an accurate self-assessed inventory of capabilities with the confidence of understanding how to grow to overcome one's deficits (Pool & Sewell, 2007).

Although the USEM and CareerEDGE models of employability use different terminology, their meanings are similar. Yorke and Knight (2007) state when discussing the relevance of self-efficacy on measuring employability, "...it was important that students should (where appropriate) be encouraged to develop higher levels of self-efficacy (broadly, the confidence that one can, on balance, 'make a difference' in situations through persistence and strategic thinking) and to develop their awareness of the significance of malleability in self-theories" (p. 160).

**Employer's perceptions of employability aspects.** Employers are continuing to face economic pressures that manifest themselves through downsizing in an attempt to

become leaner and more competitive, delayering by removing unnecessary layers of middle management, and initiating more flexible contractual arrangements including part and short-term work, outsourcing and working from home. These forces have impacted graduates in four ways: ambiguity in graduate jobs, greater flexibility in employment contracts, contractual arrangements, ability to collaborate in teams, and less clarity on career progression (Harvey, 2000). As higher education considers their role in enhancing student employability in light of these challenges, the question of employer's perceptions of desirable qualities for perspective employees takes on enhanced importance.

Knight and Yorke (2004) maintain that although employers will often talk about a desire for job candidates to come with skills with application beyond vocational skills. When employers are questioned about the meaning of skills, the term opens up a wide array of interpretations. Hart (2006) reports 56% of business executives believe higher education should provide both a well-rounded broad based education with general skills applicable to multiple fields and knowledge and skills applicable to specific work opportunities.

Knight and York (2004) indicate employers see the challenge of higher education and employability in three areas: transitions, translations and transformations. Transitions relates to the challenge of taking academic knowledge and applying it to the context of the types of problems faced in the world of work (Bastiaens & Martens, 2000). Book knowledge is very different from the procedural knowledge, and skills associated with professional life in which specialized forms of knowledge and common sense are developed in the context of the work (Knight & Yorke, 2004).

There is also the challenge of translation in which experience is applied to a new and different context. Achievement in academics, authentic learning experience and even past work experience do not necessarily dictate success in future employment.

Employers are interested in the learning from the experience and the ability for students to translate the experience into achievement in another context (Knight & Yorke, 2004).

Initial jobs for graduates may be ones they could have acquired without a degree in which case the graduate's task may be to grow the job. Employers are less willing to provide extensive periods of integration and internal training and will expect the graduate to translate past experiences and quickly become productive (Harvey, 2000).

Lastly, employers are interested in the transformation of students to acquire a complex set of diverse qualities that go beyond high grades and academic recognition. Employers value a diverse set of qualities including, "soft skills, personal qualities, dispositions and other achievements" (Knight & Yorke, 2004, p. 16). Harvey (2000) states more and more employers in light of tightening labor markets are less concerned with the degree earned and more concerned with other interactive and personal qualities.

Personal attributes are attitudes and abilities including intellect, knowledge (in some cases) willingness and ability to learn and continue learning, ability to find things out, willingness to take risks and show initiative, flexibility and adaptability to respond, pre-empt and ultimately lead change and 'soft skills' such as self-motivation, self-confidence, self-management and self-promotion. (p. 8)

## **Marketing Employability in Higher Education**

**The market identity of higher education.** A degree in higher education falls under the category of a service in which the product is intangible, heterogeneous, perishable, inseparable from the provider, and the customer (student) is an essential element of the selection and consumption (Canterbury, 2000). The uniqueness of the value of a college education is the lifetime benefits that may accrue to its recipients, one of which is enhancing employability. Higher education delivers values that are hard to compare to other goods or services due to:

- the uniqueness of the decision with a lack of full understanding of the ramifications;
- the pervasive influence of the all aspects of the institution during the college experience;
- human development issues may constrain and influence the process;
- the college choice is so significant it may lead to a lack of rational openness to the choice of which institution to attend;
- educational institutions assume students lack the capability to choose wisely;
- the family life of students is significantly altered; and
- what a buyer is choosing remains somewhat veiled and ambiguous (Canterbury, 2000).

**Higher education as a social good or commodity.** Higher education is struggling in conflict with their identity to produce wisdom or utility based primarily on a past dependence on government funding and a perspective that the product of education

is primarily a social good rather than a private good (Gibbs & Maringe, 2008). This tension began in the 70s following the space race of the 50s and 60s when government funding flowed to colleges and universities for capital projects, research and new programs associated with emerging technology and social trends (Anctil, 2008). Higher education is a mature industry (Spellings, 2006) in which the product of education has become commercialized (Anctil, 2008) or what some might call commodification. A consumer mentality has replaced the internal, social and personal returns with an emphasis on strategic market reach as students rush through programs desiring to benefit from quick economic gains associated with completion of their degree (Gibbs & Maringe, 2008).

Gibbs and Maringe (2008) lament that such an environment challenges the opportunity for student reflection, deliberation and critical thinking skills developed over time when “learning-for-itself” is exchanged for “learning-for-others” (p. 14) and the role of educational institutions to contribute to society as a social good have been supplanted by the personal economic gains of individual consumers. A consumerism environment emphasizes higher education’s responsibility towards global marketplaces in universities is achieved by “producing, transferring, and disseminating economically productive knowledge” (Naidoo & Jamieson, 2005, p. 267). In a system driven by consumerism in which the product of education becomes a commodity, the educational process is reduced to “packaged, consumable product capable of being considered a component of the market mechanism” (Gibbs & Maringe, 2008, p. 12). The evolution of higher education towards consumerism is a natural result of the field becoming less of an experience of the elite and more broadly available to previous populations who lacked access; however,



universities that are in the upper level of higher education hierarchy with superior resources and reputations are more immune from these market forces and are more likely to preserve an emphasis in traditional academic principles (Naidoo & Jamieson, 2005).

The commodification process of higher education has been accelerated by the rising influence of for-profit institutions; technology advancements, which has enhanced accessibility; and the rising prominence of adult learners. These forces have given rise to the marketing age in higher education (Ancil, 2008). Gibbs and Maringe (2008) suggest that higher education need not succumb to a rush to the bottom in promoting cut-rate deals for degrees; rather, they should pursue marketing as a strategic element in a proactive rather than reactive manner. The marketing model needs to expand beyond the traditional marketing concept suggested by the four P's of marketing (product, price, promotion and place) (McGregor, 1960) and recognize the value of the learner as a participant in the process conceptualized by three major points of emphasis: (a) trust by the learner in the process that impacts their behavior, (b) the importance of the unique sequential period of time in which the learning occurs, and (c) the self-confidence exhibited by the learner in the process.

Reduction in government funding, expanded use of technology in education, and the growing nontraditional student population have given rise to a great awakening in higher education towards marketing their programs. According to Edminston-Strasser (2009) "'Marketing' had once been a term that could be spoken only in the most hushed tones in academia" (p. 146), but is becoming a mainstay of all institutions.

**Market or mission orientation.** Higher educational institutions grapple with whether they should orient themselves to a market or mission focus. Best (2008) stresses

market based organizations recognize that all members of the organization not only the marketing departments must be market-based. As both public and private institutions have become dependent on tuition as a source of revenue, many have given up defining themselves in terms of providing broader social and economic contributions to society and adopted a market focus in trying to be all things to all consumers (Zemsky, Wegner, & Massy, 2005).

The rising role of consumerism and competitive aspects of higher education funding have contributed to a consumer mentality and commodification of many institutions (Anctil, 2008). The lines between higher education and other commercial enterprises have been blurred as higher education has become a major player in advertising and promotion through all media sources. For-profit entities have been major participants in paid advertising, but more traditional public and private institutions have also been forced to participate to retain public attention (Blumenstyk, 2006).

Acknowledging that few institutions can exist without a market orientation, Zemsky, et al. (2005) suggests institutions need not hold their mission subordinate to a market orientation and should exercise discretion by avoiding over simplistic marginal analysis to eliminate important mission parts of the organization that may not be self-sustaining. At the same time, institutions should respond to market indicators that encourage prioritization of resources in areas valued by the market. Institutions that fail to maintain reserves and operating margin are likely to have their mission coopted by a frivolous market(s) and fail to identify and maintain their distinctive strategy.

**Branding and marketing.** Branding is a common term with ambiguous interpretation. Branding relates to the story an organization tells about itself to the

customer and other constituents. The brand message is a promise to meet a customer's expectation (Judson et al., 2009) and serves as a trust mark or warrant (Sevier, 2001). Best (2008) discusses how brands can follow a number of different patterns including company and brand name; brand and sub-brand name; company and product name; company, brand and product name; company name, brand name and number; brand name and benefit; and brand name only. Sevier (2001) indicates two essential aspects of brand are the audience notices your value message among others and considers the message relevant to addressing one's unique needs. Judson et al. (2009) emphasize attributes of brands take both tangible and intangible forms that if managed properly deliver value and influence. Value can be thought of as the promise and delivery of an experience and help customers organize and make sense of a cluttered market. Lancendorfer (2007) indicates two key principles of branding include differentiation from other competitors and integration in which all marketing communication is reinforcing the same value claims. Kotler and Fox (1995) emphasizes "name, term, sign, symbol, or design, or some combination" (p. 225) are all aspects of branding differentiation in higher education.

Branding may also be used as a business level tactic of Branding is an important strategic issue that institutions should intentionally manage. Development of a brand positions businesses appropriately to serve their target customers within their missions and objectives. Firms determine to follow one of two strategic business strategies of either price leadership or product differentiation (Barney & Hesterly, 2009). Both of these strategies have important implications as firms select a branding strategy.

Branding helps to communicate positioning and is focused on a specific target market. Strong brands may become more valuable than any other asset of the

organization (Lancendorfer, 2007) and derive an additional source of equity for the firm as they expand the organization's market penetration with new products due to brand loyalty and emotional connection. This identity plays a part in allowing firms to charge price premiums not afforded competitors with a less valued brand. Correspondingly, negative news about an organization or its products can lead to brand liabilities and erode the brand equity. Brand equity is defined similar to accounting equity in which the value of the brand as an asset is subtracted from the liabilities associated with the brand (Best, 2008).

Two aspects of a brand include brand vitality and brand stature. Vitality exists when a brand is unique or differentiated in the consumer's mind from other brands and is considered relevant to the consumer's needs. Both high esteem and high familiarity relate to the stature of a brand. (Kotler, 1999). Although some see all publicity as good publicity, Kotler (1999) rebuffs this notion: "a brand that has high familiarity but low esteem is a troubled brand" (p. 69) and suggests that increased advertising for a lowly esteemed brand will likely accelerate the decline of the brand and the firm.

**Higher education's experience with branding.** Higher education has less experience and has been more passive in developing and managing their brand. Higher education attempts to establish brand identities follow common patterns and often fail to create unique brand identities; and have tended to focus their message on athletics, fundraising and student recruitment. Common themes include aspiration, learning, future and world. The most frequent slogans referenced include "Live, Learn, Lead"; "Your Future. Your Terms"; and "We Practice What We Teach". In general, most universities over-reach their targets trying to appeal to too many constituencies and they lack

originality in their linguistic devices that result in a failure to achieve unique distinctiveness (Bergh, Reece, & Lancendorfer, 2007).

Marketing and communicating an organization's distinctive is a relatively new concept to many older, elite institutions. Disparities exist between public and private schools in this area. Although for-profits like University of Phoenix spend millions per year on advertising, only 10% of public institutions of higher education spend over \$1 million or more on their marketing and communications budget. Private education commits 21% of their operating expenditures towards marketing and communications while their public counter-parts commit .5% (Edmiston-Strasser, 2009).

There are also differences between public and private administrators of higher education in the area of strength of brand. Judson et al. (2009) concludes from the results of their survey of administrators from public and private institutions that differences exist in brand messaging which arise due to contrasting attitudes towards growth and a positive perspective on branding promotion. Surprisingly, private institutions may have a less aggressive attitude towards growth given their funding mechanism that is more reliant upon institutional aid, scholarships and endowment programs. The authors encourage administrators to recognize their various constituents (students, parents, alumni and donors) as customers; acknowledge the additional efforts needed such as internal brand communication to build their brands; and accept that differences exists between public and private university administrators in their commitment to an effective brand communication strategy as well as their own sense of institutional distinctiveness.

**Brand communities.** Another important aspect of brands associated with higher education is brand communities. Muniz and O'Guinn (2001) define brand communities:

A brand community is a specialized, non-geographically bound community, based on a structured set of social relationships among admirers of a brand. It is specialized because at its center is a branded good or service. Like other communities, it is marked by a shared consciousness, rituals and traditions, and a sense of moral responsibility. (*sic*) (p. 412)

Brand communities “consist of all the people for whom a particular brand is relevant and the relationships they form in the context of using the brand (McAlexander, Koenig, & Schouten, 2005, p. 62). Brand communities are particularly important to higher education as they are found to exist across geographic boundaries (Holt, 1995) and may exist virtually over the Internet (Granitz & Ward, 1996). Loyalty to a brand is dependent on integration of the brand community and the extent of interconnectedness of individual members within the brand (McAlexander et al., 2005).

Brand communities exists in institutions of various sizes but have different impact on the loyalty of their members. McAlexander and Koenig (2010) found that alumni from smaller institutions have stronger bonds with all categories of the community, but are less likely to add more to their collection of logo clothing or recommend their alma mater to family, friends and even their children as compared to alumni from larger institutions. Both groups expressed similar commitments to talking to others about their schools. Although the data show some differences between the two, both groups show a strong bond to the brand community. Some differences result from greater intimacy of smaller educational institutions and enhanced opportunity to build close relationships manifesting in higher bonds to community with alumni from smaller institutions. Large institution alumni are more likely to support their institutions through the purchase of

logo clothing and personal recommendations due to the influences of by high profile sports and style trends that favor the wearing of well- known university logoed clothing. The research supports the concept of brand communities as a viable means to build alumni relationships and foster support for the institution (McAlexander & Koenig, 2010).

Brand communities have power to influence the perceptions of the brand and marketers play a role in maintaining and shaping the brand (McAlexander et al., 2005). A powerful brand community is becoming an important priority in higher education as institutions seek to differentiate themselves from the increasingly competitive environment.

**Integrated marketing communication.** Integrated Marketing Communication (IMC) involves a cohesive and consistent marketing message throughout the institution that focuses on the fourth P of marketing (promotion) and is concerned with the strategic assets of marketing efforts (Sevier, 1999). Seminal research on IMC was conducted in the late 1990s to determine how closely American advertising agencies adhered to the tenants of the IMC concept (Schultz & Kitchen, 1997). IMC holds that a single communication strategy should be used for each target population as the basis for the communication strategy across the various methods used to promote a company's product or service (Duncan & Everett, 1993). Higher education is particularly vulnerable to violating IMC concepts due to their departmental structures and lack of a single cohesive marketing strategy (Edmiston-Strasser, 2009).

IMC may occur on a continuum using a four-step framework. Organizations progress through each step or phase chronologically and indicate greater IMC development as the progress to later stages. The four stages are identified as:

- stage 1, tactical coordination of marketing communication;
- stage 2, commitment to market research;
- stage 3, acquisition and application of information technology to support IMC; and
- stage 4- strategic integration of IMC (Schultz & Schultz, 2004).

In a survey of 42 U.S. public institutions of higher education, Edmiston-Strasser (2009) found essentially all of the institutions surveyed had at least obtained the first stage of development of IMC with a dedicated senior marketing and communications official, but issues related to reporting authority could lead to a less effective IMC approach. President and executive level leadership commitment was a key finding of the survey as the most frequently mentioned factor leading to success of IMC. Higher developed institutions frequently stressed the need for a centralized marketing committee. The findings also concluded that institutions that achieved higher stage levels of IMC also believed they were achieving greater brand awareness across their key target markets. The survey indicated early stage institutions had more difficulty ensuring consistent brand messaging across the organization. The research supports the existence of IMC across institutions of higher learning in varying degrees and is a key component to an institution achieving an accurate external communication of its brand.

The author observed that some evidence supports a more strategic staging process would be to first develop a strategic plan (stage 4), to be followed by research (stage 2),



which leads to the implementation of application technology (stage 3), and finally an organizational commitment through coordination of the marketing plan (stage 1).

Although this revised approach is more rational, the responding firms indicate historical sequential commitment to IMC has more often followed the traditionally ordered four stages (Edmiston-Strasser, 2009).

### **Conclusions: Need for the Study**

Employability is an important societal and higher education priority that has broad implications. Higher education has historically served a preeminent role in helping shape and develop individuals in transition from youth to adulthood. Society continues to look to colleges and universities to equip and even transform the next generation as they prepare to take their place in society. Gaining a better understanding of employability and the role higher education plays in this process are worthy pursuits. Many students and administrators see enhancing employability as the most important reason to pursue a bachelor's degree (Taylor et al., 2011).

Christian higher education, as represented by the members of the CCCU are a unique category of higher education with a strong emphasis in their mission to help their graduates become more employable. CCCU institutions in contrast to many other traditional liberal arts universities and colleges integrates a liberal arts core with professional applied studies.

Due to the cyclical aspects associated with the job search process, employability itself is a complex subject that goes beyond the simple act of gaining a job (Knight & Yorke, 2004). Several models of employability have been put forth to help identify the

important aspects of employability. The DOTS model (Law & Watts, 1977) and its modified form is simple to understand but critics questioned the lack of emphasis on a job seeker gaining fulfilling work (McCash, 2006). Other models considered include the “Career EDGE model” (Pool and Sewell, 2007) and the USEM model (Yorke and Knight, 2007). The USEM model provides a broad base of understanding, general and specific skills, self-efficacy beliefs, and metacognition. As one considers the role of Christian higher education in employability, the USEM model provides a useful framework for consideration due to its focus on aspects of a fully developed person associated with a liberal arts education and its inclusion of self-efficacy which stresses the importance of one’s personal beliefs and individuals’ approaches to circumstances in the world (Dweck, 2000).

Higher education is a mature industry facing disruptive innovation that impacts CCCU institutions (Spelling, 2006). Nontraditional education models offer both opportunities and challenges for CCCU institutions. Serving new audiences such as adults, minorities, woman and rural populations (Altbach et al, 2011; Sabatier, 2009; Schatzel et al., 2011; Van Der Wer) and the cost effective benefits afforded through greater reliance on technology (Allen & Seaman, 2011) and part-time instructors (National Center for Educational Statistics, 2012), provides opportunities for CCCU institutions to expand their market and gain financial support.

There are also many concerns and potential threats associated with the new paradigm. Residential education with a rich tradition of curricular and co-curricular programs designed to educate the whole person serves as a foundation of many CCCU institutions. The number of residential students are contracting (National Student

Clearinghouse Research Center, 2016; Schatzel et al., 2011) at the same time competition is expanding (Altback et al., 2011; Selingo, 2013). Even younger students are shifting their preferences to nontraditional programs due to convenience, flexibility and cost savings (Aslanian, 2005) and many question the value of a liberal arts education with preferences to reduce their course load to more technical and applied subjects that hold an obvious connection to their desired vocation or profession (Aslanian, 2005). Institutional loyalty is also being challenged as students swirl credit units from multiple institutions (Spelling, 2006; Van Der Werf & Sabatier, 2009) and institutions are rushing to offer three year bachelor's programs in response to student's demands to accelerate the undergraduate process (Van DerWerf & Sabatier, 2009).

As CCCU institutions face a shifting landscape and have adapted their practices to their new reality, questions arise over whether the claims of the institutions remain valid and consistent across all programs. Bachelor's degree recipients follow many different paths to completion of their degrees and the number of units taken from the degree conferring institution vary significantly for each graduate. CCCU institutions should be concerned that graduates achieve comparable outcomes regardless of their program delivery and unique academic journey. CCCU institutions proudly claim enhancing the employability of their graduates as one of their expected outcomes and part of their value proposition ("JBU facts 2014-2015 - About - John Brown University," n.d; Jackson, 2012a). CHEU branding and value propositions will benefit from the shedding of light on the consistency of employability of all graduates and provide important insights on the value of authentic learning experiences (Lombardi & Oblinger, 2007). In addition, adult learning theory postulates the importance of context and work experience in helping

students gain greater levels of employability through context (Knowles, 1988). This study will provide insights for CCCU institution on the importance of work experience in influencing employability.

Preparing students for employment is an important topic but the role higher education plays in this process has had very little research indicating a gap and need for additional studies. Yorke and Knight's (2007) conducted initial pilots and subsequent testing of the SEQ and EEQ, but a review of the current peer reviewed literature provides no additional published research involving the instruments and professor Knight is unaware of any additional studies. The goal of this study is to provide insights to CCCU institutions regarding the connection between varying programs and paths different students take as these processes relate to employability. This information will be useful in brand messaging and operational practices for the CHEUs in a time of disruption and change. This study will make a significant contribution to the study of the connection between higher education and employability and will be of direct interest to CHEUs.

## CHAPTER 3 – METHOD

### Research Design

Creswell (2008) identified three methods to address research problems: qualitative, quantitative and mixed methods. A quantitative method is recommended when attempting to uncover factors that influence a specific outcome or may be more likely to predict a given outcome.

The primary focus of this research was to gain understanding concerning the relationship and differences among variables or constructs associated with different clusters of students and their suitability for employment using SEQ and EEQ survey instruments. The research compared the following four student groups as previously defined: *Residential Traditional Students*, *Deferred Professional Students*, *Accelerated Traditional Students*, and *Other Students*. Variables may take on two or more values that can be measured or observed (Newton & Rudestam, 1999) and the survey instruments used provided measurable outcomes used to quantify results. A quantitative method is appropriate to explore and to understand the differences and the relationship between constructs (Creswell, 2008). Accordingly, the researcher employed a quantitative quasi-experimental (Cook & Campbell, 1979) survey research method seeking to identify any affective differences between specific groups of CHEU students nearing or having completed their degrees in measures of suitability for employment using the SEQ and EEQ survey instruments.

Cook and Campbell (1979) outline the concept of a quasi-experimental approach to help measure the causal relationship between treatment and result when participants self-select a course of treatment in real world conditions not subject to normal experimental constraints. Quasi-experiments do not use random assignments to infer changes due to comparative treatment, but center on the measurable differences of treatment in nonequivalent groups with the sole focus being on the effects of the treatment. This research will consider the effects of treatment on the four previously identified nonequivalent groups.

### **Research Purpose and Hypothesis**

The purpose of this study was to investigate differences in suitability of employment of distinct student groups at comparable Christian higher education institutions using the SEQ and EEQ survey instruments. The study identified the impact of the proportion of one's total education received from a CHEU to determine if there is a correlation between enrollment in units from a CHEU and suitability for employment. The study will also compare the impact of authentic learning or work experience while attending school for traditional and nontraditional students respectively. Work experience was established by the participants based on the number of years of work experience prior to or during the time in which they simultaneously were enrolled in pursuit of a bachelor's degree. The research hypothesis to be tested are as follows:

H1: There is a difference in suitability of employment among *Residential Traditional Students, Deferred Professional Students, Accelerated Traditional Students* and *Other Students*.

This hypothesis assumed there is a difference in employability based on the manner and modality in which a student pursues a degree that holds ramifications related to the value proposition for the different institutions considered in this study.

H2: There is a difference in suitability of employment among respective clusters of students from one Christian liberal arts university in comparison to others in the research.

This hypothesis seeks to compare the suitability of employment among students from the four participating institutions to determine if differences persist regardless of common affiliations between the four Christian liberal arts institutions. This information will help to determine if institutional choice is important when it comes to suitability of employment.

H3: There is a positive correlation between the percentage of a students' education received from a Christian liberal arts university and suitability for employment.

This hypothesis assumed one of the values of a Christian higher education is the manifestation of a higher suitability for employment by students. This relationship is important to the value proposition of Christian higher education.

H4: There is a positive correlation between suitability of employment and number of authentic learning experiences for *Residential Traditional Students*.

This hypothesis assumed that authentic learning experiences are an important component of education that will manifest in higher levels of employability for RTS participants.

H5: There is a positive correlation between suitability of employment and number of years of work experience in the context of education for *Deferred Professional Students*.

In a similar manner to authentic learning experience, students that work while they learn are able to apply abstract concepts in real time.

### **Statistical Tests**

Newton and Rudestam (1999) specify group differences may be ascertained when a discrete independent variables is present; whereas relationships between independent variables typically involve orderable discrete or continuous independent variables. Independent variables and associative constructs related to the research include the student's school of affiliation, program choice (traditional compared to nontraditional), percentage of education obtained through a CHEU, number of authentic learning experiences, and years of work experience prior to and during the time in which the student pursued a degree.

Participants self-identified the presence of specific constructs as they completed the questionnaire. Each participant self-selected the appropriate responses to the SEQ and EEQ survey instruments. The results of the instrument were analyzed over a multiple step process to address specific questions and test each hypothesis. Discrete or ordinal discrete values were assigned to variables such as school of association, category of student, category of program, and attendance at a traditional Christian institution. Variables such as age, years of work experience, and number of authentic learning experiences were represented by ordinal discrete values using groupings, self-selected by



participants. Ordinal grouping of work experience include (a) 1 – 2 years, (b) 3 – 5 years, (c) 6 – 10 years, (d) over 10 years, and (e) none of the above. These groupings assume some diminishing marginal gains in employability based on increasing years of work experience. Responses by participants to questions on the EEQ and SEQ instruments provided measureable responses for comparison using ordinal discrete values.

The data was assessed using two phases. During the first phase, independent discrete and ordinal discrete variables were assessed using a series of one-way ANOVAs for H1 and H2. Newton and Rudestam (1999) recommend using a one-way ANOVA to determine statistically different means among groups of three or more in which the differences in means are partitioned between groups and within groups. ANOVAs provide *F*-values that can be used to determine heteroscedasticity which indicates the significance of the variance among the different distributions (George & Mallery, 2016). Effect size ( $Eta^2$ ) was determined for all differences that measured within the statistically significant confidence level of 95% ( $p < .05$ ) using the formula suggested by Newton and Rudestam (1999) by determining the ratio of the between group sum of squares to the between and within group sum of squares:

$$Eta^2 = \frac{SS_{between}}{SS_{between} + SS_{within}}$$

Post hoc analysis were conducted on each one-way ANOVA to determine contrast differences between any two distributions using least significant difference (LSD). The post hoc analysis enables the determination of greater precision in differences that exist between different distribution pairs than the omnibus test conducted as part of the one-way ANOVA (Newton & Rudestam, 1999).

For H1, the first ANOVA was conducted to determine if statistically significant differences in the mean for the SEQ, EEQ and SEQ + EEQ scores exist among the four comparable academic clusters followed by post hoc contrast of each cluster with each other cluster to provide a contrast matrix. An additional one-way ANOVA with LSD post hoc was conducted in comparing the scores on different factors associated with the EEQ.

A similar approach was taken in testing H2. A one-way ANOVA was used to compare the means of employability measurements among participants from the four CHEUs with an LSD post hoc contrast to determine individual contrast between distribution pairs. A second ANOVA tested differences among the distributions based on individual factors of the SEQ and EEQ followed by post hoc LSD contrast among distribution pairs.

A series of bivariate correlations were conducted to address hypotheses H3, H4 and H5 using the Pearson product-moment correlation (Pearson  $r$ ). The correlation statistic ( $r$ ) returns a value between -1 and 1 indicating perfect negative to perfect positive correlation between the distribution of two variables (George & Mallery, 2016). Test were conducted on H3, H4 and H5 to determine the correlation with measures of employability of the following variables: percentage of education obtained at a CHEU in relation to H3, number of authentic learning experiences for RTS students in relation to H4, and number of years of work experience for DPS students in relation to H5. Each test considered statistically significant correlation ( $p < .05$ ) and effect size for all correlations found to be within 95% confidence interval.

In the last phase of data analysis, a series of simple linear regressions were conducted to determine if relationships exist between tested explanatory variables, measured using discrete ordinal values, and total scores of the SEQ and EEQ. Analysis determined the statistical significance between each explanatory variable and employability measures and the strength of the relationship in terms of the proportion of variance explained in the employability measurement by the respective explanatory variable.

### **Population and Sample**

The population for this research entails graduates within the last twelve months and students within their last semester of graduation (within 15 credit units) at participating CHEUs. Samples for this research were gathered from John Brown University (JBU), William Jessup University (WJU), George Fox University (GFU) and Point University (Point) based on convenience and availability. The identified possible participants for the sample was 1,749 (909 graduates and 840 near graduates). The population selected for this survey is based on affinity with the researcher who has worked at two of the four institutions, attended a third and had willing access to the fourth. An email link to the survey along with a description of the research was emailed to possible participants of the sample. Participants reviewed and accepted informed consent (refer to Appendix D). Inducements to participate in the form of gift cards were utilized. An email reminder was provided after one week. The survey link remained open for three weeks. Participants voluntarily respond to the survey/questionnaire in a random fashion. Upon completion of the survey, 396 participants (23% response)

participated in the survey with 290 participants (17% response) completing at least some questions in all sections of the survey.

An adequate sample size for meaningful interpretation is dependent on the level of desired precision, desired confidence level and the variability of the measured attributes (Miaoulis & Michener, 1976). The level of precision relates to the range of the sampling error relative to the true value of a population attribute and is frequently expressed in a percentage range. Confidence level builds on central theorem and assumes a normal bell shaped distribution in which 95% of the sample values fall within two standard deviations of the mean of the true population. Degree of variability is an indicator of the relative homogeneous attributes of the samples and a less heterogeneous population will support a smaller relative sample size (Israel, 1992).

Newton and Rudestam (1999) provide additional consideration for determining an appropriate sample size based on the criteria of statistical power, alpha level and effect size. Statistical power relates to the degree in which statistical text are able to detect relationships between variables and accurately reject the null hypothesis. A Type II error occurs when a researcher fails to reject the null hypothesis when it is in fact false (Trochim, Donnelly, & Arora, 2016). A Type II error is measured by Beta [ $B$ ] with statistical power measured as  $1 - B$ . A power value of .8 or higher indicates 80% of the time a researcher will accurately find the effect that exists in the population and considered a minimum value for meaningful statistical analysis. A higher power value indicates a lower probability of making a beta error and increases with a larger sample size, but are influenced by the alpha level, effect size and the specific statistical test being used (Newton & Rudestam, 1999).

A Type I error occurs when a researcher misinterprets results and concludes a significant relationship between variable when in fact none exists and rejects the null hypothesis (Trochim et al., 2016). Type I errors are referred to as Alpha [ $\alpha$ ] error and are measured by the level of significance (i.e., the  $p$  value). A  $p$  value of .05 signals a 95% confidence level that the null hypothesis is in fact false and there is a significant relationship between the variables. The value of  $p$  becomes smaller as the sample relative to the population becomes larger and the findings more significant. A critical  $p$  value of .05 (i.e. 95% confidence level) is standard in the social sciences (Newton & Rudestam, 1999).

Effect size pertains to the magnitude or size of the relationship between various members of a population that can be measured using different statistical test such as  $t$  test, correlation, ANOVA, multiple regression and Chi-square ( $X^2$ ). Effect size is often established within an acceptable range given the specific statistical test based on guidelines developed by Cohen in which an effect size index be constructed to establish levels of small, medium and large effect based on the selected statistical test. For a  $t$  test, small effect size is .20, medium effect size is .50 and large effect size is .80 (Cohen, 1988). The difference in the means between two comparative groups divided by a common standard deviation establishes the effect size. Many researchers choose to target medium effects using Cohen's index based on their specific statistical test (Newton & Rudestam, 1999).

The size of the sample and the number of factors are relevant to the test one uses to differentiate means and the necessary sample size to ensure adequate degrees of freedom. Newton and Rudestam (1999) express a preference for a  $t$  over a  $Z$  test when a

sample is small to avoid assumptions of a standard normal distribution for the sample. In addition, an increased number of explanatory parameters will lead to the need to increase the sample size. A heuristic of 10 or more subjects for every parameter is recommended.

Although the complexities of choosing a sample size vary widely based on desired statistical outcomes and the complexity of the research being considered, Yamane (1973) postulates a simplified formula for the number of occurrences to be utilized in a sample. Assuming a  $p$  value of .05 and a 95% confidence interval, the formula

$$n = \frac{N}{1+N(e)^2}$$
 where  $n$  is the required sample size,  $N$  is the population size and  $e$  is the level of confidence desired provides a necessary sample of 326 (Yamane, 1973).

### **Instrumentation**

A questionnaire (Appendix D) was prepared from two instruments that have been designed to measure different aspects of employability using the USEM developed by Yorke and Knight (2007). The SEQ provides insight to teachers of the disposition of their students and the EEQ was designed to measure students' perceptions of how well their educational experience prepared them for employment. A validated version of the SEQ includes 14 stem statements with four forced-choice response options (strongly agree; tend to agree; tend to disagree; strongly disagree). Twelve of the questions pertain to self-efficacy (six relating to items originating from inside higher education and six from the wider world). The two remaining questions pertain to self-theories and the issue of locus of control and the impact of luck and or effort on achievement. The two questions relate to the amount of fixedness individuals perceive in their own abilities to

initiate change. The SEQ questions derive three factors for consideration: (a) the impact of luck or effort on achievement, (b) engagement, and (c) personal control.

The EEQ instrument measures the perceptions of students on a number of facets of higher education related to suitability for employment. The instrument uses 23 statements and a five-point Likert scale from strongly agree to strongly disagree. The instrument covers five factors instrumental in preparation for employment suitability: (a) valuing workplace experience, (b) academic awareness, (c) general awareness, (d) employment orientation, and (e) critical independence (Yorke & Knight, 2007). A five-point scale provides a mid-point and allows participants to express a neutral position.

The survey method was cross-sectional in terms of area of study and will be administered to students that are within their last semester approaching graduation or have graduated in the last 12 months. This method was selected based on convenience and accessibility to the sample. The survey was designed to measure the degree in which academic programs have prepared individual students for employment.

According to Creswell (2008), validity refers to the ability to draw meaningful and useful inferences from scores on the instrument using the forms of content validity, predictive or concurrent validity and construct validity. Reliability pertains to internal consistency and the ability of the instrument to provide consistent scores on specific constructs over time (p. 149-150). The validity of the questionnaire to draw meaningful inferences regarding employability is based on USEM model of employability (Yorke & Knight, 2007). Reliability of the instrument is based on pilot and initial studies concluded by the authors prior to their publication of the questionnaires and initial study results in 2004. Table 1 provides summary information of the four studies. The

respondents were an opportunity sample in either their first or last year of multiple subject studies. York and Knight (2007) conducted analysis of the results offering insights on the validity of the instrument. A random sample of the SEQ indicated 28.5% of the respondents had crossed out one or more of the respondent options indicating a serious consideration of the questions.

A factor analysis of the SEQ indicated that 61.6% of the variance associated within higher education questions was associated with the three factors associated with the survey, and wider world questions provided similar results. Two remaining questions related to intelligence and the ability to change indicated a dichotomized tendency for respondents to agree or disagree. Nearly the same percentage of respondents (28.5% and 29.3%) stated some level of agreement that intelligence is static and some level of disagreement related to an individual's possibility to change with a similar percentage (71.5% and 70.7%) responding in the opposite. These two-paired questions with opposite scoring help to validate these questions.

York and Knight (2007) also conducted an initial pilot and revised version of the EEQ as detailed in Table 1. As with the EEQ a factor analysis was conducted and concluded 49% of the variance was attributable to a five-factor solution. A Cronbach alpha (Cronbach, 1951) reliability scale was developed for the five identified factors and indicated relatively robust validation of factors 1-4 (see Table 2), but factor 5 (Critical Independence) shows relatively weak statistical properties (value of .55).



Table 1. *SEQ and EEQ Previous Research Studies*

Authors	Type of Study	Participants	Results- key Findings
Yorke and Knight	Pilot study of SEQ	700 students	Items in survey reflected underlying constructs
Yorke and Knight	SEQ Questionnaire	2,269 students in five universities, north-west England	12 of original 16 questions indicated load factors in excess of .3; 3 factor solution accounted for 61.6% of variance
Yorke and Knight	Pilot study of EEQ	1,400 students; 4 institutions	Revisions made in questionnaire based on pilot
Yorke and Knight	EEQ Questionnaire	2,072 students in seven institutions	A five factor solution accounted for 49% of variance; eight of original 31 questions did not achieve statistical significance; four of the five factors had high Cronback alpha scores in excess of .68

### **Limitation and Delimitations**

One delimitation of the survey process is the manner in which the questions are posed. Survey participants are required to respond to statements of preference using Likert-scales. Although these are common survey techniques, they force participants to make discrete categorical selections of value that may not accurately reflect their

inclinations or the strengths of their preferences on specific items. The incremental nature of Likert scales may lead to misinterpretation of descriptive statistics such as mean and standard deviation or other parametric analysis based on a normal distribution. Allen and Seaman (2007) point out challenges in treating Likert scale options as incremental points along a continuous scale and encourage the use of rank, frequency, median, range and tabulations and other nonparametric procedures to strengthen interpretation of Likert scales. Likert surveys may also create spatial bias and pseudoneglect in which participants tend to answer questions with a slightly left biased perspective (Nicholls, Orr, Okubo, & Loftus, 2006). To minimize pseudoneglect, seven of the 14 SEQ questions and six of the 23 EEQ questions were reverse scored.

The SEQ uses a four point Likert scale without a mid-point. The EEQ uses a five point Likert scale with a mid-point. There are advantages and disadvantages to use or lack of a mid-point. The absence of a mid-point eliminates the neutral option in a forced choice survey (Allen & Seaman, 2007) and may reduce the participant's social desirability bias to please the interviewer with a neutral rather than negative response (Garland, 1991). Positive bias, however, tends to drop when the number of selection alternatives increases (Matell & Jacoby, 1971). Without a mid-point, respondents are forced to have an opinion when they may not have one and may result in distortion of the results (Brown, 2000). Matell and Jacoby (1971) recommend achieving the balance between sufficient alternatives for participants by offering enough options to avoid social desirability bias, but also limiting the number of options to permit discrimination in responses. There is no single number of proper response alternatives as options should be unique to each study based on empirical evidence (Guilford, 1954). Cronbach (1950)

clarifies a survey's reliability increases within limits based on an increasing number of alternative solutions, but stresses that validity must increase at least proportionately. Researchers frequently use a 5 category response in Likert scales indicating the popular choice serves as a good balance in achieving sufficient options to capture participants' views without overwhelming them with too many alternatives (Croasmun & Ostrom, 2011).

The SEQ avoidance of a mid-point alternative forces respondents to a more decisive position on the issue of self-efficacy which fundamentally identifies the relative degree of control participants believe they hold in influencing their futures. Self-efficacy is a difficult issue to claim neutrality as alternative positions are somewhat mutually exclusive. Topics explored in the EEQ are more adaptive to a five point scale and permit a relative positions of neutrality.

The study is also limited as a cross-sectional study at a particular point in time and fails to recognize the potential changes in culture and economic conditions that may proceed or follow the survey. Inferences from the study are also limited based on the selection of the survey population. The results should not be inferred upon a broader population.

The study focused on descriptive statistics, which seek to summarize data collected from a sample through a data reduction process that represents the findings using tables, graphs and singular statistics. The methods used in the analysis rely upon numerous inferential statistics in determining differences and correlations in seeking to understand the relationship between the constructs, but the study results will have limited inferences to a larger population through theoretical probability calculations (Newton &

Rudestam, 1999). The manners in which the sample was developed and the analysis methods employed further limit the application of the observations.

The instrument itself also has some limitations. Although the instrument has been tested and revised over a large population, approximately 40% of the variations associated with the SEQ and approximately half of the variation of the EEQ relate to factors not contemplated in the instrument. In addition, the instrument lacks scales for interpretation. Such limitations make it difficult to discern degrees of employability. York and Knight (2007) recognize the limiting application of the instrument in measuring all aspects of a person's employability. The value of the instrument is in "prompting students to reflect on their employability, take action to enhance it and consider how to make strong claims to being employable" (p. 167).

Survey instruments should be both valid and reliable. Validity is based on whether an instrument measures what it is intended to measure while reliability centers on the ability of the instrument to measure consistently (Creswell, 2008). Cronbach's alpha (Cronbach, 1951) is used by many researchers to assess an instruments reliability. Cronbach's alpha yields a value of between 0 and 1 and provides a correlation of the means between all possible split-halves (Trochim et al., 2016). Higher values reflect on greater level of inter-relatedness of the items within an instrument (Tavakol & Dennick, 2011).

Researchers have varied views on acceptable levels of Cronbach's alpha. On the low side researchers indicate an unacceptable level below .6 with low level reliability obtained at .7 (Davidshofer & Murphy, 2005). Depending on the nature of the research lower levels between .5 and .6 for instrument testing and preliminary research may be

reliable, but values of .8 or higher should be used for basic research (Nunnally, 1967). Research related to job satisfaction and other applied applications consistently required higher levels of Cronbach's alpha such as .95 (Kaplan & Saccuzzo, 2017) and .9 to .95 (Nunnally, 1978). A meta-analysis of researcher positions concluded an average minimally acceptable value of .70 for research related to values and beliefs and .82 for application elements such as job satisfaction (Peterson, 1994). Although a high Cronbach's alpha is helpful in achieving greater reliability confidence, shorter length instruments and instruments with less unidimensionality in which a single trait is measured will tend to have lower Cronbach's alpha scores (Tavakol & Dennick, 2011).

Yorke and Knight (2007) report Cronbach's alpha scores for the EEQ (see Table 2).

Table 2. *EEQ Cronbach Alpha by Factor*

Factor	Label	Cronbach's alpha
I	Valuing workplace experience	.77
II	Academic awareness	.72
III	General awareness	.69
IV	Employment Orientation	.68
V	Critical independence	.55

Using Peterson's (1994) guidelines all factors for the EEQ except critical independence fall within acceptable ranges for behavior research of beliefs or values. Yorke and Knight (2007) did not provide Cronbach's alpha scores for the SEQ, however, other indications of reliability such as factor loading between .65 and .96 along with a three

factor solution accounting for 61.1% of the variance supports internal reliability of the instrument.

### **Role of Researcher**

The researcher was employed at the time of the research by John Brown University (JBU) as a faculty member in the Soderquist College of Business (SCOB). Along with teaching and other faculty roles, the researcher oversaw the nontraditional business degree programs as a Department Head. The researcher teaches in traditional undergraduate, non-traditional undergraduate and SCOB's graduate business programs. Prior to assuming a position with JBU, the researcher worked at William Jessup University (WJU) in an administrative role associated with nontraditional programs for eight years. The researcher's position at the university, academic background, and ongoing interest in Christian nontraditional education may influence his objectivity, methods, analysis and conclusions.

### **Data Collection Procedures**

Data was collected using an online survey. The two questionnaires containing 35 total questions and demographic questions were administered through SurveyMonkey®. JBU provided a list of email addresses for participants; a representative from WJU, GFU and Point communicated by email to their respective participants. An email was sent inviting recipients to participate in the survey with an attached link. All data was secured through a login/password maintained by the researcher. Participants who follow the link were required to make an affirmative choice to provide informed consent section before

proceeding to the two surveys and demographic section that followed the survey (see Appendix D). Results of answers from the demographic section were used to segment the participants for conducting statistical tests. Participants were provided a reminder email after one week and the survey was closed after three weeks. The data was transferred to a password secured computer. A software program, Statistical Package for the Social Sciences (SPSS), was utilized to perform the analysis and statistical test.

## **CHAPTER 4 – RESULTS**

This study focused on differences that exist in employability using the SEQ and EEQ instruments among different clusters of students that have recently graduated or are nearing graduation at four different CCCU institutions. The study compares the employability of participants that utilize different academic paths in obtaining their undergraduate degree and the relationship between other intermediate constructs and higher levels of employability. The intermediate factors considered include the percentage of a student's undergraduate academic plan obtained from a CHEU, the number of authentic learning experiences utilized by students in obtaining their degree, and the number of years of working experience achieved in the context of pursuing a bachelor's degree. The study results have implications for CHEUs in terms of the veracity and consistency of marketing and branding claims related to graduates' employability.

### **Research Question and Hypothesis**

The research question was: Are there differences in employability among students utilizing different academic cluster that attend different CHEUs located in various parts of the country and is there a relationship between employability and the factors: CHEU proportionate attendance, number of authentic learning experiences for RTS participants,



and work experience within the context of pursuing a bachelor's degree for DPS participants? To evaluate this research question five hypotheses were tested:

H1: There is a difference in suitability of employment among *Residential Traditional Students*, *Deferred Professional Students*, *Accelerated Traditional Students* and *Other Students*.

H2: There is a difference in suitability of employment among respective clusters of students from one Christian liberal arts university in comparison to others in the research.

H3: There is a positive correlation between the percentage of a students' education received from a Christian liberal arts university and suitability for employment.

H4: There is a positive correlation between suitability of employment and number of authentic learning experiences for *Residential Traditional Students*.

H5: There is a positive correlation between suitability of employment and number of years of work experience in the context of education for *Deferred Professional Students*.

Employability in this research is based on responses by participants to the SEQ and EEQ. Other constructs were measured using survey instruments to quantify the results (see appendix D). A series of one-way ANOVAs was used with the data to consider hypotheses (H1 and H2) to determine if meaningful differences exist in employability based on academic clusters and institutional affiliation. Hypotheses (H3, H4 and H5) were analyzed using a series of bivariate correlations to determine the strength of the relationship between employability and the variables: percentage of education obtained from a Christian liberal arts university (H3), number of authentic learning experiences

with RTS participants (H4) and work experience with DPS participants (H5). Finally, a series of simple linear regressions were completed to determine the strength of the relationship between variables using discrete ordinal values and employability.

### **Sample Description and Data Collection**

The research solicited students that had affiliation with four CHEUs: John Brown University (JBU) in Siloam Springs, Arkansas; Point University (Point) in Atlanta, Georgia; William Jessup University (WJU) in Rocklin, California; and George Fox University (GFU) in Newberg, Oregon. Eligible participants included individuals who had graduated within the last 12 months with a bachelor's degree and students nearing graduation that are within one semester (15 credit units) of completing the academic requirements for their bachelor's degree. A list of eligible participants at each institution was obtained and an email invitation with a link to the survey was sent either directly to the possible participants or through a representative of each university. In total 1,749 possible participants were identified from the four institutions composed of 909 graduates and 840 near graduates. The survey was open for three week and received responses from a total of 396 participants (23% response) of which 290 participants (17% response) provided responses in all sections of the survey and are considered complete responses.

There were a few adaptations from the research methods proposal that were required in the process of completing the survey. Rather than the survey being sent to all possible participants identified from each participating university simultaneously, a batching method was employed based on specific approval processes at each institution. The first invitation was sent to possible participants identified with JBU on August 2,

2017. Subsequently, surveys were sent to possible participants from Point on August 4, WJU on August 7, and GFU on August 9. JBU's participants received direct communication from the researcher while participants from other institutions received an email invitation through an assigned institutional representative. A reminder email was sent 7-10 days following the original invitation.

GFU would not allow the survey to go to alumni and only sent the survey to current students nearing graduation. Although the institutions were instructed to send the survey to those who had graduated in the last 12 months or existing students within one semester of graduation (within 15 credit units), some participants who completed the survey identified themselves as outside of either category. Those that selected the other category appear to be primarily composed of students nearing graduation, but not identifying themselves within one semester of graduation. Participants who identified themselves as other were included in the survey as near graduates. Separate survey links were used for each affiliated university. All links to the survey were closed on August 30, 2017, three weeks after the initial invitation was sent to GFU's possible participants. Table 3 details the breakdown of the participants from each university that fully completed questions from all sections of the survey.

Table 3. *Summary of Participants Statistics by University (n=290)*

	Graduates (n=145)		Near Graduates (n=98)		Other (n=47)		Total	
	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>
JBU	87	60%	32	32.7%	5	10.6%	124	42.8%
Point	29	20%	6	6.1%	7	14.9%	42	14.5%
WJU	25	17.2%	17	17.3%	4	8.5%	46	15.9%
GFU	4	2.8%	43	43.9%	30	63.8%	77	26.6%
Other	0	0%	0	0%	1	2.1%	1	.3%

*Note:* Other students are participants that are nearing graduation, but did not identify themselves as within one semester of graduation.

The sample was predominantly composed of younger students under age 26 with 72.6% identifying themselves as Residential Traditional Students (RTS) and 5.6% as Accelerated Traditional Students (ATS). Table 4 details the breakdown of the participants who identified an academic profile.

Table 4. *Summary of Academic Profile (n=288)*

	<i>n=288</i>	<i>% of total</i>
Residential Traditional Students	209	72.6%
Deferred Professional Students	46	16%
Accelerated Traditional Students	16	5.6%
Other Students	17	5.9%

The sample gender was predominantly female, 62.4%. Near graduates represent the largest percentage of female participants, 66.3%, among academic profiles. The sample gender approximates the overall gender population of each participating institution which range from a low of 53% female at Point (“College navigator - Point University,” n.d.) to a high of 60% female at GFU (“College navigator - George Fox University,” n.d.). Table 5 details the gender breakdown of the sample.

Table 5. *Summary of Gender of Participants Statistics (n=290)*

	Graduates (n=145)		Near Grad. (n=98)		Other (n=47)		Total (n=290)	
	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>
Male	56	38.6%	33	33.7%	20	42.6%	109	37.6%
Female	89	61.4%	65	66.3%	27	57.4%	181	62.4%

A majority of the participants are below 26, 79.8% of total participants. The largest next category by age was participants between 31 and 40, 9.1%. Table 6 details the age distribution of the sample.

Table 6. *Summary of Age of Participants Statistic (n=287)*

	Graduate (n=143)		Near Grad. (n=97)		Other (n=47)		Total (n=287)	
	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>
0-25 Yrs.	109	76.5%	77	79.4%	43	92%	229	79.8%
26-30 Yrs.	6	4%	2	2.1%	0	0%	8	2.8%
31-40 Yrs.	10	7%	13	13.4%	3	6%	26	9.1%
41-50 Yrs.	12	8.5%	4	4.1%	0	0%	16	5.6%
50+ Yrs.	6	4%	1	1%	1	2%	8	2.8%

The sample ethnicity is largely White (non-Hispanic), 81.3%, with the next highest ethnicity listed as Hispanic, 7.6%. Participating institutions report gender of all enrolled students to be somewhat more diversified than the sample. Point reports the most diversified gender with 51% of students as White (non-Hispanic) and 5% as Hispanic/Latino (“College navigator - Point University,” n.d.). JBU reports a greater concentration of White students (76%) and a smaller concentration of Hispanic/Latino students (4%) (“College navigator - John Brown University,” n.d.). Table 7 details the ethnicity distribution of the sample.

Table 7. *Summary of Ethnicity of Participants Statistic (n=289)*

	<i>n=289</i>	<i>% of total</i>
American Indian or Native Alaskan	1	.4%
Asian	9	3.1%
Black or African-American	6	2.1%
Hispanic	22	7.6%
Native Hawaiian or other Pacific Islander	2	.7%
White	235	81.3%
Two or more races	14	4.8%

The participants identify business as the most frequent academic area of study, 30.9%, followed by other, 18.4% and psychology, 11.5%. Table 8 details the area of study distribution preferences for the sample.

Table 8. *Summary of Area of Study Statistic (n=288)*

	RTS (n=209)		DPS (n=46)		ATS (n=16)		Other (n=17)		Total	
	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>
Liberal Stud./Educ.	18	8.6%	0	0%	1	6.3%	1	5.9%	20	6.9%
Humanities	16	7.7%	1	2.2%	0	0%	1	5.9%	18	6.3%
Business	46	22%	31	67.4%	7	43.8%	5	29.4%	89	30.9%
Psychology	23	11%	6	13%	2	12.5%	2	11.8%	33	11.5%
Science	23	11%	1	2.2%	1	6.3%	1	5.9%	26	9%
Arts	18	8.6%	3	6.5%	1	6.3%	0	0%	22	7.6%
Engineering	22	10.5%	0	0%	2	12.5%	3	17.6%	27	9.4%
Other	43	20.6%	4	8.7%	2	12.5%	4	23.5%	53	18.4%

*Note.* RTS = Residential Traditional Students, DPS = Deferred Professional Students, and  
ATS = Accelerated Traditional Students.

The sample family income is concentrated between \$50,000 and \$100,000, 42.7% with an equal percentage (20.6%) reporting between \$25,000 and \$50,000 and over \$100,000. Table 9 details the reported family income for the sample.



Table 9. *Summary of Annual Family Income Statistic (n=286)*

	<i>n=286</i>	<i>% of total</i>
Under \$25,000	46	16.1%
Between \$25,000 and \$50,000	59	20.6%
Between \$50,000 and \$100,000	122	42.7%
Over \$100,000	59	20.6%

The sample occupation varies depending on the academic profile. A significant percentage of RTS and ATS participants identify their occupation as students or unemployed, 53.9% and 50% respectively. These participants are below age 26. The largest occupation for DPS participants who are over age 25 is for-profit business, 30.4%. Table 10 details the reported occupation for the sample.

Table 10. *Summary of Occupation Statistic (n=287)*

	RTS (n=208)		DPS (n=46)		ATS (n=16)		Other (n=17)		Total	
	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>
For-Profit Business	33	15.9%	14	30.4%	3	18.8%	5	29.4%	55	19.2%
Govt.	5	2.4%	7	15.2%	1	6.3%	2	11.8%	15	5.2%
NGO	16	7.7%	5	10.9%	1	6.3%	0	0%	22	7.7%
Education	15	7.2%	5	10.9%	0	0%	1	5.9%	21	7.3%
Student	95	45.7%	1	2.2%	6	37.5%	4	23.5%	106	36.9%
Not Pres. Employed	17	8.2%	2	4.3%	2	12.5%	4	23.5%	25	8.7%
Other	27	13%	12	26.1%	3	18.8%	1	5.9%	43	15%

*Note.* RTS = Residential Traditional Students, DPS = Deferred Professional Students, ATS = Accelerated Traditional Students, and NGO = Non-government organization or charity.

The sample years of work experience varies based on the academic profile. DPS participants have extensive work experience in the context of pursuit of a bachelor's degree, 67.4% with 10+ years. Other students also report high levels of work experience, 41.2% with 10+ years. RTS participants show the lowest amount of work experience, 37.8% with 1-2 years. In aggregate the highest percentage of the sample reports work

experience is between 3-5 years, 33.3%. Table 11 details the work experience for the sample.

Table 11. *Summary of Work Experience Statistic (n=288)*

	RTS (n=209)		DPS (n=46)		ATS (n=16)		Other (n=17)		Total	
	<i>n</i>	<i>% of</i>	<i>n</i>	<i>% of</i>	<i>n</i>	<i>% of</i>	<i>n</i>	<i>% of</i>	<i>n</i>	<i>% of</i>
	<i>total</i>		<i>total</i>		<i>total</i>		<i>total</i>		<i>total</i>	
1-2 Yrs.	79	37.8%	0	0%	3	18.8%	5	29.4%	87	30.2%
3-5 Yrs.	77	36.8%	7	15.2%	8	50%	4	23.5%	96	33.3%
6-10 Yrs.	26	12.4%	6	13%	2	12.5%	1	5.9%	35	12.2%
10+ Yrs.	2	1%	31	67.4%	1	6.3%	7	41.2%	41	14.2%
Other	25	12%	2	4.3%	2	12.5%	0	0%	29	10.1%

*Note.* RTS = Residential Traditional Students, DPS = Deferred Professional Students, and ATS = Accelerated Traditional Students.

The sample has primarily utilized CHEUs in their undergraduate education, 67.6% utilized CHEUs for 75% or more of their undergraduate education. RTS participants show the highest use of CHEUs with 82.7% using CHEUs for more than 75% and 96.2% using CHEUs for more than 50% of their education. DPS participants rely proportionately less on CHEUs with 41.3% obtaining less than 50% of their education from CHEUs. Table 12 details the CHEU participation for the sample.

Table 12. *Summary of CHEU Participation Statistic (n=287)*

	RTS (n=208)		DPS (n=46)		ATS (n=16)		Other (n=17)		Total	
	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>	<i>n</i>	<i>% of total</i>
Less than 25%	3	1.4%	2	4.3%	2	12.5%	1	5.9%	8	2.8%
Between 25% and 50%	5	2.4%	17	37%	2	12.5%	4	23.5%	28	9.8%
Between 50% and 75%	28	13.5%	15	32.6%	8	50%	6	35.3%	57	19.9%
Between 75% and 100%	172	82.7%	12	26.1%	4	25%	6	35.3%	194	67.6%

*Note.* RTS = Residential Traditional Students, DPS = Deferred Professional Students, and  
ATS = Accelerated Traditional Students.

The average number of authentic learning experiences reported by participants was 3.53 per participant. The highest average was associated with RTS, 3.83 and the lowest mean was associated with DPS, 2.53. Table 13 details the number of authentic learning experiences for the sample.

Table 13. *Summary of Authentic Learning Experiences (n=287)*

	RTS (n=209)		DPS (n=45)		ATS (n=16)		Other (n=17)		Total	
	<i>n</i>	<i>% of</i>	<i>n</i>	<i>% of</i>	<i>n</i>	<i>% of</i>	<i>n</i>	<i>% of</i>	<i>n</i>	<i>% of</i>
	<i>total</i>		<i>total</i>		<i>total</i>		<i>total</i>		<i>total</i>	
1	5	2.4%	15	33.3%	3	18.8%	4	23.5%	27	9.4%
2	23	11%	11	24.4%	2	12.5%	2	11.8%	38	13.2%
3	52	24.9%	7	15.6%	6	37.5%	5	29.4%	70	24.4%
4	51	24.4%	4	8.9%	3	18.8%	2	11.8%	60	20.9%
5 or more	78	37.3%	8	17.8%	2	12.5%	4	23.5%	92	32.1%
Total	209	100%	45	100%	16	100%	17	100%	287	100%
Mean*	3.83		2.53		2.94		3		3.53	

*Note.* RTS = Residential Traditional Students, DPS = Deferred Professional Students, and ATS = Accelerated Traditional Students. The mean calculation for number of authentic learning experiences assumes 5 for the 5 or more selection category. A total of 92 of 287 participants (32%) selected 5 or more authentic learning experiences indicating the true average could be higher.

To summarize the demographic statistics and descriptive characteristics, the sample population was derived from four CHEUs, located in dispersed geographic settings throughout the United States. The largest proportion of respondents for the sample was derived from JBU, 42.8% with the aggregate sample primarily being composed of RTS participants, 72.6%. The sample is composed evenly of graduates and participants nearing graduation. The sample is composed of a larger percentage of females, 62.4% and tends to be younger than 26, 79.8%. The area of study for the sample was concentrated around professional degrees with 30.9% studying business, 11.5%

psychology, and 9.4% engineering. The sample is largely composed of participants who identify their ethnicity as White 81.3%. The sample participant's family income is middle income, 42.7% are between \$50,000 and \$100,000 and 79.4% earn less than \$100,000. Work experience varies widely between younger students under 26 and participants that identify themselves as DPS and Other Students. A large percentage of DPS and Other Students report work experience of 10+ years, 67.4% and 41.2% respectively; while 74.6% of RTS and 68.8% of ATS report work experience of less than 5 years. The largest aggregate percentage of participants in the sample, 45.6%, report their occupation as student or unemployed. Of the remainder, the largest reported occupation is for-profit business. The sample participants have utilized CHEUs for a large percentage of their education with 67.6% relying on CHEUs for more than 75% of their post-secondary education. The sample on average has participated in 3.53 authentic learning experiences in their educational pursuit with RTS averaging 3.83 in contrast to DPS participants, 2.539.

### **Data Analysis and Instrument Reliability**

Data were collected using the 14 question SEQ and the 23 question EEQ instruments designed to measure the relationship between higher education and employability (Yorke & Knight, 2007). Demographic questions in the survey determined the participants' institution of identity, current academic status, academic profile, percentage of education obtained from a CHEU, number of authentic learning experiences, gender, age, ethnicity, area of study, family income, occupation, and work experience prior to and during pursuit of a bachelor's degree. The SEQ and EEQ

instruments were validated by the authors through a pilot test followed by an initial survey in the United Kingdom (see Tables 1 and 2). The authors of the EEQ performed a Cronbach's alpha test to determine the internal validity of the questionnaire after obtaining a five factor solution. Table 14 provides a comparison of the current study with the author's originally reported Cronbach's alphas using the authors' identified factors.

Table 14. *Summary of Cronbach's Alpha Statistic by Factor for EEQ*

	Reported Cronbach alpha by instrument's authors	Cronbach alpha for this study
Factor I: Valuing Workplace Experience ( <i>n</i> =291)	.77	.84
Factor II: Academic Awareness ( <i>n</i> =290)	.72	.76
Factor III: General Awareness ( <i>n</i> =292)	.69	.77
Factor IV: Employment Orientation ( <i>n</i> =291)	.68	.73
Factor V: Critical Independence ( <i>n</i> =295)	.55	.67

The study results provide a higher Cronbach's alpha score for each factor compared to the authors' original study with all factors above .7 (rounded), the threshold

identified by Peterson (1994) for values and beliefs. Overall, the EEQ provided a Cronbach's alpha of .76 with a value on standardized items of .81. An additional test of the EEQ identified negative corrected item-total correlation scores for five of the questions (8, 15, 16, 18 and 19). These questions are associated with general awareness (factor III) and if excluded raise the Cronbach's alpha to .90.

The authors did not perform a Cronbach's alpha examination on the SEQ in their introduction to the instrument and relied upon factor loading to support validation (Yorke & Knight, 2007) for 12 of the 14 questions. The other two questions are related to theories of self focused on locus of control. The authors' study identified a three factor solution with loadings achieved above .3 for each question. Table 15 provides a comparison of the authors' original study factor loadings to the loading obtained in this study based on a factor analysis.

Table 15. *Summary of Factor Loading Statistic for SEQ*

	Factor loading authors' study	Highest loading for this study
The academic tasks I am given motivate me to put in quite a lot of effort.	.58	.57
The amount of work I put into my studies is reflected in my grades.	.65	.69
Luck doesn't play much of a part in what I achieve academically.	.83	.63



As a student, I like learning situation in which I, rather than the teaching staff, can shape the work to be done.	.96	.49
I find that academic work doesn't stretch me intellectually.	.77	.78
R		
Higher education doesn't give me much of an opportunity to develop new skills. R	.72	.83
In life in general, I am stimulated by the challenge of difficult problems.	.79	.72
I don't let other people determine the way I tackle what I do outside higher education.	.96	.53
The tasks that people outside higher education expect me to undertake usually energize me to work hard at them.	.74	.54
In the things I do outside higher education, I find that there is not much of a connection between what I achieve and the effort I put in. R	.69	.70
Chance will probably be influential in what I achieve in employment. R	.69	.72
I don't like situation in which I, rather than others, am responsible for what happens. R	.62	.32
An individual can't change their intelligence by much. R	-	.14
No matter what kind of person someone is, it is always possible for them to change significantly.	-	.75

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*Note.* R = question was reverse scored.

The study factor loadings are comparable on questions 1, 2, 5, 7 and 10 and lower for questions 3, 4, 6, 8, 9 and 12. A Cronbach's alpha was performed using the data from the survey results. A factor analysis on the survey results provided different grouping from the authors' original study. Table 16 provides a Cronbach's alpha based on the factor analysis conducted for this study.

Table 16. *Summary of Cronbach's Alpha Statistic for SEQ*

	Cronbach alpha for this study
Factor I: Questions 5, 6 and 13	.57
Factor II: Questions 4, 7, 8 and 9	.51
Factor III: Questions 10, 11 and 12	.35
Factor IV: Questions 1, 2 and 3	.51
Other: Question 14	-

A Cronbach's alpha of the SEQ, excluding question 14 provided a Cronbach's alpha of .32. Excluding questions 1, 2 and 12 due to negative corrected item-total correlation values improves Cronbach's alpha to .44. Although the SEQ Cronbach's alpha statistic is below normal thresholds of reliability, consideration is made for the short length of the SEQ and the relatively high number of constructs. As the number of interrelated constructs increases in an instrument and the number of questions decreases, Cronbach's alpha values decrease (Tavakol & Dennick, 2011).

## **Descriptive Statistics**

Descriptive statistics are included in Table 17 for the total SEQ, EEQ and combined (SEQ + EEQ) scores based on academic profile. The SEQ includes 14 questions using a four point Likert scale. Affirmative answers (strong agree) receive a value of four per question with a reduction of one point for each less affirming response. Answers for reverse scored questions were valued in the opposite manner. Scores on the SEQ could range between 14 and 56. The EEQ includes 23 questions using a five point Likert scale with strongly agree answers receiving a value of five and reverse scored questions receiving a value of five for strongly disagreed. Scores on the EEQ could range between 23 and 115. Scores on the SEQ and EEQ were combined to a total employability score (SEQ + EEQ) that has a possible range between 37 and 171. A summary of the mean and standard deviation of the employability measurements by academic profile are detailed in table 17.

Table 17. *Descriptive Statistics of Participant Data by Academic Profile and Employability Measurement*

	RTS		DPS		ATS		Other	
Employability Measurement	<i>Mean</i>	<i>Stand. Dev.</i>	<i>Mean</i>	<i>Stand. Dev.</i>	<i>Mean</i>	<i>Stand. Dev.</i>	<i>Mean</i>	<i>Stand. Dev.</i>
SEQ	32.5	2.78	32.5	4.5	31.6	2.9	32.8	3.2
	(n=205)		(n=45)		(n=16)		(n=17)	
EEQ	51.2	7.7	48.5	11.9	51	6.1	54.1	4.9
	(n=200)		(n=44)		(n=14)		(n=16)	
SEQ + EEQ	83.9	8.2	81.1	15.8	82.3	7.7	86.8	5.8
	(n=197)		(n=43)		(n=14)		(n=16)	

*Note.* RTS = Residential Traditional Students, DPS = Deferred Professional Students, and ATS = Accelerated Traditional Students.

Descriptive statistics are provided in Table 18 indicating the scoring on employability measures for participants from each of the affiliated institutions. Participants affiliated with JBU report the highest mean on the SEQ (32.9), EEQ (51.6) and SEQ + EEQ (84.5).

Table 18. *Descriptive Statistics of Participant Data by Institution and Employability Measurement*

	John Brown University		Point University		William Jessup University		George Fox University	
Employability Measurement	<i>Mean</i>	<i>Stand. Dev.</i>	<i>Mean</i>	<i>Stand. Dev.</i>	<i>Mean</i>	<i>Stand. Dev.</i>	<i>Mean</i>	<i>Stand. Dev.</i>
SEQ	32.9	3.3	31.8	3.6	31.5	2.8	32.9	2.8
	(n=123)		(n=42)		(n=45)		(n=73)	
EEQ	51.6	9.6	49.5	6.4	51.4	8.5	50.4	6.7
	(n=120)		(n=40)		(n=45)		(n=69)	
SEQ + EEQ	84.5	11.7	81.3	7.2	82.9	8.5	83.7	7.6
	(n=119)		(n=40)		(n=44)		(n=67)	

Descriptive statistics are provided in Table 19 indicating the scoring on specific questions from each questionnaire (SEQ and EEQ) combined based on their specific factor.

Table 19. *Descriptive Statistics of Participant Data by SEQ and EEQ Factors*

Factor	<i>n</i>	<i>Mean</i>	<i>Stand. Dev.</i>
SEQ			
The impact of luck and/or effort on achievement	286	17.4	2.2
Engagement	287	6.4	1.7
Personal control	288	3.8	1.0
EEQ			
Valuing workplace experience	285	9.8	3.7
Academic awareness	284	8.8	2.7
General awareness	286	17.5	4.0
Employment orientation	285	9.8	3.0
Critical independence	289	4.9	1.8

Descriptive statistics are provided in Table 20 indicating the mean score and standard deviation on employability measurements (SEQ, EEQ and SEQ + EEQ) depending on the proportion of participants' undergraduate education obtained from a CHEU. The highest mean for the SEQ + EEQ was identified for participants with less than 25% (84.7) with the next highest mean associated with between 75% and 100% (84.2). There are a small number of participants (6) identifying themselves with less than 25% compared to 181 who selected over 75%.

Table 20. *Descriptive Statistics of Participants Data by Percentage of CHEU Attendance and Employability Measurement*

	SEQ (n=282)		EEQ (n=273)		SEQ + EEQ (n=269)	
CHEU Attendance	<i>Mean</i>	<i>Stand. Dev.</i>	<i>Mean</i>	<i>Stand. Dev.</i>	<i>Mean</i>	<i>Stand. Dev.</i>
Less than 25%	32.2	3.9	52.5	7.06	84.7	6.9
	(n=6)		(n=6)		(n=6)	
Between 25% and 50%	31.8	3.2	50.3	5.9	82.0	5.9
	(n=28)		(n=28)		(n=26)	
Between 50% and 75%	31.8	3.2	49.4	8.3	81.3	9.2
	(n=57)		(n=54)		(n=54)	
Between 75% and 100%	32.8	3.2	51.3	8.6	84.2	10.2
	(n=189)		(n=185)		(n=181)	

Descriptive statistics are provided in Table 21 indicating the mean number of authentic learning experiences based on academic cluster. The highest mean (3.8) is associated with RTS and the lowest (2.5) with DPS.

Table 21. *Descriptive Statistics of Participants' Data by Number of Authentic Learning Experiences and Academic Cluster (n=287)*

Academic Profile	Number of Authentic Learning Experiences	
	<i>Mean</i>	<i>Stand. Dev.</i>
Traditional Residential Student (n=209)	3.8	1.12
Deferred Professional Student (n=45)	2.5	1.49
Accelerated Traditional Student (n=16)	2.9	1.3
Other Student (n=17)	3.0	1.5

Descriptive statistics are provided in Table 22 indicating the mean score of participants on the SEQ, EEQ and SEQ + EEQ depending on their work experience in the context of earning an undergraduate degree. The highest SEQ + EEQ score (86.9) was associated with the category of other (less than 1 year work experience). The largest group of participants (32.8% on the SEQ + EEQ) selected 3-5 years of work experience.



Table 22. *Descriptive Statistics of Participants' Data by Work Experience and Employability Measurement*

SEQ (n=284)			EEQ (n=275)		SEQ + EEQ (n=271)	
Work Experience in the Context of Degree	<i>Mean</i>	<i>Stand. Dev.</i>	<i>Mean</i>	<i>Stand. Dev.</i>	<i>Mean</i>	<i>Stand. Dev.</i>
1 to 2 years	32.2 (n=87)	3.1	51.2 (n=85)	7.0	83.4 (n=85)	7.5
3 to 5 years	33.1 (n=94)	3.7	51.0 (n=90)	9.2	84.3 (n=89)	11.6
6 to 10 years	32.0 (n=34)	2.4	50.7 (n=35)	6.5	83.0 (n=34)	7.0
10+ years	32.8 (n=41)	2.7	48.5 (n=40)	7.4	80.6 (n=39)	8.7
None of the above	32.8 (n=28)	3.1	54.1 (n=25)	11.9	86.9 (n=24)	12.4

Figure 2 provides a histogram and summary of descriptive statistics for the sample. The distribution of the sample exhibits slight positive skewness for SEQ and increasing positive skewness for EEQ and SEQ + EEQ. Skewness measurements may be influenced by outliers. All employability elements exhibit positive kurtosis indicating a steeper than normal curve and concentration of scores around the mean.

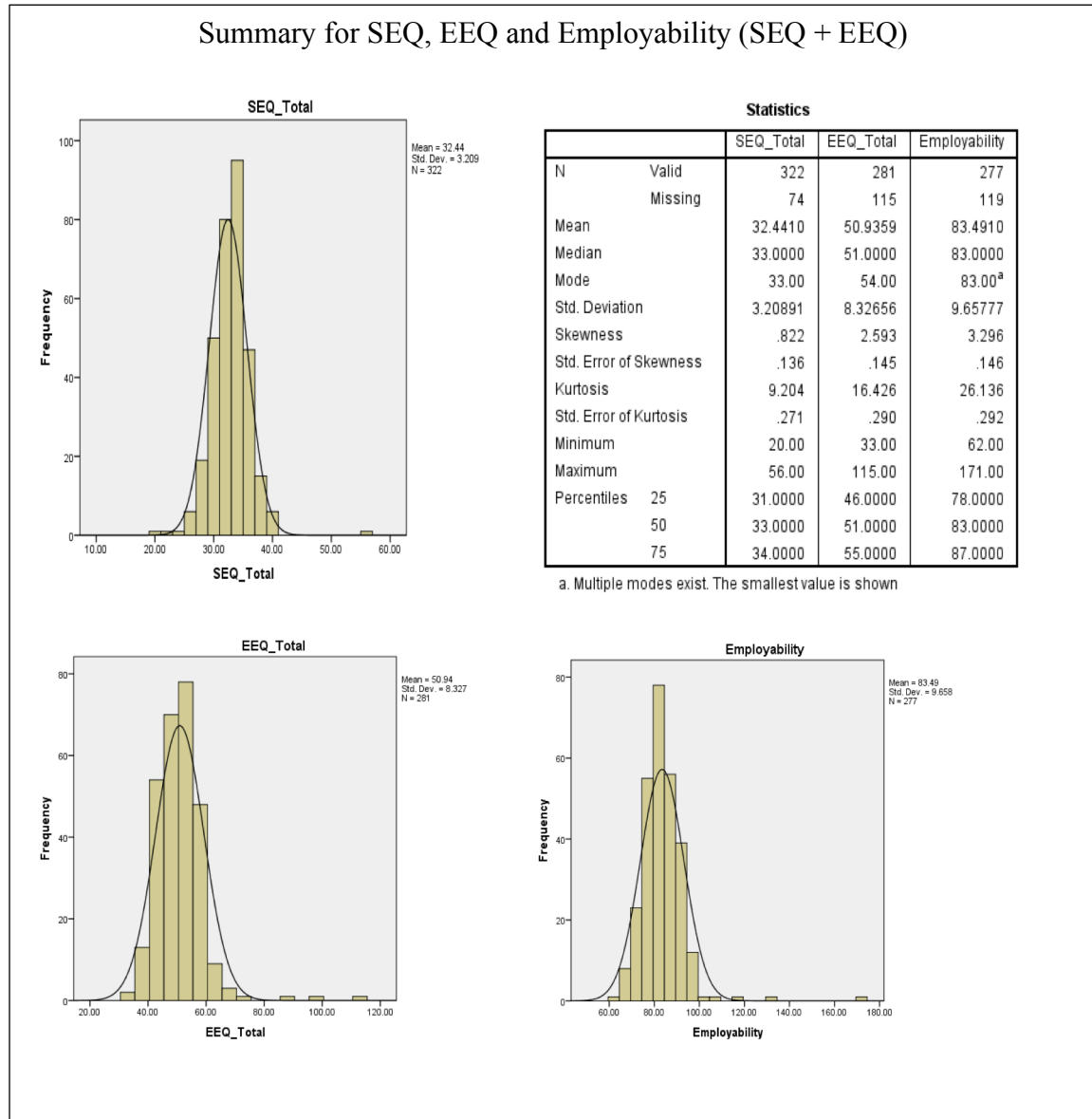


Figure 2. Histogram of employability scores with normal curve overlaid.

### Comparison of Means of Employability among Academic Clusters

A one-way ANOVA was conducted to compare the differences in employability among the four academic clusters from the study. The goal of this analysis was to determine if there was a statistical difference among the means of the four academic clusters pursuant to hypotheses one as follows:

H1: There is a difference in suitability of employment among *Residential Traditional Students, Deferred Professional Students, Accelerated Traditional Students and Other Students*.

Based on the ANOVA results, there was no significant statistical difference in the means among the four academic clusters using SEQ, EEQ and SEQ + EEQ scores SEQ [ $F(3, 279) = .5, p = .683$ ], EEQ [ $F(3, 270) = 2.063, p = .105$ ], and SEQ + EEQ [ $F(3, 266) = 1.706, p = .137$ ]. Post hoc comparisons using the least significant difference (LSD) among the four academic clusters indicated that the mean on the EEQ for ATS ( $M = 51, SD = 6.1$ ) was significantly different ( $p = .043$ ) than Other Students ( $M=54, SD = 4.9$ ), but other contrast comparing groupings of academic clusters did not indicate a significant statistical difference in the means of any of the measures of employability. Table 23 provides detail of the ANOVA results.

Table 23. *ANOVA Statistics of Participant Data Comparing the Mean for Academic Clusters of Employability Instruments*

	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>	<i>ES eta (<math>\eta^2</math>)</i>
SEQ ( <i>n</i> =279)						
Between Groups	15.4	3	5.1	.500	.683	.0005
Within Groups	2,865.3	279	10.3	-	-	-
Total	2,880.7	282	-	-	-	-
EEQ ( <i>n</i> =270)						
Between Groups	425.7	3	141.9	2.063	.105	.022
Within Groups	18,569.8	270	68.8	-	-	-
Total	18,995.5	273	-	-	-	-
SEQ+EEQ ( <i>n</i> =266)						
Between Groups	478.2	3	159.4	1.706	.166	.018
Within Groups	24,851.2	266	93.4	-	-	-
Total	25,329.4	269	-	-	-	-

*Note.*  $df$  = degrees of freedom.  $F$  =  $F$  ratio determined by between groups mean square divided by within-group mean square. *Sig.* = probability of observed value happening by chance.  $ES$  = effect size.

An additional ANOVA was conducted using the various factors from the EEQ to determine if any statistical differences exist among the academic clusters in specific aspects of the EEQ. Based on the ANOVA results, there was a significant statistical difference in the means among the four academic clusters for the factors general awareness [ $F(3, 281) = 2.983, p = .032$ ] and employment orientation [ $F(3, 280) = 4.833, p = .003$ ]. There was no significant statistical difference in the means of critical independence [ $F(3, 284) = 1.503, p = .214$ ]. The effect size ( $\eta^2$ ) is between small (.01) and medium (.059) (Cohen, 1988) for all five factors of the EEQ. Post hoc comparisons using the least significant difference (LSD) among the four academic clusters for the five EEQ factors indicated that the mean of the factor valuing workplace experience, RTS ( $M = 10.02, SD = 3.55$ ) was significantly different ( $p = .010$ ) than DPS ( $M=8.43, SD = 4.26$ ) and DPS was significantly different ( $p = .042$ ) than Other Students ( $M=10.59, SD = 3.74$ ). For the factor academic awareness, RTS ( $M = 8.95, SD = 2.6$ ) was significantly different ( $p=.018$ ) than DPS ( $M = 7.91, SD = 3.21$ ) and DPS was significantly different ( $p = .033$ ) from Other Students ( $M=9.56, SD = 2.22$ ). For the factor general awareness RTS ( $M = 17.24, SD = 3.87$ ) was significantly different ( $p = .004$ ) than DPS ( $M = 19.13, SD = 4.26$ ). For the factor employment orientation, RTS ( $M = 10.02, SD = 2.88$ ) was significantly different ( $p < .001$ ) than DPS ( $M = 8.26, SD = 3.52$ ) and DPS was significantly different ( $p = .009$ ) than Other Students ( $M = 10.47, SD = 1.81$ ). For the factor critical independence RTS ( $M = 4.86, SD = 1.86$ ) was

significantly different ( $p = .039$ ) from Other Students ( $M = 5.82$ ,  $SD = 1.33$ ). Other contrast considered were not significantly different for the EEQ factors. Table 24 provides detail of the ANOVA results for the EEQ factors.

Table 24. *ANOVA Statistics of Participant Data Comparing the Mean for Academic Clusters of EEQ Factors*

	F	Sig.	Effect Size eta ( $\eta^2$ )
Valuing Workplace Experience ( $n=280$ )	2.542	.057	.027
Academic Awareness ( $n=279$ )	2.4	.068	.025
General Awareness ( $n=281$ )	2.983*	.032*	.031
Employment Orientation ( $n=280$ )	4.833*	.003*	.049
Critical Independence ( $n=284$ )	1.5	.214	.016

*Note.*  $F$  =  $F$  ratio determined by between-groups mean square divided by within-group mean square. *Sig.* = probability of observed value happening by chance. *ES* = effect size.

\* = within 95% confidence interval.

The first ANOVA performed on the SEQ, EEQ and SEQ + EEQ failed to identify any significant difference between the means of the four academic clusters. Post hoc contrast analysis indicated a significant statistical difference for the EEQ between ATS and Other Students. A second ANOVA performed on the five factors of the EEQ indicate that the mean of the factors general awareness and employment orientation for the four academic clusters were significantly different. Although differences in nuanced aspects of employability were indicated, there is insignificant evidence to reject the null

hypothesis that there is no difference in suitability of employment among *Residential Traditional Students, Deferred Professional Students, Accelerated Traditional Students and Other Students* cannot be rejected, thus H1 cannot be accepted as true.

### **Comparison of Means of Employability among Institutions**

A one-way ANOVA was conducted to compare the differences in employability among the sample participants in aggregate that identified themselves with one of the four CHEUs associated with this study. The goal of this analysis was to determine if employability measures differ among participants based on their institution of affiliation pursuant to hypothesis two as follows:

*H2: There is a difference in suitability of employment among respective clusters of students from one Christian liberal arts university in comparison to others in the research.*

Based on the ANOVA results, there was a significant statistical difference in the means among the participants from the four academic institutions that participated in the study using SEQ [ $F(3, 279) = 3.052, p = .029$ ] no significant difference for the EEQ [ $F(3, 270) = .788, p = .501$ ] and no significant difference in the SEQ + EEQ [ $F(3, 266) = 1.124, p = .340$ ]. Post hoc comparisons using the least significant difference (LSD) among the four institutions indicated that the mean on the SEQ for WJU participants ( $M = 31.5, SD = 2.8$ ) was significantly different ( $p = .026$ ) than GFU participants ( $M = 32.9, SD 2.89$ ), and significantly different ( $p = .015$ ) than JBU participants ( $M = 32.9, SD 3.3$ ). Other contrast comparing groupings of participating institutions did not indicate a significant statistical difference in the means of any of the measures of employability.

The effect size ( $\eta^2$ ) of .032 for the SEQ is between small (.01) and medium (.059) (Cohen, 1988). Table 25 provides detail of the ANOVA results.

Table 25. *ANOVA Statistics of Participant Data Comparing the Mean for of Employability Instruments Based on Institution of Affiliation*

	<i>F</i>	<i>Sig.</i>	<i>ES</i> <i>eta</i> ( $\eta^2$ )
SEQ ( $n=279$ )	3.05*	.029*	.032
EEQ ( $n=270$ )	.788	.501	.009
SEQ + EEQ ( $n=266$ )	1.124	.340	.013

*Note.* *F* = *F* ratio determined by between groups mean square divided by within-group mean square. *Sig.* = probability of observed value happening by chance. *ES* = effect size.

\* = within 95% confidence interval.

An additional ANOVA was conducted to compare the means on the employability instruments for each institution when grouping by academic cluster. Based on the ANOVA results there was a significant statistical difference in the means among the participants from the four academic institutions for RTS using SEQ [ $F(3, 200) = 3.489, p = .017$ ] and no significant difference for the EEQ [ $F(3, 195) = 1.19, p = .315$ ] and SEQ + EEQ [ $F(3, 192) = 1.80, p = .149$ ]. For DPS there was no statistical difference for SEQ [ $F(3, 41) = .414, p = .744$ ], EEQ [ $F(3, 40) = .397, p = .756$ ], and SEQ + EEQ [ $F(3, 39) = .395, p = .757$ ]. For ATS there was no statistical difference for SEQ [ $F(3, 12) = 2.094, p = .155$ ], EEQ [ $F(2, 11) = 1.352, p = .299$ ], and SEQ + EEQ [ $F(2, 11) = .705, p = .515$ ]. For Other Students there was a statistical difference for SEQ + EEQ [ $F(2, 13) =$



5.662,  $p = .017$ ] and no statistical difference for SEQ [ $F(2, 14) = 2.02$ ,  $p = .169$ ] and EEQ [ $F(2, 13) = 2.952$ ,  $p = .299$ ].

Post hoc comparisons using the least significant difference (LSD) among RTS participants from the four CHEUs indicated that the mean for JBU, RTS participants ( $M = 33.1$ ,  $SD = 2.45$ ) on the SEQ was significantly different ( $p = .02$ ) than RTS participants from Point ( $M = 31.8$ ,  $SD = 3.7$ ) and significantly different ( $p = .007$ ) than RTS participants from WJU ( $M = 31.4$ ,  $SD = 1.96$ ). LSD comparisons were also conducted for Other Students indicated that the mean for GFU participants ( $M = 93.67$ ,  $SD = 5.03$ ) on the SEQ + EEQ was significantly different ( $p = .005$ ) than JBU ( $M = 82.4$ ,  $SD = 4.21$ ). Other contrast comparing groupings of participating institutions segmented by academic cluster did not indicate a significant statistical difference in the means of any of the measures of employability. The effect size ( $\eta^2$ ) for RTS participants with the SEQ (.049) is between small (.01) and medium (.059) (Cohen, 1988). Table 26 provides detail of the ANOVA results.

Table 26. *ANOVA Statistics of Participant Data Comparing the Means for Employability Instruments for Academic Cluster Based on Institution of Affiliation*

	<i>F</i>	<i>Sig.</i>	<i>ES</i> <i>eta (η<sup>2</sup>)</i>
SEQ			
Residential Traditional Students ( <i>n</i> =200)	3.49*	.017*	.049
Deferred Professional Students ( <i>n</i> =41)	.414	.744	.029
Accelerated Traditional Students ( <i>n</i> =12)	2.094	.155	.344
Other Students ( <i>n</i> =14)	2.022	.169	.224
EEQ			
Residential Traditional Students ( <i>n</i> =195)	1.19	.315	.018
Deferred Professional Students ( <i>n</i> =40)	.397	.765	.028
Accelerated Traditional Students ( <i>n</i> =11)	1.352	.299	.197
Other Students ( <i>n</i> =13)	2.952	.088	.434
SEQ + EEQ			
Residential Traditional Students ( <i>n</i> =192)	1.8	.149	.027
Deferred Professional Students ( <i>n</i> =39)	.395	.757	.029
Accelerated Traditional Students ( <i>n</i> =11)	.705	.515	.114
Other Students ( <i>n</i> =13)	5.662*	.017*	.466

*Note.* *F* = *F* ratio determined by between groups mean square divided by within-group mean square. *Sig.* = probability of observed value happening by chance. *ES* = effect size.

\* = within 95% confidence interval.

The first ANOVA performed on the SEQ, EEQ and SEQ + EEQ identified statistical differences in the means of the SEQ without segregating participants by academic cluster. A second ANOVA considered the difference in means based on academic clusters. The second ANOVA indicated a statistical difference in the SEQ for RTS participants and SEQ + EEQ for Other Students. Therefore the null hypothesis that that there is no difference in suitability for employment among respective clusters of students from one Christian liberal arts university in comparison to others in the research can be rejected, thus H2 is accepted as true.

### **Correlation Analysis Results**

A series of bivariate correlations were conducted to address hypothesis H3, H4 and H5. The purpose of the correlation for H3 was to determine if a positive correlation exists between a Christian liberal arts education and employability as follows:

*H3: There is a positive correlation between the percentage of a students' education received from a Christian liberal arts university and suitability for employment.*

The correlation analysis was used to determine the strength of the relationship between the proportion of a student's education obtained at a CHEU and measures of suitability for employment using the Pearson product-moment correlation (Pearson  $r$ ). Details of the correlation are provided in Table 27 and indicate a statistically significant relationship ( $p < .05$ ) between a Christian liberal arts education and the SEQ [ $r(269) = .137, p = .025$ ]. The strongest relationship was found between Christian liberal arts education and the SEQ factor, engagement [ $r(269) = .174, p = .004$ ]. The EEQ, SEQ +

EEQ and other factors taken from the SEQ and EEQ instruments provide the weakest correlations. The EEQ factors of general awareness and critical independence indicates slight negative correlation. Newton and Rudestam (1999) recommend using the Pearson  $r$  value for effect size rather than the coefficient of determination ( $r^2$ ) to avoid underestimating the effects of the relationship when a relatively low correlation might be statistically significant with a large population size, but infer a relatively weak association when using  $r^2$ . Using Cohen (1988) the effect size is between small (.10) and medium (.30) for the SEQ and the SEQ factor, engagement.

Table 27. *Summary of Bivariate Correlation Scores for Percentage of Education Obtained from Christian Liberal Arts and Employability Measurement (n=269)*

Measure	Pearson $r$	$r^2$
1. Percentage of Education from Christian Liberal Arts	-	
2. SEQ	.137*	.019*
3. EEQ	.035	
4. SEQ + EEQ	.076	
5. SEQ 1- Impact of Luck and /or Effort on Achievement	.055	
6. SEQ 2- Engagement	.174**	.030**
7. SEQ 3- Personal Control	.079	
8. EEQ 1- Valuing Workplace Experiences	.033	
9. EEQ 2- Academic Awareness	.092	
10. EEQ 3- General Awareness	-.078	
11. EEQ4- Employment Orientation	.093	
12. EEQ 5- Critical Independence	-.025	

Note. \*within 95% confidence level. \*\*within 99% confidence level.

A second bivariate correlation was utilized to determine the relationship between number of authentic learning experiences and measures of employability related to H4 as follows:

*H4: There is a positive correlation between suitability of employment and number of authentic learning experiences for Residential Traditional Students.*

The correlation analysis was used to determine the strength of the relationship between the authentic learning and measures of suitability for employment. Details of the correlation are provided in Table 28. When considering all participants as a single group the analysis indicate a statistically significant relationship between number of authentic learning experiences and the EEQ factor, general awareness [ $r(285) = .135, p = .023$ ]. A weak relationship exists between authentic learning and the various measures of employability with several of the components indicating a slight negative relationship.

An inverse significant relationships was determined for RTS students between authentic learning experiences and EEQ factors of valuing workplace experience [ $r(207) = -.137, p = .049$ ] and employment orientation [ $r(207) = -.201, p = .004$ ]. A positive relationship was found between authentic learning experiences and general awareness [ $r(207) = .221, p = .001$ ]. Other measures indicate a weak relationship between authentic learning experiences and measures of employability for RTS participants with many of the measures indicating a negative or inverse relationship. The effect size for the statistically significant correlations range between small (.10) and medium (.30) (Cohen, 1988).

Table 28. *Summary of Bivariate Correlation Scores for Number of Authentic Learning Exercises and Employability Measurement*

Measure	Pearson <i>r</i>	
	All Participants ( <i>n</i> =288) <i>r/r</i> <sup>2</sup>	RTS ( <i>n</i> =209) <i>r/r</i> <sup>2</sup>
1. Number of Authentic Learning Exercises	-	-
2. SEQ	-.010	-.032
3. EEQ	-.055	-.072
4. SEQ + EEQ	-.054	-.089
5. SEQ 1- Impact of Luck and /or Effort on Achievement	.042	.101
6. SEQ 2- Engagement	-.063	-.122
7. SEQ 3- Personal Control	-.037	-.064
8. EEQ 1- Valuing Workplace Experiences	-.093	-.137/.019*
9. EEQ 2- Academic Awareness	-.055	-.065
10. EEQ 3- General Awareness	.135/.018*	.221/.049**
11. EEQ4- Employment Orientation	-.103	-.201/.040**
12. EEQ 5- Critical Independence	-.087	-.040

*Note.* \*within 95% confidence level. \*\*within 99% confidence level.

An additional bivariate correlation was utilized to determine the relationship between work experience in the context of education and measures of employability related to H5 as follows:

*H5: There is a positive correlation between suitability of employment and number of years of work experience in the context of education for Deferred Professional Students.*

The correlation analysis was used to determine the strength of the relationship between work experience in the context of education and measures of suitability for employment. Details of the correlation are provided in Table 29 and indicate weak statistically significant relationships between work experience and all of the measures of employability when considering all participants as a single group. The EEQ, SEQ + EEQ, SEQ factor of engagement, and EEQ factors of valuing workplace experiences, academic awareness and general awareness all indicate slight negative correlations.

A statistical negative relationship exists for DPS participants between years of work experience and the EEQ [ $r(43) = -.379, p = .012$ ], SEQ + EEQ [ $r(43) = -.346, p = .023$ ], valuing workplace experience [ $r(43) = -.367, p = .015$ ], and academic awareness [ $r(43) = -.330, p = .031$ ]. All measures of employability demonstrate a negative correlation with years of work experience for DPS participants. The effect size for the statistically significant correlations range between medium (.30) and large (.50) (Cohen, 1988).

Table 29. *Summary of Bivariate Correlation Scores for Years of Work Experience in Educational Pursuant Context and Employability Measurement*

Measure	Pearson <i>r</i>	
	All Participants ( <i>n</i> =271) <i>r</i>	DPS Participants ( <i>n</i> =43) <i>r/r</i> <sup>2</sup>
1. Years of Work Experience	-	
2. SEQ	.013	-.202
3. EEQ	-.003	-.379/.144*
4. SEQ + EEQ	-.001	-.346/.120*
5. SEQ 1- Impact of Luck and /or Effort on Achievement	.019	-.092
6. SEQ 2- Engagement	-.063	-.278
7. SEQ 3- Personal Control	.100	-.034
8. EEQ 1- Valuing Workplace Experiences	-.046	-.367/.135*
9. EEQ 2- Academic Awareness	-.045	-.330/.109*
10. EEQ 3- General Awareness	-.024	-.271
11. EEQ4- Employment Orientation	.017	-.072
12. EEQ 5- Critical Independence	.092	-.215

*Note.* \*within 95% confidence level.

In summary the bivariate correlations performed provide evidence of a significant relationship between the percentage of education obtained from a CHEU and measures of employability in comparison to the SEQ and SEQ factor of engagement, however, in aggregate there is insufficient evidence to reject the null hypothesis that there is not a



positive correlation between the percentage of a students' education received from a CHEU and suitability of employment cannot be rejected. Thus H3 cannot be accepted as true.

The bivariate correlation performed for H4 provided evidence of a moderate relationship between the number of authentic learning experiences and measures of employability, but with some measures indicating a positive relationship and others demonstrating a negative relationship. Therefore the null hypothesis that there is not a positive correlation between the number of authentic learning experiences and suitability of employment cannot be rejected. Thus H4 cannot be accepted as true.

The bivariate correlation conducted in the context of H5 does not support a statistically significant positive correlation between years of work experience and measures of employability. Therefore the null hypothesis that there is not a positive correlation between suitability of employment and years of work experience cannot be rejected. Thus H5 cannot be accepted as true.

### **Additional Analysis**

Additional analysis was performed to determine if there are any additional meaningful relationships that might exist between employability and other variables from the survey and the strengths of the relationship. A series of simple linear regressions was utilized to determine if a relationship exists between explanatory variables, measured using discrete ordinal values and total scores for the SEQ and EEQ. The analysis indicates a significant statistical relationship between percentage of education obtained at a CHEU and SEQ ( $p = .022$ ) and between age and EEQ ( $p = .026$ ). The independent

variable, percentage of education obtained at a CHEU explained a significant amount of variance in the dependent variable, SEQ,  $R^2 = 1.9\%$ ,  $F(1, 280) = 5.319$ ,  $p = .022$ . In addition, the dependent variable, age has an inverse relationship with SEQ and EEQ and explained a significant amount of variance in the dependent variable, EEQ,  $R^2 = 1.8\%$ ,  $F(1, 272) = 5.002$ ,  $p = .026$ . The results of the simple linear regression analysis is shown in Table 30.

Table 30. *Summary of Simple Linear Regression of Measurable Independent Variables and Employability*

	SEQ			EEQ		
	$R^2$	$B$	$Sig.$	$R^2$	$B$	$Sig.$
Percentage of CHEU ( $n=282$ )	.019	.536	.022*	.001	.300	.626
Authentic Learning ( $n=281$ )	.000	-.010	.869	.003	-.055	.362
Age ( $n=274$ )	.001	-.085	.631	.018	-1.055	.026*
Family Income ( $n=280$ )	.000	.016	.935	.003	-.491	.339
Work Experience ( $n=275$ )	.000	.001	.997	.000	.024	.950

Note. \* = within 95% confidence level.

Figure 3 provides simple linear regression plots for the five explanatory variables analyzed in Table 30 and SEQ scores. The horizontal axis represents Z scores with the vertical axis represented by variances from the expected value.

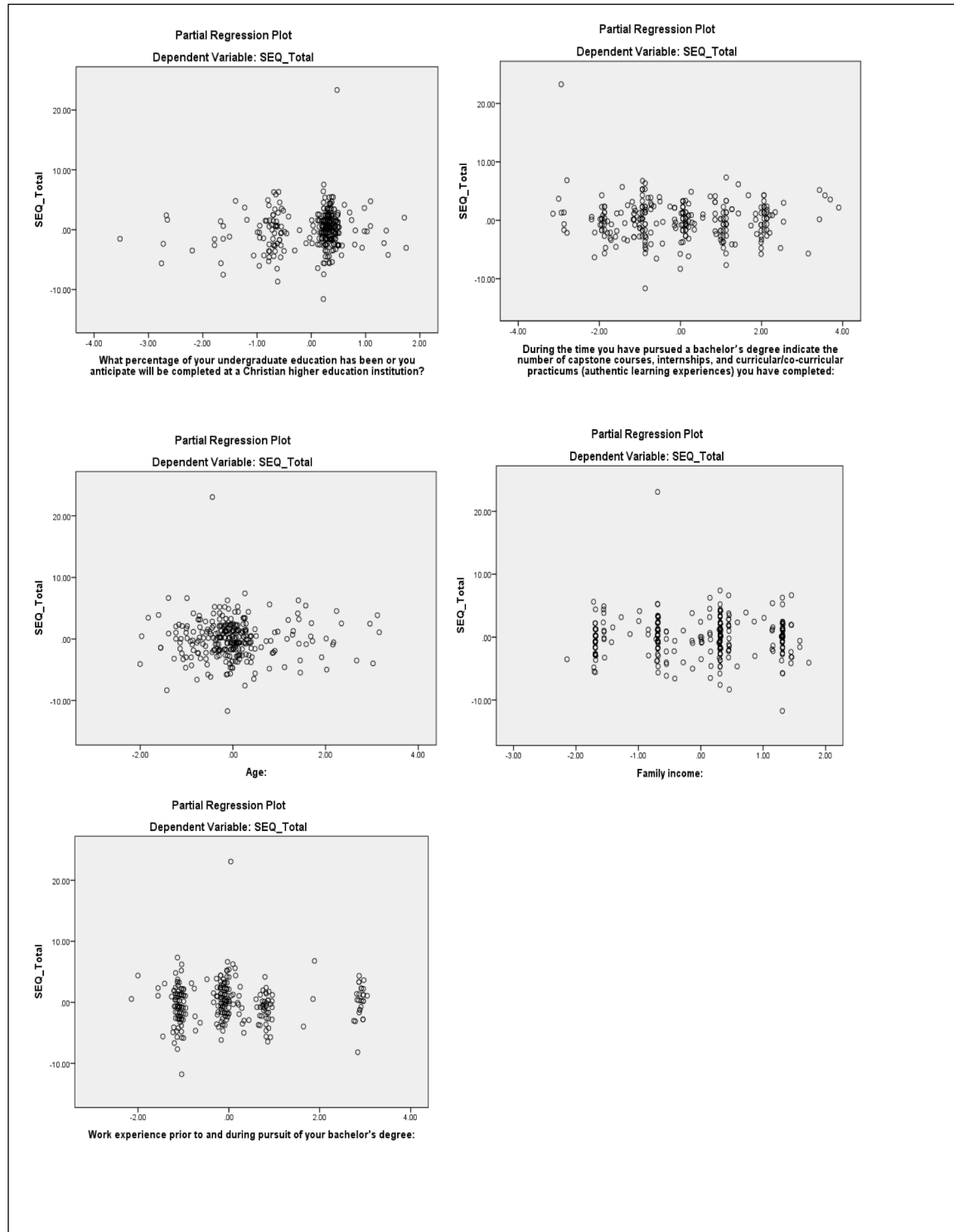


Figure 3. Partial Regression Plots for SEQ

Figure 4 provides simple linear regression plots for the five explanatory variables analyzed in Table 30 and EEQ scores. The horizontal axis represents Z scores with the vertical axis represented by variances from the expected value.

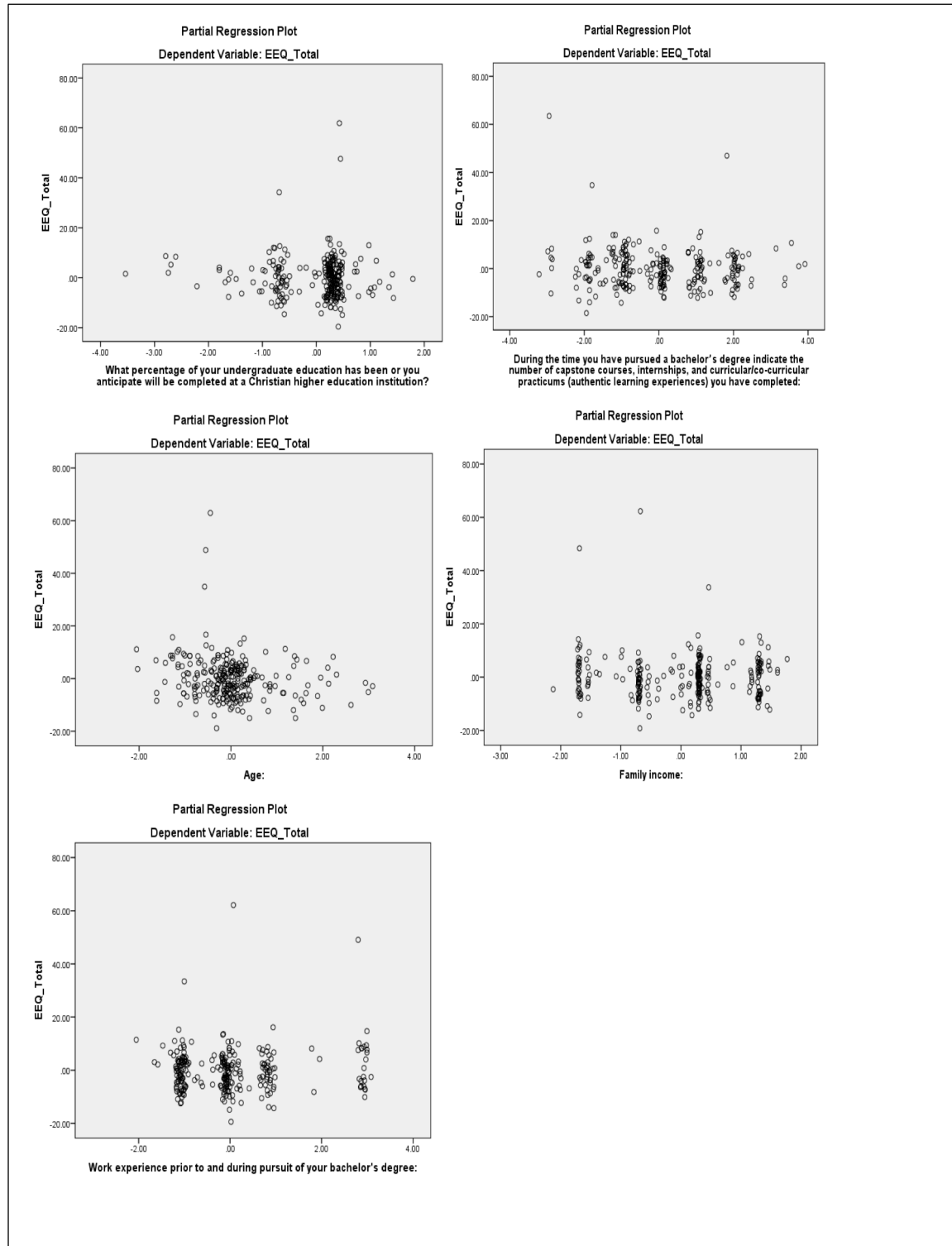


Figure 4. Partial Regression Plots for EEQ

## **Conclusion**

The primary purpose of this study was to determine specific differences that exist in employability among different academic clusters of students that have recently graduated or are nearing graduation. In addition, the study was designed to explore the relationship between the factors of attendance at a CHEU, authentic learning experiences, and work experience in relation to employability. A total of 1,749 possible participants were identified and invited by email to participate in the survey of which 396 provided partial response and 290 addressed questions in all sections of the survey. The participants were affiliated with four CHEUs geographically dispersed throughout the United States. Participants that completed questions from all sections of the survey were evenly split between graduates and near graduates. Table 31 summarizes the outcomes from the test that were conducted on the hypotheses.

Table 31. *Summary of Hypotheses Outcomes*

Hypothesis	Outcome
H1: There is a difference in suitability of employment among <i>Residential Traditional Students, Deferred Professional Students, Accelerated Traditional Students</i> and <i>Other Students</i> .	Not Accepted
H2: There is a difference in suitability of employment among respective clusters of students from one Christian liberal arts university in comparison to others in the research.	Accepted
H3: There is a positive correlation between the percentage of a students' education received from a Christian liberal arts university and suitability for employment.	Not Accepted
H4: There is a positive correlation between suitability of employment and number of authentic learning experiences for <i>Residential Traditional Students</i> .	Not Accepted
H5: There is a positive correlation between suitability of employment and number of years of work experience in the context of education for <i>Deferred Professional Students</i> .	Not Accepted

The results of the statistical test indicate there is a statistically significant difference in employability based on school of affiliation among different clusters of students and H2 is accepted as true. Nuanced statistical differences were observed in support of H1, H3, H4 and H5, however, the evidence was not sufficient to reject each respective null hypothesis.

An additional analysis involving a series of simple linear regressions were conducted to determine the strength of relationships between the explanatory variables and employability. Along with testing previously considered variables CHEU proportionate attendance, authentic learning and work experience, additional potential explanatory variables, age and family income were considered in relation to the SEQ and EEQ scores. The results found a statistically significant direct relationship ( $p = .022$ ) between CHEU attendance and the SEQ ( $R^2 = 1.9\%$ ) and a statistically significant inverse relationship ( $p = .026$ ) between age and the EEQ ( $R^2 = 1.8\%$ ). The outcomes and significance of the one-way ANOVAs, bivariate correlations, and simple linear regressions will be discussed in further detail in chapter 5.

## **CHAPTER 5 – DISCUSSION**

Higher education is a mature industry undergoing increasing pressure to lower prices and enhance flexibility (Spellings, 2006). The value of a bachelor's degree has declined in terms of earning potential as the income gap has dropped between high school and bachelor degree graduates while the cost of a bachelor's degree has increased by 75% over the past 15 years (Vedder & Strehle, 2017). Although the value of a bachelor's degree goes beyond earnings potential, it is one of the more concerning metrics facing higher education. The members of the CCCU are not immune from the pressure being exerted on higher education and have adapted their delivery models to increase access to education by new student segments through online and accelerated education, and increased flexibility for admissions and residency requirements.

CHEUs are unique organizations that integrate a study of the liberal arts with professional applied studies, and these institutions make significant value claims through their marketing messaging regarding their ability to impact the employability of graduates. The modern day definition of liberal arts has taken some departure from its original roots and current graduates of a liberal arts education are expected to balance the philosophical study of a rich liberal arts core with applied coursework, authentic learning, and internships in a more holistic curriculum design (Maier, 2014). Hiring managers care less about a job candidate's degree and more about their ability to communicate, think critically, exercise a strong work ethic, work in teams, demonstrate initiative, utilize



strong interpersonal skills, solve problems and conduct analysis. All these skills are honed in a liberal arts education (Gehlhaus, 2007). Many employers are concerned that educational institutions are not adequately preparing graduates for the complex needs of an increasingly global market-place, including a broad understanding of human culture and the physical and natural world. Ewest and Kliegl (2012) assert the marginalization of the liberal arts is a contributing factor to the recent lapses in moral and ethical behavior of business leaders.

As the programs students use have expanded and the ways in which CHEUs educate these students have evolved, CHEUs need to consider whether their claims of preparation for employment remain equally valid for all of their graduates regardless of their academic journey. These potential differences in employability among students depending upon their academic path have implications for the messaging of value claims and brand identities of CCCU member institutions.

The purpose of this study was to investigate differences in suitability of employment of unique student clusters at representative CHEUs and consider other intermediary variables which may correlate to employability. Although CHEUs tend to celebrate their high job placement as bragging statistics, gaining a greater understanding of the constructs of what enhances the employability of graduates is less understood. The USEM model of employment introduced by Yorke and Knight (2007) is well suited to helping understand the connection between higher education and employability due to its inclusion of a broad understanding of the world gained through exposure to the liberal arts, a more highly developed sense of personal responsibility developed through higher levels of self-efficacy, and a greater personal recognition of effective learning through

metacognition along with appropriate job related skills. CHEUs will benefit from gaining greater insights on the constructs associated with higher levels of employability and be able to refine marketing messages and operating practices as they consider the employability outcomes of all students.

This chapter presents a summary of the research findings presented in chapter four, provides context to the comparable literature, and presents conclusions and implications drawn from the findings related to higher education as an industry and academia. In addition, this chapter provides discussion on the limitations of the study and recommendations for future research.

### **Summary of Research Findings**

The study sought to answer five hypotheses through a quantitative quasi-experimental approach utilizing the SEQ and EEQ instruments (Yorke & Knight, 2007) and a series of demographic questions combined in a single survey. The survey was delivered through four participating CCCU institutions to 1,749 recent and near graduates with 396 providing partial responses and 290 completing all sections of the survey. This study's primary objective was to determine if differences exist in employability among participants who had utilized different paths in their academic journey and the correlation of identified constructs to levels of employability. The differences between participant's employability scores of these academic clusters were tested through the following hypothesis:

H1: There is a difference in suitability of employment among *Residential Traditional Students*, *Deferred Professional Students*, *Accelerated Traditional Students* and *Other Students*.

This study also sought to determine if there were differences in employability among participants from each of the four participating CHEUs. The differences in employability scores of participants from the four participating CHEUs were tested through the following hypothesis:

H2: There is a difference in suitability of employment among respective clusters of students from one Christian liberal arts university in comparison to others in the research.

The first two hypothesis (H1 and H2) were tested using a series of one-way ANOVAs with a least significant difference (LSD) post hoc contrast among the comparative groups.

**H1.** The first hypothesis sought to determine if there was any meaningful difference in employability among participants identified from the four academic clusters. To provide measurable levels of employability, the total score of the SEQ, EEQ and SEQ + EEQ were utilized as a basis for comparison using a one-way ANOVA. A second ANOVA was performed to compare the scores on the five factors derived from the EEQ represented by scores on specifically grouped questions that held a common theme. The first ANOVA provides no statistically significant difference among the academic cluster's measures of employability. The second ANOVA provides differences among participants when considering the EEQ factors of general awareness, employment orientation, and valuing workplace experience. There was insufficient evidence to reject

the null hypothesis that there is no difference in suitability of employment among *Residential Traditional Students*, *Deferred Professional Students*, *Accelerated Traditional Students* and *Other Students* and H1 was not accepted as true.

**H2.** The second hypothesis sought to determine if participants from respective academic clusters would produce different scores on the employment measures among the four participating CHEUs. First, a one-way ANOVA was conducted to determine if there were any differences between participants when considered in aggregate among the different CHEUs. A second one-way ANOVA considered differences between specific participants segregated by academic cluster among the participating CHEUs. The first one-way ANOVA indicated a significant statistical difference in the means when considering all participants in aggregate among the four CHEUs for the SEQ. Post hoc contrast among the four institutions indicated significant statistical differences in the means of the SEQ for WJU compared to GFU and WJU compared to JBU.

The second one-way ANOVA considered the differences among the four CHEUs with participants segregated and compared by academic cluster. This analysis concluded a difference among RTS participants based on the SEQ and differences for Other Students using the SEQ + EEQ. Post hoc contrast found differences for the SEQ among RTS participants for JBU compared to Point and JBU compared to WJU. For Other Students differences were found for the SEQ + EEQ between GFU and JBU. Therefore the null hypothesis that suitability for employment among respective academic clusters of participants in comparisons across different CHEUs is not different was rejected and H2 was accepted as true.

**Bivariate Correlations.** A series of bivariate correlations was conducted to address hypothesis H3, H4 and H5. Hypothesis H3 sought to determine the strength of the relationship between the percentage of a students' education received from a Christian liberal arts university and employability as follows:

H3: There is a positive correlation between the percentage of a students' education received from a Christian liberal arts university and suitability for employment.

Hypothesis H4 sought to determine the strength of the relationship between the number of authentic learning experiences utilized by students in their educational journey and employability among RTS participants as follows:

H4: There is a positive correlation between suitability of employment and number of authentic learning experiences for Residential Traditional Students.

Hypothesis H5 sought to determine the strength of the relationship between years of work experience within the context of earning a degree and employability among DPS students as follows:

H5: There is a positive correlation between suitability of employment and number of years of work experience in the context of education for *Deferred Professional Students*.

**H3.** Hypothesis H3 sought to determine if a positive correlation exist between the percentage of a students' educational journey received from a CHEU and employability. A bivariate correlation (Pearson  $r$ ) indicated a statistical significant positive correlation between the percentage of CHEU education utilized by a student and their SEQ score. Additionally, a positive correlation was present with the SEQ factor, engagement.

Evidence was insufficient to reject the null hypothesis that there is not a positive correlation between the percentage of a students' education received from a CHEU and H3 was not accepted as true.

**H4.** Hypothesis H4 sought to determine if a positive correlation exist between the number of authentic learning experiences utilized by RTS students in their educational journeys and measures of employability. Two bivariate correlations (Pearson  $r$ ) were conducted in conjunction with H4. The first considered the correlation between all participants regardless of academic cluster and the number of authentic learning exercises in comparison to employability. This correlation indicated a positive correlation between number of authentic learning exercises and general awareness. When considering RTS students as a segregated comparison group, a negative statistical correlation was found between the EEQ factors of valuing workplace experience and employment orientation. A positive correlation was found with the EEQ factor of general awareness. Evidence was insufficient to reject the null hypothesis that there is not a positive correlation between the number of authentic learning experiences and suitability for employment and H4 was not accepted as true.

**H5.** Hypothesis H5 sought to determine if a positive correlation exist between work experience within the context of pursuing education and employability for DPS participants. Two bivariate correlations (Pearson  $r$ ) were conducted in conjunction with H5. The first considered the correlation between all aggregated participants' work experience and employability. The second correlation limited the comparisons to DPS participants. When considering all participants regardless of academic cluster there was not a significantly statistical correlation between work experience and employability. For

DPS participants a negative statistical correlation exists between work experience and the EEQ, SEQ + EEQ, valuing workplace experience, and academic awareness. Evidence was insufficient to reject the null hypothesis that there is not a positive correlation between suitability of employment and years of work experience for DPS participants and H5 was not accepted as true.

**Linear Regressions.** A series of simple linear regressions was conducted to consider the strength between explanatory variables previously tested and dependent variables represented by the various measures of employability and whether other ordinal-interval variables available through the survey might have a statistically significant relationship to measures of employability. The analysis concluded a statistically significant ( $p = .022$ ), but weak ( $R^2 = 1.9\%$ ) relationship between percentage of education obtained at a CCCU and SEQ. In addition, the variable age was found to have a statistically significant ( $p = .026$ ), but weak ( $R^2 = 1.8\%$ ) inverse relationship with EEQ.

### **Findings Related to the Literature**

**Employability model.** This study utilized the USEM model of employability developed by Yorke and Knight (2007) which define employability as more than a simplistic definition of gaining and retaining fulfilling work. The USEM components include *understanding* associated with a good first degree, both general and subject specific *skills*, *efficacy beliefs* and other personal qualities, and *metacognition* relating to personal reflections on learning how one learns best. The USEM model identifies attractive qualities in applicants desired by employers and implies enhanced levels of

employability are achieved as the components represented by the USEM model increase. Yorke and Knight (2007) developed the SEQ and EEQ instruments for the purpose of measuring student reflections in achieving aspects of the USEM model and to serve as an assessment tool for those in higher education in formatting their curriculum and enhancing teaching methods. The authors envisioned the instruments would help serve as assessment instruments compatible with employability enhancement and to support overall development of the academic curriculum towards fostering employability. They did, however, raise questions concerning the ability for self-efficacy and employability to be measured and the challenge associated with psychometrically robust scales of employability.

Although the simplistic methods of counting the number of new jobs among graduates as a crude but easily measured method of linking employment and learning is likely to persist (Harvey, 2001), such measures are less helpful in gaining insights on the complexities of how education contributes to employability. This study has effectively provided an opportunity for further testing of the SEQ, EEQ and USEM models of employability by providing a basis of comparison of scores on the instruments and identified constructs such as program modalities, attendance at CHEUs, authentic learning experiences and work experience as intermediary variables related to employability.

**Connection between Christian liberal arts and employability.** Claims by CHEUs related to enhanced employability are common. Jackson (2012a) calls graduates of WJU “exceptionally employable” and JBU’s mission includes development of “professional lives” (“JBU facts 2014-2015 - About - John Brown University,” n.d.).



There is evidence that the liberal arts are an important component of enhanced employability. According to Gehlhaus (2007) hiring managers are seeking candidates that have enriched themselves through a liberal arts education and possess the ability to communicate, think critically, exercise a strong work ethic, work in teams, demonstrate initiative, utilize strong interpersonal skills, solve problems and conduct analysis. The connection between personal skills and other interpersonal traits associated with the liberal arts is well founded as an employability imperative, but they attempts to measure the effects are absent from the literature. The value of a liberal arts education is not without critics. Spelling (2006) raises questions whether the modern liberal arts education is worth its cost and Urgo (2010) indicates a challenge with monetizing values that are difficult to measure.

This study provided evidence of a positive significant statistical correlation between attendance at a CHEU and higher scores on the SEQ. This relationship was particularly strong for the SEQ factor, engagement which relates to a student work ethic and greater confidence in their efforts to affect a positive outcome. These findings indicate a positive relationship between self-efficacy as a component of employability and increased percentages of a Christian liberal arts education. The SEQ directly relates to the USEM aspects of efficacy and metacognition and is an important contribution to literature concerning CHEUs' ability to impact employability.

**Relationship between modalities of education and employability.** Higher education enrollment has declined from over 20 million in 2010 to 18.3 million in 2016 (National Student Clearinghouse Research Center, 2016). Over this same period of time, enrollment in online and accelerated programs has increased for every age level.

Enrollment in online programs increased 381% from 2002 to 2010 (I.E. Allen & Seaman, 2011) and younger students are increasingly opting for more flexible educational delivery models to accelerate their educational journeys (Aslanian, 2005). These important trends influence the operational and academic models of all of higher education, but particularly CHEUs due to financial reliance on tuition, room and board, and other fees associated with residential enrollment. Students are increasingly questioning whether enhancement of employability and the resulting financial and interpersonal benefits can be achieved through utilization of less expensive and less time consuming models of education associated with online and accelerated models.

The research indicated the mean of ATS participants ( $M = 51$ ,  $SD = 6.1$ ) on the EEQ was significantly different ( $p = .043$ ) than Other Students ( $M=54$ ,  $SD 4.9$ ). When considering the individual factors of the EEQ, significant statistical differences was indicated between the four academic clusters for general awareness [ $F(3, 281) = 2.983$ ,  $p = .032$ ] and employment orientation [ $F(3, 280) = 4.833$ ,  $p = .003$ ]. Specific statistically significant contrast were observed in comparing individual pairs of academic clusters for valuing workplace experience, academic awareness, employment orientation, and critical independence. These results contribute to the literature by helping to distinguish differences in employability measurements observed in comparing participants associated with different academic clusters. Other Students and ATS participants showed consistently higher employability scores than DPS participants and similar scores to RTS participants. These findings indicate the value of a bachelor's degree obtained using different modalities of education from the same institution may result in different

outcomes in terms of employability and questions the consistent value claims of the institution in enhancing the employability of their students.

**Contribution to marketing in higher education.** Canterbury (2000) stresses the ambiguity of the educational selection process for students and emphasizes the product of education is inseparable from the provider. This ambiguity in the choice of institutions leads to challenges in institutional claims of a unique brand identity and creates market confusion concerning the comparable value of a degree depending on the process used. For CHEUs and others in higher education the comparative outcomes of employability have significant implications for their operational models.

Prospective students are challenged to compare the price of different modalities of education due to the differences between sticker prices and effective prices after institutional aid is offered. For the 2016-17 school year, annual tuition prices for traditional residential programs at the four comparative schools ranged from a low of \$19,200 at Point (“College navigator - Point University,” n.d.) to a high of \$33,730 at GFU (“College navigator - George Fox University,” n.d.). Sticker prices can be misleading as most students receive institutional and other forms of aid. GFU claims an average annual institutional gift of \$18,070 per RTS student for 2016-17 (“College navigator - George Fox University,” n.d.). Traditional education prices are usually bundled for a package of credits. At JBU, traditional students can take up to 36 credit units under the annual tuition contract although a student would only take 30 credit units per year to complete a bachelor’s degree in four years (“Tuition and fees - Financial aid,” n.d.). Nontraditional online and accelerated programs are usually sold A la carte using a per credit unit price. At JBU the cost per credit unit for the online program for 2017-18

is \$420/credit unit (“JBU Online tuition & fees - Online,” n.d.), indicating a 50% discount from the approximate per credit unit price for traditional credit units at JBU.

This study raises challenges to CHEUs in their unequivocal message of enhancing employability among all students while charging significantly different prices based on the model of education the student utilizes. Statistical tests associated with H1 were insufficient to reject the null hypothesis that there is not a significant difference in employability of students based on academic cluster. If employability is similar for all students, why is an RTS education a priority? Would CHEUs and others be able to serve their students more effectively by reducing the emphasis on RTS education and divert resources to nontraditional models? Such a move would be in line with Spellings (2006) urging to reduce the cost of education.

Another challenge for CHEUs is revealed within the nuanced evidence of differences in employability shown in the statistical test utilized for H1. Diplomas and transcripts do not reveal program differences which leads employers and other constituents to assume equivalency in all degrees. This research raises questions of whether CHEUs should make provision to more adequately communicate differences in modality choices to validate consistent claims as to employability for respective graduates depending on educational program choices.

The research also has implications for *Brand Communities* and *Integrated Marketing Communication (IMC)* strategies. Nontraditional programs struggle to develop the same connected sense of community that can power the brand and lead to brand loyalty. McAlexander and Koenig (2010) found alumni from smaller institutions have a stronger community bond than those of larger public institutions. As more

students select nontraditional models, will these bonds remain strong? These bonds are important to the sustainability of the institutions in terms of future enrollment and alumni giving.

IMC strategies emphasize consistent messaging to all the institutions customers with a clear and consistent value proposition. Although the message should be nuanced to each target market (Duncan & Everett, 1993), the institutional values should not differ. Marketers at CHEUs often develop very different messages for prospective students in unique audiences that challenge the consistency in overall institutional messaging. Nontraditional programs are often promoted on the basis of convenience, price and flexibility (Clinefelter & Aslanian, 2015). Prospective students are left to ponder whether the other value claims of the institution also extend to nontraditional students.

## **Research Conclusions**

The research provides several meaningful conclusions in helping determine factors that may be present with higher levels of employability. Statistically significant differences ( $p = .043$ ) were observed in the EEQ scores when comparing the mean of Other Students ( $M=54$ ,  $SD$  4.9) to ATS participants ( $M = 51$ ,  $SD = 6.1$ ). Other Students are a unique classifications and may be more likely to use multiple institutions and flexible educational modalities in a process called swirling (Van Der Werf & Sabatier, 2009). These students may be the most masterful, independent and less likely to define themselves through institutional labels. They also are adapt in managing their academic programs and able to synthesize multiple approaches to achieve education in a personally satisfactory manner.

Although aggregate scores on the SEQ, EEQ and SEQ + EEQ did not indicate statistically significant differences when comparing all four academic clusters, statistically significant differences did arise when segregating individual questions from the EEQ by specific factors. The EEQ factors of general awareness [ $F(3, 281) = 2.983, p = .032$ ] and employment orientation [ $F(3, 280) = 4.833, p = .003$ ] indicated significant differences among the four clusters. General awareness pertains to an understanding of aspects of a student's journey outside of higher education that would make the student more employable. Employment orientation relates to the development of job relevant skills and the confidence students possess in being able to effectively demonstrate skills and evidence of past accomplishments to prospective employers. For the factor general awareness, RTS ( $M = 17.24, SD = 3.87$ ) was significantly different ( $p = .004$ ) than DPS ( $M = 19.13, SD = 4.26$ ). For the factor academic awareness, RTS ( $M = 8.95, SD = 2.6$ ) was significantly different ( $p = .018$ ) than DPS ( $M = 7.91, SD = 3.21$ ) and DPS was significantly different ( $p = .033$ ) from Other Students ( $M = 9.56, SD = 2.22$ ). For this study, DPS participants scored higher than RTS participants for general awareness. DPS students are more likely to have interrupted their educational pursuit due to a significant life event (Schatzel et al., 2011) and are likely to derive meaning and context from the lens of their own life experience (Knowles, 1988). RTS participants and Other Students both scored higher than DPS participants for employment orientation which may relate to the emphasis on graduate level skills. DPS students express career enhancement as one of the major reasons for returning to school (Schatzel et al., 2011) and may be insecure of their own ability to claim employment desired skills or a portfolio of sample work.

Another nuanced contrast was observed for the factor valuing workplace experience, RTS ( $M = 10.02$ ,  $SD = 3.55$ ) was significantly different ( $p = .010$ ) than DPS ( $M=8.43$ ,  $SD = 4.26$ ) and DPS was significantly different ( $p = .042$ ) than Other Students ( $M=10.59$ ,  $SD = 3.74$ ). For the factor academic awareness, RTS ( $M = 8.95$ ,  $SD = 2.6$ ) was significantly different ( $p=.018$ ) than DPS ( $M = 7.91$ ,  $SD = 3.21$ ) and DPS was significantly different ( $p = .033$ ) from Other Students ( $M=9.56$ ,  $SD = 2.22$ ). For the factor critical independence, RTS ( $M = 4.86$ ,  $SD = 1.86$ ) was significantly different ( $p = .039$ ) from Other Students ( $M = 5.82$ ,  $SD = 1.33$ ).

Valuing workplace experience questions relate workplace experience to academic experience and vice versa and indicates a participant's awareness in recognizing specific linkage between the two. The results of this research indicate statistically significant higher averages for Other Students and RTS participants over DPS students in valuing workplace experience. DPS students frequently return to college to improve upon their current job placements and may see less relevance in connecting current jobs to the advanced positions they aspire to after graduation.

Academic awareness relates to the USEM model components of understanding, skills and metacognition. Students who rank high on academic awareness possess a broad base of knowledge, personal understanding of how they best learn and see themselves possessing well developed problem solving skills. For this study, RTS participants and Other Students demonstrated higher average scores than DPS participants for this factor. According to Knowles (1998), DPS students possess a more utilitarian focused in their academic pursuits and value processes which more closely aligned to real world context. The factor critical independence pertains to the extent in

which participants' value more autonomous learning that considers topics from multiple perspectives. It is most closely associated with self-efficacy, other personal qualities and metacognition. For this factor the mean score of Other Students were significantly higher than those of RTS participants, consistent with the more autonomous nature exhibited by Other Students.

There were also implications pertaining to comparisons between participants when aggregated by academic institution. This study hypothesized (H2) that participants from respective academic cluster would achieve different levels of employability regardless of their institutional affiliation. The research findings found significant differences in the SEQ [ $F(3, 279) = 3.052, p = .029$ ] when comparing institutional participants regardless of academic cluster. Individual contrast indicated WJU participants ( $M = 31.5, SD = 2.8$ ) were significantly different ( $p = .026$ ) than GFU participants ( $M = 32.9, SD 2.89$ ), and significantly different ( $p = .015$ ) than JBU participants ( $M = 32.9, SD 3.3$ ).

In comparing employability scores of participants from different CHEUs when participants were segregated by academic cluster, additional statistical differences were observed. A statistically significant difference was indicated for RTS participants with SEQ [ $F(3, 200) = 3.489, p = .017$ ] and Other Students for SEQ + EEQ [ $F(2, 13) = 5.662, p = .017$ ]. Individual contrast between the four schools also yielded significant differences. When considering participants in aggregate for the SEQ, WJU participants ( $M = 31.5, SD = 2.8$ ) were significantly different ( $p = .026$ ) than GFU participants ( $M = 32.9, SD 2.89$ ) and significantly different ( $p = .015$ ) than JBU participants ( $M = 32.9, SD 3.3$ ). When segregating participants by academic cluster other statistical differences were



indicated. Among RTS participants the mean of the SEQ for JBU participants ( $M = 33.1$ ,  $SD = 2.45$ ) was significantly different ( $p = .02$ ) than RTS participants from Point ( $M = 31.8$ ,  $SD = 3.7$ ) and significantly different ( $p = .007$ ) than RTS participants from WJU ( $M = 31.4$ ,  $SD = 1.96$ ). The average on the SEQ + EEQ with Other Students was significantly different ( $p = .005$ ) for GFU participants ( $M = 93.67$ ,  $SD = 5.03$ ) compared to JBU participants ( $M = 82.4$ ,  $SD = 4.21$ ).

These results highlight the individual uniqueness of each institution involved in the study regardless of their common affiliations. The factors that are associated with employability are more likely to go beyond common institutional associations.

Another finding from the research pertains to the relationship between the proportion of a student's education obtained from a CHEU and levels of employability when considering all participants in aggregate. The research determined that a positive significant relationship exists with the SEQ [ $r(269) = .137$ ,  $p = .025$ ], and the SEQ factor, engagement [ $r(269) = .174$ ,  $p = .004$ ]. The SEQ and SEQ factor, engagement align with the biblical perspective of personal accountability within God's sovereignty. Students with high engagement scores tend to see themselves more in control of grades through enhanced effort; discount the role of luck in determining their fate; are more likely to be stimulated by difficult problems; and tend to be energized by classroom assignments and projects. Homes (1987) indicates Christian liberal arts programs provide a positively stimulating environment to enable and prepare Christians to fulfill the commission to impact the world.

Authentic learning experiences are another factor that were considered in relation to employability. Authentic learning is a special type of learning that focuses on solving

real-world complex problems using assignments and projects that replicate real world challenges (Lombardi, 2007). Bennett et al. (1999) stress higher education must foster the development of core or personally transferable skills that can be used in multiple context to solve complex problems. For this research, participants were asked to identify the number of capstone courses, internships, and curricular/co-curricular practicums completed as part of their pursuit of a bachelor's degree. The average number of authentic learning exercises completed by all participants was 3.52. The highest average number of authentic learning exercises were completed by JBT, RTS participants ( $M = 4.12$ ) and the lowest completed by Point, DPS participants and JBU, ATS participants ( $M = 2$ ) (see Appendix E).

The research supported a statistically significant correlation ( $p = .023$ ) between number of authentic learning experiences and the EEQ factor, general awareness [ $r(285) = .135, p = .023$ ] when considering all participants as a single group indicating that authentic learning experiences give students a greater awareness of the realities of the world outside of the classroom. A second correlation for RTS students provided evidence of conflicting correlations. A negative statistically significant correlation was identified for the EEQ factor, valuing workplace experience [ $r(207) = -.137, p = .049$ ] and the EEQ factor, employment orientation [ $r(207) = -.201, p = .004$ ]. A positive relationship for RTS students exists for the EEQ factor, general awareness [ $r(207) = .221, p = .001$ ].

Research conclusions for the correlations associated with authentic learning when considering RTS students provide insights that increasing number of authentic learning exercises may correlate negatively with some aspects of employability. RTS participants

may develop a more cynical view of their classroom and may devalue courses that fail to include authentic learning. The complexities of the world may also make them less confident of their own abilities to control the outcomes as they experience the arbitrary effects that often exist beyond the classroom. Authentic learning experience may also cause RTS students to question their own grasp of employment valued skills as the move from the theoretical to the practical. Such a process is not unusual as individuals often over-estimate their abilities before they are confronted with real world complexities that expose deficiencies. At the same time, the positive correlation for RTS students with the EEQ factor of general awareness indicate authentic learning experiences can be important in helping reveal to RTS students the skills they need to develop in order to be effective and valued by an employer.

The correlation between work experience and employability was also considered in the research. The findings were somewhat surprising and counter-intuitive as a significant negative correlation was observed for DPS participants between years of work experience and EEQ [ $r(43) = -.379, p = .012$ ], SEQ + EEQ [ $r(43) = -.346, p = .023$ ], valuing workplace experience [ $r(43) = -.367, p = .015$ ], and academic awareness [ $r(43) = -.330, p = .031$ ]. It appears DPS participants who are older and have obtained a greater amount of work experience are less likely to connect employability with academic learning. Knowles (1998) indicates adult learners tend to see learning through the lens of their own acquired context and adult learners may be more cynical of academic learning. DPS participants frequently pursue a degree in order to meet a qualification established in the work place for advancement, but are more likely to value their own experiences.

Lastly, the research concludes that the percentage of one's education obtained at CHEUs has a significant ( $p = .022$ ) but weak ( $R^2 = 1.9\%$ ) relationship in predicting SEQ, and age was found to have a significant ( $p = .026$ ) but weak ( $R^2 = 1.8\%$ ) inverse relationship with EEQ. These findings support the positive correlation between CHEU attendance and employability and are consistent with other finding concerning older adult students that may see greater value in their own life and work experience than academic processes in effecting employability and younger students that may have an elevated self-assessment of their own employability.

Summarizing the research conclusions, this research sheds light on employability and patterns of the student experience in higher education that relate to different levels of employability. Overall it was found that with some measures of employability scores vary depending on the academic cluster students chose to utilize and their institutions of affiliation. These findings support that both academic cluster and specific institution of attendance are relevant factors related to employability. The findings, however, were weak and inconsistent in supporting differences across all measure of employability. Additionally, the study determined a positive but weak correlation between the percentage of education obtained from a CHEU and various measures of employment, and both positive and negative significant but weak correlations when considering the relationship between number of authentic learning experiences and employability for RTS participants. An inverse significant but weak correlation was determined between employability and years of work experience for DPS participants.

Furthermore, the academic cluster of Other students tend to have greater self-confidence in their abilities to navigate their own academic journey and translate skills

acquired in an educational context to employment. Other Students recorded the highest overall means for academic awareness, valuing workplace experiences and critical independence. RTS participants also recorded relatively high means for academic awareness, valuing workplace experience, and employment orientation. RTS participants reported a positive correlation between authentic learning experiences and employability for general awareness, but negative correlations with engagement, valuing workplace experience and employment orientation. DPS participants reported low in comparison means for valuing workplace experience and academic awareness. DPS participants also indicate an overall negative correlation with years of work experience and levels of employability. DPS participants tend to value current work experience and academic processes less in enhancing employability than participants from other academic clusters. One possible explanation for this dichotomy is DPS participants are somewhat discontent with their current work station and resent the requirement for going back to school in order to gain advancement. The research revealed that age and work experience may actually create a less optimistic perspective on employability.

## **Implications of Findings**

**Implications for higher education.** This research has several implications for CHEUs and other higher education institutions facing current challenges. The research findings that academic clusters are associated with different levels of employability should be considered in terms of academic structure and the development of value proposition for CHEUs as they consider their unique approach with different student clusters. DPS and ATS participants are potentially at risk. Both student groups complete

at least 50% of their education through accelerated, online or nontraditional teaching methods. DPS participants are over age 26 and more likely to possess significant work experience. DPS students indicate average scores on the SEQ ( $M = 32.5$ ) that were not statistically different from other clusters but rank lowest on the EEQ ( $M = 48.5$ ). DPS students also record relatively low scores on valuing workplace experience and academic awareness. Programs designed for working adults frequently substitute work experience for other curricular and noncurricular requirements with the belief that adults enter the classroom with foundational knowledge and real world context (Knowles, 1988). Many programs allow adults to apply work experience to academic courses or simply allow students to test-out of specific course requirements. There is rising support for competency based learning, credit by examination and credit for prior learning. The research from this study infers that DPS students struggle to connect academic processes as relevant to employability and do not necessary value their past work experience in enhancing their own employability. These dual findings may reveal a cynicism that is acquired by working adults that see themselves striving to complete their degree to meet arbitrary conditions for advancement. DPS participants represent unique challenges and implications for CHEUs as increasing proportions of their graduates fall into the DPS cluster.

Similarly and potentially more at risk are ATS students. ATS students are younger and increasingly opting for less time constraining and more flexible academic options due to their desire to jump-start their earning potential (Clinefelter & Aslanian, 2015). ATS participants average scores on the SEQ ( $M = 31.6$ ) were lower than any other cluster and their EEQ average score ( $M = 51$ ,  $SD = 6.1$ ) was significantly different

from Other Students ( $M=54$ ,  $SD = 4.9$ ), a group with a similar number of participants ( $n = 17$ ). ATS participants often utilize the same academic methods as DPS students, but lack significant work experience. This combination leaves them particularly vulnerable in acquiring the complex combination of qualities increasingly desired by employers. ATS students along with other younger aged students may over-estimate their skills and capabilities in terms of employment.

Other Students represent another group of students with implications for CHEUs. This academic cluster pursues multiple sources in accumulating units for a degree and are less prone to accept labels, affiliations and institutional connections. Other Students, as an academic cluster, achieved the highest overall average ( $M = 86.8$ ) for SEQ + EEQ among all of the academic clusters and also rated highest for academic awareness and valuing workplace experience. Although this cluster of students was represented by a small number of participants ( $n = 17$ ), the higher means for employability measurements raises questions regarding the value of a CHEU education. Other Students indicate a smaller proportion of their education from a CHEU and may use multiple modalities and noncurricular approaches in accumulating course credit. CHEUs will need to better understand this potentially growing group as an increasing number of all student, including RTS, are likely to transfer from previous institutions.

Another implication from the study concerns the statistical differences in employability among the four participating institutions. Despite the common values and association with the CCCU, institutions pursue their academic missions in a unique way and must individually consider the best practices for advancing employability of all students. It is not enough for an institution to claim affiliation with a broader body in

which they share common values. Each institutions exist within a unique ecosystem that requires individual strategic approaches to ensure institutional effectiveness.

The research found a positive correlation between the percentage of participants' education obtained from a CHEU and the SEQ as well as the SEQ factor, engagement. These findings support the quality of a liberal arts education in educating the whole person and helping develop individuals who have healthy views of self in relation to the ambiguous outcomes in life. The challenge for CHEUs falls in the EEQ. The research did not support a statistically significant positive correlation between the EEQ and the proportions of one's education obtained through a CHEU. The implications are that CHEUs may excel at enhancing a student's understanding, self-efficacy, other personal qualities, and metacognition, but not stand-out in terms of professional and other skills needed in employment. The application for this finding falls to the academic processes and departments associated with professional curriculum and programs.

The research of RTS students concerning authentic learning supported both positive and negative correlations with aspects of employability. The presence of authentic learning experiences may cause students to discount the benefit of other courses that do not contain authentic learning elements. It also may have the impact of RTS students viewing their qualifications for employment through a more critical lens as they are given greater exposure to real world context. CHEUs will need to consider ways to keep all academic courses relevant to post graduate life by connecting practice to theory and help students rebuild confidence in their employment skills in the aftermath of authentic learning encounters.



Lastly, the research provides mixed implications to CHEUs in terms of marketing messaging and value of their brand. Although statistically significant differences were observed in employability measurements among the different academic clusters, the differences were relatively small. The research supports the consistency among all graduates of CHEUs in terms of enhanced employability and largely supports the CHEU current messaging of equivalency of all graduates, at least in terms of employability. The challenge this implication presents is in differentiated pricing models CHEUs utilize among different academic clusters. There are less incentives for students to pursue their education path through RTS programs if the employability outcomes do not reflect the higher priced and more time consuming trade-offs associated with the RTS experience and most CHEUs are fiscally dependent on RTS tuition. CHEUs operational approach is vulnerable to non-differentiated outcomes among unique academic clusters unless CHEUs can prove value by some other means that resonates in the market place.

An opposite concern relates to the differences that were observed in employability among the academic clusters and represent challenges of a reverse nature for CHEUs. Brand equity is reliant upon providing a consistent quality product to an organizations constituents and holds intangible value that is often greater than other organizational asset (Best, 2008). Differences in employability among graduates utilizing different paths to completion of their degrees are likely to register with employers and can quickly threaten strategic relationships with donors and other important constituents as well. As more students seek to maximize their marginal utility by seeking the least expensive and most direct path to a degree, employers may call for clearer differentiation of an undergraduate's academic journey.

As pressures continue to rise on higher education to deliver education at a lower cost and within a shorter period of time, the complexities of enhancing a student's employability will remain an important consideration. CHEUs need to remain vigilant and creative to actively balance the calls to cut corners in academic delivery with the need of helping enhance graduate employability. They will need to consider the implications of their approaches on their brand value and marketing communication messaging. Short-term strategies to support current operating budgets could have long-term implications on brand communities and brand equity leading to long-term threats to the institution. CHEUs will also need to determine how to communicate a consistent set of values to all market segments.

**Implications for the Academy.** The implications for the academy pertain primarily to the models and concepts associated with employability in gaining greater insights on the connection between higher education and employability. Yorke and Knight (2007) indicate self-efficacy and employability resist measurement and stress the challenges associated with developing employability scales. This research has applied the questionnaires in a new manner which furthers the understanding of the SEQ and EEQ as reliable instruments and demonstrates the benefits of measurable aspects of comparison to interrelated constructs. The research will benefit those studying employability and the connection between alternative approaches to curriculum and programs.

Some implications for the academy overlap with industry applications associated with higher education. The external pressure on education to lower cost (Spellings, 2006) and competing models of education led by innovative for-profit institutions (Van

Der Werf & Sabatier, 2009) are challenging the historical identity of higher education. CHEUs that are tuition dependent are struggling to reclaim an identity forged in a time when a residential education was considered a necessity for emerging adults (Altbach et al., 2011). In the new paradigm, CHEUs and higher education in general are being challenged to base operational strategies on short-term, return on equity calculations and compete on the basis of cheap, fast and easy. Society is struggling to separate the value of a bachelor's degree from a more extensive and holistic educational experience.

Embracing employability from the perspective of the USEM model of employability (Yorke & Knight, 2007) provides an opportunity for CHEUs to reclaim a unique identity connected to their past. CHEUs' value claims include the pursuit of vocational and professional preparation through a complete education experience of the whole person. This is unique space that CHEUs can claim in higher education. This research helps to inform and further define the relevance of employability as a sustainable value for CHEUs.

A related topic pertains to how the academy and CHEUs in particular market themselves. One of the key elements of marketing is to understand the identity of one's customers (Best, 2008). CHEUs and the academy need to broaden their understanding of the customer. Although an increasing number of constituents recognize a key role of education is to prepare students to make a productive contribution to the workforce (Taylor et al., 2011), employers are considered a peripheral constituent that at times detracts from the more lofty ideals of molding young minds. This study has provided evidence that the outcomes of a solid liberal arts education are not only compatible with the interest of employers, but they are a necessity and increasingly rare among recent

college graduates (Hart Research Associates, 2013). Further research will need to be done to identify the factors needed to help CHEUs to reconcile market and mission objectives, but this research has contributed and expanded the conversation.

### **Limitation, Delimitations, Risks and Assumptions**

Several limitations, risks and assumptions existed in the study. The instruments themselves poise limitations. Yorke and Knight (2007) developed the SEQ and EEQ to provide insights to help educators more effectively engage students to promoted employability by providing greater insights to students, teachers and curriculum leaders in the pedagogical practices that contribute to enhanced employability. They envisioned self-efficacy and employability as resistant to measurements and see challenges in using the instruments as summative assessments. This research utilized the SEQ and EEQ as a way of comparing employability among different academic clusters and to determine the presence of intermediary constructs. Although the use of the questionnaires may extend the author's original vision, they are nonetheless effective for gaining insights into aspects of employability.

The SEQ has internal validity concerns. The SEQ failed to meet traditional standards of validity based on Cronbach's alpha and it is unclear whether the instrument met this test in the original pilot study as the authors' failed to report the measurement (Yorke & Knight, 2007). Findings based on the SEQ must therefore be discounted. The questionnaires were also developed in the UK within another culture. Some of the verbiage of the questions were modified for American students. Aspects of culture, education, and demographics unique to the audience can hinder the findings.

A limitation is the research findings may not be applicable to all CHEUs or other colleges and universities. The findings should not be generalized to other institutions and has limited application to audiences within the participating institutions. Another delimitation is the conditions imposed on survey participants that they have graduated with a bachelor's degrees in the last twelve months or be within one semester of graduation.

Delimitations were also imposed related to the collection of the data. An email invitation was sent to possible participants of each of the four participating school. Each school was instructed to include all bachelor's degree graduates within the last 12 months and students within one semester of graduation. Although institutional representatives were informed the survey should go to those within 15 units of graduation, this reference was not included on the survey which may have led to some confusion. It is likely near graduates could extend to students within one year of graduation. GFU only included students within one semester of graduation in the email pool as they were unwilling to include graduates due to internal policy. These minor inconsistencies in the way the pool were identified could limit the applicability of comparisons among the academic clusters and institutions.

Some of the risks associated with the study falls in the realm of ethics, anonymity and potential harm to human subjects. To mitigate the potential harm to students, the survey and collection process were reviewed by GFU institutional review board before contact was made with participating institutions (see Appendix A). JBU and WJU also imposed additional institutional review board requirements (see Appendixes B and C) before institutional participation in the survey was approved. Participants' anonymity

was protected through SurveyMonkey® which disguises the participants' identities and results were transferred with all statistical tests conducted using a log-in secured laptop with network firewall protection.

### **Recommendations for Future Research**

This research sheds light on the connection between employability and Christian higher education, but additional research is needed. A significant challenge facing higher education is finding more effective ways to understand their role in impacting employability. The ESECT project started in the UK and operated from 2002 through 2005 as a government sponsored think-tank focused on enhancing student employability. In the aftermath of the ESECT project a clearinghouse of tools, research, and reports continues to support the efforts of higher education in enhancing employability ("ESECT ToolKits," n.d.). ESECT's efforts appear to have not been advanced by other countries and academia despite its importance to the role higher education plays in society; and yet employability is at the heart of current criticism being advanced against higher education as the value of an undergraduate degree relative to its cost is being increasingly questioned. Vedder and Strehle (2017) suggest the value of an undergraduate degree is being questioned as the proportion of adult Americans with a bachelor's degrees has grown to a third of the population. They offer the taxi driver index as an example of the declining value of a bachelor's degree. "In the mid-1970s, far less than 1% of taxi drivers were college graduates; by 2010 more than 15% were." In this time of rising uncertainty concerning the value of an undergraduate degree, new tools need to be

developed and additional research needs to be conducted to help higher education provide a more effective role in enhancing employability.

Yorke and Knight (2007) indicate employability resists measurement, especially as a summative assessment, but it is important for CHEUs and other higher education institutions to validate their claims of enhancing student employability for all students. This research has shown how the instruments can be used to differentiate the employability claims of students that pursue their education through different paths, but additional instruments are needed to be developed, refined and tested as both formative and summative tools of assessing educational outcomes. There is also a need for additional qualitative research to gain greater understanding of employer expectations and student reflection on the learning process.

This research uncovered some counter-intuitive results that merit additional quantitative and qualitative research. The research results indicated a negative correlation between additional work experience and measures of employability among DPS students. Understanding why older students become increasingly cynical of the role higher education plays in enhancing employability as they have more actual work experience is a topic worth exploration.

Another subject worth additional study is the relatively high employability scores achieved by Other Students who are most likely to have accumulated credits in a fragmented manner. One would assume a more monolithic educational journey would yield higher self-perceptions of employability, but Other Students seem to defy this thinking. As students continue to use multiple institutions and alternative approaches to

accumulating credits, greater understanding is needed of this diverse and somewhat independent group of students.

In addition, ATS participants are increasingly using accelerated, online and other nontraditional curriculum approaches and represent a relatively emerging cluster with growing numbers. These students are often not provided the opportunity to participate in rich noncurricular activity despite the benefits in enhancing employability. It is also more challenging to provide authentic learning experiences to ATS students in order to bridge academic theory with real-world practice. As the population for ATS students increases, they will be more indicative of each institution's alumni and increasingly are representative of the product of higher education.

Another topic for future research pertains to marketing in higher education. CHEUs and other higher education institutions need to address the validity of their consistent value claims in messaging to all students regardless of the program they pursue. Enhancing employability is intrinsically tied to the value claims of CHEUs. At stake for CHEUs is the potential for erosion of brand equity and declining significance of brand communities as institutions grapple with their emerging identities. In addition, CHEUs need to better recognize the customers they serve and the varied demands of important constituents. CHEUs are facing increasing pressure and need to adapt their strategic models to remain relevant and sustainable. As CHEUs gain a better understanding of the needs and demands of the constituents they serve, marketing messaging can become more consistent and unified.

A final recommendation for additional research is gaining better insights about the elements of employability from employers. Instruments such as the SEQ and EEQ



rely on students' self-perceptions of employer valued attributes. Additional work to help quantify and qualify the needs of employers will help to validate the messaging. It is also important to gain greater understanding of the perceptions of employers towards graduates that utilize alternative methods in earning a degree. Do employers see all bachelor's degree graduates from a given university in a similar light or do they differentiate graduates based on their academic cluster and inherent differences in curricular and noncurricular influences? These questions face CHEUs and other institutions of higher learning.

## **Conclusion**

The research used a quasi-experimental quantitative approach to identify the differences in employability using the SEQ and EEQ among 396 graduates and near graduates that utilized alternative academic paths in pursuit of their bachelor's degree from four geographically dispersed CHEUs located in the U.S. (JBU, WJU, GFU and Point). The research also sought to measure the relationship between employability of the survey participants and the variables percentage of education obtained from a CHEU, number of authentic learning experiences, and years of work experience within the undergraduate context.

The research indicated a statistically significant difference in the mean ( $p = .043$ ) on the EEQ between Other Students and ATS participants. Additional significant differences were observed in the means of the EEQ factors, general awareness ( $p = .032$ ) and employment orientation ( $p = .003$ ) among the four academic clusters. Other differences were observed in direct contrast of one cluster to another for general

awareness, academic awareness, valuing workplace experience, academic awareness and critical independence. This research indicates differences in the means of employability among unique academic clusters.

Statistically significant differences in the mean for the SEQ ( $p = .029$ ) were also observed among aggregate respondents from the four participating CHEUs. When segregating participants by academic cluster, significant differences in the mean were present for the SEQ ( $p = .017$ ) for RTS participants. Other Students registered differences ( $p = .017$ ) for the SEQ + EEQ. Additional contrast comparisons reinforced significant statistical differences among participants from the four participating CHEUs indicating that the specific universities one attends, regardless of common affiliation and comparable values, contribute to different levels of employability for their students.

The research also concluded a significant positive correlation for the SEQ and the SEQ factor, engagement with the proportion of undergraduate education obtained from a CHEU indicating education obtained from a CHEU is an important element in enhancing self-efficacy and other personal qualities associated with employability. Additional research provided some positive and some negative correlations for the number of authentic learning experiences and different measures of employability. Authentic learning experiences revealed a positive correlation with general awareness when aggregating participants as a single group. Segregating the participants by academic cluster indicated a positive significant correlation with general awareness for RTS participants, however, negative correlations were observed for RTS participants with engagement, valuing workplace experience and employment orientation. Correlation for the number of years of work experience with DPS participants indicated significant

negative correlation with EEQ, SEQ + EEQ, valuing workplace experience and academic awareness.

Finally, the percentage of education obtained from a CHEU used by participants in their educational journey was shown to explain 1.9% of the SEQ variance and age was shown to have an inverse relationship to the EEQ and explained 1.8% of the variance. For the participants in the survey, the percentage of education at a CHEU is a relevant factor in employability and participants of younger ages tend to have greater confidence in their self-perceptions of employability.

This research represents a pioneering effort in attempting to identify the specific elements of employability and measure them to determine if differences in values are represented by students choosing alternative paths towards completion of a bachelor's degree. Although students have many options for the methods they can utilize in pursuing their education, the unique employability gains associated with each path are less clear. Different paths represent dissimilar explicit and implicit costs to the students and the comparable employability outcomes are a relevant factor. CHEUs and other institutions that combine liberal arts with professional studies need a better understanding of the alternative outcomes of employability for their different academic delivery models as a means of promoting their institutional values and brand reputations. Employers are struggling to understand the significance of diplomas that fail to reveal the prospective employees academic path or whether they can assume all graduates of a given institutional are equally equipped as prospective employees.

This research has begun a conversation about an emerging topic that calls for greater attention. The stakes are high for CHEUs as they face an uncertain future and

seek to address increasing demands of society. Helping discover the illusive aspects of enhancing employability is a worthy pursuit to help CHEUs in a period of rediscovery of their own unique identities and contribution to higher education and society.

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## APPENDICES

### Appendix A *IRB George Fox University*

GEORGE FOX UNIVERSITY HSRC INITIAL REVIEW QUESTIONNAIRE

Page 1

**\*\*NOTE:** Review carefully the full text of the Human Subjects Research Committee Policies and Procedures.

Date submitted: June 6, 2017

Date received:

#### GEORGE FOX UNIVERSITY Human Subjects Research Committee

#### PROTECTION OF HUMAN SUBJECTS INITIAL REVIEW QUESTIONNAIRE

[**Note:** Dissertation, or other formal research proposal, need not be submitted with this form. However, relevant section(s) may need to be attached in some cases, in addition to filling out this form completely, but only when it is not possible to answer these questions adequately in this format. Do not submit a proposal in lieu of filling out this form.]

Title of Proposed Research: Exceptionally Employable: A Study of the Value of Contrasting Educational Modalities within Christian Liberal Arts Institutions in Preparing Students for Employment Suitability

Principal Researcher(s): Sam Heinrich

Degree Program: DBA- Marketing

Rank/Academic Standing: Candidate

Other Responsible Parties (if a student, include faculty sponsor; list other involved parties and their role)

Paul Shelton, Dissertation Committee Chair; Justine Haigh, Dissertation Committee Member; and Joe Walenciak, Dissertation Committee Member

(\*\*Please include identifying information on page 6 also.)

(1) Characteristics of Subjects (including age range, status, how obtained, etc)

This study will include an undetermined number of participants, less than 10,000, drawn from students who have graduated in the last 12 months or are within one semester of completing their bachelor's degrees from several Christian higher education institutions including: John Brown University, William Jessup University, George Fox University, Pointe University and Bryan College. Study participants will include both traditional (18-22) and nontraditional adult populations (over 22).

(2) Describe Any Risks to the Subjects (physical, psychological, social, economic, or discomfort/inconvenience):

It is anticipated that participants will experience minimal risk during the study. It is possible that some participants may experience discomfort and annoyance in receiving the survey. The survey instrument will request demographic information and other discreet identifying factors that some participants may prefer to not provide. Participants may choose to refrain from providing information that makes them uncomfortable. The survey will require about 10 to 15 minutes to complete. All participants will be informed in advance of the research study purpose and procedures through an email communication. Participants will acknowledge informed consent before participating in the study through an electronic affirmation.

(3) Are the risks to subjects minimized (i) by using procedures which are consistent with sound research design and which do not unnecessarily expose subjects to risk, and (ii) whenever appropriate, by using procedures already being performed on the subjects for diagnostic or treatment purposes? ☒ Yes/ ☐ No

Degree of risk: 1 (low)

(4) Briefly describe the objectives, methods and procedures used:

The purpose of this research is to determine if there is a statistical difference in suitability of employment between students organized in specific groups that have recently completed or are nearing completion of their bachelor's degree at a Christian higher education institution, measured by the student's responses to self-efficacy and employment experience questionnaires. The research is designed to shed light on the correlation between the approaches students use in completing their undergraduate program and measures of employability.

Information will be gathered using an on-line survey instrument sent by email to the population administered through SurveyMonkey. The survey will provide a brief explanation of the purpose and use of the survey, disclosure of the researcher, and contact information for the researcher. A link to the survey will be sent by email to the population. The names will be obtained through public access. Before taking the survey, participants will be asked to review and agree to informed consent.

(5) Briefly describe any instruments used in the study (attach a copy of each).

The survey instrument is composed of two validated questionnaires designed by Yorke and Knight (2007): the Self-Efficacy Questionnaire (SEQ) and the Employment Experience Questionnaire (EEQ). The SEQ is designed to provide insights to teachers of the disposition of their students and the EEQ was designed to measure student's perceptions of how well their education and work experience prepared them for employment based on the USEM model of employability (Understanding, Skills, Efficacy and Metacognition) designed by Yorke and Knight.

(6) How does the research plan make adequate provision for monitoring the data collected so as to insure the safety, privacy and confidentiality of subjects?

The data will be collected using SurveyMonkey which separates the personal identity of participants from the data. The researcher will not track the Internet Protocol (IP) addresses of the participants. Data will be housed on the personal computer of the researcher with tight security protocols and firewall protection.

(7) Briefly describe the benefits that may be reasonably expected from the proposed study, both to the subject and to the advancement of scientific knowledge – are the risks to subjects reasonable in relation to anticipated benefits?

The information will be helpful in determining if there is a difference in the suitability for employment of students based on their academic journeys. Such information is important to Christian higher education institutions in terms of teaching modalities and the manner in which student's achieve credits necessary for earning a degree. The study will also explore the correlation between authentic learning experiences and employability as well the relationship between work experience prior to or during academic studies and employability. These findings could help to address the importance of a Christian liberal arts education and the academic requirements of institutions in preparing students for employment. These results will help to establish brand identity and inform marketing messaging. The risk to Christian liberal arts institutions are minimal, but the results may be contradictory to current business models. Such information could be unwanted, but informative.

(8) Where some or all of the subjects are likely to be vulnerable to coercion or undue influence (such as children, persons with acute or severe physical or mental illness, or persons who are economically or educationally disadvantaged), what appropriate additional safeguards are included in the study to protect the rights and welfare of these individuals?

The survey should not pose coercion to any vulnerable participants.

(9) Does the research place participants "at risk?" ☐ Yes ☒ No If so, describe the procedures employed for obtaining informed consent (*in every case, attach copy of informed consent form; if none, explain*).

COMMITTEE REVIEW

For Committee Use Only
------------------------

HSRC Member Signature	Recommend Approval	Conditional Approval	Not Recommended
Chair _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Member _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Member _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Member _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Member _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Member _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Member _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments (continue on back if necessary, use asterisk to identify):

Title: Mr.

Principal Researcher(s): Sam Heinrich

Date application completed: June 6, 2017

(The researcher needs to complete the above information on this page)

**COMMITTEE FINDING:**

For Committee Use Only

☐ (1) The proposed research makes adequate provision for safeguarding the health and dignity of the subjects and is therefore approved.

☐ (2) Due to the assessment of risk being questionable or being subject to change, the research must be periodically reviewed by the HSRC on a \_\_\_\_\_ basis throughout the course of the research or until otherwise notified. This requires resubmission of this form, with updated information, for each periodic review.

☐ (3) The proposed research evidences some unnecessary risk to participants and therefore must be revised to remedy the following specific area(s) on non-compliance:

☐ (4) The proposed research contains serious and potentially damaging risks to subjects and is therefore not approved.

\_\_\_\_\_  
Chair or designated member

\_\_\_\_\_  
Date



Title: Mr.

Principal Researcher(s): Sam Heinrich

Date application completed: July 19, 2017

**(The researcher needs to complete the above information on this page)**

**COMMITTEE FINDING:**

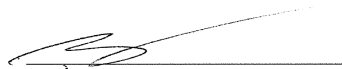
For Committee Use Only

☒ (1) The proposed research makes adequate provision for safeguarding the health and dignity of the subjects and is therefore approved.

☐ (2) Due to the assessment of risk being questionable or being subject to change, the research must be periodically reviewed by the **HSRC** on a \_\_\_\_\_ basis throughout the course of the research or until otherwise notified. This requires resubmission of this form, with updated information, for each periodic review.

☐ (3) The proposed research evidences some unnecessary risk to participants and therefore must be revised to remedy the following specific area(s) on non-compliance:

☐ (4) The proposed research contains serious and potentially damaging risks to subjects and is therefore not approved.



Chair or designated member

7/21/17

Date

## Appendix B IRB William Jessup University



### INSTITUTIONAL REVIEW BOARD (IRB) APPLICATION External Research Project Form

Use this form for any external research projects that involve WJU students/staff as subjects.

Principal Investigator (Please Print) Sam Heinrich

Phone # 530.701.2831 Email: sheinrich@jbu.edu

Home Institution George Fox University

Supervising Chair or Dean (Please Print) Paul Shelton, PhD. Dept. School of Business

Phone # 503.554.2814 Fax # \_\_\_\_\_ Email pshelton@georgefox.edu

**Project Title**

Exceptionally Employable: A Study of the Value of Contrasting Educational Modalities within Christian Liberal Arts Institutions in Preparing Students for Employment Suitability

Research Start Date 7.18.17 Expected End Date 10.15.17

**Submission Type**

☒ New ☐ Continuation  
☐ Addendum ☐ Renewal  
☐ Other: \_\_\_\_\_

An IRB application for your home institution has been (check all that apply):

☐ Submitted  
☒ Approved  
☒ Attached; from George Fox University (name of institution)

Recommendation for IRB Review Category (you may cite the recommendation from your home institution, if applicable).

This Submission	If other than new, category of original submission
<input type="checkbox"/> Exempt because (number) _____	<input type="checkbox"/> Exempt
<input type="checkbox"/> Expedited because (number) _____	<input type="checkbox"/> Expedited
<input type="checkbox"/> Full Review	<input type="checkbox"/> Full Review

**Please complete all 3 pages.**

## INSTITUTIONAL REVIEW BOARD APPLICATION

Please complete the following sections in enough detail for the IRB to understand the nature, intent and procedure of your project. Please type the following information within this document or submit your approved IRB application from your home institution. Be sure to sign and include page 3 with your submission.

**1. Title:** *Exceptionally Employable: A Study of the Value of Contrasting Educational Modalities within Christian Liberal Arts Institutions in Preparing Students for Employment Suitability*

**2. Project Summary:** Summarize your project in enough detail to give the IRB an overview of the project:

*The purpose of this research is to determine if there is a statistical difference in suitability of employment among students organized in specific groups that have recently completed or are nearing completion of their bachelor's degrees at a Christian higher education institution, measured by the student's responses to self-efficacy and employment experience questionnaires. The research is designed to shed light on the correlation between the approaches students use in completing their undergraduate program and measures of employability.*

*Information will be gathered using an online survey instrument sent by email to the population administered through SurveyMonkey. The survey will provide a brief explanation of the purpose and use of the survey, disclosure of the researched, and contact information for the researcher. A link to the survey will be sent by email to the population. Before taking the survey, participants will be asked to review and agree to informed consent.*

**3. Research Question:** State your research questions and hypothesis if applicable: (see attached Research Method- chapter 3 of dissertation proposal)

*The purpose of this study is to investigate differences in suitability of employment of distinct student groups at comparable Christian higher education institutions using the SEQ and EEQ survey instruments. The study will identify the impact of the proportion of one's total education received from a Christian liberal arts institution to determine if there is a correlation between enrollment in units from a Christian liberal arts institution and suitability for employment. The study will also compare the impact of authentic learning or work experience while attending school for traditional and nontraditional students respectively. The research hypothesis to be tested are as follows:*

*H1: There is a difference in suitability of employment among Residential Traditional Students, Deferred Professional Students, Accelerated Traditional Students and Other Students.*

*This hypothesis assumes there is a difference in employability based on the manner and modality in which a student pursues a degree that holds ramifications related to the value proposition for the different institutions considered in this study.*

*H2: There is no difference in suitability of employment in comparing students, by group, from one Christian liberal arts institution to students in the same respective group from another Christian liberal arts institution.*

*This hypothesis assumes a common outcome in terms of employability among the Christian liberal arts institutions regardless of the unique characteristics of each school that does not manifest in differences in employability of students. Differences in employability are assumed to be related to other characteristics of students as expressed in H1, H2, H3 and H4.*

*H3: There is a positive correlation between the percentage of a student's education received from a Christian liberal arts institution and suitability for employment.*

*This hypothesis assumes one of the values of a Christian higher education is the manifestation of a higher suitability for employment by students. If present, this relationship is important to the value proposition of Christian higher education.*

*H4: There is a positive correlation between suitability of employment and number of authentic learning experiences for Residential Traditional Students.*

*This hypothesis assumes that authentic learning experiences are an important component of education that will manifest in higher levels of employability.*

*H5: There is a positive correlation between suitability of employment and number of years of work experience while attending school for Deferred Professional Students.*

*In a similar manner to authentic learning experience, students that work while they learn are able to apply abstract concepts in real time. (Excerpt from Chapter 3 of dissertation proposal)*

**4. Sample:** Please describe your data source including where you are procuring your sample. Include the target sample demographics, inducement to obtain sample, recruiting materials, inclusion and exclusion criteria, and any other pertinent data. *The survey is being drawn from the Self Efficacy Questionnaire and Employment Experience Questionnaire designed by Yorke and Knight (2007).*

**5. Procedure:** Describe all applicable research procedures. Please list a) recruitment procedures, b) randomization procedures, c) research design and data collection procedures, d) description of treatment and control conditions, e) qualitative methodology. Please include all instructions given to participants at all phases of the research. *See attached Chapter 3- Method of approved research proposal.*

**6. Data Collection Instruments:** Please list all instruments and provide a copy of all measures, surveys and instrumentation: *See Appendix B of approved research proposal.*

**7. Privacy and Confidentiality:** Explain how you will safeguard the participant's privacy and confidentiality: *Data will be collected using an online survey. The two questionnaires containing 35 questions and will be administered through SurveyMonkey®. John Brown University and William Jessup University will provide a list of email addresses for participants or a representative from the school will communicate by email to the participants. An email will be sent inviting recipients to participate in the survey with an attached link. All data will be secured through a login/password maintained by the researcher. Participants who follow the link will be required to make an affirmative choice to provide informed consent section before proceeding to the two surveys. Participants will complete a demographic section (see Appendix B) that follows the surveys. Results of answers from the demographic section will be used to segment the results into groupings and variables. Participants will receive a reminder email after one week and the survey will be closed after three weeks.*

*The data will be transferred to a password secured computer. A software program, Statistical Package for the Social Sciences (SPSS), will be utilized to perform the analysis and statistical test contemplated in this proposal.*

*An attempt to minimize response bias related to the effect of nonresponses on the analysis (Fowler Jr, 2013) will be employed using a wave technique to see if the number of respondents changes from week to week during the period in which the survey is open. Late respondents and those that respond after follow-up email prompts are more likely to be non-respondents (Leslie,*

Page 3 of 6

1972). A few late responders and non-responders will receive a follow-up communication to ensure consistency in responses.

**8. Foreseeable Benefits:** What are the potential benefits associated with this project?

*As CCCU institutions face a shifting landscape and have adapted their practices to their new reality, questions arise over whether the claims of the institutions remain valid and consistent across all programs. Bachelor's degree recipients follow many different paths to completion of their degrees and the number of units taken from the degree conferring institution vary significantly for each graduate. CCCU institutions should be concerned that graduates achieve comparable outcomes regardless of their program delivery and unique academic journey. CCCU institutions proudly claim enhancing the employability of their graduates as one of their expected outcomes and part of their value proposition ("JBU facts 2014-2015 - About - John Brown University," n.d; Jackson, 2012a). CCCU branding and value propositions will benefit from the shedding of light on the consistency of employability of all graduates and provide important insights on the value of authentic learning experiences (Lombardi & Oblinger, 2007). In addition, adult learning theory postulates the importance of context and work experience in helping students gain greater levels of employability through context (Knowles, 1988). This study will provide insights for CCCU institution on the importance of work experience in influencing employability.*

*Preparing students for employment is an important topic but the role higher education plays in this process has had very little research indicating a gap and need for additional studies. Yorke and Knight's (2007) conducted initial pilots and subsequent testing of the SEQ and EEQ, but a review of the current peer reviewed literature provides no additional published research involving the instruments and professor Knight is unaware of any additional studies. The goal of this study is to provide insights to CCCU institutions regarding the connection between varying programs and paths different students take as these processes relate to employability. This information will be useful in brand messaging and operational practices for the CCCUs in a time of disruption and change. This study will make a significant contribution to the study of the connection between higher education and employability and will be of direct interest to CCCUs.*

**9. Foreseeable Risks:** What are the risks associated with this project and what will you do to minimize the risk? *There are minimal risks to participants of the study. Answering surveys leads some people to feel mildly upset or anxious. Some questions about personal history are included, but these questions are arranged in broad categories. Participation is voluntary and may be stopped at any time.*

**10. Informed Consent:** Please indicate the procedures for obtaining consent from the agency that provides access to participants (if applicable) and from participants and/or their legally responsible representative.

If applicable:

- If the agency is other than WJU, attach a letter of agreement from the responsible agency to the IRB application. If informed consent is for research that involves minors, address the parent or guardian using language such as "your child..."
- If the research involves minors ages 12-17, include a Student Assent form in addition to the Informed Consent form.
- If research is conducted exclusively through the use of self report questionnaires or opinion surveys, include an Informed Consent for Electronic Survey Questionnaires.
- If clinical research involves human subjects, the following additional forms must be signed by the participant: California Experimental Subjects Bill of Rights, and Use of Private Health Information.

*Please see Appendix B. All conditions have been met. The research is not clinical.*

**11. Data Analysis:** Please include your strategy for data analysis:  
*See Chapter 3- Methods of research proposal.*

**12. Dissemination:** Please describe your plan for dissemination of your data including targeted conferences and publications:  
*The findings will be included in the final dissertation. Upon approval from the dissertation committee, the proposal will be published in Digital Commons. Additional publications and presentations at academic conferences may occur in the future.*

**13. Explanation of reason for exempt or expedited status (if applicable):**

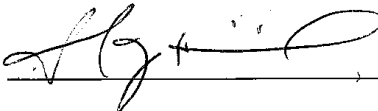
*The researcher has a limited time to complete his dissertation and request expedited status.*

**Informed Consent:** Please sign below to indicate that you have included the following items (as applicable) to your informed consent. Please include your informed consent with the IRB application.

When using humans as research subjects you must first obtain their informed consent. Use this checklist to effectively create an informed consent form:

1.
  - a) A statement explaining the purpose of the research.
  - b) A statement of the expected duration of the subject's participation.
  - c) A description of the procedures to be followed.
2. A description of any reasonable foreseeable risks or discomforts to the subject, including invasion of privacy.
3. A description of any benefits reasonably expected from the research, either to the subject or to others.
4. A disclosure of appropriate alternative procedures or courses of treatment, if any, that might be advantageous to the subject.
5. A statement informing the subject about how his/her confidentiality will be guarded; i.e. that their confidentiality will be protected by assigned code numbers, by limitations of who has access to data, by data storage in locked cabinets, by locked computer files, etc.
6. If research involves more than a minimal risk, explain whether any compensation or medical treatment is available if injury occurs and, if so, what they consist of, or where further information may be obtained.
7. The name, address, and telephone number of the principal investigator of the research project, and his/her affiliation with William Jessup University. If the principal investigator is a student, the name and telephone number of the faculty advisor is also required.
8. A statement that the subject's participation is voluntary, and that his/her refusal to participate will involve no penalty or loss of benefits to which the subject is otherwise entitle, and that the subject may discontinue participation at any time without penalty or loss of benefits to which the subject is otherwise entitle.
9.
  - a) If written informed is required, a place for the subject to sign and date the form must be included. A statement that a copy of the signed consent form will be given to the subject for his/her records must also be included.
10. A statement informing the subject that inquiries regarding the nature of the research, his/her rights as a subject, or any other aspect of the research as it relates to his/her participation as a subject can be directed the Office of Academic Research: Dr. Aisha N. Lowe, Director ([alowe@jessup.edu](mailto:alowe@jessup.edu); 916-577-2258).
11. If clinical research involves human subjects:
  - A signed California Experimental Subjects Bill of Rights and
  - A signed authorization for Use of Private Health Information is required.

Signed: \_\_\_\_\_

 7.21.17

I agree to provide a copy of the aggregate results from this study to William Jessup University.

Signed:  7.21.17

**Submit an electronic copy of your completed application with actual signatures to the IRB  
Committee Chair, Dr. Aisha Lowe (alowe@jessup.edu).**

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**For IRB Use Only**

☐ Preliminary approval (e.g. grant proposal, institutional research, including CFR 46.118). Re-submission required prior to data collection.

☐ Approved as exempt. No further review needed unless protocol changes.

Signature: Certified Faculty \_\_\_\_\_ Date \_\_\_\_\_

OR

Signature: IRB Chair or Designee \_\_\_\_\_ Date \_\_\_\_\_

☐ Approved as expedited. No further review needed unless the protocol changes or data-gathering extends beyond time limit.

Project approval expires \_\_\_\_\_

Signature: IRB Chair or Designee \_\_\_\_\_ Date \_\_\_\_\_

☐ Full Review

☐ Approved as submitted.

Project approval expires \_\_\_\_\_

☐ Not approved (see attachment). Re-submission is required.

Signature: IRB Chair \_\_\_\_\_ Date \_\_\_\_\_

Names of board members who reviewed this project:

\_\_\_\_\_  
\_\_\_\_\_



**Office of Academic Research**

Institutional Review Board (IRB)  
2121 University Avenue  
Rocklin, CA 95765

July 26, 2017

Sam Heinrich, Principal Investigator  
George Fox University

RE: Exceptionally Employable: A Study of the Value of Contrasting Educational Modalities within Christian Liberal Arts Institutions in Preparing Students for Employment Suitability

**Notice of Approval to Conduct Research**

This letter authorizes the use of human subjects in your project titled *Exceptionally Employable: A Study of the Value of Contrasting Educational Modalities within Christian Liberal Arts Institutions in Preparing Students for Employment Suitability*. The William Jessup University Institutional Review Board (IRB) has approved the protocol as described in your IRB application by **expedited** review. The expiration date for this protocol is December 31, 2017. The risk designation applied to your project is *no more than minimal risk*.

Under applicable regulations, no changes to procedures involving human subjects may be made without prior IRB review and approval. The regulations also require that you promptly notify the IRB of any problems involving human subjects, including unanticipated side effects, adverse reactions, participant complaints and any injuries or complications that arise during the project.

If you have any questions about the IRB process, or if you need assistance at any time, please feel free to contact me: [alowe@jessup.edu](mailto:alowe@jessup.edu); 916-577-2258.

Sincerely,

A handwritten signature in cursive script that reads 'Aisha N. Lowe'.

Aisha N. Lowe, Ph.D.  
Associate Dean, Office of Academic Research  
William Jessup University





## Institutional Review Board Approval

Proposal Identification Number: 2017-044

Primary Investigator: Sam Heinrich

Title: Exceptionally Employable: A study of the value of contrasting educational modalities within Christian liberal arts institutions in preparing students for employment suitability.

I am pleased to inform you that your research proposal has been approved by the JBU Institutional Review Board. It is the Board's opinion that you provided adequate safeguards for the welfare of the participants in this study.

You are authorized to implement this study as of the date of final approval, July 31, 2017, and this authorization is valid for one year, with the option to renew authorization if protocols do not change.

This approval is granted with the understanding that the research will be conducted within the published guidelines of the JBU Institutional Review Board. Any proposed changes to the protocols should be reported to the IRB for approval.

Sincerely,

Curtis J. Cunningham, Ph.D.

Chair

## Appendix D Survey Instrument

### 1. Statement of Rights

**INVESTIGATOR:** Sam Heinrich, in conjunction with dissertation as part of the requirements of the Doctorate of Business Administration at George Fox University.

**PURPOSE OF THE RESEARCH:** The purpose of the research is to determine if there is a statistical difference in suitability of employment between students organized in specific groups that have recently completed or are nearing completion of their bachelor's degrees at a Christian higher education institution, measured by the student's responses to self-efficacy and employment experience questionnaires. The research is designed to shed light on the correlation between the approaches students use in completing their undergraduate programs and measures of employability.

**PROCEDURES TO BE FOLLOWED DURING THE RESEARCH:** You will be asked to complete a brief survey. Your participation will take about 10-15 minutes. You will be asked to state your level of agreement with questions from two different instruments: the Self-Efficacy Questionnaire (SEQ) and the Employment Experience Questionnaire (EEQ). Both instruments rely on self-reflection on the participant's past academic and employment experiences that they believe contribute to their suitability or preparedness for employment. Suitability for employment is based on four broad elements including: understanding of relevant knowledge of a discipline; obtaining specific skills to complete required tasks in particular job; the presence of beliefs related to what makes one effective in terms of controlling an outcome and other related personal qualities; and the ability to reflect upon or recognize one's own learning process. The EEQ makes several statements related to employment. For purposes of this survey please consider your experience in internships, practicums, capstones and other examples of authentic learning as part of your work experience.

You will also be asked to respond to a number of questions related to demographic information and specific elements of your undergraduate academic journey.

**RISKS:** There are minimal risks to participation in this study. Answering surveys leads some people to feel mildly upset or anxious. Some questions about your personal history are included, but these questions are arranged in broad categories. Please feel free to stop the study if you feel any negative effects.

**BENEFITS OF THE STUDY:** There are no direct benefits from participation in the research; however, the topic is an important one for higher education in shaping their academic programs in preparing students for employment.

**CONFIDENTIALITY:** You have a right to privacy and all identifying information you share will remain confidential (private), unless otherwise required by law. Your personal identity is protected through the instrument we are using for this survey (SurveyMonkey). In addition, access to the survey is restricted to only those personnel actively involved in collecting and collating the data. Your identity will not be associated with your responses when results are viewed by the investigator named above.

**QUESTIONS ABOUT THE RESEARCH:** If you have any questions regarding this research project or your participation, you may contact Sam Heinrich at [sheinrich10@georgefox.edu](mailto:sheinrich10@georgefox.edu) or 530.701.2831.

**PARTICIPATION RIGHTS AND RESEARCH WITHDRAWAL:** Your participation in this study is voluntary and your permission is assumed by your participation. If you choose not to participate in this study, there will be no penalty or loss of benefits to which you are otherwise entitled and your relationship with your respective university will not be affected. In addition, you may discontinue participation at any time without any penalty or loss of benefits. You may also refuse to answer any questions you do not wish to answer.

**\* I am participating in this survey voluntarily and may choose NOT to participate or end participation at any time.**

**By answering "Yes" below I agree to participate in this survey and confirm that I have read the aforementioned statement of rights and agree to continue the survey.**

☐ Yes

☐ No

## 2. Self-Efficacy Questionnaire (SEQ)

Please share your agreement level with each of these statements:

	Strongly Agree	Tend to Agree	Tend to Disagree	Strongly Disagree
1. The academic tasks I am given motivate me to put in quite a lot of effort.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. The amount of work I put into my studies is reflected in my grades.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Luck doesn't play much of a part in what I achieve academically.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. As a student, I like learning situations in which I, rather than the teaching staff, can shape the work to be done.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I find that academic work doesn't stretch me intellectually.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Higher education doesn't give me much of an opportunity to develop new skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. In life in general, I am stimulated by the challenge of difficult problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I don't let other people determine the way I tackle what I do outside higher education.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. The tasks that people outside higher education expect me to undertake usually energize me to work hard at them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Agree	Tend to Agree	Tend to Disagree	Strongly Disagree
10. In the things I do outside higher education, I find that there is not much of a connection between what I achieve and the effort I put in.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Chance will probably be influential in what I achieve in employment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I don't like situations in which I, rather than others, am responsible for what happens.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. An individual can't change their intelligence by much.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. No matter what kind of person someone is, it is always possible for them to change significantly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 3. Employment Experience Questionnaire (EEQ)

Please share your agreement level with each of these statements:

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1. The teaching in my program of study has encouraged discussion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. The teaching in my program of study has helped me to think critically about my subject.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. This year's work requires me to be more independent than last year's did.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Experience of the work environment has helped me to focus my academic studies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I have a broad understanding of my subject area.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Workplace experience has enabled me to become more confident in higher education.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. What I have learned in the workplace has helped me in my academic studies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I am not sure what subject-specific skills I can claim to have.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I understand how I learn most effectively.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. In my academic work I have been able to apply skills that I have developed in work environments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I feel confident in my academic work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
12. While in higher education I have learned some strategies that help me to succeed on novel problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I have become skilled in my subject specialism.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. The work experience I have had has made me think about what I need to do in my studies to develop a graduate-level career.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. I have not been encouraged to consider how the things I do outside the formal academic program can provide evidence in support of graduate-level employment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. I am not sure what subject knowledge I will need for my preferred future career.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. I know what general skills employers expect of graduate-level employees.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. I do not know the extent to which my current capabilities fit the expectations of graduate-level employees.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. I find it hard to assess my strengths and weaknesses as a competitor in the graduate labor market.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. I have enhanced the general skills that make people effective in employment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
21. I can provide an employer (or other interested party) with evidence of my general skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. I have built up a portfolio of evidence of my achievements.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. I expect that I will be effective in a graduate-level job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



#### 4. Demographics and Academic Journey Profile

Current academic status:

- ☐ Planning to graduate with bachelor's degree in the next six months
- ☐ Completed bachelor's degree in the last 12 months
- ☐ Other (please specify)

What institution did you graduate or plan to graduate from?

- ☐ George Fox University
- ☐ John Brown University
- ☐ Point University
- ☐ William Jessup University
- ☐ Other (please specify)

Select the academic profile that best represents your academic journey (if you have graduated, assume your age at the time of graduation):

- ☐ Traditional student/programs (Residential Traditional Students). Profile: Students under age 26 that have received 75% of their undergraduate academic program as full-time residential students attending a Christian college or university.
- ☐ Nontraditional students/programs (Deferred Professional Students). Profile: Students over age 25 that have received at least 50% of their undergraduate academic programs through accelerated, online or other nontraditional teaching methods.
- ☐ Traditional students/Nontraditional programs (Accelerated Traditional Students). Profile: Students under age 26 that have taken at least 50% of their undergraduate courses using accelerated, online or other nontraditional education.
- ☐ Other (Other Students). Profile: Student academic plan does not fit any of the other alternatives.

What percentage of your undergraduate education has been or you anticipate will be completed at a Christian higher education institution?

- ☐ Less than 25%
- ☐ Between 25% and 50%
- ☐ Between 50% and 75%
- ☐ Between 75% and 100%
- ☐ Other (please specify)

During the time you have pursued a bachelor's degree indicate the number of capstone courses, internships, and curricular/co-curricular practicums (authentic learning experiences) you have completed:

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5 or more

Gender:

- ☐ Male
- ☐ Female

Age:

- ☐ 25 or younger
- ☐ 26-30
- ☐ 31-40
- ☐ 41-50
- ☐ Over 50

**Ethnicity:**

- ☐ American Indian or Native Alaskan
- ☐ Asian
- ☐ Black or African-American
- ☐ Hispanic
- ☐ Native Hawaiian or other Pacific Islander
- ☐ White
- ☐ Two or more races

**Area of study:**

- ☐ Liberal Studies or Education
- ☐ Humanities
- ☐ Business
- ☐ Psychology
- ☐ Science
- ☐ Arts
- ☐ Engineering
- ☐ Other (please specify)

**Family income:**

- ☐ Under \$25,000/year
- ☐ \$25,000-\$50,000
- ☐ \$50,000-\$100,000
- ☐ Over \$100,000

Occupation:

- ☐ For-Profit Business
- ☐ Government
- ☐ Non-Government Organization/Charity (NGO)
- ☐ Education
- ☐ Student
- ☐ Not presently employed
- ☐ Other (please specify)

Work experience prior to and during pursuit of your bachelor's degree:

- ☐ 1 to 2 years
- ☐ 3 to 5 years
- ☐ 6 to 10 years
- ☐ 10+ years
- ☐ None of the above

**Appendix E Summary of Authentic Learning Experiences (n = 290)**

RTS (n=209)			DPS (n=45)		ATS (n=16)		Other (n=17)		Total		
<i>n</i>	<i>% of total</i>		<i>n</i>	<i>% of total</i>		<i>n</i>	<i>% of total</i>		<i>n</i>	<i>% of total</i>	
John Brown University											
1	0	0%	11	39.3%	2	33.3%	2	40%	15	12.3%	
2	6	7.2%	7	25%	2	33.3%	1	20%	16	13.1%	
3	16	19.3%	6	21.4%	2	33.3%	0	0%	24	19.7%	
4	22	26.5%	2	7.1%	0	0%	0	0%	24	19.7%	
5 or more	39	47%	2	7.1%	0	0%	2	40%	43	35.2%	
Total	83	39.7%	28	62.2%	6	37.5%	5	29.4%	122	42.5%	
Mean	4.13		2.18		2		2.8		3.52		
Point University											
1	1	2.9%	1	16.7%	0	0%	0	0%	2	4.8%	
2	5	14.3%	4	66.7%	0	0%	0	0%	9	21.4%	
3	12	34.3%	1	16.7%	0	0%	0	0%	13	31%	
4	8	22.9%	0	0%	1	100%	0	0%	9	21.4%	
5 or more	9	25.7%	0	0%	0	0%	0	0%	9	21.4%	
Total	35	16.8%	6	13.3%	1	6.3%	0	0%	42	14.6%	
Mean*	3.54		2		4		N/A		3.33		
William Jessup University											
1	0	0%	3	30%	0	0%	0	0%	3	6.5%	
2	5	20%	0	0%	0	0%	1	12.5%	6	13%	

3	3	12%	0	0%	1	33.3%	4	50%	8	17.4%
4	8	32%	1	10%	0	0%	1	12.5%	10	21.7%
5 or more	9	36%	6	60%	2	66.7%	2	25%	19	41.3%
Total	25	12%	10	22.2%	3	18.8%	8	47.1%	46	16%
Mean*	3.84		3.7		4.33		3.5		3.78	

George Fox University

1	4	6.2%	0	0%	1	16.7%	2	50%	7	9.2%
2	7	10.8%	0	0%	0	0%	0	0%	7	9.2%
3	21	32.3%	0	0%	3	50%	1	25%	25	32.9%
4	12	18.5%	1	100%	2	33.3%	1	25%	16	21.1%
5 or more	21	32.3%	0	0%	0	0%	0	%	21	27.6%
Total	65	31.1%	1	2.2%	6	37.5%	4	23.5%	76	26.5%
Mean*	3.6		4		3		2.25		3.49	

Total

1	5	2.4%	15	33.3%	3	18.8%	4	23.5%	27	9.4%
2	23	11%	11	24.4%	2	12.5%	2	11.8%	38	13.2%
3	52	24.9%	7	15.6%	6	37.5%	5	29.4%	70	24.4%
4	51	24.4%	4	8.9%	3	18.8%	2	11.8%	60	20.9%
5 or more	78	37.3%	8	17.8%	2	12.5%	4	23.5%	92	32.1%
Total	209	100%	45	100%	16	100%	17	100%	287	100%
Mean*	3.83		2.53		2.94		3		3.53	