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### A Mixed Methods Case Study: Understanding the Experience of Nebraska 4-H Participants Relative to Their Transition and Adaptation to College

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A MIXED METHODS CASE STUDY: UNDERSTANDING THE EXPERIENCE OF  
NEBRASKA 4-H PARTICIPANTS RELATIVE TO THEIR TRANSITION AND  
ADAPTATION TO COLLEGE

by

Jill Walahoski

A DISSERTATION

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Under the Supervision of Professor Brent Cejda  
Lincoln, Nebraska

May, 2013

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NEBRASKA 4-H PARTICIPANTS RELATIVE TO THEIR TRANSITION AND  
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Jill Walahoski, Ph.D.

University of Nebraska, 2013

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This mixed methods case study was designed to assess the preparedness of former Nebraska 4-H participants to successfully transition and adjust to college. The study also sought to understand the way that students' experiences in Nebraska 4-H may have influenced their readiness to transition to college. The initial quantitative stage of this case study administered the Student Adaptation to College Questionnaire to former 4-H participants who were recent high school graduates. Latter qualitative stages included interviews with staff regarding the practices and strategies they employed related to preparing young people for college and interviews with former 4-H participants selected from the survey sample.

The results of the quantitative analysis indicated that generally, former 4-H participants reported a positive adaptation to college. Significant differences were found between the variable groups or with the influence of the covariate in the clusters of (a) Attachment: This College; (b) Personal and Emotional Adjustment: Psychological; (c) Personal and Emotional Adjustment: Physical; (d) Social Adjustment: General; and (e) Social Adjustment: Social Environment. Student's reporting different engagement

levels in 4-H reported significant differences in their attachment to college and in their general social adjustment to college.

The qualitative analysis discovered that staff and former 4-H participants both credit the cumulative 4-H experience and the multiple opportunities to explore interests, potential career areas and colleges as influential in the preparing young people for the transition to college. Additionally, both groups recognize that 4-H results in skill development relevant to a successful transition to college, especially networking, public speaking, and independence. Ultimately, the findings in this study indicate that the Nebraska 4-H experience positively contributes to the college readiness equation for its participants. Implications for nonformal youth development and suggestions for future research are discussed.

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## **Chapter One**

### **Introduction**

“Even if students graduate high school, are they really equipped for the next stage?” (Pittman, 2010, p. 10). Unfortunately, many are not. The readiness gap, Pittman (2010) suggests, is the difference between being fully credentialed and fully prepared. She goes on to express that despite a student’s ability to graduate high school and high aspirations for their post-secondary plans, they are ill prepared. In fact, Pittman (2010) ascertains, only three in ten seniors are college ready and only four in ten are career ready. This leads to alarmingly high drop-out rates, an inability to get jobs and ultimate economic hardships for many.

Certainly, this is a sobering reality at a time when so much emphasis has been placed on increasing the number of college graduates and improving our future workforce. President Obama’s goal is for the United States to lead the world in college graduates and specifically calls for the completion of degrees and certificates by an additional five million Americans in the next decade (Johnson & Rochkind, 2009). According to the Youth Development Institute (2006), the realities of the 21<sup>st</sup> century job market will demand a workforce skilled beyond remedial education and employment training. “To effectively help these young people, educators, guidance counselors, case managers, school administrators and youth program staff need to have access to effective program models and strategies on what it takes for young-adult learners to access higher education” (p. 2).

To better understand the potential influence of one nonformal youth development organization in preparing young people for their future, this case study examined the

Nebraska 4-H experience. It sought to understand the readiness of their participants to successfully transition to post-secondary education and to describe the experience that influenced that readiness.

### **College Readiness Challenge**

For many, college is seen as the gateway to achieving career aspirations and the pathway toward a better and more successful life. In fact, according to the Youth Development Institute (2006) even when considering the cost of education, the financial return gained for a college degree has never been higher. However, an alarming number of students do not acquire the skills or academic supports to prepare them either for college or the workforce. In fact, according to the 2010 College and Career Readiness report compiled by ACT, formerly known as American College Testing, only 24% of students were adequately prepared for college in all four of the academic areas on the ACT. Further, when the data are compared for race and ethnicity, the percentage rates decline for all groups with the exceptions of Caucasian and Asian American/Pacific Islander.

Despite a substantial lack of readiness, more students are entering college than ever before. According to Russell (2008), the increased challenges have not deterred enrollment. The National Center for Education Statistics (NCES) (2009) reported a 2% increase in public high school graduation rates from 1991 to 2009 for a current graduation rate of 75.5%. In 2009, more than three million students graduated from public high schools in the United States. The reported graduation rate for Nebraska was 82.9% and approximately 19,500 students graduated in 2009. Additionally, NCES (2008) reports a 25% increase in the graduates' expectation of attaining a college degree.



Fifty-percent of high school graduates in 1972 expected to earn a four year degree, compared with 75% in 2004.

Unfortunately, increased high school graduation rates, high aspirations and high college enrollment rates have not concluded in success for some students. According to Barnett (2011), many students leave during the first year and a significant number depart sometime before completing a degree. Barnett (2011) reported the following:

Low persistence rates are of concern to students who are not able to meet their educational and career goals and to institutions monitoring their students' performance and their own. Persistence is also of concern to society at large because college educated citizens contribute in multiple ways to the social good and are less likely to engage in harmful behaviors. (p. 193)

### **Determining College Readiness**

Traditionally, educators, both formal and nonformal, have relied on academic benchmarks such as ACT scores, Advanced Placement (AP) courses taken and Grade Point Average (GPA) to determine a student's readiness for college. Though these scores represent a critical component of college readiness, they likely don't tell the whole story. More recently, there has been uprising discussion regarding the definition of "readiness" and those components that go beyond the academic benchmarks for preparedness.

Conley (2007) introduces a four facet definition for college readiness that reflects the recent literature. The facets included in his model are: (a) key cognitive strategies, (b) key content, (c) academic behaviors, and (d) contextual skills and awareness. The definition certainly goes beyond academic benchmarks, but more importantly recognizes that the "facets are not mutually exclusive, rather they interact and affect one another extensively" (Conley, 2007, p. 12).

Though early studies focused on academic ability as our strongest predictor of readiness, academic performance explained only half of the drop-out rate. Again, while academic adjustment is certainly an important part a student's ability to persist, it doesn't capture the complexity of the college adjustment experience. A study by Gerdes and Mallinckrodt (1994) supports that personal and social adjustments are at least as important as academic adjustment. Examining the broader concept of adjustment or transition then, is a stronger predictor of persistence (Gerdes & Mallinckrodt, 1994).

### **Transition Theory**

Readiness or preparedness to succeed is often categorized into the areas of transition or adjustment to college entry and persistence toward completion. According to Goldrick-Rab, Carter and Winkle-Wagner (2007)

the first body of literature is primarily concerned with examining inequities in college participation, and addresses questions regarding the relative importance of ascriptive characteristics, high school preparation, and financial aid in predicting enrollment. The second area of research focuses on correlates of student persistence to the bachelor's degree, with a strong emphasis on theories of student retention. (para 2)

This study focused on the transition to college as a predictor of overall readiness and ultimately a student's ability to persist.

Schlossberg (1981) articulates what has become arguably the most widely used theory in educational transition research. Her model introduces four factors of situation, self, support and strategies which all influence a person's ability to transition and ultimately adapt to change. Baker and Siryk (1980, 1984, 1989) reinforced Schlossberg's theory regarding transition or adaptation as a key predictor in readiness for college and their tool, the Student Adaptation to College Questionnaire (SACQ), has commonly been associated with Schlossberg's theory.

## **Bridging the Gap: The Role of Nonformal Education**

Pittman (2010) acknowledges that the task of implementing strategies to address the comprehensive approach to college readiness is a daunting, but necessary task to effectively address the sobering gaps in readiness. She also insists that the job of preparing students and creating an environment in which they can be successful is a job for many. Students, parents, communities, educators, educational institutions and policy makers are all accountable in bridging the gap (Pittman, 2010). One key player in bridging the gap is nonformal youth development. Nonformal education has a far wider scope and greater versatility, diversity and adaptability than formal education. It has extraordinary freedom and latitude to serve people of any age or background in virtually any kind of learning they desire (Khan, 1989). Finally, because school-age children between the ages of 5 and 14 spend up to 80% of their time out of school (National Institute on Out-of-School Time, 2000), nonformal education represents a lay opportunity to help young people grow and acquire important assets for their future.

**4-H Youth Development.** 4-H Youth Development is a leading nonformal educational organization that is delivered by 109 Land Grant Universities in every county nationwide. More than 5.6 million young people, ages 8-19, are engaged in 4-H and the program is administered by approximately 3,500 youth workers nationally.

A national longitudinal study of 4-H youth development conducted by the Institute for Applied Research in Youth Development at Tufts University documents that youth engaged in 4-H are 1.8 times as likely as youth engaged in other out-of-school time organizations to expect to go on to college. Additionally, 4-H youth regard themselves as more competent in academics and in general, 4-H youth have higher levels of

developmental assets often associated with college readiness. Greater achievement and motivation for further education should combine to enhance the likelihood that 4-H youth, more so than other youth, will remain in high school, graduate, and go on to college (Lerner & Lerner, 2011). Additionally, a study of youth enrolled in Nebraska 4-H during their senior year of high school indicated that over 90% have plans for post-secondary education (Nebraska 4-H Youth Development, 2011).

4-H has long been rooted in the development of life skills and contextual behaviors or, the ability to apply those skills, and much success has been documented. However, less is known about how those skills are applied in the transition to college and what strategies implemented by the youth serving organization were the strongest influencers in preparing participants for the transition to post-secondary education. Understanding 4-H's contribution in preparing young people for college is important for strengthening the college readiness practices employed by this organization, but also for contributing to the establishment of the role of nonformal education in bridging the readiness gap.

### **Study Overview**

This mixed methods case study sought to assess the preparedness of former Nebraska 4-H participants to successfully transition and adjust to college. Additionally, it was designed to understand students' experiences in Nebraska 4-H that may have influenced their readiness to transition to college. The central research questions for the study are:

1. How prepared are former Nebraska 4-H participants to transition and adjust to college?

2. What occurs during the Nebraska 4-H experience that might help explain the level of preparedness?

Based on these data, the following mixed methods question was asked: In what ways do the interview data describing the Nebraska 4-H experience from the perspective of staff and participants help to explain the quantitative results about college adaptation reported on the survey? Sub-questions included:

1. How do former 4-H participants report their adjustment to college?
2. How do former 4-H participants describe their experience in 4-H?
3. How do former 4-H participants describe the relationship between their 4-H experience and their readiness for college?
4. How do staff members describe their efforts to influence college readiness?

Participants in this study self-reported the effectiveness of their transition through scales of the SACQ measuring their academic adjustment, social adjustment, personal and emotional adjustment and institutional attachment. Following the quantitative assessment, interviews were conducted with former 4-H participants and youth development staff to understand more fully the experience of participants leading up to college. The paragraphs below discuss the significance of the study, detail its delimitations and limitations, as well as introduce the glossary of key terms.

### **Significance**

College education is critical both for financial stability of the individual and for meeting the needs of the future workforce (Society for Human Resource Management, 2006; Youth Development Institute, 2006) yet, a deficit exists in preparing young people to be successful in college. Pittman (2010) recognizes that the job of preparing young

people to be college ready must extend beyond the classroom to out-of-school, nonformal learning.

4-H Youth Development is a nonformal educational organization well positioned to contribute to narrowing the gap for readiness. 4-H has documented success both in developing assets in young people and in fostering aspirations of young people to go on to post-secondary education (Lerner & Lerner, 2011; Nebraska 4-H, 2011). Two questions remained, is 4-H in Nebraska developing a population of young people prepared to successfully transition to college and how are the practices that contribute toward this development described? A better understanding of the practices of this case can inform and improve future practice in this organization and ultimately help young people in Nebraska 4-H better prepare for post-secondary education and future careers. Additionally, the findings may also be generalized to inform other similar youth serving agencies.

Finally, this study represents one example of a nonformal youth development organizations' efforts toward preparing young people for college. While this is only a single example, it contributes to the body of evidence suggesting that nonformal education should be recognized as a key contributor in the pursuit of preparing young people for a comprehensive readiness described by Conley (2007).

### **Delimitations**

According to Bryant (2004), delimitations are “factors that prevent you from claiming that your findings are true for all people in all times and places” (p. 57). The study has four delimitations: (a) participation in the survey was limited to a sample of 150 college freshmen who represent a convenience sample of the population,

approximately 1,300 high school-seniors, potential college freshmen, are enrolled in 4-H annually; (b) the survey was offered to students electronically and only 70% of graduating 4-H members provided an email address at enrollment making them eligible for the sample; (c) participation in the study was restricted to former 4-H participants who stayed in 4-H through the 12<sup>th</sup> grade and it did not include participants who left the organization prior to graduation; and (d) survey and interview data only represent those participants who were enrolled in post-secondary education at the time of data collection and won't represent students who did not go on to post-secondary education.

### **Limitations**

Bryant (2004) defined limitations as “restrictions created by your methodology” (p. 58). The study has three limitations: (a) the study's dependent variables were measured only through self-reported data; (b) participants in the staff focus groups have an existing relationship with the researcher and could provide positively inflated responses; and (c) the study is cross-sectional and only offers descriptive information relative to the time of participation.

### **Definition of Terms**

*4-H Youth Development:* a youth organization administered by the National Institute of Food and Agriculture of the United States Department of Agriculture (USDA), with the mission of engaging youth to reach their fullest potential while advancing the field of youth development (National 4-H Council, 2012).

*Adaptation:* “a process during which an individual moves from being totally preoccupied with the transition to integrating the transition into his or her life” (Schlossberg, 1981, p. 7).

*College Readiness*: “the level of preparation a student needs to enroll and succeed, without remediation, in a credit-bearing general education course at a postsecondary institution that offers a baccalaureate degree or transfer to a baccalaureate program” (Conley, 2007, p. 5).

*College Ready Student*: “one who possess sufficient mastery of key cognitive strategies, key content knowledge, academic behaviors, and contextual knowledge to be successful in college” (Conley, 2007, p. 5).

*Nonformal Education*: organized educational activity outside the formal classroom that is intended to serve identifiable learning clientele and learning objectives (Coombs & Ahmed, 1974).

*Persistence*: an individual’s ongoing pursuit of their academic goals leading to, but not exclusive to graduation (Reason, 2009, p. 660).

*Transition*: “any event, or non-event that results in changed relationships, routines, assumptions, and roles” (Schlossberg, Waters, & Goodman, 1995, p. 27).

## **Overview of Chapters**

The introductory chapter was written to establish the importance and purpose for this study. Chapter Two, the review of literature, provides an overview of existing research with regard to the current conditions influencing the readiness of students, emerging definitions for college readiness, Transition Theory and the Student Adaptation to College Questionnaire. Chapter Three describes the methodology employed to conduct this study. It provides rationale for a mixed methods case study design and provides an overview of each methodology. Chapter Four documents the findings both for the quantitative and qualitative methods of this study. Finally, Chapter Five discusses



the interpretation and implications of the results and introduces recommendations for future research.

## **Chapter Two**

### **Literature Review**

The challenge of college readiness cannot be attributed to just one generation of students and educators. Rather, it is a reflection of the trends of society and the reaction of higher education to the shifts in society. According to Cohen and Kisker (2010), the Mass Higher Education Era introduced the goal of “open access,” targeting a student body reflecting the diversity of society. Perhaps this introduced an initial challenge of being ill prepared to support the gaps that arose among the groups in a new, more diverse student body. Similarly, during the Era of Consolidation, the trend continued in an effort to equalize opportunities to attend college. However, as more and more students took advantage of the equalized opportunity, it became evident that “equal opportunity never ensures equal results” (Cohen & Kisker, 2010, p. 429).

Over time as the gap widened for earning potential between those with and those without degrees, enrollment rates continued to rise. Correspondingly, the student body represents an increasingly broader make-up reflective to that of the larger society. Changes in the student-body are also compounded with the advances in technology and greater expectations for the individualized student approach (Cohen & Kisker, 2010). The inconsistency of preparedness to succeed in college or in the workplace has reached a new peak.

Russell (2008) also noted that the “new generation of college-goers is increasingly being drawn from previously underrepresented groups who tend to be less academically prepared than previous generations” (p. 2). So, while enrollment and aspiration are increasing, so it seems are the disparaging gaps in preparedness, the

misalignment between high school and college expectations and, unfortunately the need for remedial education efforts.

The purpose of this study is to assess the preparedness of former Nebraska 4-H participants to successfully transition and adjust to college and to understand experiences in Nebraska 4-H that may have influenced their readiness to transition to college.

Preparation for this literature review involved the review of articles discussing both formal and nonformal education, student development and psychology. The purpose of this literature review is to (a) examine factors that have contributed to a current gap in college readiness, (b) introduce a more comprehensive definition of college readiness, (c) establish adjustment or transition to college as a predictor of readiness and persistence, (d) address a theoretical framework for transition, (e) examine the Student Adaptation to College Questionnaire as an established measure for assessing the effectiveness of students' adaptation to college, and (f) introduce nonformal education, and specifically 4-H, as a case of interest for understanding the development of college readiness.

### **Defining College Readiness**

**Situational factors and realities.** In addition to understanding the historical trends and factors that have contributed to the college readiness gap, it is also important to note several situational factors and realities students' face that influence both their readiness and success collegiately. Porchea, Allen, Robbins and Phelps (2010) discussed several situational factors that could influence a student's college readiness. As previously mentioned, the student body has become much more diverse and so, it is pertinent to consider the diversity of their backgrounds. Porchea et al. (2010) site the

significant impact of family income and parent's educational level on a student's college readiness and likeliness to persist. Moore (2009) also discussed the relevance of a student's background in regards to college readiness and success. She articulated "one reason for the increased need for remediation is the increased enrollment of students who may not have previously considered post-secondary education" (p. 60). She goes on to discuss the increase of students with lower ACT scores and GPA scores are enrolling in higher education, some in response to pressure and expectation to do so (Moore, 2009).

Johnson and Rochkind (2009), in their survey of more than 600 students, also introduced a series of situational realities that can influence college readiness and persistence. One reality is that most students leave because they are working at least part-time and the burden of work and school becomes too great. The number one reason students leave early is due to the pressure of working and going to school simultaneously. This challenge is reported almost twice as often as that of tuition costs (Johnson & Rochkind, 2009).

A second reality is that many students who fail to finish often lack the support of financial assistance. Further, young people who leave college without a degree are more likely than their peers to come from a less privileged background. According to their report, approximately, 60% of students who dropped out of college were on their own financially (Johnson & Rochkind, 2009).

The third reality is that students are not making careful, well-informed, decisions about their post-secondary plans. The college selection process is often limited especially for students from lower income families. Due to a lack of resources, students often settle for choices that fit their current situation. In fact, nearly 60% of those who

did not complete college suggested they chose a college based on whether or not the schedule worked with theirs and approximately 66% made the decision based on location (Johnson & Rochkind, 2009).

Finally, the fourth reality is that while students understand having a degree is an asset, they are unable to fully see the impact at the time they choose to leave. Most of the students engaged in the study reported that they always planned to go to college. However, students who did not graduate identified a lesser influence from parents and teachers regarding their college plans. While the significance of this factor is less prevalent than those previously discussed, it does help explain which students are more likely to reach the tipping point to leave college (Johnson & Rochkind, 2009).

**Traditional benchmarks.** The Youth Development Institute (2006) introduced capacity as a component of their essential framework for college success.

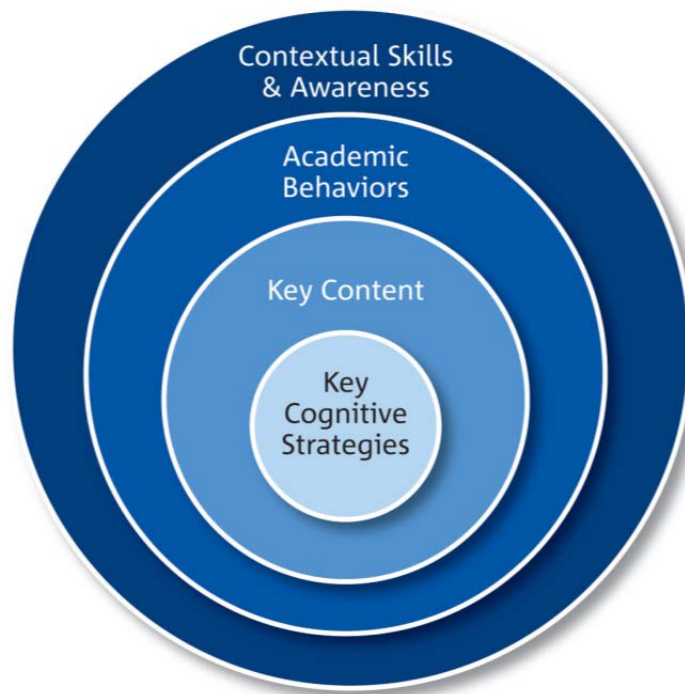
In order for young adult learners to enter and succeed in college they must be able to develop certain capacities necessary to navigate the complex world of higher education. These capacities include academic skills, knowledge and understanding. At the most basic level, students can't get into and succeed in college if they are not academically prepared. (p. 4)

Reason (2009) reinforces the value of academic preparedness and performance stating that they “are likely the strongest predictors of college persistence and degree attainment” (p. 664). Without question, a certain degree of academic aptitude is essential in achieving college readiness and the measures mentioned above are important benchmarks. However, there are several challenges with the current benchmarks. In regards to GPA scores, inconsistencies in grading and weighting of courses can alter their reliability. In 2005, the National Assessment of Educational Progress (NAEP) documented an average GPA increase, indicating that what once was assessed as “C”,

may now reflect a “B”. Additionally, scores like the ACT do not reflect an actual measure of content knowledge, rather they are an indication of probability for competency in a subject-matter area (Conley, 2007). Further compounding the issue, state-level content and assessment standards are inconsistent and often lack the rigor essential for readiness (AASCU, 2011, p. 2).

**Comprehensive definition of college readiness.** The definition of college readiness is evolving. In light of the limitations with the academic benchmarks addressed above, Barnett (2011), Conley (2007), Pittman (2010), Porchea et al. (2010), Reason (2009) and Roderick, Nagaoka and Coca (2009) all explore a multi-component and more comprehensive definition for college student readiness and persistence. Conley’s (2007) framework captured the facets discussed by other authors and offers a truly comprehensive definition that will serve as a theoretical framework for this study.

Conley (2007) defined readiness as “the level of preparation a student needs in order to enroll and succeed without remediation” (p. 5). His definition describes a multi-faceted approach that includes factors that are both internal and external to the school-environment. Conley generally defines “students who possess sufficient mastery of key cognitive strategies, key content knowledge, academic behaviors, and contextual knowledge would be defined as being college-ready” (Conley, 2007, p. 5). As shown in Figure 1, the four facets “are neither mutually exclusive nor perfectly nested as they appear to be in the model. They interact with and affect one another extensively” (Conley, 2007, p. 12).



*Figure 1. Facets of college readiness (Conley, 2007 p. 12).*

Conley (2007) suggests that a student who meets all the aspects of the college readiness definition would be comfortable in their transition to college. The four components of this more comprehensive definition combined represent both the necessary knowledge and skill development, but also the ability to apply knowledge and skill.

According to Conley (2007),

the success of a well-prepared college student is built upon a foundation of key cognitive strategies that enable students to learn content from a range of disciplines. Unfortunately, the development of key cognitive strategies in high school is often overshadowed by an instructional focus on decontextualized content. (p. 12)

Key cognitive strategies include intellectual openness, inquisitiveness, interpretation, analysis and problem-solving. These abilities are essential for discerning

the information presented in college courses. They should be developed overtime and practiced to the degree that they become a habitual way to approach learning. Pittman (2010) and Porchea et al. (2010) also reference the development of cognitive skills, mental capabilities for absorbing and interpreting information, as essential to becoming college ready. Similarly, Roderick et al. (2009) refers to four core academic skills that include reading, writing, comprehension, and analysis.

Academic aptitude and the development of key content knowledge are factors in college readiness. Haycock (2010) discussed the importance of striving for more common standards academically. According to Haycock (2010),

the common standards movement is actually about trying to clarify what successful college students will need to know and be able to do, so we can get serious about teaching and measuring those things, rather than simply calculating the course credits or pass-rates on low level state tests. (p. 15)

She goes on to discuss the importance of a common set of standards that are higher than current standards and are also expressed in fewer and clearer standards.

Similarly, Conley (2007) included key content as a facet in his four part definition for college readiness. He recognizes the strong connection between content and the cognitive skills previously discussed, but defines key content as the academic skills of writing and research and a core content knowledge in the areas of English, math, science, social science, world language, and the arts.

Conley (2007) introduces academic behaviors simply defined as self-monitoring and study skills as essential to college readiness. Time-management, self-control, the ability to prepare for courses, and the ability to effectively use resources are all examples of academic behaviors. Roderick et al. (2009) also documents the importance of developed academic behaviors. She refers to a series of non-cognitive skills that include



study skills, time-management, and work habits. Similarly, Pittman (2010) characterizes these abilities as learning and innovation skills. Ultimately, this component articulates that beyond academic knowledge, the ability to practice strong academic skills and behaviors is an important component of readiness.

Finally, the facet of contextual skills and an awareness that represents an essential understanding of the contextual factors was introduced as part of a more comprehensive definition (Conley, 2007). Overall, it is an understanding of the system and culture of college that must be navigated. Specific characteristics that further describe this facet include an ability to interact successfully with a diverse range of faculty, staff and students; and an understanding of the values and norms of colleges (Conley, 2007, p. 18).

Porchea et al. (2010) discussed the importance of social competence to develop relationships and build ties in a community, both factors that significantly impact persistence. Additionally, Barnett (2011) emphasizes the importance of student integration and involvement in college. She further implores that engagement and social integration are keys to persistence. In regards to college readiness, students need to be prepared with the social competence and skills to achieve engagement and integration. Reason (2009) offers a contextual framework for persistence that recognizes the value of contextual skills both in understanding and navigating the college environment and in having a positive experience both in and out of the classroom.

Several of the authors mentioned above also identified the development of life skills or assets as an integral component for college readiness. Roderick et al. (2009) recognizes the importance of self-awareness and self-control. Conley (2007) reinforces these personal skills. The key characteristics that support Conley's life skills include the

ability to accept critical feedback and the ability to objectively assess one's level of competence within a subject relative to plans for completion (Conley, 2007, p. 18).

Pittman (2010) offers one of the strongest endorsements for the development of life skills. She references four categories of the Search Institutes Development Assets including commitment to learning, positive values, social competencies and positive identity. She articulates the importance of life skills such as personal motivation, responsibility, interpersonal competence and a positive view of the future as essential elements to being college and career ready. Porchea et al. (2010) reinforce the value of life skills and discussed both discipline and commitment as important factors. There are likely a vast number of life skills that contribute to college readiness and success. It seems there is some consensus from the authors included here that self-awareness, self-esteem, and personal motivation may be some of the most critical elements to develop in regards to college readiness.

### **College Transition**

Readiness or preparedness to succeed is often categorized into the areas of transition or adjustment to college entry and persistence toward completion. According to Goldrick-Rab et al. (2007),

the first body of literature is primarily concerned with examining inequities in college participation, and addresses questions regarding the relative importance of ascriptive characteristics, high school preparation, and financial aid in predicting enrollment. The second area of research focuses on correlates of student persistence to the bachelor's degree, with a strong emphasis on theories of student retention. (para 2)

This study will focus on the transition to college as a predictor of overall readiness.

According to Chickering (1996), the transition to college is marked by complex challenges in emotional, social and academic adjustment. In a longitudinal study

conducted by Gerdes and Mallinckrodt (1994), examining the college transition served as a key variable for understanding a student's decision to leave or remain in college. Their findings support that adjustment and early integration in campus life are "at least as important as academic factors in student retention" (p. 286).

**Transition theory.** Transition theory was first introduced by Nancy K. Schlossberg (1981, 1984) to provide a framework that would facilitate an understanding of adults in transition and lead them to the help they needed to cope with the ordinary and extraordinary process of living (Evans, Forney, Guido, Patton, & Renn, 2010). The theory was further expanded as a college student development theory to understand the transition of college students (Schlossberg et al., 1995). This most recent work will serve as a theoretical framework for this study.

It is important to note that though transition and adaptation are closely aligned one is not synonymous to the other. Schlossberg (1981) defined adaptation as "a process during which an individual moves from being totally preoccupied with the transition to integrating the transition into his or her life" (p. 7). Transition refers "to any event, or non-event that results in changed relationships, routines, assumptions, and roles" (Schlossberg et. al, 1995, p. 27).

Transition is the occurrence or non-occurrence that the individual perceives which changes their pattern of behavior. Transition then is an introduced change. Schlossberg (1981) discusses that reaction to change is not consistent. Different individuals react differently to change, the same individual reacts differently to different changes and the same individual can react different to the same change depending on the other variable in their life (Schlossberg, 1981).

Adaptation then refers to how an individual reacts to and moves through the change created by the transition. It is influenced by how individuals perceive their balance of resources to deficits in terms of the transition. There are many factors that influence adaptation to transition and they were originally categorized in three areas: (a) the characteristics of the particular transition, (b) the characteristics of the transition environments, and (c) the characteristics of the individual (Schlossberg, 1981).

**Four S's.** The factors discussed above would later be reframed as the four S's. The four S's create a framework for helping individuals determine their resources as they approach transition. Chickering and Schlossberg (1995) refer to this as "taking stock", determining resources in regards to "your situation, your self, your supports, and your strategies" (p. 49).

**Situation.** There are several relevant aspects to consider when assessing the situation. It is important to note that that assessment must also continue to reflect the perception of the individual as the individual's perception influences how they deem the situation and assess their resources. Factors to consider in the situation include: (a) trigger, what was the catalyst for the change; (b) timing, is the transition occurring at what the individual perceives to be a good time; (c) control, what is in the individual's control; (d) role change, were any changes in roles deemed as positive or negatives changes; (e) duration, is the transition short-term, long-term or permanent; (f) concurrent stress, what other stresses are presently occurring; (g) previous experience, is the previous either positive or negative experience associated with the transition; and (h) assessment, who or what is seen as responsible for the transition.

**Self.** The self-factor includes both personal and demographic characteristics and psychological resources. Self represents the strengths and weaknesses an individual presents at the time of transition. Personal and demographic characters could include gender, socio-economic status, state of health and age. Coping tools, optimism, self-efficacy and values are examples of psychological resources.

**Supports.** The factor of supports recognizes the influence of relationships and networks on an individual's ability to transition. The influences could be either positive in that they enhance or strengthen an individual's ability to transition or negative in that they weaken or hinder the transition. Supports can include family, friends, co-workers, community and other institutions or networks where the individual identifies themselves.

**Strategies.** The final S introduces strategies or ways that individuals cope with change presented in the transition. There are four recognized strategies: (a) information-seeking, (b) direct action, (c) inhibition of action, and (d) intrapsychic behavior. Ideally, the strategies mutually serve an individual's ability to transition in that they can change the situation, control the situation and manage the stress in the process.

According to Chickering and Schlossberg (1995) the four S's are not introduced as independent factors. Rather, it is a combination of the factors that influence an individual's reaction response to transition and ultimately their ability to adapt. It is also important to note that an individual's ability to transition at one time is not permanent as the balances of resources and deficits for an individual can change over time (Chickering & Schlossberg, 1995).

### **Student Adaptation to College Questionnaire**

Baker and Siryk (1980, 1984, 1989) reinforced that transition or adaptation are a key predictor in readiness for college and their tool, the Student Adaptation to College Questionnaire (SACQ), has commonly been associated with Schlossberg's theory and has been used to understand the transition and adaptation process for college students in multiple studies. According to Carter, Locks, Winkle-Wagner and Pineda (2006)

the field of psychology has largely influenced the literature on college student adjustment to college and a majority of the psychological studies used the Student Adjustment to College Questionnaire (SACQ)—relying solely on this instrument or using it in concert with other instruments. (p. 7)

“Early studies utilizing the SACQ produced a body of information that permitted detailed evaluation of the tool, in particular its “reliability and validity” (Baker, n.d., p. 2). Later data provides an improved understanding of “the phenomenon of adjustment to college, its definition, its determinants, and means of facilitating it” (Baker, n.d., p. 2). Studies have established that students who are high-scoring on the four constructs of the SACQ are more successful academically and likely to be more involved in college life (Baker & Siryk, 1984, 1989; Tomlinson-Clarke, 1998). Additionally, students scoring high on the SACQ are less likely to report stress or personal difficulties (Martin, Swartz-Kulstad, & Madson, 1999; Mathis & Lecci, 1999). Finally, high scoring students are less likely to discontinue enrollment (Baker, McNeil, & Siryk, 1985; Baker & Siryk, 1984, 1986, 1989; Krotseng, 1992).

The SACQ has also been used in correlation with others measures of student adaptation (Rice, Cole, & Lapsley, 1990) and in combination with an adaptation of the SACQ, the Anticipated Student Adaptation to College Questionnaire (ASACQ) (Baker et al., 1985). The ASACQ was developed for use prior to matriculation to measure

expectations for the impending transition into college. Further still, the SACQ has been utilized in examining mental and physical health (Mathis & Lecci, 1999; Rice et al., 1990) as “a determinant of adjustment” (Baker, n.d., p. 28). Finally, the SACQ has also been used to study the transition of specific populations of students and such as students engaged in a specific course of study (Cooper & Robinson, 1988) and with international students (Hurtado, Carter, & Spuler, 1996).

Baker and Siryk (1980, 1984, 1989) articulated that personal motivations, clearly defined goals and environmental satisfaction are important in academic adjustment. The SACQ was designed to allow students to self-report the effectiveness of their adjustment to college. The subscales of this tool are well aligned with the college readiness categories addressed above enabling this to serve both a measure of a student’s transition, but also as an indicator of their overall readiness.

According to Baker (1986), the tool serves as a source of dependent variables in studies of factors related to the student adjustment process. The SACQ is a 67 item instrument which creates an index of overall adjustment, but also contains four subscales to measure academic adjustment, social adjustment, personal and emotional adjustment and institutional attachment. The norms were established from data collected at Clark University (Dahmus, Bernardin, & Bernardin, 1992). Eight semesters of data were combined to establish normative data for the subscales of the SACQ (Baker & Siryk, 1989).

**Subscales.** The subscales of academic, social and personal emotional adjustment can be considered as primary in the sense that they contain no overlapping items, and are intended to measure each construct separately. “A fourth subscale contains some items

exclusive to itself and other items shared with two of the primary subscales, and assesses the student's commitment to the college experience, especially attachment to the particular institution attended” (Baker, n.d., p. 5).

***Academic adjustment.*** The academic adjustment subscale assesses a student’s success at coping with the various educational demands of college. Further there are four clusters that represent the different aspects of adjustment in the academic scale which include: motivation for being in college and doing college work; translation of the motivation into actual academic effort; the efficacy or success of the effort expended; and satisfaction with the academic environment (Baker, n.d.; Baker & Siryk, 1989).

***Social adjustment.*** The social adjustment subscale examines items relevant to the interpersonal and societal demands of college. Social adjustment also has four clusters which include: extent and success of social activities and functioning in general; involvement with other persons on campus; relocation away from home and significant persons there; and satisfaction with the social environment (Baker, n.d.; Baker & Siryk, 1989).

***Personal and emotional adjustment.*** The personal and emotional subscale is designed to measure how an individual is feeling both psychologically and physically. Personal-emotional adjustment is seen as having two distinct clusters which include: sense of psychological well-being; and sense of physical well-being (Baker, n.d.; Baker & Siryk, 1989).

***Institutional attachment.*** Finally, the attachment subscale focuses on the student’s experience in general. Commitment to the college experience is also seen as



having two clusters: satisfaction with being in college in general; and satisfaction with being at the institution in which enrolled (Baker, n.d.; Baker & Siryk, 1989).

**Strengths and limitations.** According to Baker (n.d.),

numerous studies by many investigators employing the SACQ have yielded considerable information concerning the operational meaning of adjustment to college. There is ample evidence that it is a measurable construct that has a wide variety of behavioral and experiential correlates which are readily recognizable as significant adaptational events in the everyday lives of college students. (p. 257)

Baker (n.d.) also noted that the variables measured by the SACQ are not necessarily stable capacities of an individual. They assess an individual at a certain point in time and certainly changes in a student's life can influence the state of their responses. Data from early studies and Clark University and Holy Cross College do show statistically significant correlations between two testing points overtime. However, the degree of consistency is not enough to suggest that characteristics reported are lasting.

Finally, the SACQ is generally acknowledged to be a valuable survey instrument however, there is a limitation in its "transparency of purpose" (Baker & Siryk, 1989, p. 5). It could be clear to someone taking the instrument that it was intended to measure adjustment and therefore they could skew their answers favorably.

### **Nonformal Education and 4-H Youth Development**

Nonformal education is considered any organized, systematic teaching and learning carried on outside the formal classroom. Generally, nonformal education is sponsored by community organizations that provide particular types of teaching and learning experiences to specific youth populations. It is not an alternative to the formal education offered in schools; instead it is another kind of education essential for helping young people grow to optimum maturity (Dunham & Walker, 1994).

According to Coombs and Ahmad (1974), nonformal education is simply any organized activity with educational purposes carried on outside the structured framework of formal education systems, as they exist today. It is not a system of interrelated parts like formal education; rather it is an assortment of separate educational activities. They are less sharply defined by institutional structure and are not bound by age restrictions, time schedules and sequences, curriculum boundaries, academic standards, examinations, credits and degrees. For precisely this reason, nonformal education has a far wider scope and greater versatility, diversity and adaptability than formal education. It has extraordinary freedom and latitude to serve people of any age or background in virtually any kind of learning they desire (Khan, 1989). Finally, because school-age children between the ages of 5 and 14 spend up to 80% percent of their time out of school (National Institute on Out-of-School Time, 2000), nonformal education represents a lay opportunity to help young people grow and acquire important assets for their future.

One well-established, nonformal program is 4-H. It is the mission of the 4-H program to “assist youth and volunteer staff through non-formal education to acquire knowledge, develop life skills and strengthen values that enable them to become increasingly self-directing, productive, contributing citizens” (National 4-H Council, 2012). 4-H is designed to help young people develop the kinds of skills needed to make positive, healthy decisions now and in the future. There is substantial program research which establishes that many assets and competencies can be developed by youth as they participate in 4-H programs.

In the article, “Building an Asset-Based Program for 4-H”, Perkins and Butterfield (1999) divided 40 assets into 7 categories: commitment, value, competency,

support, empowerment, boundaries and expectations, and constructive use of time.

Perkins and Butterfield (1999) reported that those involved in 4-H possessed more assets than a comparison group of youth who were not involved in 4-H. Examples of some of the assets listed are positive personal power, responsibility, self-esteem, positive adult influences, and peaceful conflict resolution. Similarly, a national longitudinal study of 4-H youth development conducted by Tufts University documents that youth engaged in 4-H are 1.8 times as likely as youth engaged in other out-of-school time organizations to expect to go on to college. 4-H youth regard themselves as more competent in academics and in general 4-H youth have higher levels of developmental assets often associated with college readiness. Greater achievement and motivation for further education should combine to enhance the likelihood that 4-H youth, more so than other youth, will remain in high school, graduate, and go on to college (Lerner & Lerner, 2011).

### **Summary of Literature Review**

In summary, this literature review identified factors that have contributed to the current gap in college readiness. Post-secondary education is attracting a larger, more diverse body of students who bring with them situational realities not faced by previous generation of college-goers. The complexity of the new student body increases the importance of understanding what it truly means to be college ready. A more comprehensive definition offered by Conley (2007) and others identifies multiple facets of readiness to be successful in college. An indicator of readiness can be found in a student's ability to transition and adapt to college. Schlossberg et al. (1995) offer a theoretical framework for understanding the facets of transition. Finally, the constructs of the SACQ offer some parallel both to Transition Theory and to the expanded definition

for college readiness. A mixed-methods sequential explanatory design employing the SACQ and a series of interviews designed to examine the experience in one nonformal education program is further discussed in Chapter Three.

## **Chapter Three**

### **Methodology**

This chapter will reintroduce the research problem and review the research purpose. Further, it will provide a rationale for a mixed methods case study design and provide an overview of each methodology. The quantitative section will include the research questions, sampling procedures, instrument design, data collection, data analysis, and verification strategies. The qualitative section will include the research questions, a description of the participants, data collection, data analysis, and data validation strategies.

### **Restatement of the Problem**

As illustrated in Chapter One, 4-H nationally and in Nebraska has documented success in developing aspirations in young people to go on to college (Lerner & Lerner, 2011; Nebraska 4-H, 2011). Additionally, the work of 4-H in developing life skills and assets suggests a contribution toward the development of a college ready young adult when examined through a comprehensive definition for college readiness. However, it is not known how well 4-H participants adjust to college and little is known about the practices and factors that enable Nebraska 4-H to prepare participants for a successful transition.

According to National 4-H Council (2012), 4-H Youth Development is the country's largest nonformal educational organization and is delivered by Land Grant Universities through school and community-based programs nationwide. More than 5.6 million young people, ages 8-19, are engaged in 4-H and in Nebraska one in three age eligible youth are engaged in 4-H programming (Nebraska 4-H, 2011). According to a

longitudinal study conducted by the Institute for Applied Research in Youth Development at Tufts University, youth engaged in 4-H are 1.8 times more likely to expect to graduate from college than youth from other nonformal education programs (Lerner & Lerner, 2011). Additionally, according to this study, 4-H youth regard themselves as more competent in academics, and in general, 4-H youth have higher levels of developmental assets often associated with college readiness. One could surmise that greater achievement and motivation for further education would combine to enhance the likelihood that 4-H youth, more so than other youth, will remain in high school, graduate, and go on to college (Lerner & Lerner, 2011). The Tuft's study has collected data from more than 7,000 students, grades 5 to 12, and 3,000 of their parents from 44 states including Nebraska. However, it has not followed the sample through their transition to post-secondary education. Further, there is less understanding about the specific interventions that have influenced the positive outcomes reported in this study.

A study of youth enrolled in 4-H during their senior year of high school indicates that over 90 percent had plans for post-secondary education (Nebraska 4-H Youth Development, 2011). A question that merits discussion is: as young people engaged in 4-H are developing the aspirations to go on to higher education, are they also developing the skills to successfully transition and adapt to college? Further, what strategies or practices are employed by staff to develop college readiness in the young people whom they serve?

This mixed methods case study sought to assess if participants in Nebraska 4-H are prepared to successfully transition to college through their self-report of their adjustment. The study was also designed to understand experiences in Nebraska 4-H that

fostered the reported level of preparedness. A better understanding of the practices of this case can inform and improve future practice in this organization. Additionally, the findings may also be generalized to inform 4-H programs in other states and other similar nonformal youth serving agencies.

### **Purpose Statement and Research Questions**

This mixed methods case study sought to assess the preparedness of former Nebraska 4-H participants to successfully transition and adjust to college as defined by the constructs of the Student Adaptation to College Questionnaire. The study also sought to understand students' experiences in Nebraska 4-H that may have influenced their readiness to transition to college. The central research questions for the study included:

1. How prepared are former Nebraska 4-H participants to transition and adjust to college?
2. What occurs during the Nebraska 4-H experience that might help explain the level of preparedness?

Based on these data, the following mixed method question was asked: In what ways do the interview data describing the 4-H experience from the perspective of staff and participants help to explain the quantitative results about college adaptation reported on the survey? Sub-questions included:

1. How do former 4-H participants report their adjustment to college?
2. How do former 4-H participants describe their experience in 4-H?
3. How do former 4-H participants describe the relationship between their 4-H experience and their readiness for college?
4. How do staff members describe their efforts to influence college readiness?

To address the questions above, the mixed methods case study incorporated quantitative and qualitative methods. The quantitative method surveyed 4-H participants during their first semester in college. The qualitative methods included interviews with staff regarding the practices and strategies they employed related to preparing young people for college. Interviews were also conducted with former 4-H participants regarding their experience. An explanatory sequential mixed methods design was employed and the data collection occurred in “two distinct interactive phases” (Creswell & Plano Clark, 2011, p. 71). The quantitative phase was conducted first, and then followed with a qualitative phase designed to explain initial quantitative results (Creswell & Plano Clark, 2011). A diagram for this explanatory sequential mixed methods case study is presented in Figure 2 (Plano Clark & Creswell, 2008, p. 468).

## **Methods**

Though there are data in a longitudinal study to suggest 4-H participants are more college ready than their counterparts (Lerner & Lerner, 2011), the study did not follow students through the transition to college. Further, the program efforts of 4-H are so diverse that it is difficult to understand exactly how the organization influences college readiness. A mixed methods case study was the necessary next level of assessment to truly understand the program practices and features that help explain the organization’s level of effectiveness in preparing young people for college. The qualitative portion of the study, when combined with the quantitative portion of the study, offers the strongest combination of methods in seeking to understand what is happening. Together, “they provide a better understanding of research problems, than either approach alone”



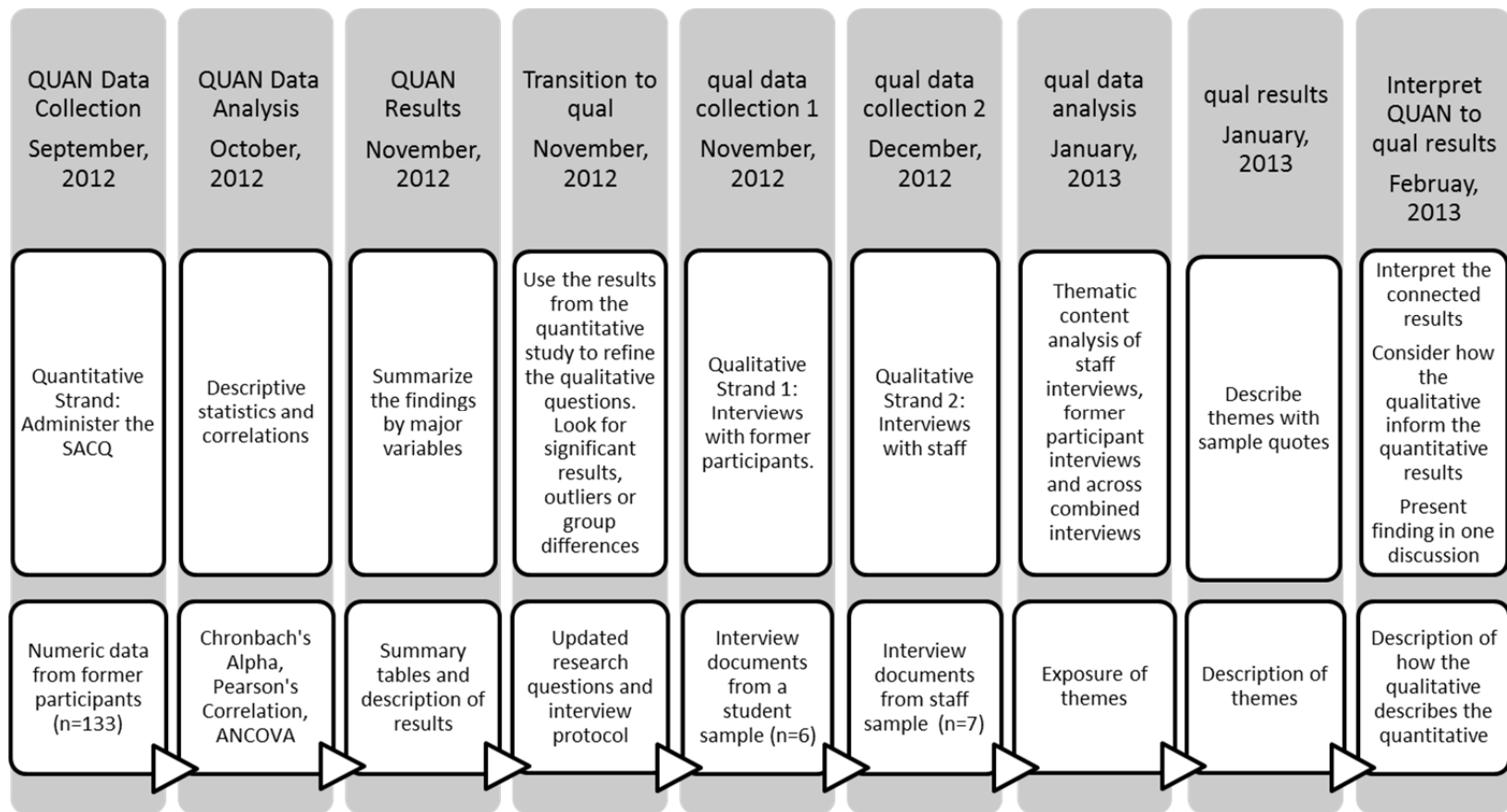


Figure 2. Explanatory sequential mixed methods diagram.

(Creswell & Plano Clark, 2007, p. 5). The quantitative data is necessary to generalize the effectiveness of the program in preparing young people for college and it informs the qualitative measures. In short, the quantitative data describes “what is” (Merriam, 2009, p. 5). A qualitative approach is necessary to capture the rich descriptive data that will interpret participants’ experiences and provide an understanding of what is happening. This may lead to the identification of best practices (Merriam, 2009). In this case study, qualitative data was collected from both staff and former participants to examine the perspectives of two distinct audiences engaged in the Nebraska 4-H experience. Former participants provide insight into their own participation in the experience and share their perspective about how participation has influenced their preparedness for college. Staff can provide insight into the program intention and report the type of development they observed in participants. A case study seeks to examine the unit from multiple perspectives and these sources combined create a stronger understanding of what is happening.

A case study as defined by Merriam (2009) “is an in-depth description and analysis of a bounded system” (p. 40). The key characteristic of a case study is the unit of analysis or the bounded system that allows for detailed data collection involving multiple sources of data collection. 4-H Youth Development is the largest youth development organization in the United States and it exists in every state (National 4-H Council, 2012). This case study examined the Nebraska 4-H program which represents a case bounded by the state boundary, but also by a staff of 4-H Specialists, Educators and Assistants that operate under a shared set of policies and procedures and a shared strategic plan and program outcomes. A case study was the appropriate tradition of

inquiry as this study sought to understand the “unique and common features” of a Nebraska 4-H program experience (Stake, 1995, p. 1). In seeking to understand them, it is necessary to capture the stories through multiple data sources for the primary interest of learning how they function.

A mixed methods approach was also necessary in this study as one data source will not sufficiently tell the whole story. In this situation, the quantitative results established significant trends as well as outliers or group differences and established potentially generalizable impact experienced in the program. While this may answer the degree to which participants are impacted by the program, there was still a lack of understanding as to the how the impact was created. Essentially, we might know the effect, but not the cause. The qualitative measures probed further toward understanding how or why the quantitative results were produced. The two data sets dually inform one another, again creating a more sophisticated body of evidence (Creswell & Plano Clark, 2007). Creswell and Plano Clark (2011) offer a definition of core characteristics of mixed methods which includes collection and analysis of both quantitative and qualitative which are then integrated concurrently, sequentially or by embedding one within the other. This study utilized a sequential explanatory design which is described by Creswell and Plano Clark (2011) as a design with “two distinct interactive phases” that occur in a purposeful order (p. 71). The quantitative results address the initial research question. The qualitative phase is then designed to follow from the results of the first quantitative phase. The researcher then looks to the qualitative data to explain the quantitative results and potentially identify predictors or associations between the experience and the program impact (Creswell & Plano Clark, 2011).

### **Quantitative Methodology: Student Adaptation to College Questionnaire (SACQ)**

**Research question.** The SACQ addressed the following research question:

1. How do former 4-H participants report their adjustment to college?

**Participant selection and sample.** Approximately 1,300 high school seniors are enrolled in Nebraska 4-H annually and 70% of the population report an email address at enrollment. Nine-hundred and thirteen 2012 graduates reporting an email address were invited for participation in the survey. A series of reminders and incentives were offered and data collection continued until a sample of 150 responses from former 4-H participants who were actively enrolled at the time of high school graduation were secured. Of those respondents, 138 or 92% are currently enrolled in post-secondary education including 56 males and 82 females. Thirty-six students, 26%, are enrolled in a two-year post-secondary program and the remaining 74% in four-year programs. Finally, when asked about their level of engagement in 4-H, 47% reported a high-level of engagement, 41% reported a moderate level of engagement and 12% reported minimal engagement. Due to incomplete responses 133 of the 138 responses were usable in this study.

**Instrument.** Following receipt of permission from the Western Psychological Services for use of the instrument and approval from the Institutional Review Board, the Student Adaptation to College Questionnaire (SACQ) developed by Baker and Siryk (1980, 1984, 1989) was administered to the sample population. The SACQ has been used to understand the transition and adaptation process for college students (Baker et al., 1985; Baker & Siryk, 1984, 1986, 1989; Krotseng, 1992; Martin et al., 1999; Mathis & Lecci, 1999; Tomlinson-Clarke, 1998).

The SACQ is a 67 item instrument which creates an index of overall adjustment, but also contains four subscales to measure academic adjustment, social adjustment, personal and emotional adjustment and institutional attachment. Within the four subscales are 12 independent clusters (Baker & Siryk, 1989). (The instrument is available in Appendix A). The subscale of Academic Adjustment includes four clusters; academic environment, application, motivation and performance. The subscale of Attachment includes two clusters for general attachment and this college attachment. The Personal-Emotional Adjustment subscale includes two clusters of psychological and physical adjustment and finally, the Social Adjustment subscale includes four clusters; general, nostalgia, other people and social environment. The clusters are further discussed below as they represent the dependent variables in this study. In addition to responding to the items on the survey, participants were also asked to report their gender, race, the type of college they selected for their post-secondary experience and their self-reported level of engagement in 4-H.

**Data collection.** The survey was administered electronically via Qualtrics, a web-based data collection system. The survey invitation was made available to students approximately six weeks into their first semester of college and was available on-line for four weeks. Initial contact was made three days prior to the questionnaire being distributed to the sample. The pre-survey notice was sent via email. It expressed that an important survey was about to arrive in a few days and convey my appreciation for their participation. The mailing of the survey was also sent via email. The letter of informed consent was pasted into the body of the email and a link for completing the questionnaire was shared at the bottom of the email. Participation was requested within the next seven

days. Follow-up communication included an electronic thank you to those who completed the survey. Reminder emails were sent to those who had not completed the survey at the end of the week and for three additional weeks.

**Variables.** The independent variables in this study included gender, race, type of college attended and self-reported level of engagement in 4-H. According to Baker and Siryk (1986), the SACQ serves as a source of dependent variables in studies of factors related to the student adjustment process. Each of the four sub-scales has two or more clusters which present the dependent variables for this study. The clusters for each the sub-scales are articulated in Figure 3 (Baker, n.d.; Baker & Siryk, 1989).

Academic Adjustment	<ul style="list-style-type: none"> <li>•Motivation for being in college and doing college work</li> <li>•Translation of the motivation into actual academic effort</li> <li>•The efficacy or success of the effort expended</li> <li>•Satisfaction with the academic environment</li> </ul>
Social Adjustment	<ul style="list-style-type: none"> <li>•Extent and success of social activities and functioning in general</li> <li>•Involvement with other persons on campus</li> <li>•Relocation away from home and significant persons there</li> <li>•Satisfaction with the social environment</li> </ul>
Personal and Emotional Adjustment	<ul style="list-style-type: none"> <li>•Sense of psychological well-being</li> <li>•Sense of physical well-being</li> </ul>
Institutional Attachment	<ul style="list-style-type: none"> <li>•Satisfaction with being in college in general</li> <li>•Satisfaction with being at the institution in which enrolled</li> </ul>

*Figure 3.* SACQ sub-scale clusters.

**Data analysis.** All quantitative data were entered into SPSS for analysis. Data received via the electronic questionnaire were exported into SPSS from Qualtrics.

Descriptive statistics were used to report the independent variables. The analysis of the dependent variables included establishing reliability of the subscales with Cronbach's Alpha and utilizing Pearson Correlation to illustrate the relationships between the subscales. Next, an Analysis of CoVariance (ANCOVA) was used to test the null hypothesis that there is no significant difference in the means between the groups of two-year versus four-year institution type and males and females while controlling for covariate of engagement. Levene's Test of Equity of Error Variance was also conducted to establish the homogeneity of variance of the dependent variable across groups (Tabachnick & Fidell, 2007).

**Validity.** Baker and Siryk (1989) used intercorrelation and criterion relations to show validity of the SACQ. Through intercorrelation they established that certain subscales shared items in common. Criterion-related validity was also used to establish validity. They examined the relationship between scales and independent variables that may demonstrate the effect of the variables being assessed (Baker & Siryk, 1989).

Dahmus, Bernardin, and Bernardin (1992) asserted that criterion validity is present in the SACQ survey. This study will establish construct validity through with the use of the Pearson's Correlation. Construct validity examines both the convergent and divergent validity and illustrates that constructs that there is convergence between similar construct and a divergence between lesser related constructs (Trochim, 2006)

**Reliability.** The SACQ instrument has been used reliably with a variety of different cohorts for a number of years at different research sites (Baker & Siryk, 1989). Baker and Siryk used several statistical tests to assess the reliability of the SACQ including one-factor principal component analysis which is a variable reduction

technique used when variables are highly correlated. When applied to the SACQ, the analysis displayed a large loading of respondents for every variable.

A second method used was a Cronbach Alpha, which is a statistic that is commonly used to assess the internal consistency and reliability of a psychometric tool, as well as how well a set of variables measures a one-dimensional underlying construct. In 1984, the internal consistency for the 52-item version of the SACQ was .82 to .87 for the Academic Adjustment subscale, and .83 to .89 for the Social Adjustment subscale (Baker & Siryk, 1989). This study also employed Cronbach's Alpha to establish the reliability of this instrument with this sample.

Finally, normative data has been established for the SACQ and represents full score means for each of the scales (Baker & Siryk, 1989). However, the means presented in this study represent response score means for each of the clusters, so an accurate comparison cannot be made. This study analyzed each independent cluster as opposed to full scales because analyzing the smaller units provided a more detailed understanding of the adaptation of former participants. Further, the means are presented as response score means to report findings that are more accessible to the reader.

### **Qualitative Methodology: Former Participant Interviews and Staff Interviews**

The qualitative methodology included interviews with former 4-H participants and Nebraska 4-H staff. Interview protocols for each group were established to address the research questions and to further explore the quantitative findings. The data were examined for significant results, outlying results and significant differences among the independent variables.



**Research questions.** The former participant interviews addressed the following research questions:

1. How do former 4-H participants describe their experience in 4-H?
2. How do former 4-H participants describe the relationship between their 4-H experience and their readiness for college?
3. How do staff members describe their efforts to influence college readiness?

**Staff description and sample.** The total population of 4-H staff in Nebraska is approximately 115 Educators and Assistants who represent all 93 counties. In some instances staff members represent a multi-county unit, while other counties have more than one 4-H staff member. The Nebraska 4-H staff are both males and females and are employed either by the University of Nebraska or the counties in which they serve. They have education ranging from bachelor's degrees to doctoral degrees and are at various stages in their career. Seven participants were purposefully selected for the interviews. According to Merriam (2009) "purposeful sampling is based on the assumption that the investigator wants to discover, understand and gain insight and therefore must select a sample from which the most can be learned" (p. 77). This sample targeted staff for staff's roles associated with career development, college readiness and recruitment. They were contacted via email and phone to set up in-person interviews. Though they are colleagues of the mine, there is no conflict of interest as I have no supervisory role over these purposefully selected staff members. Additionally, strategic efforts were made to remind the staff participants to elaborate on their answers as though I was not connected to the program. I also consistently asked participants to expand or elaborate on major points to ensure they disclosed a rich level of detail. Finally, prior to the start of

interview I reviewed their participant rights reinforcing that their participation was voluntary and that no identifiable data would be disclosed.

The staff interview sample included seven Nebraska 4-H staff recognized for their expertise and commitment to college and career readiness. Five females and two males were involved in the interviews. Five have county-based responsibilities and two represent district (multi-county) or state staff. Finally, four have been employed with Nebraska 4-H less than 10 years and three more than 10 years.

**Former participant description and sample.** Sampling for the former participant interviews targeted only former 4-H participants who responded to the survey. All 138 respondents enrolled in post-secondary education were invited to participate in former participant interviews. However, no participants emerged through the initial invitation process. Therefore, two students were selected through staff referrals and then a snowball approach was utilized to identify four additional participants. In total, four males and two females participated, all students were white, as 97% of the responding sample reported being white. Four students reported moderate engagement and two reported a high-level of engagement in 4-H. Four students reported enrollment in four-year post-secondary programs and two students reported enrollment in two-year post-secondary programs.

**Data collection with staff.** Following approval from the Institutional Review Board, interviews with staff were semi-structured and conducted individually. The interviews sought a description of the practices and strategies staff employed in pursuit of preparing youth for college and asked staff whether or not the practices specifically targeted any of the constructs of the SACQ. The interviews also collected general

description of programs and program factors staff perceived relevant to developing college readiness in youth participants. The interviews were voice recorded and then transcribed and coded for themes. The staff interviews lasted approximately 30 minutes. (The protocol is available in Appendix C). However, the discussions were allowed to deviate from the questions as the stories of the participants offered another direction.

**Data collection with former 4-H participants.** Following approval from the Institutional Review Board, interviews with former 4-H participants were semi-structured and conducted individually. The interviews sought a description of their experience and their perception for how their experience prepared them for college. The interviews were audio recorded and then transcribed by someone not associated with this study and coded by the researcher. The interviews with former 4-H participants lasted approximately 15 minutes. (The protocol is available in Appendix B). However, the discussions were allowed to deviate from the questions as the stories of the participants offered another direction.

**Data analysis.** Merriam (2009) discusses that data analysis begins “by identifying segments in your data that respond to your research questions” (p. 176). The overall pursuit of this study was to understand and identify program features that impact the development of college readiness in participants. Creswell (2007) as cited in Merriam (2009) discusses his preference of starting with a larger list of categories in data analysis and then reducing and combining them into a smaller number of final themes. A similar process was utilized in this study.

Coding of the data was guided by the steps discussed in Merriam (2009). The interviews were read first and then meaningful sections of text were highlighted and then

marked with key terms using track changes in Microsoft Word. This is referred to as “open-coding” as the researcher is “open to anything possible at this point” (Merriam, 2009, p. 178). After completing the review of each interview, the key terms, or open codes, were then transferred to a Microsoft Excel document where they were alphabetically sorted by interviews. The lists of codes from each interview were then compared and related terms were clustered, color-coded and then sorted again. The clusters were then reviewed and related clusters were grouped together. Finally, clusters were determined to either be major topics or minor topics. As the analysis continued, categories were retained as they were reinforced by the findings and refined and renamed using the most descriptive terms and themes emerged. As a final step, the researcher returned to the data for a more rigorous review continuing to refine and revise the themes and identifying evidence for each theme. During the analysis some categories were reinforced and held together while others fell apart. When nothing new was exposed, a point of saturation was reached (Merriam, 2009, pp. 178-183).

**Interpreting the connected results.** Following a summary of both the quantitative and qualitative results linkages were drawn between the results. The qualitative themes were connected to the significant findings in the quantitative study and “interpreted to what extent and in what ways do the qualitative results explain the quantitative results and what overall is learned in response to the study’s purpose” (Creswell & Plano Clark, 2011, p. 83). The ultimate goal was that themes which emerged from the interviews would explain the quantitative results and provide specific insight into the strategies and practices that were meaningful in influencing a participant’s ability to adapt to college.

**Data validation strategies.** To verify the procedures used in this case study, the data from the questionnaire and interviews were triangulated. Triangulation refers to “the use of multiple sources of data and multiple methods to confirm emerging findings” (Merriam, 2009, p. 215). This study employed a survey and two types of interviews and used these sources of data to compare and cross-check data. Additionally, peer review was also conducted to establish credibility and determine the plausibility of the findings (Merriam, 2009). A youth development evaluator not involved in the data collection reviewed the findings and validated the conclusions drawn by the researcher. Additionally, they provided suggestions as to how to best present the information to the intended audience in a way that is both understandable and potentially useful for improving practices.

**Ethical considerations.** It is the ethical responsibility of the researcher to represent all the data and not allow for their own bias as much as is possible. The lead researcher works within 4-H youth development in Nebraska and certainly a personal perspective has been established that may create a bias. Those views of the researcher are disclosed in the discussion of the findings. Additionally, there are ethical issues regarding the protection of the participant. Merriam (2009) offers an ethical issues checklist (p. 253). The checklist includes many of the same risks addressed through the Institutional Review Board process. In short, the purpose of the inquiry must be clearly articulated and any agreement with the participants must be adhered to. The study should employ reasonable boundaries, low risk methods for data collection and provide informed consent. Confidentiality of individual participants should be protected and the researcher should be credible, trustworthy and ethical in their approach.

**Limitations.** Previously mentioned in Chapter One, this study has three limitations: (a) the study's dependent variables were measured only through self-reported data; (b) participants in the staff focus groups have an existing relationship with the researcher and could provide positively inflated responses ; (c) the study is cross-sectional and only offers descriptive information relative to the time of participation.

In response to self-reported data and the cross-sectional data collection, the mixed-methods approach to the case study offered multiple sources of data which were used to validate and confirm the findings. In response to the existing relationship between the researcher and participants in the staff focus groups, it should be noted that the staff were selected for their relevant experience to this study and there is no supervisory relationship between the researcher and the participants.

## **Chapter Four**

### **Results**

This chapter will present the findings exposed through the analysis of the survey responses and interviews with staff and former 4-H participants who are currently enrolled in post-secondary education. The initial sections will restate the research questions and briefly describe the methods of analysis. The remaining sections will examine the results of the study in relation to the research questions.

#### **Research Questions**

This mixed methods case study sought to assess the preparedness of former Nebraska 4-H participants to successfully transition and adjust to college. It sought to understand students' experiences in Nebraska 4-H that may have influenced their readiness to transition to college. The central research questions for the study were:

1. How prepared are former Nebraska 4-H participants to transition and adjust to college?
2. What occurs during the Nebraska 4-H experience that might help explain the level of preparedness?

Based on these data, the following mixed methods question was asked: In what ways do the interview data describing the 4-H experience from the perspective of staff and participants help to explain the quantitative results about college adaptation reported on the survey? Sub-questions included:

1. How do former 4-H participants report their adjustment to college?
2. How do former 4-H participants describe their experience in 4-H?

3. How do former 4-H participants describe the relationship between their 4-H experience and their readiness for college?
4. How do staff members describe their efforts to influence college readiness?

During the first phase of this case study, I administered the Student Adaptation to College Questionnaire to former 4-H participants who were recent high school graduates. Latter stages of the study included interviews with staff regarding the practices and strategies they employed related to preparing young people for college and interviews with former 4-H participants selected from the survey sample.

### **Quantitative Phase**

The data collected from the Student Adaption to College Questionnaire addresses the first central research question seeking to understand how prepared former 4-H participants are to transition to college. It also addresses sub-question number one as its results will describe how participants report their adjustment to college. The analysis of the responses to the survey included first, establishing reliability of the SACQ clusters with Cronbach's Alpha. Next, construct validity was established utilizing Pearson Correlation to illustrate the relationships between the clusters. Finally, Analysis of CoVariance, (ANCOVA) was used to test the null hypothesis that there was no significant difference in the means between the groups of two-year versus four-year institution type and gender while controlling for covariate of engagement. An ANCOVA is used in this case to examine the influence of engagement, which could explain differences between the variable groups (Tabachnick & Fidell, 2007).

**Reliability.** Cronbach's Alpha was employed to establish reliability of the clusters. Reliability was tested for the clusters as opposed to the larger subscales as the



smaller unit is more indicative of true reliability. Nine of the 12 clusters included all items which appeared worthy of retention, therefore all of the items were retained in the analysis. The clusters appeared to have good internal consistency with alpha scores ranging from  $\alpha = .707$  to  $\alpha = .867$  (see Table 1). The alpha values in two clusters were improved by eliminating one item in each cluster. In the Social Adjustment: Other People cluster the alpha value improved from  $\alpha = .660$  to  $\alpha = .714$  by eliminating item number 14 (I have had informal, personal contacts with college professors). The alpha value of Academic Adjustment: Motivation cluster improved from  $\alpha = .370$  to  $\alpha = .674$  by eliminating item number 50 (I am enjoying my academic work at college) (see Table 1). Finally, the cluster of Academic Adjustment: Application has a low alpha value of  $\alpha = .537$ . The reliability of this cluster could not be improved by the elimination of items. Low reliability can affect the results and interpretation of that cluster should be viewed with caution.

**Validity.** Pearson's Correlation was used to establish construct reliability. Table 2 illustrates the effect size or strength of the relationship, the significance level and the size of the sample. An effect size of  $r = .1$  indicates small strength of the relationship between the clusters,  $r = .3$  indicates a medium strength of the relationship and  $r = .5$  and above indicates large strength of the relationship between the clusters. Construct validity examines both the convergent and divergent validity and illustrates that there is convergence between similar construct and a divergence between lesser related constructs (Trochim, 2006). The correlation between Academic Adjustment: Academic Environment and Attachment General found in Table 2 was  $r = .248$  indicating a small to

Table 1

*Cluster Reliability Analysis, Cronbach's Alpha*

Cluster	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Academic Adjustment: Academic Environment	.799	.804	5
*Academic Adjustment: Application	.537	.539	4
Academic Adjustment: Motivation	.674	.680	5
Academic Adjustment: Performance	.790	.798	9
Attachment: General	.773	.779	3
Attachment: This College	.707	.779	4
Personal and Emotional Adjustment: Psychological	.867	.875	9
Personal and Emotional Adjustment: Physical	.710	.710	6
Social Adjustment: General	.847	.861	7
Social Adjustment: Nostalgia	.805	.805	3
Social Adjustment: Other People	.714	.740	6
Social Adjustment: Social Environment	.742	.786	5

\*low reliability

moderate relationship between the clusters supporting that there are different facets explored by the clusters. In contrast when comparing the four clusters in the Social Adjustment subscale, the findings show correlation values from  $r = .471$  to  $r = .753$  illustrating a strong relationship between the four clusters. These findings established that measures which should be related are in fact closely related and measures that should not be related are in fact not as closely related.

Table 2

*Pearson's Correlations Between Clusters*

		Academ. Environ.	Attach: General	This College	Psychological	Physical	Soc. Adj.: General	Nostalgia	Soc. Environ.	Other People	Motivation	Application	Performance
Academic Environment	Pearson Correlation	1	.248**	.339**	.024	.098	.329**	.155	.532**	.244**	.231**	.075	.052
	Sig. (2-tailed)		.004	.000	.785	.259	.000	.074	.000	.005	.007	.392	.554
	N	134	134	134	134	134	134	134	134	134	134	134	134
Attachment: General	Pearson Correlation	.248**	1	.403**	.367**	.482**	.377**	.361**	.413**	.449**	.606**	.345**	.295**
	Sig. (2-tailed)	.004		.000	.000	.000	.000	.000	.000	.000	.000	.000	.001
	N	134	134	134	134	134	134	134	134	134	134	134	134
This College	Pearson Correlation	.339**	.403**	1	.283**	.342**	.477**	.420**	.577**	.518**	.455**	.148	.116
	Sig. (2-tailed)	.000	.000		.001	.000	.000	.000	.000	.000	.000	.087	.182
	N	134	134	134	134	134	134	134	134	134	134	134	134
Psychological	Pearson Correlation	.024	.367**	.283**	1	.689**	.346**	.649**	.364**	.580**	.491**	.414**	.686**
	Sig. (2-tailed)	.785	.000	.001		.000	.000	.000	.000	.000	.000	.000	.000
	N	134	134	134	134	134	134	134	134	134	134	134	134
Physical	Pearson Correlation	.098	.482**	.342**	.689**	1	.225**	.514**	.331**	.409**	.425**	.361**	.554**
	Sig. (2-tailed)	.259	.000	.000	.000		.009	.000	.000	.000	.000	.000	.000
	N	134	134	134	134	134	134	134	134	134	134	134	134
Social Adjustment: General	Pearson Correlation	.329**	.377**	.477**	.346**	.225**	1	.531**	.753**	.711**	.428**	.158	.195*
	Sig. (2-tailed)	.000	.000	.000	.000	.009		.000	.000	.000	.000	.069	.024
	N	134	134	134	134	134	134	134	134	134	134	134	134

Table 2 continues

		Academ. Environ.	Attach. General	This College	Psychological	Physical	Soc. Adj.: General	Nostalgia	Soc. Environ.	Other People	Motivation	Application	Performance
Nostalgia	Pearson Correlation	.155	.361**	.420**	.649**	.514**	.531**	1	.471**	.658**	.420**	.219*	.372**
	Sig. (2-tailed)	.074	.000	.000	.000	.000	.000		.000	.000	.000	.011	.000
	N	134	134	134	134	134	134	134	134	134	134	134	134
Social Environment	Pearson Correlation	.532**	.413**	.577**	.364**	.331**	.753**	.471**	1	.636**	.537**	.235**	.290**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000	.006	.001
	N	134	134	134	134	134	134	134	134	134	134	134	134
Other People	Pearson Correlation	.244**	.449**	.518**	.580**	.409**	.711**	.658**	.636**	1	.498**	.265**	.363**
	Sig. (2-tailed)	.005	.000	.000	.000	.000	.000	.000	.000		.000	.002	.000
	N	134	134	134	134	134	134	134	134	134	134	134	134
Motivation	Pearson Correlation	.231**	.606**	.455**	.491**	.425**	.428**	.420**	.537**	.498**	1	.442**	.448**
	Sig. (2-tailed)	.007	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000
	N	134	134	134	134	134	134	134	134	134	134	134	134
Application	Pearson Correlation	.075	.345**	.148	.414**	.361**	.158	.219*	.235**	.265**	.442**	1	.643**
	Sig. (2-tailed)	.392	.000	.087	.000	.000	.069	.011	.006	.002	.000		.000
	N	134	134	134	134	134	134	134	134	134	134	134	134
Performance	Pearson Correlation	.052	.295**	.116	.686**	.554**	.195*	.372**	.290**	.363**	.448**	.643**	1
	Sig. (2-tailed)	.554	.001	.182	.000	.000	.024	.000	.001	.000	.000	.000	
	N	134	134	134	134	134	134	134	134	134	134	134	134

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Analysis of covariance.** The ANCOVA tests the null hypothesis which predicts that there is no significant difference in the means between males and females or between students attending four-year and two-year academic institutions. An ANCOVA is used due to the covariate of engagement level in 4-H. Engagement in this study introduces an interacting variable that can affect the relationship between dependent and independent variables. Descriptive statistics were produced for each cluster and Levene's test of Equality of Error Variances was used to test the assumption of homogeneity of variance. This is necessary as the test statistics of the ANCOVA are based on the equity of variances between the sample populations. Finally, the Test Between-Subjects Effects illustrates the results of the ANCOVA (Tabachnick & Fidell, 2007).

After running the ANCOVA, it was established that covariate of engagement was only significant in the clusters of (a) Attachment: This College and (b) Social Adjustment: General. These are the only instances in which participant responses are significantly influenced by their level of engagement in 4-H. At the point at which the covariate of engagement was not significant, a step-down approach was applied and in a second step, the interaction of engagement was removed to ensure that interaction wasn't complicating the results. There is potential for the significance values to change because the sample was not perfectly divided and the interaction isn't held at zero. In a third step, the variable of engagement was removed completely, again to simplify the results. At this step, the analysis becomes a two-way Analysis of Variance, (ANOVA). Finally, in a fourth step, I removed the interaction between the variable of gender and institution type. This final step only exposed significance in the cluster of Personal and Emotional

Adjustment: Psychological, therefore the table for the fourth step is only reported in that instance (Tabachnick & Fidell, 2007).

The following sections report the results of the ANCOVA and ANOVA for the five clusters with significant interaction of the covariate and significant differences between the variable groups. Those clusters included: (a) Attachment: This College; (b) Personal and Emotional Adjustment: Psychological; (c) Personal and Emotional Adjustment: Physical; (d) Social Adjustment: General; and (e) Social Adjustment: Social Environment. The complete analysis, including descriptive statistics, the equality of error variances and the between subjects effects, was conducted for all 12 clusters and the results for those 7 clusters with no significant differences between variable groups are reported in Appendix D.

***Attachment: This college.*** The mean values for the Attachment: This College cluster are illustrated in Table 3. Means are shown for gender, institution type and for the combined variables. The grand mean is  $\bar{X} = 2.43$  with a standard deviation of 1.68. Generally speaking, the grand mean indicates that students felt the items in this cluster applied relatively closely to them. Negative items were reverse scored in each of the clusters to ensure that all items were consistently interpreted as to whether the response applied negatively or positively to the cluster.

Levene's Test of Equity of Error Variance established the homogeneity of variances of the dependent variable across groups. Table 4 shows a significance value of .284. A value greater than .05, the level set for alpha, shows that for the Academic Adjustment: Performance cluster there is homogeneity of variance. If the significance

Table 3

*Descriptive Statistics, Attachment: This College*

Gender	Institution Type	Mean	Std. Deviation	N
Male	Two-Year	3.2750	1.40464	20
	Four-Year	2.1210	1.41844	31
	Total	2.5735	1.51021	51
Female	Two-Year	3.3167	1.50436	15
	Four-Year	2.1306	1.77010	67
	Total	2.3476	1.77680	82
Total	Two-Year	3.2929	1.42649	35
	Four-Year	2.1276	1.65957	98
	Total	2.4342	1.67730	133

Table 4

*Levene's Test of Equality of Error Variance, Attachment: This College*

F	df1	df2	Sig.
1.279	3	129	.284

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Institution Type + Engagement + Gender \* Engagement + Gender \* Institution Type + Institution Type \* Engagement + Gender \* Institution Type \* Engagement

value had been less than .05, it would have concluded the variance across groups to be unequal.

The results of the ANCOVA inform whether or not significant mean differences exist between the groups of independent variables of gender and institution type and for their interaction gender\*institution type. Initially, the covariate was allowed to interact

with predictors to assess the homogeneity of regression assumption, testing whether or not the covariate explains any difference between variable groups. For the cluster of Attachment: This College the three-way interaction, gender\*institution-type\*engagement, is significant with a value of .049 (see Table 5). The effect of gender on Attachment: This College is dependent on the institution type and influenced by the level of engagement. Figures 4 through 6 will illustrate the significant differences in the means between the variable groups at each level of engagement. Attachment: This College for females is generally consistent while Attachment: This College for males is improved by their level of engagement and is more significant at two-year institutions. Simply, attachment to college is significantly different for students at different institution types and the level of engagement in 4-H significantly influences those differences.

***Personal and Emotional Adjustment: Psychological.*** The mean values for the Personal and Emotional Adjustment: Psychological cluster are illustrated in Table 6. Means are shown for gender, institution type and for the combined variables. The grand mean is  $\bar{X} = 3.19$  with a standard deviation of 1.55. Generally speaking, the grand mean indicates that students felt the items in this cluster applied relatively closely to them.

Levene's Test of Equity of Error Variance established the homogeneity of variances of the dependent variable across groups. Table 7 shows a significance value of .596. A value greater than .05, the level set for alpha, shows that for the Academic Adjustment: Performance cluster there is homogeneity of variance. If the significance value had been less than .05, it would have concluded the variance across groups to be unequal.



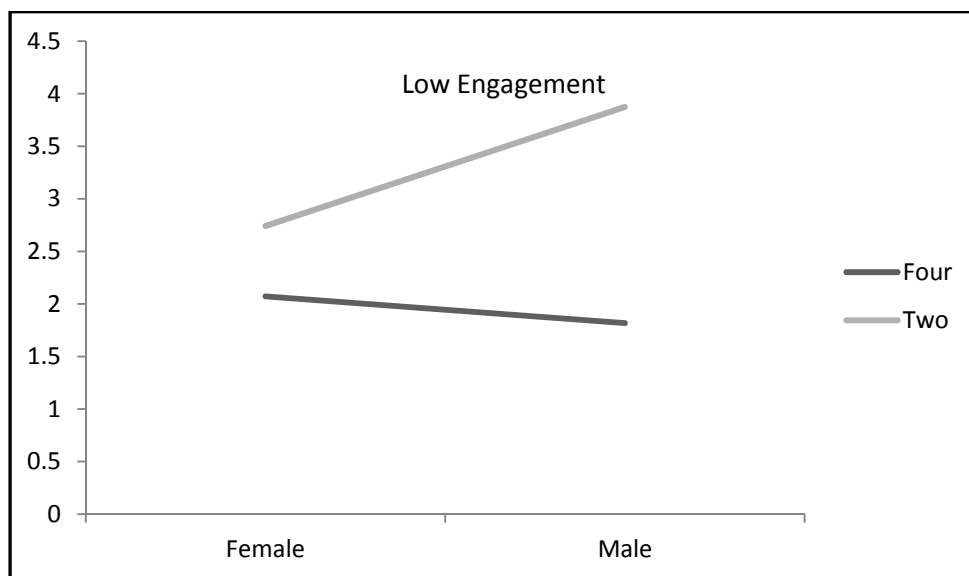
Table 5

*Tests of Between Subject Effects: Attachment: This College*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	48.518 <sup>a</sup>	7	6.931	2.684	.013	.131	18.785	.890
Intercept	67.608	1	67.608	26.177	.000	.173	26.177	.999
Gender	2.935	1	2.935	1.136	.288	.009	1.136	.185
Institution Type	7.568	1	7.568	2.930	.089	.023	2.930	.397
Engagement	1.361	1	1.361	.527	.469	.004	.527	.111
Gender * Engagement	3.122	1	3.122	1.209	.274	.010	1.209	.194
Gender * Institution Type	8.549	1	8.549	3.310	.071	.026	3.310	.439
Institution Type * Engagement	.669	1	.669	.259	.612	.002	.259	.080
Gender * Institution Type * Engagement	10.160	1	10.160	3.934	.049	.031	3.934	.503
Error	322.844	125	2.583					
Total	1159.438	133						
Corrected Total	371.362	132						

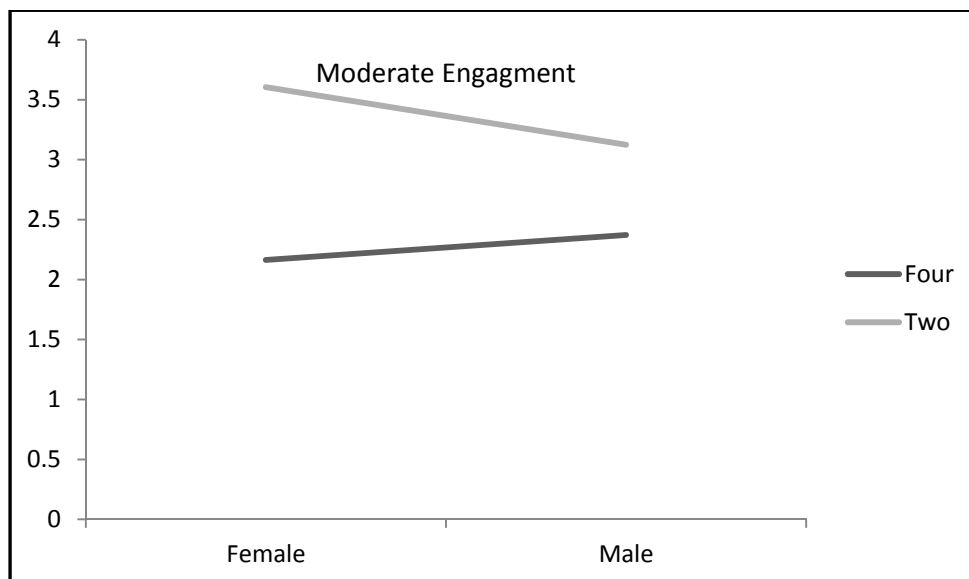
a. R Squared = .131 (Adjusted R Squared = .082)

b. Computed using alpha = .05



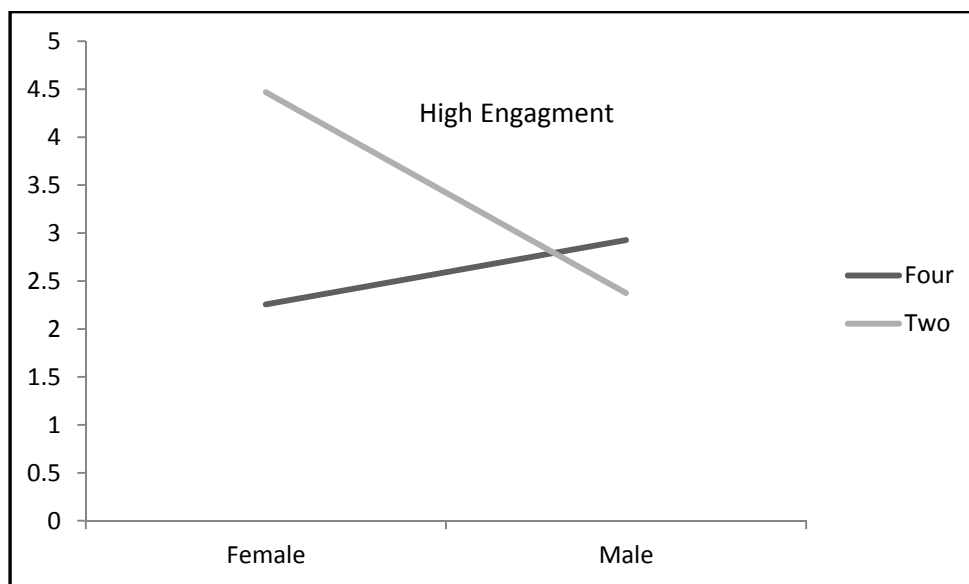
	Female	Male
Four-Year	2.071649	1.816872
Two-Year	2.740909	3.875

Figure 4. Low engagement, attachment: this college.



	Female	Male
Four-Year	2.163498	2.371399
Two-Year	3.604545	3.125

Figure 5. Moderate engagement: attachment: this college.



	Female	Male
Four-Year	2.255347	2.925926
Two-Year	4.468182	2.375

Figure 6. High engagement: attachment: this college.

Table 6

*Descriptive Statistics, Personal and Emotional Adjustment: Psychological*

Gender	Institution Type	Mean	Std. Deviation	N
Males	Two-Year	2.7889	1.41371	20
	Four-Year	2.8423	1.39363	31
	Total	2.8214	1.38761	51
Females	Two-Year	3.3259	1.84184	15
	Four-Year	3.4561	1.57113	67
	Total	3.4322	1.61252	82
Total	Two-Year	3.0190	1.60823	35
	Four-Year	3.2619	1.53706	98
	Total	3.1980	1.55365	133

Table 7

*Levene's Test of Equality of Error Variance, Personal and Emotional Adjustment:*

*Psychological*

F	df1	df2	Sig.
.631	3	129	.596

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Institution Type + Engagement + Gender \* Engagement + Gender \* Institution Type + Institution Type \* Engagement + Gender \* Institution Type \* Engagement

The results of the ANCOVA inform whether or not significant mean differences exist between the groups of independent variables of gender and institution type and for their interaction gender\*institution type. Initially, the covariate was allowed to interact with predictors to assess the homogeneity of regression assumption, testing whether or not the covariate explains any difference between variable groups. For the cluster of Personal and Emotional Adjustment: Psychological the first ANCOVA showed no significance values for the variables or their interactions which were below .05 and therefore there were no significant mean differences (see Table 8). For example, for gender the p-value is .881.

Post determining the non-significance of the variable factors, the analysis was conducted a second time removing the covariate interaction of engagement. This step was done to simplify the results and to reexamine if there were any significance changes for gender, institution type or engagement without the three-way interaction. The results found in Table 9 continued to show no significant mean differences with significance values ranging from .069 to .877.

Table 8

*Tests of Between Subject Effects: Personal and Emotional Adjustment: Psychological 1*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	20.301 <sup>a</sup>	7	2.900	1.215	.299	.064	8.506	.505
Intercept	154.737	1	154.737	64.836	.000	.342	64.836	1.000
Gender	.054	1	.054	.023	.881	.000	.023	.053
Institution Type	.088	1	.088	.037	.848	.000	.037	.054
Engagement	4.624	1	4.624	1.938	.166	.015	1.938	.282
Gender * Engagement	1.717	1	1.717	.719	.398	.006	.719	.134
Gender * Institution Type	.053	1	.053	.022	.882	.000	.022	.053
Institution Type * Engagement	.083	1	.083	.035	.852	.000	.035	.054
Gender * Institution Type * Engagement	.003	1	.003	.001	.971	.000	.001	.050
Error	298.324	125	2.387					
Total	1678.840	133						
Corrected Total	318.626	132						

a. R Squared = .064 (Adjusted R Squared = .011)

b. Computed using alpha = .05

Table 9

*Tests of Between Subject Effects: Personal and Emotional Adjustment: Psychological 2*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	17.912 <sup>a</sup>	4	4.478	1.906	.113	.056	7.625	.563
Intercept	232.196	1	232.196	98.835	.000	.436	98.835	1.000
Gender	7.905	1	7.905	3.365	.069	.026	3.365	.445
Institution Type	.056	1	.056	.024	.877	.000	.024	.053
Engagement	5.936	1	5.936	2.527	.114	.019	2.527	.351
Gender * Institution Type	.133	1	.133	.057	.812	.000	.057	.056
Error	300.713	128	2.349					
Total	1678.840	133						
Corrected Total	318.626	132						

a. R Squared = .056 (Adjusted R Squared = .027)

b. Computed using alpha = .05

Next, the covariate was removed completely resulting in a two-way ANOVA shown in Table 10. Results continued to show no significant mean differences with significance values ranging from .067 to .902. However, when the interaction between gender and institution type is removed the results found in Table 11 now indicated a significant mean difference for gender with a significance value of .038. Figure 7 plots the estimated marginal means to illustrate the difference between males, with an estimated marginal means value of 2.811, and females with an estimated marginal means value of 3.403. Males report lower mean scores indicating that items in the cluster apply more closely to

Table 10

*Tests of Between Subject Effects: Personal and Emotional Adjustment: Psychological 3*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	11.977 <sup>a</sup>	3	3.992	1.679	.175	.038	5.038	.432
Intercept	940.412	1	940.412	395.609	.000	.754	395.609	1.000
Institution Type	.206	1	.206	.086	.769	.001	.086	.060
Gender	8.083	1	8.083	3.400	.067	.026	3.400	.448
Gender * Institution Type	.036	1	.036	.015	.902	.000	.015	.052
Error	306.649	129	2.377					
Total	1678.840	133						
Corrected Total	318.626	132						

a. R Squared = .038 (Adjusted R Squared = .015)

b. Computed using alpha = .05

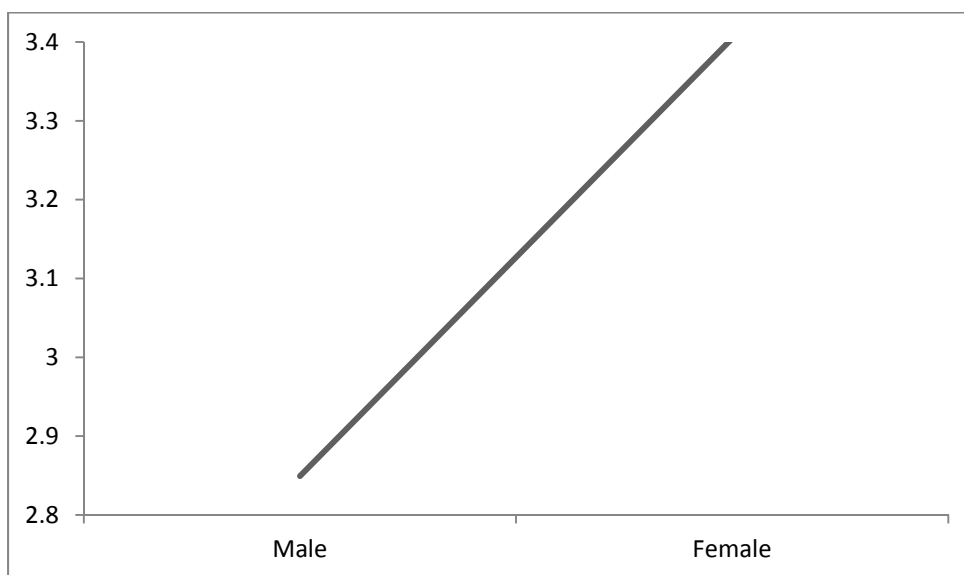
Table 11

*Tests of Between Subject Effects: Personal and Emotional Adjustment: Psychological 4*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	11.941 <sup>a</sup>	2	5.970	2.531	.084	.037	5.062	.499
Intercept	985.248	1	985.248	417.635	.000	.763	417.635	1.000
Gender	10.420	1	10.420	4.417	.038	.033	4.417	.550
Institution Type	.206	1	.206	.087	.768	.001	.087	.060
Error	306.685	130	2.359					
Total	1678.840	133						
Corrected Total	318.626	132						

a. R Squared = .037 (Adjusted R Squared = .023)

b. Computed using alpha = .05



*Figure 7.* Estimated marginal means by gender: personal and emotional adjustment: psychological

them than females, thus indicating that the reported psychological adjustment is stronger for males than females. Again, the mean scores indicated a positive psychological adjustment for both groups. However, the results for the items in this cluster, which assess for perceived psychological well-being, are significantly stronger for males than females.

***Personal and emotional adjustment: Physical.*** The mean values for the Personal and Emotional Adjustment: Physical cluster are illustrated in Table 12. Means are shown for gender, institution type and for the combined variables. The grand mean is  $\bar{X} = 3.12$  with a standard deviation of 1.39. Generally speaking, the grand mean indicates that students felt the items in this cluster applied relatively closely to them.



Table 12

*Descriptive Statistics, Personal and Emotional Adjustment: Physical*

Gender	Institution Type	Mean	Std. Deviation	N
Males	Two-Year	2.7000	1.52235	20
	Four-Year	2.9892	1.32003	31
	Total	2.8758	1.39517	51
Females	Two-Year	3.6000	1.60084	15
	Four-Year	3.2065	1.32418	67
	Total	3.2785	1.37663	82
Total	Two-Year	3.0857	1.59829	35
	Four-Year	3.1378	1.31996	98
	Total	3.1241	1.39242	133

Levene's Test of Equity of Error Variance established the homogeneity of variances of the dependent variable across groups. Table 13 shows a significance value of .572. A value greater than .05, the level set for alpha, shows that for the Academic Adjustment: Performance cluster there is homogeneity of variance. If the significance value had been less than .05, it would have concluded the variance across groups to be unequal.

Table 13

*Levene's Test of Equality of Error Variance, Academic Adjustment: Performance*

F	df1	df2	Sig.
.670	3	129	.572

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Institution Type + Engagement + Gender \* Engagement + Gender \* Institution Type + Institution Type \* Engagement + Gender \* Institution Type \* Engagement

The results of the ANCOVA inform whether or not significant mean differences exist between the groups of independent variables of gender and institution type and for their interaction gender\*institution type. Initially, the covariate was allowed to interact with predictors to assess the homogeneity of regression assumption, testing whether or not the covariate explains any difference between variable groups. For the cluster of Personal and Emotional Adjustment: Physical the results of the first ANCOVA showed no significance values for the variables or their interactions which were below .05 and therefore there were no significant mean differences (see Table 14). For example, for gender .345.

Post determining the non-significance of the variable factors, the analysis was conducted a second time removing the covariate interaction of engagement. This step was done to simplify the results and to reexamine if there were any significance changes for gender, institution type or engagement without the three-way interaction. The results found in Table 15 now indicate that gender is significant at .050. Similarly, when the covariate was removed gender is still significant at .049. This final steps resulted in a two-way ANOVA shown in Table 16. Figure 8 plots the estimated marginal means to illustrate the difference between males, with an estimated marginal means value of 2.849, and females with an estimated marginal means value of 3.405. Males reported lower mean scores indicating that items in the cluster apply more closely to them than females, thus indicating that the reported physical adjustment is stronger for males than females.

***Social adjustment: General.*** The mean values for the Social Adjustment: General cluster are illustrated in Table 17. Means are shown for gender, institution type and for the combined variables. The grand mean is  $\bar{X} = 2.69$  with a standard deviation of 1.32.

Table 14

*Tests of Between Subject Effects: Personal and Emotional Adjustment: Physical I*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	15.847 <sup>a</sup>	7	2.264	1.179	.320	.062	8.251	.490
Intercept	143.374	1	143.374	74.650	.000	.374	74.650	1.000
Gender	1.727	1	1.727	.899	.345	.007	.899	.156
Institution Type	.034	1	.034	.017	.895	.000	.017	.052
Engagement	2.314	1	2.314	1.205	.274	.010	1.205	.193
Gender * Engagement	5.876	1	5.876	3.059	.083	.024	3.059	.411
Gender * Institution Type	.125	1	.125	.065	.799	.001	.065	.057
Institution Type * Engagement	.002	1	.002	.001	.973	.000	.001	.050
Gender * Institution Type * Engagement	.748	1	.748	.389	.534	.003	.389	.095
Error	240.078	125	1.921					
Total	1553.972	133						
Corrected Total	255.925	132						

a. R Squared = .062 (Adjusted R Squared = .009)

b. Computed using alpha = .05

Table 15

*Tests of Between Subject Effects: Personal and Emotional Adjustment: Physical 2*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	9.655 <sup>a</sup>	4	2.414	1.255	.291	.038	5.018	.384
Intercept	203.902	1	203.902	105.979	.000	.453	105.979	1.000
Gender	7.526	1	7.526	3.912	.050	.030	3.912	.501
Institution Type	.137	1	.137	.071	.790	.001	.071	.058
Engagement	1.643	1	1.643	.854	.357	.007	.854	.151
Gender * Institution Type	2.527	1	2.527	1.313	.254	.010	1.313	.206
Error	246.270	128	1.924					
Total	1553.972	133						
Corrected Total	255.925	132						

a. R Squared = .038 (Adjusted R Squared = .008)

b. Computed using alpha = .05

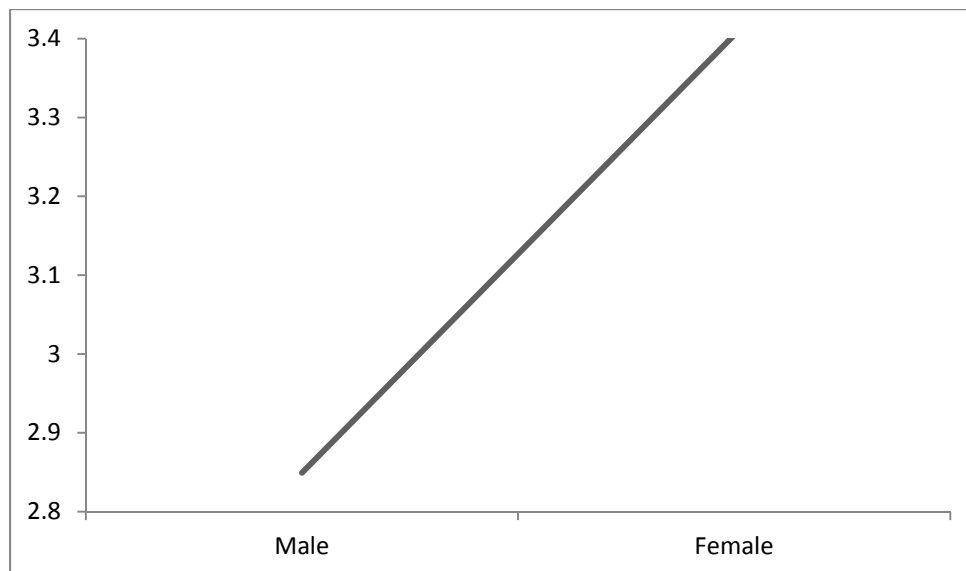
Table 16

*Tests of Between Subject Effects: Personal and Emotional Adjustment: Physical 3*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	8.013 <sup>a</sup>	3	2.671	1.390	.249	.031	4.169	.362
Intercept	952.962	1	952.962	495.869	.000	.794	495.869	1.000
Institution Type	.066	1	.066	.035	.853	.000	.035	.054
Gender	7.618	1	7.618	3.964	.049	.030	3.964	.506
Gender * Institution Type	2.845	1	2.845	1.480	.226	.011	1.480	.227
Error	247.913	129	1.922					
Total	1553.972	133						
Corrected Total	255.925	132						

a. R Squared = .031 (Adjusted R Squared = .009)

b. Computed using alpha = .05



*Figure 8.* Estimated marginal means by gender: personal and emotional adjustment: physical.

Table 17

*Descriptive Statistics, Social Adjustment: General*

Gender	Institution Type	Mean	Std. Deviation	N
Males	Two-Year	3.2571	1.26729	20
	Four-Year	2.6221	1.27485	31
	Total	2.8711	1.29749	51
Females	Two-Year	3.4000	1.47989	15
	Four-Year	2.3923	1.24474	67
	Total	2.5767	1.33964	82
Total	Two-Year	3.3184	1.34329	35
	Four-Year	2.4650	1.25236	98
	Total	2.6896	1.32650	133

Generally speaking, the grand mean indicates that students felt the items in this cluster applied relatively closely to them.

Levene's Test of Equity of Error Variance established the homogeneity of variances of the dependent variable across groups. Table 18 shows a significance value of .695. A value greater than .05, the level set for alpha, shows that for the Academic Adjustment: Performance cluster there is homogeneity of variance. If the significance value had been less than .05, it would have concluded the variance across groups to be unequal.

The results of the ANCOVA inform whether or not significant mean differences exist between the groups of independent variables of gender and institution type and for their interaction gender\*institution type. Initially, the covariate was allowed to interact with predictors to assess the homogeneity of regression assumption, testing whether or

Table 18

*Levene's Test of Equality of Error Variance, Social Adjustment: General*

F	df1	df2	Sig.
.483	3	129	.695

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Institution Type + Engagement + Gender \* Engagement + Gender \* Institution Type + Institution Type \* Engagement + Gender \* Institution Type \* Engagement

not the covariate explains any difference between variable groups. For the cluster of Social Adjustment: General the initial ANCOVA showed that institution type was significant with a p-value of .030 (see Table 19).

The analysis was conducted a second time removing the covariate interaction of engagement. This step was done to simplify the results and to reexamine if there were any significance changes for gender, institution type or engagement without the three-way interaction. The results found in Table 20 continued to illustrate the significance of institution at a value of .003. Figure 9 plots the estimated marginal means to illustrate the difference between institution type groups. The findings showed that students in four-year institutions, with an estimated marginal means score of 2.534, respond that the items in the cluster for Social Adjustment: General apply significantly more closely to them than students at a two-year institution with an estimated marginal mean score of 3.375. Additionally, removing the interaction now illustrated that engagement was significant with a value of .009. An examination of the parameter estimates shows a value of .429 which indicates a positive relationship between engagement and social adjustment. For a one unit increase in engagement there is a .429 predicted increase in adjustment.

Table 19

*Tests of Between Subject Effects: Social Adjustment: General 1*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	38.956 <sup>a</sup>	7	5.565	3.599	.001	.168	25.190	.967
Intercept	71.567	1	71.567	46.277	.000	.270	46.277	1.000
Gender	4.889	1	4.889	3.162	.078	.025	3.162	.423
Institution Type	7.487	1	7.487	4.842	.030	.037	4.842	.588
Engagement	2.798	1	2.798	1.809	.181	.014	1.809	.266
Gender * Engagement	4.836	1	4.836	3.127	.079	.024	3.127	.419
Gender * Institution Type	3.582	1	3.582	2.316	.131	.018	2.316	.327
Institution Type * Engagement	2.121	1	2.121	1.372	.244	.011	1.372	.213
Gender * Institution Type * Engagement	5.615	1	5.615	3.631	.059	.028	3.631	.473
Error	193.310	125	1.546					
Total	1194.367	133						
Corrected Total	232.266	132						

a. R Squared = .168 (Adjusted R Squared = .121)

b. Computed using alpha = .05



Table 20

*Tests of Between Subject Effects: Social Adjustment General 2*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	31.053 <sup>a</sup>	4	7.763	4.938	.001	.134	19.754	.955
Intercept	85.651	1	85.651	54.486	.000	.299	54.486	1.000
Gender	.030	1	.030	.019	.891	.000	.019	.052
Institution Type	14.066	1	14.066	8.948	.003	.065	8.948	.843
Engagement	10.978	1	10.978	6.984	.009	.052	6.984	.746
Gender * Institution Type	1.341	1	1.341	.853	.357	.007	.853	.150
Error	201.213	128	1.572					
Total	1194.367	133						
Corrected Total	232.266	132						

a. R Squared = .134 (Adjusted R Squared = .107)

b. Computed using alpha = .05

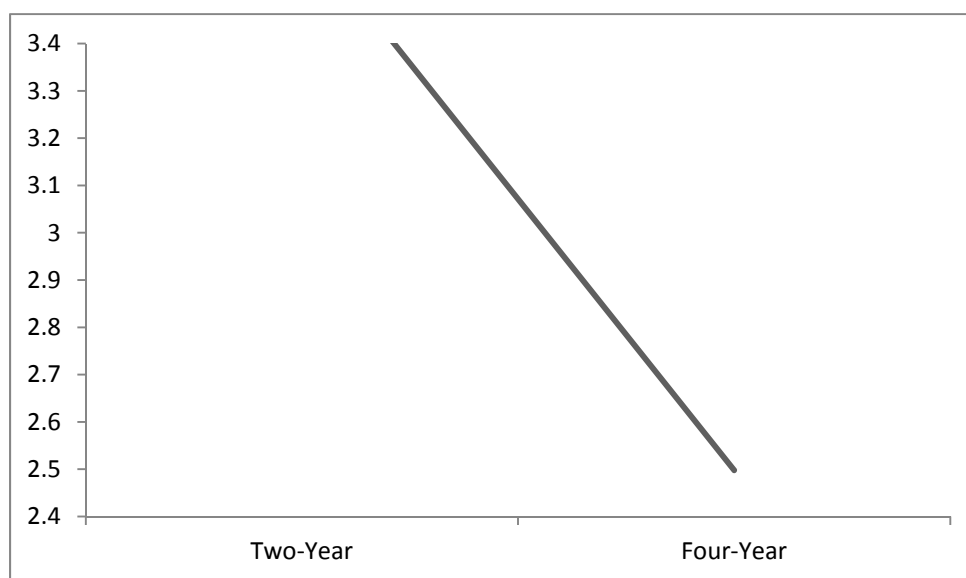


Figure 9. Estimated marginal means by institution type: social adjustment: general.

Therefore, students who reported high engagement are better socially adjusted than those reporting minimal or moderate engagement.

***Social adjustment: Social environment.*** The mean values for the Social Adjustment: Social Environment cluster are illustrated in Table 21. Means are shown for gender, institution type and for the combined variables. The grand mean is  $\bar{X} = 2.70$  with a standard deviation of 1.38. Generally speaking, the grand mean indicates that students felt the items in this cluster applied relatively closely to them.

Table 21

*Descriptive Statistics, Social Adjustment: Social Environment*

Gender	Institution Type	Mean	Std. Deviation	N
Males	Two-Year	3.5100	1.65494	20
	Four-Year	2.6452	1.38054	31
	Total	2.9843	1.53823	51
Females	Two-Year	3.6533	1.18675	15
	Four-Year	2.2776	1.12220	67
	Total	2.5293	1.24737	82
Total	Two-Year	3.5714	1.45452	35
	Four-Year	2.3939	1.21484	98
	Total	2.7038	1.37854	133

Levene's Test of Equity of Error Variance established the homogeneity of variances of the dependent variable across groups. Table 22 shows a significance value of .089. A value greater than .05, the level set for alpha, shows that for the Social Adjustment: Social Environment cluster there is homogeneity of variance. If the

Table 22

*Levene's Test of Equality of Error Variance, Social Adjustment: Social Environment*

F	df1	df2	Sig.
2.22	3	129	.089

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Institution Type + Engagement + Gender \* Engagement + Gender \* Institution Type + Institution Type \* Engagement + Gender \* Institution Type \* Engagement

significance value had been less than .05, it would have concluded the variance across groups to be unequal.

The results of the ANCOVA inform whether or not significant mean differences exist between the groups of independent variables of gender and institution type and for their interaction gender\*institution type. Initially, the covariate was allowed to interact with predictors to assess the homogeneity of regression assumption, testing whether or not the covariate explains any difference between variable groups. For the cluster of Social Adjustment: Social Environment the initial ANCOVA shows that institution type was significant with a value of .001 (see Table 23).

The analysis was conducted a second time removing the covariate interaction of engagement. This step was done to simplify the results and to reexamine if there were any significance changes for gender, institution type or engagement without the three-way interaction. The results found in Table 24 continued to illustrate the significance of institution type at a value of  $< .001$ . Finally, the covariate was removed completely resulting in a two-way ANOVA shown in Table 25. The results continued to show the significance of institution type at a value of  $< .001$ . The findings showed that students in four-year institutions, with an estimated marginal means score of 2.498, responded that

Table 23

*Tests of Between Subject Effects: Social Adjustment: Social Environment 1*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	52.599 <sup>a</sup>	7	7.514	4.738	.000	.210	33.165	.994
Intercept	99.293	1	99.293	62.606	.000	.334	62.606	1.000
Gender	1.133	1	1.133	.714	.400	.006	.714	.134
Institution Type	17.518	1	17.518	11.046	.001	.081	11.046	.910
Engagement	.196	1	.196	.124	.726	.001	.124	.064
Gender * Engagement	.606	1	.606	.382	.538	.003	.382	.094
Gender * Institution Type	2.981	1	2.981	1.879	.173	.015	1.879	.275
Institution Type * Engagement	6.184	1	6.184	3.899	.051	.030	3.899	.500
Gender * Institution Type * Engagement	5.413	1	5.413	3.413	.067	.027	3.413	.450
Error	198.249	125	1.586					
Total	1223.120	133						
Corrected Total	250.848	132						

a. R Squared = .210 (Adjusted R Squared = .165)

b. Computed using alpha = .05

Table 24

*Tests of Between Subject Effects: Social Adjustment: Social Environment 2*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	42.779 <sup>a</sup>	4	10.695	6.579	.000	.171	26.317	.990
Intercept	118.452	1	118.452	72.869	.000	.363	72.869	1.000
Gender	.279	1	.279	.172	.679	.001	.172	.070
Institution Type	28.493	1	28.493	17.528	.000	.120	17.528	.986
Engagement	3.979	1	3.979	2.448	.120	.019	2.448	.342
Gender * Institution Type	1.969	1	1.969	1.211	.273	.009	1.211	.194
Error	208.069	128	1.626					
Total	1223.120	133						
Corrected Total	250.848	132						

a. R Squared = .171 (Adjusted R Squared = .145)

b. Computed using alpha = .05

Table 25

*Tests of Between Subject Effects: Social Adjustment: Social Environment 3*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	38.800 <sup>a</sup>	3	12.933	7.868	.000	.155	23.604	.988
Intercept	891.510	1	891.510	542.351	.000	.808	542.351	1.000
Institution Type	30.638	1	30.638	18.639	.000	.126	18.639	.990
Gender	.307	1	.307	.187	.666	.001	.187	.071
Gender * Institution Type	1.593	1	1.593	.969	.327	.007	.969	.164
Error	212.049	129	1.644					
Total	1223.120	133						
Corrected Total	250.848	132						

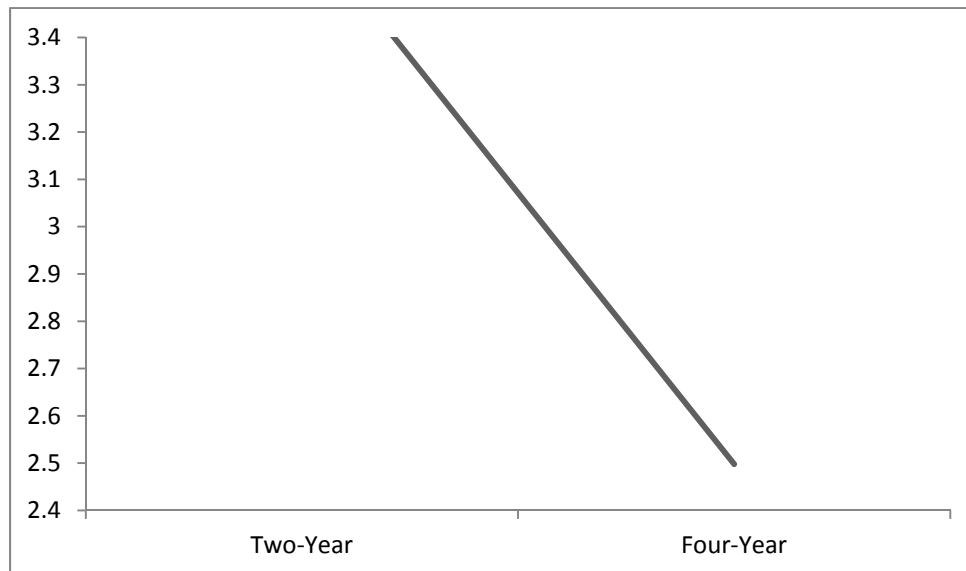
a. R Squared = .155 (Adjusted R Squared = .135)

b. Computed using alpha = .05

the items in the cluster for Social Adjustment: Social Environment applied significantly more closely to them than students at a two-year institution with an estimated marginal mean score of 3.644. Figure 10 plots the estimated marginal means to illustrate the difference between institution-type groups.

### **Summary of the Quantitative Findings**

The grand mean values for each cluster indicated that students responded that the items in the clusters apply very closely to moderately closely to them with grand mean range of  $\bar{X} = 1.54$  to  $\bar{X} = 3.75$ . The responses were collected on a nine-point scale from “applies very closely to me” to “doesn’t apply to me at all”. The negative items were reversed scored so the lower means indicate the students report positive results for each



*Figure 10.* Estimated marginal means by institution type: social adjustment: social environment.

cluster. Seven of the 12 clusters showed no significant differences in responses between the variable groups. Significant differences were found in the clusters of (a) Attachment: This College; (b) Personal and Emotional Adjustment: Psychological; (c) Personal and Emotional Adjustment: Physical; (d) Social Adjustment: General; and (e) Social Adjustment: Social Environment (See Tables 30, 36, 40, 45 and 59).

**Attachment: This college.** For the cluster of Attachment: This College the three-way interaction among gender, institution-type and engagement was significant with a value of .049. The effect of gender on Attachment: This College is dependent on the institution type and influenced by the level of engagement. Attachment: This College refers to a satisfaction with the institution at which a student is enrolled. Attachment: This College for females is generally consistent across engagement levels while

Attachment: This College for males is improved by their level of engagement and is more significant at two-year institutions. Therefore, higher engagement in 4-H results in improved satisfaction of their college choice, especially for males at two-year institutions.

**Personal and emotional adjustment: Psychological and physical.** The results for the cluster Personal and Emotional Adjustment: Psychological indicated significant mean differences for gender groups with a significance value of .038. Similarly, the results for the cluster Personal and Emotional Adjustment: Physical also indicated significant mean differences for gender groups with a significance value of .049. In both clusters, males reported lower mean scores indicating that items in the cluster applied more closely to them than females, thus indicating that students' perceived psychological and physical well-being, is stronger for males than females.

**Social adjustment: General.** The findings show that students in four-year institutions responded that the items in the cluster for Social Adjustment: General applied significantly more closely to them than students at a two-year institution. Thus four-year students reported stronger social adjustment in general than two-year students. Additionally, the level of engagement also significantly influenced student responses to the items in this cluster and illustrated that students who reported high engagement are better socially adjusted than those reporting minimal or moderate engagement.

**Social adjustment: Social environment.** The findings showed that students in four-year institutions responded that the items in the cluster for Social Adjustment: Social Environment applied significantly more closely to them than students at a two-year



institution. Thus, four-year students report stronger social adjustment to their social environment than two-year students.

### **Qualitative Phase One**

The staff interviews addressed the second central research question seeking to understand what occurs during the Nebraska 4-H experience that might help explain the level of preparedness. The interviews also addressed sub-question number four which asks staff members to describe their efforts to influence college readiness. The interviews were conducted following the survey administration and lasted approximately 30 minutes.

Participants in the staff interviews were interviewed individually and asked to answer the following four questions:

1. Describe your efforts toward influencing college readiness in youth.
2. Describe your experience in developing and delivering programs or practices that influence college readiness.
3. Are there specific practices that directly target any of the subscales of adaptation to college as described on the SACQ? and
4. What contextual factors describe your program?

Recordings of the interviews were transcribed then each interview was separately coded. The interviews were read and then meaningful sections of text were highlighted and then marked with key terms using track changes in Microsoft Word. The key terms were then transferred to a Microsoft Excel document where they were alphabetically sorted by interviews. Related terms were then clustered, color-coded and then sorted again. The clusters were then reviewed and related clusters were grouped together.

Finally, clusters were determined to either be major topics or minor topics. The major topics were labeled using the most descriptive terms and themes emerged. Minor topic data will be saved for future analysis, but will not be discussed in detail in this report.

The major themes from the staff interviews included:

1. The Cumulative Experience, Opportunities for Exploration,
2. Intentional Focus, and
3. The Unique Position of Nonformal 4-H Educators.

The following sections will discuss the themes with supporting evidence from the interviews. To protect the anonymity of the respondents, no descriptive indicators of the respondents will be associated with the quotes.

**The cumulative experience, opportunities for exploration.** The influence of the cumulative 4-H experience captured the most frequent comments from staff interview participants. In addition to reporting a diverse set of program opportunities, delivery modes and other examples of the multiple touch-points youth experience in 4-H, it was noted by every staff who I interviewed that the collection of program opportunities for youth to explore career interests and paths toward fulfilling their goals are key in targeting college readiness. There was significant mention of specific events and program efforts which included examples such as “Connecting the Dots”, “entrepreneurship programs”, “Youth Science Field Days”, “Character on the Job”, “school-enrichment”, “work-shops” and “after-school programs”. One staff member commented:

we reach youth through multiple settings, which is a strength of the program. We’re reaching youth in a wide variety of ways, hopefully with multiple touch points. We really try to offer opportunities for youth in-schools and through non-

traditional out-of-school opportunities, so that youth have lots of opportunities to explore careers and explore college opportunities. So, our settings are varied and I think that's very intentional, so we can offer lots of different touch points.

Staff also described the 4-H experience as “guided exploration through diverse content areas,” “an opportunity for hands-on learning and application,” and “an opportunity to explore, experience and practice in a safe environment”. The collection of experiences discussed above creates a platform for youth's explorations. Staff described the program as providing opportunities to “try new things,” “take diverse project areas” and “explore many program opportunities”. Collectively, they expressed that the diversity in the program areas youth are able to explore provide ample opportunities for youth to decide whether or not to pursue related career options.

Finally, related to the cumulative program experience and the opportunities for youth to explore content and career options, staff discussed the target ages served by the program. It was acknowledged that elementary youth are indirectly being introduced to content and skills relevant to future careers. However, direct efforts for college readiness are more often targeted at high school students, specifically freshmen and sophomores.

**Intentional focus.** “Future focused,” “targeting college and workforce skill development,” and “getting youth ready for college” were all phrases used to describe the efforts of the 4-H program toward college readiness. Six of the seven interview participants discussed the intentionality of their efforts to support the career development and college readiness of youth participants. Many staff also contributed to a discussion regarding the specific skills and assets the program strives to develop relevant to youth's readiness for college. Specifically, staff mentioned “networking,” “leadership skills,” “decision-making skills,” “social skills,” and “communication skills.”

Staff described their intentional approach toward the college readiness outcomes as “stand-alone programs” and “lessons incorporated into other content-based programs”. One staff member responded, “when we’re delivering a program, we present a connection to future occupations and explain the type of degree needed if a student is interested in a particular career field.” Additionally, staff reported that they created opportunities for youth to set goals and practice decision-making strategies. Further, they talked with youth about college options and helped youth consider the implications of college and career choices on their futures through simulated activities at Connecting the Dots events and through individual conversations. The strategies referenced in this theme support a larger understanding of what the 4-H experience looks like and increase our understanding of how college readiness is approached by the organization.

**Unique position of nonformal 4-H educators.** The final theme from the staff interviews highlights the unique role of a nonformal educator. Staff described their relationships with youth through the following quotes: “positive adult relationship,” “safe non-parent relationship” and an “extra influence” in the lives of young people. Additionally, they reported that youth are self-selecting this out-of-school time experience and that they are able to encourage students through “individual relationship” which some described as “mentoring”.

In addition to the unique relationships, staff also highlighted the unique connection of 4-H Youth Development to the University of Nebraska-Lincoln as an asset in their college readiness efforts. They reported this as a connection unique to other out-of-school experiences. They spoke of the strength of their “association to UNL” and “connection to campus”. All seven staff interviewed referenced their ability to bring

youth to “campus visit” or “events on campus” as important in “helping youth see themselves on campus”.

### **Qualitative Phase Two**

The former participant interviews addressed the second central research question seeking to understand what occurs during the Nebraska 4-H experience that might help explain the level of preparedness. The interviews also addressed sub-questions number two and three which ask former 4-H participants to describe their experience in 4-H and the relationship between that experience and their readiness for college. The interviews were conducted following the survey administration and lasted approximately 15 minutes.

Participants in the former participant interviews were interviewed individually and asked to answer the following questions:

1. Describe your 4-H experience.
2. Is there a specific 4-H program or event that influenced your college plans?  
Please explain.
3. Describe in your own words the impact 4-H had in preparing you for the transition to college.
4. Did 4-H help foster your interest in taking course work to provide the professional skills needed in your future career? Please explain.
5. What are other things 4-H could do to better prepare students for their future?

Recordings of the interviews were transcribed and coded utilizing the same process as the staff interviews. The major themes in this phase included:

1. The Cumulative Experience, Opportunities for Exploration, and
2. College Relevant Skill Development

**The cumulative experience, opportunities for exploration.** Similar to staff, former 4-H participants in 4-H described the experiences they encountered in 4-H as providing them with diverse opportunities both for exploration of future careers and opportunities to develop skills that would support their transition to college. They described their opportunities to explore as both “direct and indirect” and referenced experiences in 4-H that directly talked about college and careers and acknowledged learning about future options indirectly through project exploration. Five of the six students reported taking advantage of the multiple program opportunities including “club experiences,” “record book keeping,” “community service projects,” and opportunities to “learn about a lot of different interest areas”. The sixth former participant acknowledged awareness of the opportunities, but was more minimally engaged. Still, the student reported that the experience had “helped a little bit” and offered different opportunities than would have been encountered through school.

There were two specific opportunities that were repeatedly mentioned as very influential. Those include leadership roles and entrepreneurial opportunities. Four of the six students were engaged in leadership roles and reported that they gained valuable skills such as “speaking in front of group,” “confidence,” and “responsibility” through those roles. Several of the students also reported the opportunity to “turn their project into a business” and experience an “introduction to small business”.

Finally, only two students were pursuing careers directly related to their project areas in 4-H. However, the remaining students acknowledged that while they didn’t

pursue a project-area career, they learned a lot about what they were not interested in and developed interests that they intend to continue through elective courses and extra-curricular activities. One former participant stated “being involved with all those different areas I think allowed me to see things that I might be interested in, so whatever way I decide to go, it’s helpful for me to have had all those different experiences because I know what I do and don’t like.” A second former participant commented, “I’m a food science major, but I’m taking an animal science class which is just one of my interests, and I want to go on to take the meat science class. Without 4-H I probably wouldn’t have been involved in the livestock industry.” Again, this speaks to a larger understanding of the 4-H experience and indicates value in the diverse, cumulative experience, which overtime prepares young people to make informed decisions about their future.

**College relevant skill development.** When asked to describe the impact 4-H had on preparing them for college former 4-H participants talked of the skills they developed through the 4-H experience. Three skills were repeated by nearly every interview participant. Those skills included networking, public speaking skills and independence. Participant recognition of the value of relevant skill development is demonstrated by the following quotes:

4-H has influenced my life by teaching me to be able to get up and speak in front of people and interact with other people. You don’t know very many people when you come to a big school like this. So, just being able to interact with other people and then also, knowing other people from 4-H is helpful

and “my 4-H projects were definitely a major factor in learning how to hone my independence and gain skills so I could be independent”. The application of such skills to the social navigation of a new environment likely creates a more positive transition to

college. Further, these findings suggest that specific skills relevant to transition may be defined.

### **Summary of the Qualitative Findings**

The interviews were intended to describe what occurs during the Nebraska 4-H experience and to allow staff and participants to describe the relationship between the 4-H experience and participants' preparedness for college. The program is described by both staff and students as a diverse series of direct and indirect learning opportunities which better prepared students to make informed decisions about their future. Additionally, both groups of respondents credit the cumulative experience and the multiple opportunities to explore interests, potential career areas and colleges as influential in the preparing young people for the transition to college.

Staff interview participants further described their programming efforts as intentional in preparing young people for college with purposeful opportunities to explore options and to build and practice relevant skills. Additionally, they place value on the role of nonformal educators and the connection between 4-H and the University of Nebraska-Lincoln. Finally, both groups recognize that 4-H results in skill development relevant to a successful transition to college, especially networking, public speaking, and independence. The next chapter will further discuss the findings and discuss how the qualitative results inform the quantitative results.



## **Chapter Five**

### **Discussion**

This mixed methods case study was designed to assess the preparedness of former Nebraska 4-H participants to successfully transition and adjust to college. The study also sought to understand the way that students' experiences in Nebraska 4-H may have influenced their readiness to transition to college. The initial quantitative stage of this case study administered the Student Adaptation to College Questionnaire (SACQ) to former 4-H participants who were recent high school graduates. Latter qualitative stages included interviews with staff regarding the practices and strategies they employed related to preparing young people for college and interviews with former 4-H participants selected from the survey sample.

The results of the quantitative analysis indicated that generally, former 4-H participants reported a positive adaptation to college. Significant differences were found between the variable groups or with the influence of the covariate in the clusters of (a) Attachment: This College; (b) Personal and Emotional Adjustment: Psychological; (c) Personal and Emotional Adjustment: Physical; (d) Social Adjustment: General; and (e) Social Adjustment: Social Environment. Students reporting different engagement levels in 4-H reported significant differences in their attachment to college and in their general social adjustment to college.

The qualitative analysis discovered that staff and former 4-H participants both credit the cumulative 4-H experience and the multiple opportunities to explore interests, potential career areas and colleges as influential in the preparing young people for the transition to college. Additionally, both groups recognize that 4-H results in skill

development relevant to a successful transition to college, especially networking, public speaking, and independence. Ultimately, the findings in this study indicate that the Nebraska 4-H experience positively contributes to the college readiness equation for its participants.

This study represents one example of a nonformal youth development organizations' efforts toward preparing young people for college. While this is only a single example, it contributes to the body of evidence suggesting that nonformal education should be recognized as a key contributor in the pursuit of preparing young people for a comprehensive readiness described by Conley (2007). The following sections of this chapter will further discuss the significant findings and share implications for Nebraska 4-H and nonformal youth development. Finally, suggestions for future research will be offered.

### **Discussion of Significant Results**

Schlossberg (1981) articulates what has become arguably the most widely used theory in educational transition research. Her model introduces four factors of situation, self, support and strategies which all influence a person's ability to transition and ultimately adapt to change. Baker and Siryk (1980, 1984, 1989) reinforced Schlossberg's theory regarding transition or adaptation as a key predictor in readiness for college and their tool, the Student Adaptation to College Questionnaire (SACQ), has commonly been associated with Schlossberg's theory.

Past research indicates that students who are high-scoring on the four subscales of the SACQ are more successfully academically and likely to be more involved in college life (Baker & Siryk, 1984, 1989; Tomlinson-Clarke, 1998). Additionally, students

scoring high on the SACQ are less likely to report stress or personal difficulties (Martin et al., 1999; Mathis & Lecci, 1999). Finally, high scoring students are less likely to discontinue enrollment (Baker et al., 1985; Baker & Siryk, 1984, 1986, 1989; Krotseng, 1992). The survey data in this study illustrated that former 4-H participants reported positive adaptation in all four categories examined by the SACQ.

The findings in this case study established strong adaptation for former 4-H participants which suggests that 4-H contributes to successfully preparing youth for the college transition, which may be an indication of their likelihood to persist. The remainder of this discussion will discuss both significant and non-significant results relative to the four larger subscales of the SACQ and the four S's introduced by Chickering and Schlossberg (1995). Further analysis of the clusters nested in the four subscales illustrated that the strength of students' adaptation does vary at certain points for gender and institution type, and in two instances adaptation is influenced by their reported level of engagement in 4-H. Those findings will be highlighted in this discussion. Connections between the quantitative and qualitative findings will also be introduced for each subscale.

**Academic adjustment.** The Academic Adjustment subscale assesses a student's success at coping with the various educational demands of college. The four clusters that represent the different aspects of adjustment in the academic scale include: motivation for being in college and doing college work; translation of the motivation into actual academic effort; the efficacy or success of the effort expended; and satisfaction with the academic environment (Baker, n.d.; Baker & Siryk, 1989). In this study, none of the four clusters in the academic adjustment subscale introduced significant differences among

variable groups for gender, institution-type or level of engagement in 4-H. However, the respondents reported high mean scores in the academic adjustment clusters.

Additionally, there were minor comments documented in the interviews related to opportunities to extend classroom learning and the influence of 4-H on the selection of academic coursework, college and college major. This implies that in general, former Nebraska 4-H participants in this study felt well prepared for the academic transition, and in some instances there were meaningful connections between their participation in 4-H and their academic aspirations.

More notably, both staff and former 4-H participants documented the influence of 4-H on college relevant skill development which may help explain former 4-H participants' ability to adjust academically. Conley (2007) notes academic behaviors, simply defined as self-monitoring and study skills, as essential to college readiness. Time-management, self-control, the ability to prepare for courses, and the ability to effectively use resources are all examples of academic behaviors. Roderick et al. (2009) also document the importance of developed academic behaviors. They refer to a series of non-cognitive skills that include study skills, time-management, and work habits. Similarly, Pittman (2010) characterizes these abilities as learning and innovation skills. Ultimately, it is suggested that beyond academic knowledge, the ability to practice strong academic skills and behaviors is an important component of readiness and findings in this study indicate that Nebraska 4-H provides opportunities for such practice.

**Institutional attachment.** The Institutional Attachment subscale is also seen as having two clusters related to satisfaction with being in college in general and satisfaction with being at the institution in which enrolled (Baker, n.d.; Baker & Siryk, 1989). For

the cluster of Attachment: This College, the three-way interaction among gender, institution-type and engagement showed significance at the .05 level of confidence. The effect of gender on Attachment: This College, was dependent on the institution type and influenced by the level of engagement. While the results for females are generally consistent across engagement levels, results for males were significantly influenced by their level of engagement. Specifically, higher reported engagement for males at two-year institutions was associated with higher satisfaction with their college choice, which could indicate that 4-H involvement played a more significant role in institution selection for those students. This may be due to a more likely connection between 4-H projects and the careers males pursue at two-year institutions. Males with an interest in agricultural or technical related fields may have experienced opportunities in 4-H to be heavily engaged in their interest area leading to a well-made decision about their institution choice. Essentially, opportunity to practice and explore the content area in 4-H solidified their career decision leading to increased confidence and clear expectations regarding their college experience. Overall, scores on the institutional adjustment subscale indicated that all former 4-H participants were generally satisfied with their college choice and greater satisfaction with that choice may suggest a greater likelihood of persistence.

This may be explained by the qualitative data which suggest that staff are intentionally creating opportunities for students to explore college options. Additionally, staff reported the value of the connection between 4-H and the University of Nebraska-Lincoln as an asset and referenced utilizing campus visits as a method of introducing students to a college campus and aiding in their decision-making process. Though 4-H is

directly connected to the University of Nebraska-Lincoln, the opportunities to explore campus and begin thinking about the options for higher education likely benefits all students, even those who ultimately select another campus. Exposure to campus and faculty at UNL or any institution provides students an opportunity to begin establishing their own expectations and needs for college. The former 4-H participants did not credit 4-H specifically for the choice of their institution, but did recognize the value of the cumulative experience, which allowed them to explore diverse career and post-secondary options. Additionally, they credited 4-H with building assets such as confidence, independence, networking and communication skills, which likely enhance their ability to navigate campus and more easily adjust to their new environment. Conley (2007) introduced contextual factors as part of a more comprehensive definition. He suggests that an understanding of the system and culture of college that must be navigated. Specific characteristics that further describe this facet include an ability to interact successfully with a diverse range of faculty, staff and students; and an understanding of the values and norms of colleges (Conley, 2007, p. 18). The findings in this study suggest that former 4-H participants felt well prepared to navigate their college environment and were confident in their abilities to network and communicate with others at college.

**Personal and emotional adjustment.** The Personal and Emotional Adjustment subscale is designed to measure how an individual is feeling both psychologically and physically. Personal-Emotional Adjustment is seen as having two distinct clusters which include: sense of psychological well-being; and sense of physical well-being (Baker, n.d.; Baker & Siryk, 1989). The results for the psychological cluster indicated significant

mean differences for gender at the .05 level of confidence. Similarly, the results for the physical cluster also indicated significant mean differences for gender at the .05 level of confidence. In both clusters, males report lower mean scores indicating that items in the cluster apply more closely to them than females, thus indicating that the reported psychological and physical adjustment are stronger for males than females. This may indicate that transition creates a greater physical and emotional strain for females than for males which could potentially make the overall adjustment to college more difficult for females than for males. However, it may also imply that males are less likely to acknowledge or perceive challenges related to their physical and emotional adjustment.

The qualitative findings do not shed further light on the difference between genders. Males and females engaged in the interviews responded similarly when asked about their transition to college and credited 4-H for building positive personal assets that helped prepare them for college. Specifically, youth reported being confident and independent, traits which likely prepared them to be away from home and be more comfortable navigating a new environment. Further study is needed to understand the differences between gender groups in this population.

**Social adjustment.** The Social Adjustment subscale examines items relevant to the interpersonal and societal demands of college. Social Adjustment also has four clusters which include: extent and success of social activities and functioning in general; involvement with other persons on campus; relocation away from home and significant persons there; and satisfaction with the social environment (Baker, n.d.; Baker & Siryk, 1989).

The quantitative findings show that students in four-year institutions respond that the items in the Social Adjustment clusters of general and environment apply significantly more closely to them than students at a two-year institutions. Thus, four-year students report stronger social adjustment than two-year students. This might be due to differing experiences available at four-year and two-year institutions. Specifically four-year campuses are more likely to offer a wider array of organized clubs, activities and campus sponsored events, increased options for residential campus living and overall cultivate a culture that encourages campus engagement outside of the classroom. Additionally, the level of engagement also significantly influenced student responses to the items in this Social Adjustment: General cluster and illustrate that students who reported high engagement are better socially adjusted than those reporting minimal or moderate engagement. This implies that the 4-H experience contributes to the ability of its participants to adjust well socially. This may be due to the increased opportunities presented to those most highly engaged students to build and practice their social skills with peers and mentors.

The qualitative findings strongly reinforced that former 4-H participants felt socially prepared for college. However, no explanation was exposed for the differences between institution types. This may imply that despite differing degrees of social engagement opportunities available at selected institutions, former 4-H participants are able to identify opportunities that fulfill their expectations for social engagement at college. It may also suggest that former 4-H participants made a well-informed decision and selected a college which offered a social environment well suited to their individual preferences.



Former 4-H participants from both institution types credited 4-H for relevant skill development, which aided them socially. Specifically, networking, confidence and public speaking were all mentioned. Staff similarly agreed that the skills youth develop through the cumulative experience in 4-H help to prepare them socially in regards to interaction with their peers and with campus faculty and staff. The value of such skill development is also reinforced in the literature. Porchea et al. (2010) discussed the importance of social competence to develop relationships and build ties in a community, both factors that significantly impact persistence. Additionally, Barnett (2010) emphasizes the importance of student integration and involvement in college. She further implores that engagement and social integration are keys to persistence. In regards to college readiness, students need to be prepared with the social competence and skills to achieve engagement and integration. Reason (2009) offers a contextual framework for persistence that recognizes the value of contextual skills both in understanding and navigating the college environment and in having a positive experience both in and out of the classroom. Finally, Pittman (2010) and Porchea et al. (2010) reinforce the value of life skills and discussed them as essential elements to being college and career ready. The qualitative findings in this study strongly imply that the 4-H experience does develop skills and assets which aided the transition and adaptation of former 4-H participants to college.

### **Summary**

Conley's (2007) college readiness framework captured the facets discussed by many authors and offers a truly comprehensive definition that describes a multi-faceted approach which includes factors that are both internal and external to the school-

environment. Conley generally defines “students who possess sufficient mastery of key cognitive strategies, key content knowledge, academic behaviors, and contextual knowledge would be defined as being college-ready” (Conley, 2007, p. 5). The four facets “are neither mutually exclusive nor perfectly nested. They interact with and affect one another extensively” (Conley, 2007, p. 12). He suggests that a student who meets all the aspects of the college readiness definition would be comfortable in their transition to college. The four components of this more comprehensive definition combined represent both the necessary knowledge and skill development, but also the ability to apply knowledge and skill.

The quantitative results are indicative of former 4-H participants’ ability to apply the knowledge and skills they gained in part through their 4-H experience. The categories of the SACQ are closely aligned with the facets of Conley’s theory and the results indicate that former 4-H participants are prepared or readied for the transition. Though the 4-H program was not described through the qualitative data as directly targeting cognitive strategies and key content knowledge, the data do describe the program as contributing to contextual knowledge and the academic behaviors necessary for readiness. The diverse, cumulative 4-H experience offers opportunities for skill development relevant to college readiness and opportunities to practice the application of those skills. Ultimately, the findings in this study indicate that the Nebraska 4-H experience positively contributes to the college readiness equation for its participants.

## **Implications**

The results of this study suggest the following implications for Nebraska 4-H and nonformal education related to the work of preparing young people for post-secondary education.

1. The Nebraska 4-H experience contributes positively to the college readiness of participants through a cumulative experience of diverse learning opportunities and a focus on relevant skill development. There is not one prescriptive collection of program, activities or projects, but rather success is recognized through the cumulative experience. A model of a multi-faceted experience, rich with opportunity to develop and practice the application of skills may contribute to the best practices of this organization and be informative to other nonformal youth development organizations as similar practices could be employed by after-school and out-of-school time programs.
2. This study represents one example of a nonformal youth development organization's efforts toward preparing young people for college. While this is only a single example, it contributes to the body of evidence suggesting that nonformal education should be recognized as a key contributor in the pursuit of preparing young people for a comprehensive readiness described by Conley (2007).
3. While the findings of this study related to academic adjustment were not significant, they present a potentially important opportunity for 4-H and other nonformal organization to more intentionally connect with the formal education experience. Reason (2009) reinforces the value of academic

preparedness and performance stating that they “are likely the strongest predictors of college persistence and degree attainment” (p. 664). Though this study focused on a more comprehensive understanding of college readiness, without question, a certain degree of academic aptitude is essential in achieving college readiness. The comprehensive approach described by Conley (2007) described the facets of readiness as “nested” in one another and connected in a way that facets reinforce one another. The efforts of formal and nonformal education should be similarly “nested” and reinforce one another as a deficiency in any facet of readiness will negatively affect student transition and persistence.

4. There was no one prescriptive experience documented in this study that accounts for a readiness to successfully navigate the environment of college and create a healthy attachment with the college environment. Positive results related to satisfaction at their selected institutions implied that participants made well-informed post-secondary decisions. Additionally, the findings of this study imply that higher levels of engagement in the cumulative 4-H experience results in increased opportunity for skill development which likely enhances students’ ability to navigate campus and more easily assimilate to their new environment, thus creating greater attachment to college.
5. Nebraska 4-H is well positioned to contribute to social adjustment, an opportunity reasonably shared by other nonformal youth development organizations due to a far wider scope and greater versatility, diversity and adaptability than formal education. Nonformal education has extraordinary

freedom and latitude to target virtually any kind of learning they desire (Khan, 1989). Though content plays an important role, nonformal educators have the luxury to focus less on the transfer of knowledge and more on the skills developed in concert with content learning. The development of college relevant skills, documented in this study such as networking, public speaking and independence, and the ability to practice and apply those skills prepared students for the social adjustment of college.

6. Though only documented in this study through the staff interviews, it did appear that participants understand the value of their choices relevant to selecting a college major. Johnson and Rochkind (2009), in their survey of more than 600 students, introduced a series of situational realities that can influence college readiness and persistence, one of which is that while students understand having a degree is an asset, they are unable to fully see the impact at the time they choose to leave. Most of the students engaged in the study reported that they always planned to go to college. However, students who did not graduate from college identified a lesser influence from parents and teachers regarding their college plans. While the significance of this factor is less prevalent than those previously discussed, it does help explain which students are more likely to reach the tipping point to leave college (Johnson & Rochkind, 2009). In this study, students did not directly credit 4-H with influencing their college decision. However, they did indicate that the Nebraska 4-H experience provided many opportunities for exploration of their future plans, thus implying that they had opportunities to explore the

potential outcomes of those options. Further, they likely understand the weight and potential value of their decisions and the purposeful efforts of the organization to help youth understand their options were successful.

7. Finally, nonformal education can aid in closing the college readiness gap and this study exposed several unique strengths of the Nebraska 4-H program that offer insight into how the Nebraska 4-H experience successfully approaches college readiness. These approaches may also be replicable in other nonformal youth development efforts. Notable program strengths documented in this study included positive youth-adult relationships, an individually tailored program and intentional connections between the program experience and higher education. As previously mentioned, nonformal education, has great latitude with the learning environment they create (Khan, 1989). Youth-adult relationships in 4-H are not traditional parent-child or teacher-student relationships which have a necessary established hierarchy. Rather, adults in these relationships serve in a mentor-like capacity and often relationship are built around a shared-interest. Further, the program experience is self-guided and non-prescriptive, allowing the learning to be truly tailored toward the desires of the individual student and their future aspirations. Lastly, this study examined a program with a direct connection to a University system, which allowed many opportunities to connect students with on-campus experiences and research-based resources. Though other nonformal organizations may not have the same University relationship, there are certainly many avenues available to connect young

people to campuses and to make intentional connections between the program experience and future college and career aspirations.

### **Suggestions for Future Research**

There are many opportunities for future research related to this study. First, there is a significant gap in the literature regarding the role of nonformal youth development in addressing concerns related to the college readiness of today's high-school graduates. There is a need for additional case studies, and for an eventual meta-analysis of existing studies with the goal of identifying patterns and results useful to the larger field of youth development and to provide opportunities for comparison among nonformal educational programs. Additionally, this type of study would reinforce the role of nonformal education and potentially create more intentional efforts between formal and nonformal education in preparing young people for college.

Specific to this study, the minor findings in the qualitative data also offer future opportunities for research. Staff documented the value of partnerships; community connections; family connections; efforts to bring youth back to communities; and opportunities to extend classroom learning all a potential factors leading to success in college readiness efforts. Similarly, youth also mentioned in a minor capacity, the influence of 4-H on the selection of academic coursework, college and college major. Though these areas did not emerge as major themes in this study, additional studies may further expose the potential value of these factors.

The findings related to academic adjustment present another opportunity for future research. Though the findings didn't expose a significant interaction between engagement levels in 4-H and academic adjustment, the literature strongly reinforces that

academic adjustment is critical to success in college (Reason, 2009). This warrants further examination of what is being done by Nebraska 4-H and other nonformal youth development organizations to support academic preparedness. A greater understanding of current practices may also expose potential opportunities for nonformal education to contribute to closing the academic preparedness gap.

Significant findings in the quantitative data related to differences between gender groups and institution type groups were not sufficiently understood through the qualitative data in this study. The influence of 4-H related to personal and emotional adjustment and social adjustment may be better explained by further comparison of gender and institution type groups. Further review of existing literature related to transition differences among males and females and the social experiences and engagement opportunities at different institution types would be necessary in establishing future research questions which could be explored through subsequent case studies.

This case study also presents possible opportunities for replication. Yin (2008) recommends in his case study methodology, that while the purpose of a case study isn't to generalize, one might conceptually transfer findings, however, I would recommend the collection of additional empirical evidence. Replicating this study with other nonformal youth serving organizations may expose whether or not these type of findings are specific to 4-H or shared among organizations with similar educational approaches. Additionally, this study could also be replicated by 4-H programs at other Land Grant Universities. A collection of 4-H case studies could expose commonalities and unique differences among 4-H organizations across the country. Researchers interested in replicating this study may consider collecting additional data on participant program duration by documenting



the start and exit dates of participants' program experiences. Also, the addition of a control group would introduce valuable opportunities for comparison in future studies.

Finally, there is an opportunity to investigate the degree to which transition indicates retention for Nebraska 4-H participants. The current case study provides insight into the transitional success of former 4-H participants to post-secondary education, but provides no evidence relative to the participants' ability to persist through college. A longitudinal study following 4-H participants through the completion of post-secondary education would further describe the summative impacts of 4-H relevant both to transition and persistence in post-secondary education and support the body of research which supports transition as a predictor of persistence.

## **Conclusion**

According to Chickering (1996), the transition to college is marked by complex challenges in emotional, social and academic adjustment. A longitudinal study conducted by Gerdes and Mallinckrodt (1994) examined college transition as a key variable for understanding a student's decision to leave or remain in college. Their findings support that adjustment and early integration into campus life are "at least as important as academic factors in student retention" (p. 286).

The findings presented in this study indicate that the Nebraska 4-H experience does contribute to the preparedness of participants to transition to college, which suggests the increased likelihood that former participants will persist in achieving a degree. Most notably, the level of engagement in 4-H positively influences attachment to the college and social adjustment for some students. Further, the qualitative data describes a rich diverse experience with multiple points of connection for participants. Both staff and

students credit the cumulative experience and all of the facets of the Nebraska 4-H experience with preparing participants for success in the future. Additionally, both groups documented that the 4-H experience results in skill development that is relevant to a successful transition to college.

Preparing young people for successful futures is the primary goal of many nonformal youth development programs. The findings of this study certainly aid Nebraska 4-H in understanding how their program contributes to college readiness and exposes potential opportunities to maximize impacts related to college readiness. The findings and description of practices may also be applicable to other nonformal youth development organization. Finally, the results of this study document how one nonformal youth development organization contributes to closing the readiness gap and contributes an increased understanding of the role of nonformal, out-of-school time experiences in preparing young people for college.

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## **Appendix A**

### **Student Adaptation to College Questionnaire**

### **Student Adaptation to College Questionnaire**

Four introductory questions will assess the race, gender, type of college attended and the perceived level of engagement in 4-H as highly engaged, moderately engaged or minimally engaged. The following items of the SACQ ask the student to determine how well each item applies to the student on a nine point scale from “this applies very closely to me” to this “doesn’t apply to me at all”.

1. I feel that I fit in well as part of the college environment.
2. I have been feeling tense or nervous lately.
3. I have been keeping up to date on my academic work.
4. I am meeting as many people, and making as many friends as I would like in college.
5. I know why I’m in college and what I want out of it.
6. I am finding academic work at college difficult.
7. Lately I have been feeling blue and moody a lot.
8. I am very involved with social activities in college.
9. I am adjusting well to college.
10. I have not been functioning well during examinations.
11. I have felt tired much of the time lately.
12. Being on my own, taking responsibility for myself, has not been easy.
13. I am satisfied with the level at which I’m performing academically.
14. I have had informal, personal contacts with college professors.
15. I am pleased now about my decision to go to college.
16. I am pleased now about my decision to attend this college in particular.
17. I’m not working as hard as I should be at my course work.
18. I have several close social ties at college.
19. My academic goals and purposes are well defined.
20. I haven’t been able to control my emotions very well lately.
21. I’m not really smart enough for the academic work I’m expected to be doing now.
22. Lonesomeness for home is a source of difficulty for me now.
23. Getting a college degree is very important to me.
24. My appetite has been good lately.
25. I haven’t been very efficient in the use of study time lately.
26. I enjoy living in a college dormitory.
27. I enjoy writing papers for courses.
28. I have been having a lot of headaches lately.
29. I really haven’t had much motivation for studying lately.
30. I am satisfied with extracurricular activities available at college.

31. I've given a lot of thought lately as to whether I should ask for help from the Psychological/Counseling Services Center or from a psychotherapist outside of college.
32. Lately, I have been having doubts regarding the value of a college education.
33. I am getting along very well with my roommate(s) at college.
34. I wish I were at another college or university.
35. I've put on or lost too much weight recently.
36. I am satisfied with the number and variety of courses available at college.
37. I feel that I have enough social skills to get along well in the college setting.
38. I have been getting angry too easily lately.
39. Recently, I have had trouble concentrating when I try to study.
40. I haven't been sleeping very well.
41. I'm not doing well enough academically for the amount of work I put in.
42. I am having difficulty feeling at ease with other people at college.
43. I am satisfied with quality or caliber of courses available at college.
44. I am attending classes regularly.
45. Sometimes my thinking gets muddled up too easily.
46. I am satisfied to the extent at which I am participating in social activities at college.
47. I expect to stay at this college for a bachelor's degree.
48. I haven't been mixing too well with the opposite sex lately.
49. I worry a lot about my college expenses.
50. I am enjoying my academic work at college.
51. I have been feeling lonely a lot at college lately.
52. I am having a lot of trouble getting started on homework assignments.
53. I feel I have good control over my life situation at college.
54. I am satisfied with my program of courses for this semester/quarter.
55. I have been feeling in good health lately.
56. I feel I am very different from other students at this college in ways that I don't like.
57. On balance, I would rather be home than here.
58. Most of the things I am interested in are not related to any of my coursework at college.
59. Lately, I have been giving a lot of thought to transferring to another college.
60. Lately, I have been giving a lot of thought to dropping out college all together and for good.
61. I find myself giving considerable thought to taking time off from college and finishing it later.
62. I am very satisfied with professors I have now in my courses.

- 63. I have some good friends or acquaintances at college with whom I can talk about any problems I may have.
- 64. I am experiencing a lot of difficulty coping with stresses imposed upon me in college.
- 65. I am quite satisfied with my social life at college.
- 66. I am quite satisfied with my academic situation at college.
- 67. I feel confident that I will be able to deal in a satisfactory manner with future challenges here at college.

## **Appendix B**

### **Interview Protocol for Former 4-H Participants**

### **Interview Protocol for Former 4-H Participants**

#### **Instructions:**

1. Present the interviewer with the consent form describing the study and their rights as a participant. Provide them time to review the document, confirm that they understand their rights and specifically ask their permission to record the interview. Finally, collect their signature on the consent form.
2. Prior to starting the recording, remind the participant to answer the questions with as much details as possible and not to omit any information they believe is already known to the researcher.
3. Begin each recording by stating the name of the interview participant and documenting the date and time of the interview.
4. Read each question, one at a time and allow the participant ample time to respond. Follow-up with prompts such as “tell me more about” or “can you explain further what you meant by” to ensure that the richest detail has been captured. Allow for all responses, even if the participant goes away from the topic of the initial question.
5. After all questions have been answered, review and repeat any questions that you feel were insufficiently answered.
6. At the close of the interview, offer an opportunity for the participant to expand on anything else related to the interview topic that may not have been asked. Lastly, thank the participant for their responses.

#### **Questions:**

1. Describe your 4-H experience.
2. Is there a specific 4-H program or event that influenced your college plans?

Please explain:

3. Describe in your own words the impact 4-H had in preparing you for the transition to college.
4. Did 4-H help foster your interest in taking additional course work to provide the professional skills needed for your future career? Please explain.
5. What are other things 4-H could do to better prepare students for their future?

## **Appendix C**

### **Interview Protocol for Staff**



### **Interview Protocol for Staff**

#### **Instructions:**

1. Present the interviewer with the consent form describing the study and their rights as a participant. Provide them time to review the document, confirm that they understand their rights and specifically ask their permission to record the interview. Finally, collect their signature on the consent form.
2. Prior to starting the recording, remind the participant to answer the questions with as much details as possible and not to omit any information they believe is already known to the researcher.
3. Begin each recording by stating the name of the interview participant and documenting the date and time of the interview.
4. Read each question, one at a time and allow the participant ample time to respond. Follow-up with prompts such as “tell me more about” or “can you explain further what you meant by” to ensure that the richest detail has been captured. Allow for all responses, even if the participant goes away from the topic of the initial question.
5. After all questions have been answered, review and repeat any questions that you feel were insufficiently answered.
6. At the close of the interview, offer an opportunity for the participant to expand on anything else related to the interview topic that may not have been asked. Lastly, thank the participant for their responses.

#### **Questions:**

1. Describe your efforts toward influencing college readiness in youth.
2. Describe your experience in developing and delivering programs or practices that influence college readiness.
3. Are there specific practices that directly target any of the constructs of adaptation to college as described on the SACQ?
4. What contextual factors describe your program?
  - a. Setting, community type, delivery mode
  - b. Participation level/dosage
  - c. Structural supports such as partnerships, funding, established longevity, connection to UNL

## **Appendix D**

### **Non-Significant ANCOVA Results**

### Non-Significant ANCOVA Results

#### Academic Adjustment: Academic Environment

The mean values for the Academic Adjustment: Academic Environment cluster are illustrated in Table 26. Means are shown for gender, institution type and for the combined variables. The grand mean is  $\bar{X} = 3.24$  with a standard deviation of 1.03. Generally speaking, the grand mean indicates that students felt the items in this cluster applied relatively closely to them.

Table 26

#### *Descriptive Statistics, Academic Adjustment: Academic Environment*

Gender	Institution Type	Mean	Std. Deviation	N
Males	Two-Year	3.6000	1.12015	20
	Four-Year	3.3419	1.10296	31
	Total	3.4431	1.10585	51
Females	Two-Year	3.3467	.96056	15
	Four-Year	3.0567	.95588	67
	Total	3.1098	.95744	82
Total	Two-Year	3.4914	1.04751	35
	Four-Year	3.1469	1.00783	98
	Total	3.2376	1.02577	133

Levene's Test of Equity of Error Variance established the homogeneity of variances of the dependent variable across groups. Table 27 shows a significance value of .670. A value greater than .05, the level set for alpha, shows that for the Academic

Table 27

*Levene's Test of Equality of Error Variance, Academic Adjustment: Academic Environment*

F	df1	df2	Sig.
.518	3	129	.670

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Institution Type + Engagement + Gender \* Engagement + Gender \* Institution Type + Institution Type \* Engagement + Gender \* Institution Type \* Engagement

Adjustment: Academic Environment cluster there is homogeneity of variance. If the significance value had been less than .05, it would have concluded the variance across groups to be unequal.

The results of the ANCOVA inform whether or not significant mean differences exist between the groups of independent variables of gender and institution type and for their interaction gender\*institution type. Initially, the covariate was allowed to interact with predictors to assess the homogeneity of regression assumption, testing whether or not the covariate explains any difference between variable groups. For the cluster of Academic Adjustment Academic Environment there were no significance values for the variables or their interactions which were below .05 and therefore there were no significant mean differences (see Table 28). For example, for gender the p-value is .064. Table 28 also illustrates the observed powers which are expectedly low as the effect sizes are small.

Table 28

*Tests of Between Subject Effects: Academic Adjustment Academic Environment 1*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	11.949 <sup>a</sup>	7	1.707	1.681	.120	.086	11.766	.671
Intercept	122.225	1	122.225	120.354	.000	.491	120.354	1.000
Gender	3.538	1	3.538	3.484	.064	.027	3.484	.457
Institution Type	3.082	1	3.082	3.034	.084	.024	3.034	.409
Engagement	.106	1	.106	.104	.748	.001	.104	.062
Gender * Engagement	2.168	1	2.168	2.135	.147	.017	2.135	.305
Gender * Institution Type	.929	1	.929	.915	.341	.007	.915	.158
Institution Type * Engagement	1.879	1	1.879	1.850	.176	.015	1.850	.271
Gender * Institution Type * Engagement	1.050	1	1.050	1.034	.311	.008	1.034	.172
Error	126.943	125	1.016					
Total	1533.000	133						
Corrected Total	138.892	132						

a. R Squared = .086 (Adjusted R Squared = .035)

b. Computed using alpha = .05

Post determining the non-significance of the variable factors, the analysis was conducted a second time removing the covariate interaction of engagement. This step was done to simplify the results and to reexamine if there were any significance changes for gender, institution type or engagement without the three-way interaction. The results found in Table 29 again indicated no significant mean differences with significance

Table 29

*Tests of Between Subject Effects: Academic Adjustment Academic Environment 2*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	8.118 <sup>a</sup>	4	2.030	1.987	.100	.058	7.946	.583
Intercept	156.277	1	156.277	152.962	.000	.544	152.962	1.000
Gender	1.714	1	1.714	1.677	.198	.013	1.677	.251
Institution Type	1.444	1	1.444	1.413	.237	.011	1.413	.219
Engagement	2.784	1	2.784	2.724	.101	.021	2.724	.374
Gender * Institution Type	.040	1	.040	.039	.844	.000	.039	.054
Error	130.774	128	1.022					
Total	1533.000	133						
Corrected Total	138.892	132						

a. R Squared = .058 (Adjusted R Squared = .029)

b. Computed using alpha = .05

values ranging from .101 to .844. Finally, the covariate was removed completely resulting in a two-way ANOVA shown in Table 30. The results continue to show no significant mean differences with significance values ranging from .186 to .938.

### **Academic Adjustment: Application**

The mean values for the Academic Adjustment: Application cluster are illustrated in Table 31. Means are shown for gender, institution type and for the combined variables. The grand mean is  $\bar{X} = 2.59$  with a standard deviation of 1.18. Generally

Table 30

*Tests of Between Subject Effects: Academic Adjustment Academic Environment 3*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	5.335 <sup>a</sup>	3	1.778	1.718	.167	.038	5.153	.440
Intercept	1086.954	1	1086.954	1049.865	.000	.891	1049.865	1.000
Institution Type	1.833	1	1.833	1.770	.186	.014	1.770	.262
Gender	1.770	1	1.770	1.710	.193	.013	1.710	.255
Institution Type * Gender	.006	1	.006	.006	.938	.000	.006	.051
Error	133.557	129	1.035					
Total	1533.000	133						
Corrected Total	138.892	132						

a. R Squared = .038 (Adjusted R Squared = .016)

b. Computed using alpha = .05

speaking, the grand mean indicates that students felt the items in this cluster applied relatively closely to them.

Levene's Test of Equity of Error Variance established the homogeneity of variances of the dependent variable across groups. Table 32 shows a significance value of .936. A value greater than .05, the level set for alpha, shows that for the Academic Adjustment: Application cluster there is homogeneity of variance. If the significance value had been less than .05, it would have concluded the variance across groups to be unequal.

Table 31

*Descriptive Statistics, Academic Adjustment: Application*

Gender	Institution Type	Mean	Std. Deviation	N
Males	Two-Year	2.6125	1.11649	20
	Four-Year	2.6129	1.15260	31
	Total	2.6127	1.12729	51
Females	Two-Year	2.6500	1.50238	15
	Four-Year	2.5522	1.16005	67
	Total	2.5701	1.21987	82
Total	Two-Year	2.6286	1.27529	35
	Four-Year	2.5714	1.15209	98
	Total	2.5865	1.18107	133

Table 32

*Levene's Test of Equality of Error Variance, Academic Adjustment: Application*

F	df1	df2	Sig.
.141	3	129	.936

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Institution Type + Engagement + Gender \* Engagement + Gender \* Institution Type + Institution Type \* Engagement + Gender \* Institution Type \* Engagement

The results of the ANCOVA inform whether or not significant mean differences exist between the groups of independent variables of gender and institution type and for their interaction gender\*institution type. Initially, the covariate was allowed to interact with predictors to assess the homogeneity of regression assumption, testing whether or not the covariate explains any difference between variable groups. For the cluster of



Academic Adjustment: Application there were no significance values for the variables or their interactions which were below .05 and therefore there were no significant mean differences (see Table 33). For example, for gender the p-value is .898.

Table 33

*Tests of Between Subject Effects: Academic Adjustment Application 1*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	3.304 <sup>a</sup>	7	.472	.326	.941	.018	2.284	.146
Intercept	68.873	1	68.873	47.610	.000	.276	47.610	1.000
Gender	.024	1	.024	.016	.898	.000	.016	.052
Institution Type	2.161	1	2.161	1.494	.224	.012	1.494	.228
Engagement	.216	1	.216	.149	.700	.001	.149	.067
Gender * Engagement	.013	1	.013	.009	.923	.000	.009	.051
Gender * Institution Type	.183	1	.183	.126	.723	.001	.126	.064
Institution Type * Engagement	2.795	1	2.795	1.932	.167	.015	1.932	.281
Gender * Institution Type * Engagement	.120	1	.120	.083	.774	.001	.083	.059
Error	180.826	125	1.447					
Total	1073.875	133						
Corrected Total	184.131	132						

a. R Squared = .018 (Adjusted R Squared = -.037)

b. Computed using alpha = .05

Post determining the non-significance of the variable factors, the analysis was conducted a second time removing the covariate interaction of engagement. This step was done to simplify the results and to reexamine if there were any significance changes for gender, institution type or engagement without the three-way interaction. The results found in Table 34 again indicated no significant mean differences with significance values ranging from .630 to .957. Finally, the covariate was removed completely resulting in a two-way ANOVA shown in Table 35. The results continue to show no significant mean differences with significance values ranging from .839 to .962.

Table 34

*Tests of Between Subject Effects: Academic Adjustment Application 2*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	.509 <sup>a</sup>	4	.127	.089	.986	.003	.355	.068
Intercept	131.597	1	131.597	91.734	.000	.417	91.734	1.000
Gender	.004	1	.004	.003	.957	.000	.003	.050
Institution Type	.084	1	.084	.059	.809	.000	.059	.057
Engagement	.335	1	.335	.233	.630	.002	.233	.077
Gender * Institution Type	.040	1	.040	.028	.868	.000	.028	.053
Error	183.622	128	1.435					
Total	1073.875	133						
Corrected Total	184.131	132						

a. R Squared = .003 (Adjusted R Squared = -.028)

b. Computed using alpha = .05

Table 35

*Tests of Between Subject Effects: Academic Adjustment Application 3*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	.174 <sup>a</sup>	3	.058	.041	.989	.001	.122	.057
Intercept	663.629	1	663.629	465.372	.000	.783	465.372	1.000
Institution Type	.058	1	.058	.041	.841	.000	.041	.055
Gender	.003	1	.003	.002	.962	.000	.002	.050
Gender * Institution Type	.059	1	.059	.041	.839	.000	.041	.055
Error	183.956	129	1.426					
Total	1073.875	133						
Corrected Total	184.131	132						

a. R Squared = .001 (Adjusted R Squared = -.022)

b. Computed using alpha = .05

**Academic Adjustment: Motivation**

The mean values for the Academic Adjustment: Motivation cluster are illustrated in Table 36. Means are shown for gender, institution type and for the combined variables. The grand mean is  $\bar{X} = 2.18$  with a standard deviation of 1.10. Generally speaking, the grand mean indicates that students felt the items in this cluster applied relatively closely to them.

Levene's Test of Equity of Error Variance established the homogeneity of variances of the dependent variable across groups. Table 37 shows a significance value of .877. A value greater than .05, the level set for alpha, shows that for the Academic Adjustment: Motivation cluster there is homogeneity of variance. If the significance

Table 36

*Descriptive Statistics, Academic Adjustment: Motivation*

Gender	Institution Type	Mean	Std. Deviation	N
Males	Two-Year	2.4700	1.13002	20
	Four-Year	2.3677	1.24268	31
	Total	2.4078	1.18926	51
Females	Two-Year	2.1200	1.09753	15
	Four-Year	2.0209	1.01631	67
	Total	2.0390	1.02533	82
Total	Two-Year	2.3200	1.11376	35
	Four-Year	2.1306	1.09849	98
	Total	2.1805	1.10148	133

Table 37

*Levene's Test of Equality of Error Variance, Academic Adjustment: Motivation*

F	df1	df2	Sig.
.227	3	129	.877

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Institution Type + Engagement + Gender \* Engagement + Gender \* Institution Type + Institution Type \* Engagement + Gender \* Institution Type \* Engagement

value had been less than .05, it would have concluded the variance across groups to be unequal.

The results of the ANCOVA inform whether or not significant mean differences exist between the groups of independent variables of gender and institution type and for their interaction gender\*institution type. Initially, the covariate was allowed to interact with predictors to assess the homogeneity of regression assumption, testing whether or

not the covariate explains any difference between variable groups. For the cluster of Academic Adjustment: Motivation there were no significance values for the variables or their interactions which were below .05 and therefore there were no significant mean differences (see Table 38). For example, for gender the p-value is .268.

Table 38

*Tests of Between Subject Effects: Academic Adjustment Motivation 1*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	6.211 <sup>a</sup>	7	.887	.720	.655	.039	5.043	.300
Intercept	58.933	1	58.933	47.854	.000	.277	47.854	1.000
Gender	1.524	1	1.524	1.237	.268	.010	1.237	.197
Institution Type	.594	1	.594	.482	.489	.004	.482	.106
Engagement	.002	1	.002	.001	.972	.000	.001	.050
Gender * Engagement	.403	1	.403	.328	.568	.003	.328	.088
Gender * Institution Type	1.281	1	1.281	1.040	.310	.008	1.040	.173
Institution Type * Engagement	.392	1	.392	.319	.573	.003	.319	.087
Gender * Institution Type * Engagement	1.447	1	1.447	1.175	.281	.009	1.175	.189
Error	153.938	125	1.232					
Total	792.480	133						
Corrected Total	160.149	132						

a. R Squared = .039 (Adjusted R Squared = -.015)

b. Computed using alpha = .05

Post determining the non-significance of the variable factors, the analysis was conducted a second time removing the covariate interaction of engagement. This step was done to simplify the results and to reexamine if there were any significance changes for gender, institution type or engagement without the three-way interaction. The results found in Table 39 again indicated no significant mean differences with significance values ranging from .122 to .990. Finally, the covariate was removed completely resulting in a two-way ANOVA shown in Table 40. The results continued to show no significant mean differences with significance values ranging from .119 to .994.

Table 39

*Tests of Between Subject Effects: Academic Adjustment Motivation 2*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	4.616 <sup>a</sup>	4	1.154	.950	.438	.029	3.799	.294
Intercept	83.788	1	83.788	68.955	.000	.350	68.955	1.000
Gender	2.950	1	2.950	2.428	.122	.019	2.428	.340
Institution Type	.220	1	.220	.181	.671	.001	.181	.071
Engagement	.091	1	.091	.075	.785	.001	.075	.058
Gender * Institution Type	.000	1	.000	.000	.990	.000	.000	.050
Error	155.533	128	1.215					
Total	792.480	133						
Corrected Total	160.149	132						

a. R Squared = .029 (Adjusted R Squared = -.002)

b. Computed using alpha = .05

Table 40

*Tests of Between Subject Effects: Academic Adjustment Motivation 3*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	4.525 <sup>a</sup>	3	1.508	1.250	.294	.028	3.751	.328
Intercept	492.010	1	492.010	407.836	.000	.760	407.836	1.000
Institution Type	.247	1	.247	.205	.651	.002	.205	.073
Gender	2.964	1	2.964	2.457	.119	.019	2.457	.343
Gender * Institution Type	.000	1	.000	.000	.994	.000	.000	.050
Error	155.624	129	1.206					
Total	792.480	133						
Corrected Total	160.149	132						

a. R Squared = .028 (Adjusted R Squared = .006)

b. Computed using alpha = .05

**Academic Adjustment: Performance**

The mean values for the Academic Adjustment: Performance cluster are illustrated in Table 41. Means are shown for gender, institution type and for the combined variables. The grand mean is  $\bar{X} = 3.75$  with a standard deviation of 1.33. Generally speaking, the grand mean indicates that students felt the items in this cluster applied relatively closely to them.

Levene's Test of Equity of Error Variance established the homogeneity of variances of the dependent variable across groups. Table 42 shows a significance value of .091. A value greater than .05, the level set for alpha, shows that for the Academic

Table 41

*Descriptive Statistics, Academic Adjustment: Performance*

Gender	Institution Type	Mean	Std. Deviation	N
Male	Two-Year	3.5389	1.13671	20
	Four-Year	3.5556	1.34868	31
	Total	3.5490	1.25794	51
Female	Two-Year	3.7926	.91226	15
	Four-Year	3.8988	1.46038	67
	Total	3.8794	1.37234	82
Total	Two-Year	3.6476	1.03969	35
	Four-Year	3.7902	1.42808	98
	Total	3.7527	1.33457	133

Table 42

*Levene's Test of Equality of Error Variance, Academic Adjustment: Performance*

F	df1	df2	Sig.
2.205	3	129	.091

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Institution Type + Engagement + Gender \* Engagement + Gender \* Institution Type + Institution Type \* Engagement + Gender \* Institution Type \* Engagement

Adjustment: Performance cluster there is homogeneity of variance. If the significance value had been less than .05, it would have concluded the variance across groups to be unequal.

The results of the ANCOVA inform whether or not significant mean differences exist between the groups of independent variables of gender and institution type and for their interaction gender\*institution type. Initially, the covariate was allowed to interact



with predictors to assess the homogeneity of regression assumption, testing whether or not the covariate explains any difference between variable groups. For the cluster of Academic Adjustment: Performance there were no significance values for the variables or their interactions which were below .05 and therefore there were no significant mean differences (see Table 43). For example, for gender the p-value is .517.

Table 43

*Tests of Between Subject Effects: Academic Adjustment Performance 1*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	6.304 <sup>a</sup>	7	.901	.492	.839	.027	3.444	.208
Intercept	136.297	1	136.297	74.464	.000	.373	74.464	1.000
Gender	.772	1	.772	.422	.517	.003	.422	.099
Institution Type	2.553	1	2.553	1.395	.240	.011	1.395	.216
Engagement	.612	1	.612	.334	.564	.003	.334	.088
Gender * Engagement	.102	1	.102	.055	.814	.000	.055	.056
Gender * Institution Type	.464	1	.464	.253	.616	.002	.253	.079
Institution Type * Engagement	2.514	1	2.514	1.373	.243	.011	1.373	.214
Gender * Institution Type * Engagement	.605	1	.605	.330	.567	.003	.330	.088
Error	228.798	125	1.830					
Total	2108.123	133						
Corrected Total	235.102	132						

a. R Squared = .027 (Adjusted R Squared = -.028)

b. Computed using alpha = .05

Post determining the non-significance of the variable factors, the analysis was conducted a second time removing the covariate interaction of engagement. This step was done to simplify the results and to reexamine if there were any significance changes for gender, institution type or engagement without the three-way interaction. The results found in Table 44 again indicated no significant mean differences with significance values ranging from .275 to .959. Finally, the covariate was removed completely resulting in a two-way ANOVA shown in Table 45. The results continued to show no significant mean differences with significance values ranging from .273 to .869.

Table 44

*Tests of Between Subject Effects: Academic Adjustment Performance 2*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	3.579 <sup>a</sup>	4	.895	.495	.740	.015	1.978	.165
Intercept	242.926	1	242.926	134.304	.000	.512	134.304	1.000
Gender	2.172	1	2.172	1.201	.275	.009	1.201	.193
Institution Type	.088	1	.088	.049	.826	.000	.049	.055
Engagement	.005	1	.005	.003	.959	.000	.003	.050
Gender * Institution Type	.051	1	.051	.028	.867	.000	.028	.053
Error	231.523	128	1.809					
Total	2108.123	133						
Corrected Total	235.102	132						

a. R Squared = .015 (Adjusted R Squared = -.016)

b. Computed using alpha = .05

Table 45

*Tests of Between Subject Effects: Academic Adjustment Performance 3*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	3.574 <sup>a</sup>	3	1.191	.664	.576	.015	1.991	.187
Intercept	1334.281	1	1334.281	743.420	.000	.852	743.420	1.000
Institution Type	.092	1	.092	.051	.821	.000	.051	.056
Gender	2.175	1	2.175	1.212	.273	.009	1.212	.194
Gender * Institution Type	.049	1	.049	.027	.869	.000	.027	.053
Error	231.528	129	1.795					
Total	2108.123	133						
Corrected Total	235.102	132						

a. R Squared = .015 (Adjusted R Squared = -.008)

b. Computed using alpha = .05

**Attachment: General**

The mean values for the Attachment: General cluster are illustrated in Table 46. Means are shown for gender, institution type and for the combined variables. The grand mean is  $\bar{X} = 1.54$  with a standard deviation of 0.99. Generally speaking, the grand mean indicates that students felt the items in this cluster applied very closely to them.

Levene's Test of Equity of Error Variance established the homogeneity of variances of the dependent variable across groups. Table 47 shows a significance value of .016. A value less than .05, the level set for alpha, shows that for the Attachment: General cluster the homogeneity of variance was violated. A significance value less than

Table 46

*Descriptive Statistics, Attachment: General*

Gender	Institution Type	Mean	Std. Deviation	N
Male	Two-Year	2.0000	1.32894	20
	Four-Year	1.5376	1.00987	31
	Total	1.7190	1.15542	51
Female	Two-Year	1.3556	.47920	15
	Four-Year	1.4428	.94172	67
	Total	1.4268	.87375	82
Total	Two-Year	1.7238	1.08912	35
	Four-Year	1.4728	.95958	98
	Total	1.5388	.99724	133

Table 47

*Levene's Test of Equality of Error Variance, Attachment: General*

F	df1	df2	Sig.
3.573	3	129	.016

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Institution Type + Engagement + Gender \* Engagement + Gender \* Institution Type + Institution Type \* Engagement + Gender \* Institution Type \* Engagement

.05, concludes the variance across groups to be unequal. “Violations of the homogeneity were corrected by the use of a more stringent alpha level of .025” (Tabachnick & Fidell, 2007).

The results of the ANCOVA inform whether or not significant mean differences exist between the groups of independent variables of gender and institution type and for their interaction gender\*institution type. Initially, the covariate was allowed to interact

with predictors to assess the homogeneity of regression assumption, testing whether or not the covariate explains any difference between variable groups. For the cluster of Attachment: General there were no significance values for the variables or their interactions which were below the more stringent alpha level applied to this cluster of .025 and therefore there were no significant mean differences (see Table 48). For example, for gender the p-value is .278.

Table 48

*Tests of Between Subject Effects: Attachment: General 1*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	6.799 <sup>a</sup>	7	.971	.975	.452	.052	6.828	.407
Intercept	26.322	1	26.322	26.433	.000	.175	26.433	.999
Gender	1.180	1	1.180	1.185	.278	.009	1.185	.191
Institution Type	.396	1	.396	.398	.529	.003	.398	.096
Engagement	.084	1	.084	.084	.772	.001	.084	.060
Gender * Engagement	.204	1	.204	.204	.652	.002	.204	.073
Gender * Institution Type	2.138	1	2.138	2.147	.145	.017	2.147	.307
Institution Type * Engagement	.110	1	.110	.111	.740	.001	.111	.063
Gender * Institution Type * Engagement	1.167	1	1.167	1.172	.281	.009	1.172	.189
Error	124.473	125	.996					
Total	446.222	133						
Corrected Total	131.272	132						

a. R Squared = .052 (Adjusted R Squared = -.001)

b. Computed using alpha = .05

Post determining the non-significance of the variable factors, the analysis was conducted a second time removing the covariate interaction of engagement. This step was done to simplify the results and to reexamine if there were any significance changes for gender, institution type or engagement without the three-way interaction. The results found in Table 49 again indicated no significant mean differences with significance values ranging from .069 to .639. Finally, the covariate was removed completely resulting in a two-way ANOVA shown in Table 50. The results continued to show no significant mean differences with significance values ranging from .067 to .350.

Table 49

*Tests of Between Subject Effects: Attachment: General 2*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	5.593 <sup>a</sup>	4	1.398	1.424	.230	.043	5.696	.433
Intercept	38.817	1	38.817	39.534	.000	.236	39.534	1.000
Gender	3.313	1	3.313	3.375	.069	.026	3.375	.446
Institution Type	.778	1	.778	.792	.375	.006	.792	.143
Engagement	.217	1	.217	.221	.639	.002	.221	.075
Gender * Institution Type	1.744	1	1.744	1.776	.185	.014	1.776	.262
Error	125.679	128	.982					
Total	446.222	133						
Corrected Total	131.272	132						

a. R Squared = .043 (Adjusted R Squared = .013)

b. Computed using alpha = .05

Table 50

*Tests of Between Subject Effects: Attachment: General 3*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	5.375 <sup>a</sup>	3	1.792	1.836	.144	.041	5.508	.468
Intercept	245.008	1	245.008	251.049	.000	.661	251.049	1.000
Institution Type	.859	1	.859	.880	.350	.007	.880	.154
Gender	3.336	1	3.336	3.418	.067	.026	3.418	.450
Gender * Institution Type	1.843	1	1.843	1.889	.172	.014	1.889	.276
Error	125.896	129	.976					
Total	446.222	133						
Corrected Total	131.272	132						

a. R Squared = .041 (Adjusted R Squared = .019)

b. Computed using alpha = .05

**Social Adjustment: Nostalgia**

The mean values for the Social Adjustment: Nostalgia cluster are illustrated in Table 51. Means are shown for gender, institution type and for the combined variables. The grand mean is  $\bar{X} = 3.24$  with a standard deviation of 2.01. Generally speaking, the grand mean indicates that students felt the items in this cluster applied relatively closely to them.

Levene's Test of Equity of Error Variance established the homogeneity of variances of the dependent variable across groups. Table 52 shows a significance value of .948. A value greater than .05, the level set for alpha, shows that for the Social Adjustment: Nostalgia cluster there is homogeneity of variance. If the significance value had been less than .05, it would have concluded the variance across groups to be unequal.

Table 51

*Descriptive Statistics, Social Adjustment: Nostalgia*

Gender	Institution Type	Mean	Std. Deviation	N
Male	Two-Year	3.0500	2.10895	20
	Four-Year	3.1935	1.88321	31
	Total	3.1373	1.95525	51
Female	Two-Year	3.5556	2.18097	15
	Four-Year	3.2537	2.04173	67
	Total	3.3089	2.05733	82
Total	Two-Year	3.2667	2.12332	35
	Four-Year	3.2347	1.98344	98
	Total	3.2431	2.01306	133

Table 52

*Levene's Test of Equality of Error Variance, Academic Adjustment: Performance*

F	df1	df2	Sig.
.120	3	129	.948

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Institution Type + Engagement + Gender \* Engagement + Gender \* Institution Type + Institution Type \* Engagement + Gender \* Institution Type \* Engagement

The results of the ANCOVA inform whether or not significant mean differences exist between the groups of independent variables of gender and institution type and for their interaction gender\*institution type. Initially, the covariate was allowed to interact with predictors to assess the homogeneity of regression assumption, testing whether or not the covariate explains any difference between variable groups. For the cluster of Social Adjustment: Nostalgia there were no significance values for the variables or their



interactions which were below .05 and therefore there were no significant mean differences (see Table 53). For example, for gender the p-value is .931.

Table 53

*Tests of Between Subject Effects: Social Adjustment Nostalgia 1*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	5.852 <sup>a</sup>	7	.836	.198	.985	.011	1.383	.104
Intercept	152.433	1	152.433	36.015	.000	.224	36.015	1.000
Gender	.032	1	.032	.008	.931	.000	.008	.051
Institution Type	.004	1	.004	.001	.975	.000	.001	.050
Engagement	2.116	1	2.116	.500	.481	.004	.500	.108
Gender * Engagement	.503	1	.503	.119	.731	.001	.119	.064
Gender * Institution Type	.038	1	.038	.009	.925	.000	.009	.051
Institution Type * Engagement	.025	1	.025	.006	.938	.000	.006	.051
Gender * Institution Type * Engagement	.015	1	.015	.003	.953	.000	.003	.050
Error	529.065	125	4.233					
Total	1933.778	133						
Corrected Total	534.917	132						

a. R Squared = .011 (Adjusted R Squared = -.044)

b. Computed using alpha = .05

Post determining the non-significance of the variable factors, the analysis was conducted a second time removing the covariate interaction of engagement. This step

was done to simplify the results and to reexamine if there were any significance changes for gender, institution type or engagement without the three-way interaction. The results found in Table 54 again indicated no significant mean differences with significance values ranging from .401 to .791. Finally, the covariate was removed completely resulting in a two-way ANOVA shown in Table 55. The results continued to show no significant mean differences with significance values ranging from .493 to .848.

Table 54

*Tests of Between Subject Effects: Social Adjustment: Nostalgia 2*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	5.227 <sup>a</sup>	4	1.307	.316	.867	.010	1.263	.119
Intercept	232.699	1	232.699	56.232	.000	.305	56.232	1.000
Gender	1.892	1	1.892	.457	.500	.004	.457	.103
Institution Type	.292	1	.292	.071	.791	.001	.071	.058
Engagement	2.933	1	2.933	.709	.401	.006	.709	.133
Gender * Institution Type	.948	1	.948	.229	.633	.002	.229	.076
Error	529.690	128	4.138					
Total	1933.778	133						
Corrected Total	534.917	132						

a. R Squared = .010 (Adjusted R Squared = -.021)

b. Computed using alpha = .05

Table 55

*Tests of Between Subject Effects: Social Adjustment: Nostalgia 3*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	2.294 <sup>a</sup>	3	.765	.185	.906	.004	.556	.084
Intercept	1039.832	1	1039.832	251.844	.000	.661	251.844	1.000
Institution Type	.153	1	.153	.037	.848	.000	.037	.054
Gender	1.953	1	1.953	.473	.493	.004	.473	.105
Gender * Institution Type	1.211	1	1.211	.293	.589	.002	.293	.084
Error	532.623	129	4.129					
Total	1933.778	133						
Corrected Total	534.917	132						

a. R Squared = .004 (Adjusted R Squared = -.019)

b. Computed using alpha = .05

**Social Adjustment: Other People**

The mean values for the Social Adjustment: Other People cluster are illustrated in Table 56. Means are shown for gender, institution type and for the combined variables. The grand mean is  $\bar{X} = 2.64$  with a standard deviation of 1.35. Generally speaking, the grand mean indicates that students felt the items in this cluster applied relatively closely to them.

Levene's Test of Equity of Error Variance established the homogeneity of variances of the dependent variable across groups. Table 57 shows a significance value of .830. A value greater than .05, the level set for alpha, shows that for the Social

Table 56

*Descriptive Statistics, Social Adjustment: Other People*

Gender	Institution Type	Mean	Std. Deviation	N
Male	Two-Year	2.8583	1.26037	20
	Four-Year	2.6935	1.27519	31
	Total	2.7582	1.25933	51
Female	Two-Year	2.5444	1.14861	15
	Four-Year	2.5672	1.47169	67
	Total	2.5630	1.41170	82
Total	Two-Year	2.7238	1.20656	35
	Four-Year	2.6071	1.40716	98
	Total	2.6378	1.35378	133

Table 57

*Levene's Test of Equality of Error Variance, Social Adjustment: Other People*

F	df1	df2	Sig.
.294	3	129	.830

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Institution Type + Engagement + Gender \* Engagement + Gender \* Institution Type + Institution Type \* Engagement + Gender \* Institution Type \* Engagement

Adjustment: Other People cluster there is homogeneity of variance. If the significance value had been less than .05, it would have concluded the variance across groups to be unequal.

The results of the ANCOVA inform whether or not significant mean differences exist between the groups of independent variables of gender and institution type and for their interaction gender\*institution type. Initially, the covariate was allowed to interact

with predictors to assess the homogeneity of regression assumption, testing whether or not the covariate explains any difference between variable groups. For the cluster of Social Adjustment: Other People there were no significance values for the variables or their interactions which were below .05 and therefore there were no significant mean differences (see Table 58). For example, for gender the p-value is .267.

Table 58

*Tests of Between Subject Effects: Social Adjustment: Other People 1*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	6.277 <sup>a</sup>	7	.897	.476	.851	.026	3.330	.201
Intercept	98.040	1	98.040	52.007	.000	.294	52.007	1.000
Gender	2.343	1	2.343	1.243	.267	.010	1.243	.198
Institution Type	3.573	1	3.573	1.895	.171	.015	1.895	.277
Engagement	.762	1	.762	.404	.526	.003	.404	.097
Gender * Engagement	1.348	1	1.348	.715	.399	.006	.715	.134
Gender * Institution Type	1.158	1	1.158	.614	.435	.005	.614	.122
Institution Type * Engagement	3.438	1	3.438	1.824	.179	.014	1.824	.268
Gender * Institution Type * Engagement	.836	1	.836	.444	.507	.004	.444	.101
Error	235.641	125	1.885					
Total	1167.361	133						
Corrected Total	241.917	132						

a. R Squared = .026 (Adjusted R Squared = -.029)

b. Computed using alpha = .05

Post determining the non-significance of the variable factors, the analysis was conducted a second time removing the covariate interaction of engagement. This step was done to simplify the results and to reexamine if there were any significance changes for gender, institution type or engagement without the three-way interaction. The results found in Table 59 again indicated no significant mean differences with significance values ranging from .431 to .820. Finally, the covariate was removed completely resulting in a two-way ANOVA shown in Table 60. The results continued to show no significant mean differences with significance values ranging from .427 to .798.

Table 59

*Tests of Between Subject Effects: Social Adjustment: Other People 2*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	1.718 <sup>a</sup>	4	.429	.229	.922	.007	.915	.098
Intercept	116.803	1	116.803	62.243	.000	.327	62.243	1.000
Gender	1.171	1	1.171	.624	.431	.005	.624	.123
Institution Type	.097	1	.097	.052	.820	.000	.052	.056
Engagement	.184	1	.184	.098	.755	.001	.098	.061
Gender * Institution Type	.186	1	.186	.099	.754	.001	.099	.061
Error	240.199	128	1.877					
Total	1167.361	133						
Corrected Total	241.917	132						

a. R Squared = .007 (Adjusted R Squared = -.024)

b. Computed using alpha = .05

Table 60

*Tests of Between Subject Effects: Social Adjustment: Other People 3*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	1.534 <sup>a</sup>	3	.511	.274	.844	.006	.823	.101
Intercept	693.988	1	693.988	372.424	.000	.743	372.424	1.000
Institution Type	.123	1	.123	.066	.798	.001	.066	.057
Gender	1.183	1	1.183	.635	.427	.005	.635	.124
Gender * Institution Type	.215	1	.215	.115	.735	.001	.115	.063
Error	240.383	129	1.863					
Total	1167.361	133						
Corrected Total	241.917	132						

a. R Squared = .006 (Adjusted R Squared = -.017)

b. Computed using alpha = .05

## **Appendix E**

### **Institutional Review Board Approval**





October 4, 2012

Jill Walahoski

4-H State Office

114 AGH, UNL, 68583-0700

Brent Cejda

Department of Educational Administration

129 TEAC, UNL, 68588-0360

IRB Number: 20121012910 EP

Project ID: 12910

Project Title: Mixed Methods Case Study: Understanding the Experience of Nebraska 4-H Participants Relative to their Transition and Adaptation to College

Dear Jill:

This letter is to officially notify you of the approval of your project by the Institutional Review Board (IRB) for the Protection of Human Subjects. It is the Board's opinion that you have provided adequate safeguards for the rights and welfare of the participants in this study based on the information provided. Your proposal is in compliance with this institution's Federal Wide Assurance 00002258 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46). Your project has been reviewed as Expedited categories 6 and 7.

Date of EP Review: 10/4/12

You are authorized to implement this study as of the Date of Final Approval: 10/04/2012. This approval is Valid Until: 10/03/2013.

1. The approved informed consent forms have been uploaded to NUgrant (files with -Approved.pdf in <https://nugrant.unl.edu/nugrant/orr/irb/viewPrintedMessage.php?ID=171106> 2/15/2013

the file name). Please use these form to distribute to participants. If you need to make changes to the informed consent forms, please submit the revised forms to the IRB for review and approval prior to using them.

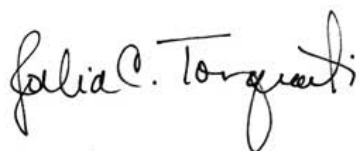
We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:

- \* Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
- \* Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
- \* Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
- \* Any breach in confidentiality or compromise in data privacy related to the subject or others; or
- \* Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

For projects which continue beyond one year from the starting date, the IRB will request continuing review and update of the research project. Your study will be due for continuing review as indicated above. The investigator must also advise the Board when this study is finished or discontinued by completing the enclosed Protocol Final Report form and returning it to the Institutional Review Board.

If you have any questions, please contact the IRB office at 472-6965.

Sincerely,



Julia Torquati, Ph.D.

Chair for the IRB





November 2, 2012

Jill Walahoski

4-H State Office

114 AGH, UNL, 68583-0700

Brent Cejda

Department of Educational Administration

129 TEAC, UNL, 68588-0360

IRB Number: 20121012910 EP

Project ID: 12910

Project Title: Mixed Methods Case Study: Understanding the Experience of Nebraska 4-H Participants Relative to their Transition and Adaptation to College

Dear Jill:

The Institutional Review Board for the Protection of Human Subjects has completed its review of the Request for Change in Protocol submitted to the IRB.

**\*\*It has been approved to include a lottery incentive to the survey.\*\***

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:

\* Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;

\* Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;

<https://nugrant.unl.edu/nugrant/orr/irb/viewPrintedMessage.php?ID=176859>

2/15/2013

\* Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;

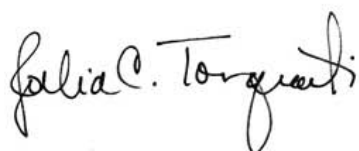
\* Any breach in confidentiality or compromise in data privacy related to the subject or others; or

\* Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

This letter constitutes official notification of the approval of the protocol change. You are therefore authorized to implement this change accordingly.

If you have any questions, please contact the IRB office at 472-6965.

Sincerely,



Julia Torquati, Ph.D.

Chair for the IRB



## **Appendix F**

### **Verification of a Peer Review**



#### Peer Review of Qualitative Phase

The following is a summary of my peer review completed on the qualitative phase of Jill Walahoski's dissertation research. The research question for the qualitative phase was presented as, "What occurs during the Nebraska 4-H experience that might help explain the level of preparedness of former participants to transition to college?"

Review steps completed by this reviewer:

1. Became familiar with the purpose of the study, the overall research questions, and the particular purpose and research questions for the qualitative phase.
2. Reviewed sample interview transcripts and met with the researcher to verify coding.
3. Examined the thematic analysis and the researcher interpretations and verified that they were consistent with the sample transcripts reviewed.

Following review of these documents, I met with the researcher to discuss my assessment of the status of her study, in particular its qualitative phase, including coding procedures and thematic findings. From this review, I consider this study's qualitative phase to be well designed and thorough. I believe the coding procedures to be an accurate representation of the research participants' experiences. Furthermore, from my review of the process employed by this researcher, this study's qualitative phase appears to have been conducted in an ethical manner using procedures and protocols reflective of rigorous qualitative research.

Signed this 14<sup>th</sup> day of February, 2013,

A handwritten signature in cursive script that reads "Jessica Bauman".

Jessica Bauman  
Peer Reviewer