ANALYZING LEARNER CHARACTERISTICS, UNDERGRADUATE EXPERIENCE
AND INDIVIDUAL TEAMWORK KNOWLEDGE, SKILLS AND ABILITIES: TOWARD
IDENTIFYING THEMES TO PROMOTE HIGHER WORKFORCE READINESS

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With the world amidst globalization and economic flux affecting business, industry, and communities the need to work together becomes increasingly important. Higher education serves an important role in developing the individual teaming capabilities of the workforce. This environment is the time and place – opportunity for student personnel to develop these capabilities.

This multiple case study utilized the analysis phase (learner, setting and job) of an instructional design model to analyze learner characteristics, the higher education environment/undergraduate experience, and the job/skills associated with individual teamwork knowledge, skills, and abilities of students from a senior cohort of the TRiO – SSS Project at a public student-centered research institution. The results yielded themes to promote the development of target populations individual teamwork KSAs which should increase their readiness to meet the teaming demands of today’s employers.

With an engaging undergraduate experience, inclusive of interaction with faculty members and collaborative learning with their peers, structured opportunities to practice individual teamwork KSAs in a work setting or internship, these underrepresented students may be an asset that is needed to meet the global workforce needs and fill civic capacities in their home communities.
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Consuelo V. Frederick
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First, acknowledging the divine inspiration that leadeth me across this way. I give thanks for the gifts and blessings.

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“Banat, banat, ban jai!” (From Paramahansa Yoganado, The Autobiography of a Yogi, p.250)
# TABLE OF CONTENTS

**ACKNOWLEDGEMENTS** ........................................................................................................ iii

**LIST OF TABLES** ........................................................................................................... vi

**LIST OF ILLUSTRATIONS** .......................................................................................... vii

Chapters

1. **INTRODUCTION** ........................................................................................................ 1
   - Need for the Study
   - Background
     - Theoretical Framework
     - Purpose of the Study
     - Research Questions
   - Limitations
   - Delimitation
     - Definition of Terms
   - Summary

2. **LITERATURE REVIEW** .......................................................................................... 15
   - Research Questions
   - Introduction
   - Learner Characteristics
   - Environment and Undergraduate Experience
   - Job/ Individual Teamwork KSAs
   - Summary

3. **METHODOLOGY** ..................................................................................................... 29
   - Research Questions
   - Research Design
     - Quality and Rigor
   - Population
   - Sample
     - Data Sources
     - Data Collection Procedures
     - Data Analysis
   - Summary

4. **FINDINGS** .................................................................................................................. 143
   - The Purpose of the Study
Part 1: Population of Interest
Part 2: Data Management
Part 3: Results
  Single Case Analysis
  Cross-Case Analysis
  Core Themes
  Summary

5. DISCUSSION, RECOMMENDATIONS, IMPLICATIONS, AND CONCLUSION .................................................................232

APPENDIX................ ..............................................................251

REFERENCES .................................................................256
LIST OF TABLES

Table

1. Student Responses on Graduating Student Survey – Items Regarding Working with a Team .................................................................3
2. Influences on Higher Education Experiences .........................................................22
3. Summary of Institution’s Eligible Students ..........................................................34
4. Teamwork KSAs Scores for All Respondents.....................................................45
5. Contingency Table of Scores Above and Below the Mean .................................47
6. Learner Characteristics, Environment, and Teamwork KSAs ............................49
7. Teamwork KSAs Test Scores for Random Found Things .....................................64
8. Teamwork KSAs Test Scores for Hut ..................................................................76
9. Teamwork KSAs Test Scores for Sonshine .......................................................91
10. Teamwork KSAs Test Scores for Rosey ...........................................................109
11. Teamwork KSAs Test Scores for Sergeant ......................................................124
12. Teamwork KSAs Test Scores for Moonlight ....................................................140
13. Teamwork KSAs Test Scores for Broken Glass ...............................................158
15. Teamwork KSAs Test Scores for Respondents Scoring Above the Mean Including Total Score for Each Sub-area ...........................................194
16. Summary Table of Core Themes and Core Finding on Learner Characteristic .......................................................................228
17. Summary Table of Core Themes and Core Finding on Environment ..............229
18. Summary Table of Core Themes and Core Finding on Teamwork KSAs .......230
LIST OF ILLUSTRATIONS

Figure

1. Single Case Navigator.................................................................58
2. Cross-Case Analysis Navigator ................................................163
3. Multi-Case Study Methodology for ISD Model - Analysis Phase ........234
CHAPTER 1
INTRODUCTION

The world is in the midst of globalization, which not only produces mergers and acquisitions, but also a plethora of strategic relationships and teaming approaches requiring “functional merging of geographically, organizationally, and culturally dispersed human resources” (Zavabi & Tavcar, 2004, p. 358). Allen (2006) noted that the 21st-century workforce is constantly changing. This state of flux has created a need for human resource development scholars and practitioners to continue to review best practices in developing a workforce with the latest technology, knowledge, and expertise. Revisiting traditional training models and processes is important as a means of moving forward with higher education’s critical purpose of preparing students for their future careers as professionals (Thompson, Licklider, & Jungst, 2003). Furthermore, teaming approaches resulting from globalization create a need for institutions to establish a systematic way to develop teamwork skills to create higher workforce readiness (Chen, Donahue, & Klimoski, 2004).

This study analyzed the learner characteristics, environment, and individual teamwork knowledge, skills, and abilities (KSAs) of students from a senior cohort of the TRiO – Student Support Services (SSS) project at a public, student-centered research institution. For the purpose of this study, an individual students, their experiences (in the higher education environment/setting), and their teamwork KSA scores were considered as a single case; these focuses parallel those of the analysis phase in the instructional design model (learner, setting, and skill). According to Stake (2006) these single cases are important because they belong to a collection of cases. Data from 7 cases were
This quintain (pronounced *kwin’ton*) as defined by Stake, is the phenomenon, or condition to be studied; it is a target, but not a bull’s eye. He further stated that it is a collective target – a collection of cases.

This chapter outlines the need for the study, the background, the theoretical framework, purpose, research questions, limitations, delimitations, and definitions of terms. Chapter 2 includes a review of the literature, and the third chapter explains the methodology. The results are provided in chapter 4. Chapter 5 includes a summary, discussion, implications, recommendations for future research, and a conclusion.

Need for the Study

Teams are used in the work environment mainly to move an organization closer to its goals (Doolen, Hacker, & Van Aken, 2003). Over 80% of Fortune 500 companies are significantly using teams in their organization (Robbins, 2003). Such “companies are seeking job candidates who possess relevant teamwork knowledge, skills and abilities” (Chen et al., 2004, p.27). Baskin, Barker and Woods (2005) explained that working together, like any other graduate skill, needs to be developed and learned.

A specific example of data regarding working in a team or group is the Graduating Student Survey administered by the University of North Texas (2004a). It asked students to respond to their perceptions about their educational experience at UNT and their career plans, specifically regarding “working with a team or group.” Students responded as indicated in Table 1.
Table 1

<table>
<thead>
<tr>
<th></th>
<th>Great deal</th>
<th>Somewhat</th>
<th>A little</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rate yourself on this ability.</td>
<td>50% 41%</td>
<td>7%</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>2. Estimate how much the UNT Experience helped develop this ability.</td>
<td>5%</td>
<td>18% 38% 38%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 illustrates that while higher percentages of students rated themselves highly, fewer attributed their experience to UNT. No detail is provided about the skill set which was rated.

In a study by Casner-Lotto and Barrington (2006) over 400 employers were surveyed. They articulated the skill sets of recent 4-year college graduates, identifying new entrants’ applied skills in teamwork/collaboration as very important to success at work. Chen et al. (2004) explained that the predominant pedagogical concerns of higher education environments are inconsistent with the need for developing school-to-work projects that create a “team-work” – capable work society. “Economic, technological, and educational arguments bring further attention to the unresolved concern about the vocational purpose of higher education and the employability skills gap of some graduates” (Baskin et al., 2005, p. 20). The report also illustrated that teamwork/collaboration was among the skills that become increasingly important in the next 5 years.

Concerning the sample for this study, the underserved/disenfranchised, the Pell Institute (2004) noted that the United States benefits from having college-educated citizens who contribute their time and money to serve the community. These educated
citizens consume fewer public services and commit fewer crimes. Additionally, these citizens enhance the economic rewards for all to share by contributing to economic growth and productivity (Institute for Higher Education Policy, 1998).

Background

"The quality and value of an undergraduate education in the past decade received, and continues to receive, scrutiny by various stakeholders associated with the higher education community" (Umbach & Wawryznski, 2005, p.153). Professional, state, and other organizations have identified standards, competencies, and evaluation methods for assessing teamwork KSAs. Included below is background information on TRiO projects, the SSS project at the institution from which the sample was drawn and project-oriented learner outcomes proposed by the Council for Advancement of Standards for TRiO programs, the Texas Higher Education Coordinating Board, the institution itself, and the Southwest Association of Colleges and Schools.

In the War on Poverty U. S. President Lyndon Baines Johnson supported the Higher Education Act of 1965. This legislation created TRiO programs to serve low-income and first-generation students for the purposes of access, achievement, and success in earning a 4-year degree. In 1968, SSS was established nationally as one of the three original TRiO Programs, with the other two serving pre-college students and SSS serving students in postsecondary education. The SSS project was funded locally at the 4-year public institution from which the sample was drawn in 1984. The Pell Institute (2004) noted that more emphasis is being put on programs that not only help these low-income students get into colleges and universities, but also help them to stay
in school and complete a degree. The local SSS project currently provides tutoring, academic counseling, mentoring, and opportunities for participation in social/cultural activities in primarily individual and small group settings of two to three students.

In 2005 the U. S. Department of Education Office of TRiO Programs encouraged collaborative and group services. In this direction, the local SSS project endeavors to encourage participation by cohorts and enhance the use of academic groups. This study is intended to support (a) project improvement, (b) advances in student achievement, and (c) greater workforce readiness for the target population.

In the *Book of Professional Standards in Higher Education* (2003) five achievement indicators for collaboration are listed: (a) works cooperatively with others, (b) seeks the involvement of others, (c) seeks feedback from others, (d) contributes to the achievement of a group goal, and (e) exhibits effective listening skills.

The Texas Higher Education Coordinating Board (1997) listed the core curriculum at the postsecondary level. Basic intellectual competencies included speaking, listening, and critical thinking. For the institution from which the cases were selected, the following were outlined as components and related exemplary education objectives for a core curriculum: (a) to participate effectively in groups with an emphasis on listening, critical and reflective thinking, and responding; and (b) to understand and apply basic principals of critical thinking, problem solving, and technical proficiency in the development of exposition and argument.

The Southern Association of Colleges and Schools (2007) encouraged institutions to conduct a project of continual self-evaluation which should include, but is not exclusive of (a) project improvement, (b) advances in student achievement, and (c)
effective use of resources in the institution’s service to its internal customers and external constituents. The results should be used in the future planning of academic projects.

Theoretical Framework

Marshall and Rossman (2006) contended that referring to the original theoretical framework is a way to counter threats to external validity. They suggested that the theoretical framework can illustrate how data collection and analysis will be guided by concepts and models. Engagement, social capital, and collaborative learning are provided for this study.

Engagement

Carini, Kuh, and Klien (2006) indicated that the principle of student engagement is simple: the more students study or practice a subject, the more they tend to learn about it. They also stated that engagement is considered to be among the better indicators of learning and personal development. Kuh and Gonyea (2006) listed the following as relevant to engagement: deep learning, spiritual practices, working with faculty outside the classroom, community-based work as part of a course, community services/volunteerism, interaction with diverse peers (religious beliefs, political opinions, and personal values), interaction with diverse peers (race and ethnicity), attending art events, exercising, relaxing, and socializing.

“The concept of student engagement is based on the constructivist assumption that learning is influenced by how an individual participates in educationally purposeful
activities” (Coates, 2005, p. 26). Coates (2005) also noted that there is a positive correlation between student engagement and quality learning. Such activities included active learning, being involved in enriching education experiences, seeking guidance from staff, or working collaboratively with other students. As principles and practices of quality assurance become more institutionalized, the importance of methodological questions regarding evaluating quality grows. Insights about activities that promote high-quality learning are drawn together by student engagement.

“The very act of being engaged also adds to the foundation skills and dispositions that are essential to live a satisfying life after college,” (Carini et al., 2005, p. 2). With this in mind, the workforce also considered engagement as a way to boost the return of human capital. Blessing White Inc. (2005) recognized engagement as a driver of productivity, competitive advantage, and customer loyalty, as well as shareholder return. They added that it was crucial that “engagement is an individualized equation because work is personal . . . each day employees are looking to utilize their unique skills and expertise . . . their job satisfaction depended on opportunities to use their talents” (p. 2). *Splitting, spinning,* and *settling* are terms they used to characterize employees who are not engaged.

Glen (2006) presented the HDA employee engagement matrix. There are nine variables in the matrix: process, role challenge, values, work-life balance, information, stake/leverage/reward/recognition, management, work-environment, and product. This model suggests that talent engagement and team engagement could prove productive for both the employee and the organization.
Social Capital

Cohen and Prusak (2001) described social capital as consisting of the stock of active connections among people, including trust, mutual understanding, and shared values, behaviors that bind the members of human networks and communities and make cooperative action possible. They stated that social capital is embedded in social structures that enable people to coordinate action to achieve desired goals; they are norms and social relations. Again, an important outcome to consider in team learning is the relatively permanent change in the team’s collective level of knowledge produced by the shared experience of the team members (Ellis, Bell, Ployhart, Hollenbeck, & Ilgen, 2005).

In Hutchison and Vidal (2004), Robert D. Putnam described social capital as social networks and the associated norms of reciprocity. Drawing upon the works of a number of authors, Thompson, Licklider & Jungst (2003) further described social capital as the complexity of networks of individuals and the role of these connections in strengthening democratic societies. Ellis et al. (2005) explained that any construct at the team level needs to include an individual team member’s ability to acquire information as well as to collectively share with the team. “The opportunity for institutional change lies in the possibility that individual participants will transfer their learning to other contexts within the institution, enabling others to learn and to change,” (Bensimon Polkinghorne, Bauman, G. & Vallejo, 2004, p.113). The structural dimension aspect of social capital is related to the location and frequency in the social structure (King & Furrow, 2004). These authors described how the relationship of positive outcomes are connected in a social context through interpersonal, associational, and cultural social
ties (King & Furrow, 2004). Woolcock and Narayan (2000) described the concept of linking social capital as a way to alleviate poverty. According to Pascarella, Pierson, Wolniak, and Terenzini (2004),

Since first-generation students are likely to enter college with a lower stock of cultural/social capital than their peers, one might anticipate their levels of academic, and perhaps even social engagement, during college will function in ways that may help them make up for this deficit. (p. 245)

Collaborative Learning

“Collaborative learning is in line with constructivist theories based on the seminal works of Piaget and Vygotsky” (Draskovic, Holdrinet, Bulte, Bulhus, & VanLeeuwe, 2004, p. 451). Vygotsky’s theory is a social-cultural cognitive theory that emphasizes how culture and social interaction guide cognitive development. When students of various performance levels work together toward a common goal, the instructional method is referred to as collaborative learning (Gokhale, 2004). Student success is an interdependent factor. Interpersonal communication and technical skills are improved by collaborative work environments that are similar to those experienced in the professional environment (Yazici, 2004). An important outcome to consider in team learning is the relatively permanent change in the team’s collective level of knowledge produced by the shared experience of the team members (Ellis et al., 2005).

Purpose of the Study

The purpose of this multiple case study was to analyze learner characteristics, the higher education environment/undergraduate experience, and the job/skills associated with individual teamwork KSAs of students from a senior cohort of the TRiO
SSS project at a public student-centered research institution. The research yielded local and systematic themes to improve practices that support the development of individual teamwork KSAs for the participating students and to promote their workforce readiness.

With a focus on the analysis phase (learner, setting, and job) of instructional design and an emphasis on the utilization of qualitative methods three primary questions were asked to identify local themes to improve practices that support the development of individual teamwork KSAs for SSS project participants. Additionally, these practices are expected to promote project participants workforce readiness. The questions are listed below.

**Research Questions**

*Research Question 1*

What is the interrelationship of the learner characteristics, undergraduate experience, and individual teamwork KSA for an individual case that represents a low-income/first-generation seniors who scored above the mean Teamwork KSAs Test?

*Research Question 2*

How do the learner characteristics, undergraduate experiences, and teamwork KSAs interrelate from one case to the other?

*Research Question 3*

What themes emerge from the findings that may be useful in designing a curriculum to develop individual teamwork KSAs which promote higher workforce readiness?

**Limitations**

There was no control for other factors in the students’ backgrounds. This study concerned only the current levels of individual teamwork KSAs that students gained
during their higher education experience with no additional treatment or intervention among the purposefully selected sample.

Delimitation

This study was delimited to senior university students who were participants in the SSS project and who have completed at least 90 credits. Students self-reported about their undergraduate teamwork experiences and associated competencies.

Definition of Terms

*Collaborative learning.* For the purpose of this study collaborative learning and cooperative learning were synonymous. When students of various performance levels work together toward a common goal, the instructional method is referred to as collaborative learning (Gokhale, 2004).

*Engagement.* Participation in purposefully educational activities such as study or practice deep learning; engage in spiritual practices, work with faculty outside the classroom; do community-based work as part of a course; engage in community services/volunteerism; have interaction with diverse peers (religious beliefs, political opinions, personal values, race, and ethnicity), attend art events, exercise; relax; and socializing (Carini et al., 2006; Kuh & Gonyea, 2006).

*Environment.* The environment is the structural dimension of social capital as it relates to the location and frequency in the social structure (King & Furrow, 2004). A 4-year public/institution of higher education serving approximately 22,000 undergraduates was the primary environment studied for the research participants.
Experience (Undergraduate). Pascerella et al. (2004) stated that academic and non-academic experiences need to be taken into account to accurately determine the effect of college on students. For the purpose of this study, undergraduate experiences take place in the higher education setting/environment.

First-generation students. First-generation students are those students whose parents have no more than a high school education (Pascerella et al., 2004).

Individual teamwork knowledge, skills, and abilities (KSAs). Stevens and Campion (1994) listed 14 competencies as a collective which are used to assess individual teamwork KSAs falling into five domains (conflict resolution, collaborative problem solving, communication, goal setting and performance management, and planning and task coordination).

Learner characteristics. One of three elements (setting and job being the others) considered in the analysis phase of instructional design models. For the purposes of this study, learner characteristics are primarily low-income status and first-generation status. Secondary characteristics include, but are not limited to, gender, age, hours employed while working, campus involvement, community volunteer work, and educational degree plan.

Low-income students. One definition of a low-income student is one whose parents’ annual income is below US $24,000 (Christou & Haliassos, 2005).

Seniors. University students who have completed at least 90 credits. (UNT, 2006).

Quintain. Phenomenon, or condition to be studied; it is a target, but not a bull’s eye. Furthermore it is a collective target – a collection of cases (Stake, 2006).
**Single case.** Individual students, their experiences and their teamwork KSAs scores were considered as a single case; these elements parallel those of the analysis phase in the instructional design model.

**Social capital.** Cohen and Prusak (2001) described social capital as the norms and social relations infused into social structures that enable people to coordinate action to achieve desired goals.

**Workforce readiness.** Casner-Lotto & Barrington (2006) described workforce readiness as the skill sets that new entrants, recently hired graduates from high school, 2-year colleges or technical schools, and 4-year colleges, need to succeed in the workplace. These include professionalism/work ethic, oral and written communications, teamwork/collaboration and critical thinking/problem solving.

**Summary**

This chapter provided an overview of the gaps in the development of teamwork KSAs. Context was provided from the macro-level of the global workforce, to the measures of accountability called for by stake-holding agents, the intermediary institution of higher education with vocational purposes to meet needs, to the point of service – SSS project. This study provided an in-depth analysis of the individual teamwork KSAs of one specific special population recognized by lawmakers as being disenfranchised. Instructional design was presented as a primary theoretical framework of analysis to identify new instructional strategies for the development of individual teamwork KSAs for the target population.
Presented was the need for the study, background, theoretical framework, purpose of the study, research questions, limitations, delimitations, and definition of terms. Chapter 2 provides a synthesis of the literature for three areas of analysis: (a) learner characteristics; (b) the undergraduate experience of a senior cohort at a 4-year, public, student-centered research institution; and (c) individual teamwork KSAs scores,
CHAPTER 2

LITERATURE REVIEW

The purpose of this multiple case study was to analyze learner characteristics, the higher education environment/undergraduate experience, and the individual teamwork knowledge, skills, and abilities (KSAs) of students from a senior cohort of the TRiO – Student Support Services (SSS) Program at a 4-year public student-centered research institution. The research yielded local and systematic themes to improve practices that support the development of individual teamwork KSAs for the participating students and promote their workforce readiness.

Research Questions

Research Question 1

1. What is the interrelationship of the learner characteristics, undergraduate experience, and individual teamwork KSA for an individual case that represents a low-income/first-generation seniors who scored above the mean Teamwork KSAs Test?

Research Question 2

2. How do the learner characteristics, undergraduate experiences, and teamwork KSAs test scores interrelate from one case to the other?

Research Question 3

3. What themes emerge from the findings that may be useful in designing a curriculum to develop individual teamwork KSAs which promote higher workforce readiness?
Introduction

The new global collaborative work environment requires motivated self-confident critical-thinkers who can communicate, manage, and make rational decisions. Our role as educators lies in understanding these emerging needs and adapting our teaching to engage learners more effectively in the learning process. (Yazici, 2004, p. 117)

The need for people to work in groups is pervasive and driven by global business and industry needs, capital gains, and community development. Higher education served the vocational purpose of preparing this human capital to become citizens who are well prepared for a global workforce. Baskin et al. (2005) explained that, like any other graduate skill, individual teamwork KSAs need to be developed and learned.

Instructional design served as a model for this research.

Sugrue (2004) presented the following:

Instructional designers design learning resources and environments that develop learners’ expertise and increase their ability to perform certain tasks. However, increased competence may not translate into performance unless two conditions are met:

1. The learning resources must target competencies that contribute to exemplary performance of tasks that are critical to the accomplishment of desired levels of department or organizational performance. In other words, the learning objectives must be aligned with performance that has been explicitly identified as important, and with competencies and tasks that are related to that important performance.

2. Other factors in the performer and the work environment that influence performance must also be optimized (Gilbert 1979; Rummler, 2004).

3. For example, the learner must be motivated to apply the new knowledge, there must be adequate incentives to apply the new skill, and the systems and work processes must necessitate and facilitate the application of the new knowledge. While not all instructional designers have the freedom or expertise to be performance consultants, they need to at least describe the conditions (of performers and work environments) under which the new learning will have the greatest chance of impacting performance. (para. 3)
While there are a variety of instructional system models, many are based on the generic analysis, design, develop, implement, and evaluate (ADDIE) model that evolved from instructional systems research that came after the World War II (Allen, 2006).

In the analysis phase of designing instructional systems, the learner, setting, and job are analyzed (Molenda, Pershing, & Reigeluth, 1996). The learners for this study were senior university students. An analysis of a learner’s characteristics may involve entry competencies, general characteristics, and learning styles. The setting/higher education was that of the undergraduate institution to include classroom and outside of classroom experiences. For the purpose of this study, the job/skill set being assessed was individual teamwork KSAs. The three elements, (a) learner characteristics, (b) undergraduate experience and (c) job/individual teamwork KSAs, are attributed to one participant - a single case. Stake (2006) argued that these single cases are important because they belong to a collection of cases. These single cases share a common characteristic or condition and may be bound by a phenomenon.

Learner Characteristics

First-Generation Students

First-generation students are those whose parents have no more than a high school education (Pascerella et al., 2004). These students are more likely than second-generation students to be males and minorities (Pike & Kuh, 2005). Lohfink and Paulsen (2005) supported the idea that an intersection of race, class, and gender oppression affects the first-generation population. These students are not completing
the treatment-higher education, which employers suggest addresses the skills gap in teamwork skills.

Although going to college may be viewed as a rite of passage for many students, as a college degree becomes a prerequisite for jobs with higher salaries, first-generation students often face unique challenges in their pursuit of a college degree. (Ishitani, 2003, p.434)

Attending college and succeeding are not synonymous for first-generation students (Ishitani, 2003). “These students are more handicapped in accessing and understanding information and attitudes” (Pascerella et al., 2004, p. 252). Lower levels of involvement outside of the classroom, including interaction with peers, may be, in part, affected by the students’ work responsibilities, family commitments, and living off campus (Lohfink & Paulsen, 2005; Pascerella et al., 2004). Pike and Kuh (2005) suggested that perhaps the reason first-generation students may be less engaged is that they do not know the importance of being engaged or how to become engaged; this engagement a social and academic activity associated with success in college. Pascerella et al. (2004) identified a significantly more positive impact of academic and non-academic college outcomes for first-generation students than for other students; the outcome was greater developmental benefits.

“First-generation students may have benefited more from their academic experiences than other students because these experiences act in a compensatory manner and thus contribute comparatively greater incremental increases in first-generation students’ stock of cultural capital” (Pascerella et al., 2004, p.280). Lohfink and Paulsen (2005) suggested that participation and involvement in academic activities may be more important to first-generation students than are social activities. Pascerella et al. (2004), citing an anonymous source, suggested that extracurricular and peer
involvement may expose first-generation students to classmates who have a better understanding of behaviors that help individuals succeed and maximize the benefits of college.

Low-Income Students

The Pell Institute (2004) wrote about the retention of low-income students. They observed that since the 1958 National Defense Act policy, higher education has targeted increasing access for students from low-income backgrounds. Ward (2006) provided a historical account of the U. S. Department of Education Office of Post Secondary Education’s establishment of projects via the Economic Opportunity Act of 1964. These projects are designed to increase access for marginalized groups including low-income and first-generation students. One definition of a low-income student was that a parent’s annual income be below US $24,000 (Christou & Haliassos, 2005). The Pell Institute reported that, in a 6-year period, 26% of the youth studied earned a bachelor’s degree.

Cooter et al. (2004) reported that providing economic access had a positive impact on student experience for underserved populations. There was however, a disutility in work because it takes away free time, time to study, and time to engage in leisure or other activities (Christou & Haliassos, 2005). Loans and work opportunities do not necessarily lead to improved access for low-income students (Christou & Haliassos, 2005). Hatt, Hannan, and Baxter (2005) noted that there are students for whom the cost of student life is not appreciated. Low-income families simply do not have sufficient resources to pay for higher education (Pell Institute, 2004).
In reference to the social capital of low-income students, Pizzolato (2006) noted that, “without rich, networked information about how to achieve their hoped-for possible selves, it may be challenging for them to create possible selves, hence aspiration achievement discrepancy” (p.59). The Pell Institute (2004) observed that low-income students could be “important economic contributors of their families, so their attempts to combine the roles of family provider and student, or their inability to contribute while enrolled, may undermine their academic commitment or performance” (p.6). In some cases, these students may feel that they do not belong or are not welcome on a campus that is an alien environment for them. Consequently, they are neither firmly attached to the campus nor integrated into higher education, and the result is diminished academic progress.

Due to the critical role of team composition, many predictors for individual performance in teams have been proposed/researched (McClough & Rogelberg, 2003). Those predictors related to socioeconomic status were not discussed. The National Alliance of Business, as cited in Ward (2006), stated that “understanding and addressing educational disparities has far reaching implications for the economic viability of our country as our ability to be competitive in the global market becomes increasingly compromised” (p.53). Providing these individuals with training may also yield a greater return on investment for an organization.

Ellis et al. (2005) discussed the role of the critical team member who serves to support communication and control workflow. They revealed that critical team members with strong teamwork KSAs may be important as a conduit for good team functioning. Results also indicated that criticality was of practical significance to organizations so
that they may consider targeted and specific team generic training. The findings of Olivera and Straus (2004) suggested that it is efficient to use the team’s “best member” to solve problems which, in turn, provides the other team members the opportunity to learn problem solving strategies, thereby providing long-term benefits for the organization. There may be members who, because of expertise or position, are likely to assume a critical role within various teams in organizations (Ellis et al., 2005).

Environment and Undergraduate Experience

John Dewey wrote that experience, and thereby learning and knowing, was an affair of doing (Kivinen & Ristela, 2003). Various studies addressed the higher education experience from differing perspectives, including time-on-task, opportunities to practice, credit hours/academic content, and familiarity. Many different experiences are provided within higher education (Koppenhaver & Shrader, 2003). Experience provides a lens to view benchmarks and success in learning group skills. The time or opportunity to practice varies by intervention.

The literature expressed undergraduate experience related to students' career and personal goals; their grade point average; their family income, ethnicity, citizenship, and gender; their work experience while in school; the extent to which they relied on financial aid; and their areas of major, which are asked on the Higher Education Data Sharing Consortium (2004) graduating senior survey. This was consistent with the data collected by the higher education institution from which the sample was selected. Pascerella et al. (2004) provided a sample of the four types of influences on the higher education as shown in Table 2.
Table 2

*Influences on Undergraduate Experience*

<table>
<thead>
<tr>
<th>Demographic and pre-college characteristics</th>
<th>Institutional characteristics</th>
<th>College academic experiences</th>
<th>College nonacademic experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Average pre-college composite development cohorts incoming freshmen</td>
<td>Cumulative credit hours completed</td>
<td>Work responsibilities</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>time spent studying</td>
<td>On or off campus residence</td>
<td></td>
</tr>
<tr>
<td>Family income level</td>
<td>scales measuring course-related interactions with peers</td>
<td>Participation in intercollegiate athletics</td>
<td></td>
</tr>
<tr>
<td>Secondary school grades</td>
<td>academic effort involvement</td>
<td>Greek affiliation</td>
<td></td>
</tr>
<tr>
<td>Volunteer work in high school</td>
<td>use of computers</td>
<td>Scales measuring non-course related interactions with peers</td>
<td></td>
</tr>
<tr>
<td>Orientation to learning</td>
<td>reading and writing involvement</td>
<td>Extracurricular involvement</td>
<td></td>
</tr>
<tr>
<td>Educational degree plan</td>
<td></td>
<td>Participation in volunteer work</td>
<td></td>
</tr>
</tbody>
</table>

Based on their findings, Olivera and Straus (2004) suggested that organizations should provide the time and physical space that provides opportunities for groups to practice collaboration. These groups should also be afforded the opportunity for problem solving, facilitation, and the opportunity to ask questions. Because group
interaction may change over time, it may be important to facilitate this process, involving members in multiple experiences. Additionally, Olivera and Straus stated that collaborative-learning improved communication and teambuilding KSAs among learners.

Harrison, Mohammed, McGrath, Florey, and Vanderstoep (2003) suggested that the concept of teams and time was not clear, but that efforts to understand this concept have grown over the years, with empirical research lagging behind. Social or member familiarity was, in part, the focus of this research, based on the premise that familiarity was time dependent. The review of literature included the concept that familiarity is important in the beginning of team development to foster coordination and integration. In addition to other hypotheses, Harrison et al. presented a three-part, single hypothesis that is explained here. Performance differences for familiar versus continuing versus one-shot teams were moderated by time so that (a) familiar groups were initially outperformed continuing and one-shot teams; (b) the difference between one-shot and ongoing teams narrowed overtime; and (c) the difference between continuing and one-shot teams were widened over time. In their study, there were 216 participants that formed 72 triads, with procedures administered to form the varying types of teams. The teams met for 3 weeks and performed various tasks. The hypothesis was supported. “A priori familiar teams with members connected by strong ties worked faster and created higher quality products” (Harrison et al., 2003).

Yazici (2004) described the principle of “opportunity to practice,” which suggested that learning was improved more through talking than by simple observation. In this study, the author postulated that collaborative learning improved understanding
of operations management methods and concepts, critical thinking, communication of operations management, and team-building KSAs. The author also expressed that students who do not want to embarrass themselves are likely to perform as independent learners. In the Yazici study, the intervention course included collaborative presentation assignments, computer lab assignments, collaborative exams, a collaborative term project, and collaborative class practices. Ninety-four students took a required course over two semesters. The results showed that the collaborative instructional tools resulted in an effective collaborative environment and enhanced critical thinking, communication, and teamwork skills.

Koppenhaver and Shrader (2003) studied 130 different teams comprised of a total of 500 undergraduate students in a semester-long finance course. They suggested that the greater the team aptitude, the greater the motivation, and that high-aptitude students make teamwork better. In this case, the measure of aptitude was the number of finance credit hours taken prior to the course in which performance was measured. They hypothesized that the “team performance improved with the per capita coursework of the team members” (Koppenhaver & Shrader, 2003, p. 6). An asset to the team was assumed to be members’ prior exposure to the concepts and principles of the major curriculum.

In the intervention provided by Sense (2005), the workshops provided conversational space that encouraged reflection and created interpersonal understanding. This conversation embraced differences as a source of understanding. Yazici (2004), who presented the “opportunity to practice” concept, stated that conversation improves learning more than just observing.
Members’ relationship to one another was discussed. Ellis, et al. (2003) examined, in part, how, at the individual and team project levels, teams learn and how the rate of learning could be improved within groups who had no prior history (knowledge) or knowledge of each other’s strengths or weaknesses. Peterson and Miller (2004) measured the perception of collaborative experience during cooperative and large group instruction. They also wanted to examine whether students with prior educational achievements have different experiences in the instructional settings. They examined the internal dimensions of students’ experience including the cognitive, emotional, and motivational dimensions; students’ prior academic achievements were also examined. Olivera and Straus (2004) researched the effects of a group on its members. They summarized that, (a) Social cohesion, suggested that groups enhance the sense of identification and concern for others, (b) The extent to which individuals learned from group participation can affect future group performance, and (c) Group collaboration, including its cognitive elements, fostered transfer of learning to individuals.

**Job/Individual Teamwork KSAs**

A study released last month tells us we could be in deep trouble within a very short time. It found that most young people entering the U.S. workforce are missing key skills that will help them use their knowledge, skills like teamwork, cooperation and leadership. (Workforce Resources, 2006, para.1)

Stevens and Campion (1994) asserted that human resource management systems are applied to individuals; people are hired as individuals, given an individual paycheck, and so on. Similarly, according to Coates (2005), the responsibility for learning lies with the individual, who is ultimately the agent in conversations about engagement. Individual teamwork KSAs were presented by Stevens and Campion.
They identify competencies which are arranged into five sub-areas or sub-themes (conflict resolution, collaborative problem solving, communication, goal-setting and performance management, and planning and task coordination). The five themes are further organized into two domains – interpersonal domain and the self-management domain: The domains and sub-themes are listed here:

**Interpersonal Domain**

1. Conflict resolution: Negotiation strategy as opposed to compromise and concession.
2. Collaborative problem solving: Members rather than supervisor take initiative to solving team’s problems and do so while considering the contributions of other team members. Members must be aware of obstacles to group problem solving and be capable of mitigating them.
3. Communication: The interpersonal competency of team members and capacity to communicate effectively should not be confused with the ability to simply converse with others or maintain cordial associations. This level of communication may be relative to the level of employee engagement for the entire team.

**Performance Management Domain**

4. Goal-setting and performance management
   a. A clear definition is critical to team effectiveness
   b. Level of goal difficulty and goal acceptance is critical to team success
   c. Monitoring team effectiveness and progress is an attribute of effective team
   d. Addressing individual performance is important to avoid loss from social-loaing. (p.4)

5. Planning and task coordination: The proper allocation of individual members to specific task, duties, and role assignments is important.

Draskovic et al. (2004) explained that, in most small groups, learners are actively engaged in problem solving and working on projects, with problem solving being the most predominant activity. In this study, small collaborative task-related interactions,
knowledge relatedness, knowledge elaborations, and knowledge acquisitions were examined. Peripheral components were tutor role and facilitation. In this study, a group of 89 (64 female and 25 male) first-year medical students (familiarity-wise, 79 were first-time participants) were divided into 6 tutor-led groups. Following the last work group session, students completed a questionnaire.

In communication, discussion, and problem solving Janz and Prasampharich, (2003) noted that collaborative sequencing or shared thinking positively affected knowledge elaborations and knowledge acquisition. Interestingly, they highlighted that speech overlaps observed in collaborative sequencing gave the impression of several minds thinking out loud together. They concluded that the achievement and productivity of the group were elevated when a group had adequate social skills, feelings of responsibility for the group’s performance, interdependent goals, willingness to teach each other the skills needed for the work, and occasional evaluation of the group’s performance,

Ellis et al. (2005) examined the utility of generic teamwork training skills for improving the effectiveness of action teams. In this study, three competencies for team training were presented because of their relevance to the demands of action team members. These competencies were as follows: planning and task coordination, collaborative problem solving, and communication. The study concentrated on cognitive- and skills-based outcomes. One hypothesis was that team members who received training would display higher levels of the later competencies. The participants in this study were 260 students (136 control and 124 trained) who formed 65 four-person teams in an introductory management course. Students received lecture-based
training and participated in a version of the Distributed Decision Making Simulation. For the hypothesis above, planning and task coordination, collaborative problem solving, and communication were all higher for the teams in the training condition. Stevens and Campion’s (1994) framework suggests high individual scores on the teamwork test indicated high team capabilities. Peterson and Miller (2004) note that when measuring at the team level, teams composed of low scoring individuals will not perform as well as teams composed of high scoring.

Summary

This chapter provided a review of the literature for the three primary elements of an analysis in the instructional design model. Learner characteristics associated with low-income status/first-generation status are reviewed. There was a paucity of literature regarding individual teamwork KSAs, particularly related to the population being studied. In the setting/ higher education four areas stood out: (a) demographic and pre-college characteristics, (b) institutional characteristics, (c) college academic experiences, and (d) college non-academic experiences. Various measures were used for the level of engagement, amount and type of experiences students may encounter in developing individual teamwork KSAs. A synthesis of the job/KSAs was presented. Chapter 3 details the methodology utilized for this study.
CHAPTER 3

METHODOLOGY

The purpose of this multiple case study was to analyze learner characteristics, the higher education environment/undergraduate experience, and the individual teamwork knowledge, skills, and abilities (KSAs) of students from a senior cohort of the TRiO – Student Support Services (SSS) Program at a 4-year public student-centered research institution. The research yielded local and systematic themes to improve practices that support the development of individual teamwork KSAs for the participating students and promote their workforce readiness.

Research Questions

Research Question 1

1. What is the interrelationship of the learner characteristics, undergraduate experience, and teamwork KSA for an individual case that represents a low-income/first-generation seniors who scored above the mean Teamwork KSAs Test?

Research Question 2

2. How do the learner characteristics, undergraduate experiences, and teamwork KSAs test scores interrelate from one case to the other?

Research Question 3

3. What themes emerge from the findings that may be useful in designing a curriculum to develop individual teamwork KSAs which promote higher workforce readiness?

Research Design

Qualitative research was selected for this study. This type of research (a) captures the individual’s point of view; (b) examines the constraints of everyday life; and
(c) secures rich descriptions (Denzin & Lincoln, 2000). These authors also noted that qualitative research emphasizes the nature of reality as it is socially structured and situationally considered and how social experiences are created and given meaning. In contrast, quantitative studies emphasize the measurement and analysis of casual relationships between variables, not process (Denzin & Lincoln, 2000, pp. 9-10).

The primary qualitative method used in this study was the case study methodology. Case studies do the following:

1. Provide an opportunity to assess a continuum from simple to complicated phenomena, with units of analysis from the individual level to corporate and business settings (Yin, 2003).

2. Are an “in-depth study of natural context and from the perspective of the involved participants” (Gall, Gall & Borg, 2007).

3. May be an in-depth description of one setting, a single subject, a single depository of documents, or one particular event (Bogdan & Biklen, 2003).

More specifically, a multiple case study design was utilized to increase the rigor and quality of this research. “Designing a study with multiple cases, multiple informants, or more than one data gathering method can greatly strengthen the study’s usefulness to other settings” (Marshall & Rossman, 2006, p. 202).

Cases were studied in an interview setting and from the individual participant’s perspective. For the purpose of this study, individual students, their experiences, and their teamwork KSAs scores were considered as a single case; these elements parallel those of the analysis phase in the instructional design model. According to Stake (2006), these single cases are important because they belong to a collection of cases.
These single cases share a common characteristic or condition and may be bound by phenomena. According to Stake (2006), the quintain is a loose confederation, or a less simple pattern and more a mosaic; it is an object, a phenomenon, or condition to be studied – a target, but not a bull’s eye. For this research, the quintain is the collection of cases and will from this point forward be referred to as the phenomenon.

Quality and Rigor

Validity

While there are guidelines to addressing threats to validity such as researcher bias and measurement bias, “there is no specific litmus test we can administer that will apply a stamp of approval to any given qualitative research project” (Hesse-Biber & Leavy, 2006, p. 66). Marshall and Rossman (2006) contended that referring to the original theoretical framework is a way to counter threats to external validity. They suggested that the theoretical framework can illustrate how data collection and analysis will be guided by concepts and models. Below are strategies that address validity presented by Gall et al. (2007). Maxwell (as cited in Gall et al., 2007) stated that such strategies help to reduce threats to validity and increase the soundness of one’s research.

The strategies Maxwell (as cited in Gall et al., 2007) listed include the following: (a) contextual completeness; (b) soliciting rich data; (c) coding checks; (d) disconfirming case analysis need; (e) member checking; (f) comparison; and (g) peer examination. Additionally, to convey the meaning of what each case revealed, assurances are sought from the data (Stake, 2006, p. 33). Gaining these assurances is called “triangulation”
which, according to Stake requires having a minimum of three confirmations and assurances that key meanings are not being missed.

The following procedures, guided by Stake (2006) were utilized to analyze each case: (a) read the collected reports; (b) coded each interview and information form data sources; (c) listed the themes; (d) constantly compared notes within and then between cases; (e) rated expected utility; (f) rated theme-based assertions; and (g) triangulated themes first within each case (for each individual student) and then separately for the cross-case analysis.

**Cross-Case Analysis**

A cross-case analysis was utilized to increase the rigor and quality of this research. This methodology was used primarily to answer Question 2. The results also produced the data to answer question 3. The cross-case analysis used the individual cases of seniors scoring above the mean on the Teamwork KSAs Test and compared them to one another. Assertions were made at this point.

Using multiple case studies was “considered more compelling, and overall the study was therefore regarded as more robust” (Yin, 2003, p.46). Furthermore, “designing a study with multiple cases, multiple informants, or more than one data gathering method can greatly strengthen the study’s usefulness to other settings” (Marshall & Rossman, 2006, p. 202). Seven cases were studied and four data sources were used for each case.

Maxwell (as cited in Gall et al., 2007) listed the following strategies as reflecting sound research:
1. Coding checks
2. Disconfirming case analysis
3. Member checking
4. Intervention and pattern matching
5. Comparison
6. Peer examination
7. Researcher reflection (p. 474-476)

Reliability

According to Bogdan and Biklen (2003),

Qualitative researchers tend to view reliability as a fit between what they record as data and what actually occurs in the setting under study, rather than the literal consistency across different observations. . . . Two researchers studying the single setting may come up with different data and produce different findings; both studies can be reliable. (p. 36)

Reliability would be found if other researchers arrive at similar results using the same case and procedures (Gall et al., 2007).

Generalizability

In qualitative research, generalizations are not made about the wider social systems (Hesse-Biber & Leavy, 2006). “Issues at the case level sometimes lead to improvement of generalizations, especially when they are rooted in a situation of stress, teasing out more of the complexity” (Stake, 2006, p. 12). According to Berg (2007), there is clear scientific value to gain from an understanding of individual, group, or event and to an extent they are generalizable. The term applicability as opposed to generalizability was proposed by Gall et al. (2007). They suggested that applicability was more appropriate based on processes and evidence and defined it as the extent to which the findings of a qualitative research study are applicable to other cases or settings (p. 633).
Population

This section includes the number/percentage of UNT student body meeting SSS eligibility requirements, as defined by the U.S. Department of Education and produced by UNT (2004b). The data are illustrated in Table 3.

Table 3

Summary of Institution’s Eligible Student Population

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Percent</th>
<th>Source of data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrollment</td>
<td>22,618</td>
<td>100%</td>
<td>UNT Fact Book</td>
</tr>
<tr>
<td>(Low-Income Students)</td>
<td>3,589</td>
<td>15%</td>
<td>Institutional Research and Accreditation</td>
</tr>
<tr>
<td>(First Generation)</td>
<td>2,630</td>
<td>11%</td>
<td>Institutional Research and Accreditation</td>
</tr>
<tr>
<td>Low-Income and First Generation</td>
<td>529</td>
<td>2%</td>
<td>Institutional Research and Accreditation</td>
</tr>
<tr>
<td>(Total eligible also includes students w/disabilities)</td>
<td>6,784</td>
<td>28%</td>
<td>Institutional Research and Accreditation</td>
</tr>
</tbody>
</table>


The special population at the institution is 6,748, or 28% of the total undergraduates at the institution. There were 2,630 first-generation students, and 3,589 low-income students. Low-income and first-generation students represented 2% (529) of the total population.

Sample

The sample for this study was “purposeful” in order to gain a deeper understanding of the experiences related to the individual teamwork KSAs of the
participants in the project. The goal was to select cases that are information rich with respect to the purpose of the study (Gall et al., 2007, p. 165). According to Gall et al., (2007) this type of sampling was not designed for population validity; the intent was to achieve an in-depth understanding of the differences in the senior cohort of students.

Data Sources

Case study methodology utilizes multiple document sources and involves multiple methods including test instrument, questionnaire, and semi-structured interviews (Marshall & Rossman, 2006). This study used various data sources to contribute to the application of theory (Yin, 2003). The study used four data sources: (a) The Teamwork KSAs Test, (b) university transcript, (c) project database, and (d) semi-structured interviews, which can be found in Appendix B.

Teamwork KSAs Test

One organization representing those with a major interest in postsecondary education is the National Postsecondary Education Cooperative (NPEC). Its mission is to promote quality, comparability, and utility of postsecondary education data at the federal, state, and institution levels. The Teamwork KSAs Test is one of the instruments posted by this agency and was used for this study.

The Teamwork-KSAs Test is a psychological test instrument designed to measure essential KSAs that are predictive of working in teams and focuses on KSAs, team, and the individual (Stevens & Campion, 1996). The Teamwork KSAs Test is a 35-item, multiple choice test with hypothetical teamwork situations. Scores range from “0,”
indicating no answers correct to “35” meaning all answers correct. The test presents 14 knowledge, skill, or ability competencies that are categorized into five sub-themes: (a) conflict resolution, (b) collaborative problem solving, (c) communication, (d) goal-setting and performance management, and (e) planning and task coordination. The first three lie in the domain of interpersonal KSAs; the last two are in the domain of self-management.

The construct validity of the Teamwork KSA Test and an employment aptitude test established a composite of $r=0.81$. The Teamwork KSAs Test was validated only for an overall teamwork score. Stevens and Campion (1996) have suggested that the subscale scores only be used for assessing training and development needs. An analysis of the test items yielded an internal reliability coefficient of $r=0.80$ (Stevens & Campion, 1996).

Using external raters and peer evaluation, McClough and Rogelberg (2003) found that the Teamwork KSAs Test successfully predicted individual team member behavior. The index was ($r = 0.31, p < 0.01$) for raters and ($r = 0.34, p < 0.01$) for peers, such that higher scores on the teamwork KSAs related to greater individual effectiveness with teams (Leach, Wall, Toby, Rogelberg, & Jackson, 2005). Chen et al., (2004) stated that the test may capture a significant cognitive ability component. Furthermore, “finding that teamwork KSAs are related to actual team performance criteria suggests that systematic development of these KSAs in higher education would contribute to improved workforce readiness” (p. 29).
Interview Guide

The interview guide was designed using questions validated in the University of North Texas (UNT) Graduating Student Survey (2004a), the UNT Student Services Survey, and the College Student Experience Questionnaire (CSEQ). These first two survey instruments can be found at http://www.unt.edu/ir_acc/CommonDataSet.htm

Transcript and Project Records

In addition to the developed interviews, students' transcript and project database information was utilized. Participant transcript from People-Soft/Enterprise Information was used to verify students' majors. The project database contained demographic and project eligibility information as well as contact with project staff.

Semistructured Interviews

Semistructured interviews were conducted for each case. The interview guide approach allowed for a set of topics to be explored with each respondent (Gall et al., 2007). No set of questions was decided in advance. Three broad topics were to be covered: (a) students' teamwork experiences as an undergraduate, (b) distinction of experiences within an academic setting and non-academic and associated competencies and (c) competencies associated with each experience. Additional open-ended questions were asked to probe more deeply into the experiences of each case. The recording of the interviews included handwritten notes, audio files, and transcripts of each audio file.
Data Collection Procedures

To provide local and project-specific data SSS seniors were purposively selected from the SSS project to take the Teamwork KSAs Test. The project database preliminarily revealed 62 students. The transcripts for these students were downloaded from the Enterprise Information System (EIS) and analyzed to verify senior classification. Seniors received electronic communication with a request to complete the Teamwork KSAs Test. Seniors who scored above the mean and those who scored below the mean were separated to establish the two levels of participants. A chi-square test of homogeneity was applied to a 2 x 5 contingency table representing the data of interest. Standardized residuals \( (R) \) were computed for each of the cells. Standardized residuals greater than 2.00 were considered a major contributor to a significant chi-squared value (Hinkle, Wiersma & Jurs, 2003, p. 560). The power for this test, assuming a sizable effect size (i.e., \( w = .8 \)), was .85. The results are expected to yield the seniors scoring above the mean.

Data Analysis

The individual’s score determined the mean score. Seniors who scored above the mean and those who scored below the mean were separated to establish the two levels of participants. Data provided on the five sub-themes were utilized in individual case reports and the cross-case analysis. Each research question is presented below followed by the analysis procedure.
Research Question 1 – Single Case Analysis

1. What is the interrelationship of the learner characteristics, undergraduate experience, and individual teamwork KSA for an individual case that represents a low-income/first-generation senior who scored above the mean Teamwork KSAs Test?

According to Stake (2006) these single cases are important because they belong to a collection of cases. The single cases share a common characteristic or condition and may be bound by phenomena. The assessment for each individual case scoring above the mean was performed separately for each case.

Triangulation was offered as a method to address threats to validity (Berg, 2007; Gall et al., 2007; Hesse-Biber & Leavy 2006; Marshall & Rossman, 2006). A good researcher wants assurance that “meaning gained by the reader was the meaning he or she intends to convey” (Stake, 2006, p. 33). Gaining these assurances is called “triangulation” which, according to Stake, requires having a minimum of three confirmations and assurances that key meanings are not being missed. Also, “each important interpretation needs assurance that was supported by the data and not easily misinterpreted by readers of the report” (p.33). Most specific to this study is the concept of interpretive validity.

In addition to the data collection/analysis from the Teamwork KSAs Test, four other sources were used for cases involving the seniors who scored above the mean. Stake (2006) listed the following as procedures for analysis of single case:

1. Reading the collected reports
2. List the themes/research questions
3. Analyze case while reviewing notes
After answering question 2 the researcher proceeded to answer question two.

Research Question 2 – Cross-Case Analysis

2. How do the learner characteristics, undergraduate experiences, and Teamwork KSAs test scores interrelate from one case to the other?

“A cross case analysis brings together findings from individual case studies and are the most critical parts of a multiple-case study. The analysis treated each individual case as though it were an independent study” (Yin, 2003, p. 145). The cross-case procedure described by Stake (2006) involved reading the research reports and applying them to situated findings.

The research questions are expected to guide the study with expected new creations and modifications in understanding. The analysis was not simply a matter of listing case findings pertinent to each research question, because to some extent the findings needed to keep their contextual meaning during the authoring of the multi-case report. (Stake, 2006, p. 47)

The following steps were used:

1. Rated theme-based assertions from merged findings
2. Completed matrix for generating theme-based assertions from important factor clusters
3. Completed multi-case assertions
4. Synthesize assertions for triangulation between cases
5. Prepare the final report. (p.47)
Stake (2005, p. 10) described how assertions are developed: “Starting with a topical concern, case researchers considered the foreshadowed problems, concentrate on issue related observations, interpret patterns of data, and reformulate issues as findings or assertions.”

The previous information was used to answer question 3: What themes emerge from the findings that may be useful in designing a curriculum to develop individual teamwork KSAs that promote higher workforce readiness for the target population? Question 3 required that the assertions from the multiple cases be synthesized. The synthesis began with restating question 3 and a chain of reasoning for arriving at the core findings to answer this research question.

Summary

This chapter described qualitative research which has as its essence a commitment “to some version of the naturalistic, interpretive approach to subject matter” (Denzin & Lincoln, 2000 p.8). This chapter provided details of the population sampling process and strategies for a multiple case analysis. The selected methodology yielded themes instrumental in designing a curriculum to development of teamwork KSAs of student population participating in a TRiO – SSS project as well as to promote among them a greater workforce readiness related. Chapter 4 presents the findings of the study.
CHAPTER 4

FINDINGS

Before a presentation of the results of the single cases and the multi-case report this chapter provides an overview of the purpose of the study, population of interest and data management.

Purpose of the Study

The purpose of this study was to analyze learner characteristics, the higher education environment/experience, and the job/skills associated with individual teamwork knowledge, skills, and abilities (KSAs) of students from a senior cohort of the TRiO – Student Support Services (SSS) project at a public student-centered research institution. The research focused on three questions:

Research Question 1

1. What is the interrelationship of the learner characteristics, undergraduate experience, and individual teamwork KSA for an individual case that represents a low-income/first-generation seniors who scored above the mean Teamwork KSAs Test?

Research Question 2

2. How do the learner characteristics, undergraduate experiences, and teamwork KSAs test scores interrelate from one case to the other?

Research Question 3

3. What themes emerge from the findings that may be useful in designing a curriculum to develop individual teamwork KSAs which promote higher workforce readiness?

This chapter is organized into three parts. The first part recaptures the population of interest and describes sample cases. Part 2 describes data management, including
the methodology, data sources, and framework for the presentation of the data. Part 3 presents the results for all participants who took the test and the 7 who responded to the request for an interview.

Part 1: Population of Interest

Of the total population of 22,618 students at the university from which the sample was selected, during the time of this study 6,219 or 27% of the total undergraduates were eligible for the SSS project. There were 2,630 first-generation students and 3,589 low-income students. Low-income and first-generation students represented 529 or 2% of the total population.

The particular project that serves the population of interest is the SSS project, which was established in 1968 as one of the three original TRiO programs, with the other two serving pre-college students and SSS (which serves the population of interest) serving students in postsecondary education. The goal of the project is to provide low-income and first-generation college students with access to a college education, achievement, and success in earning a 4-year degree. The project was funded at the university from which the sample was selected in 1984.

To provide local and project-specific data, SSS seniors were purposively selected from the SSS project to take the Teamwork KSAs Test. The project database preliminarily revealed 62 students. The transcripts for these students were downloaded from the Enterprise Information System (EIS) and analyzed to verify classification.

Specifically, individual teamwork KSAs were assessed. An electronic version of the Teamwork KSAs Test was sent to the 62 seniors in the SSS project. The Teamwork
KSAs Test by Stevens and Campion (1996) is a psychological test instrument designed to measure essential knowledge, skills, and abilities that are predictive of working in teams and focuses on KSAs, team, and the individual. The Teamwork KSAs Test is a 35-item, multiple choice test with hypothetical teamwork situations.

Responses were gathered from 24 people, presenting a response rate of 39%. The scores for all 24 respondents are presented in Table 4. Conflict resolution (CR), collaborative problem solving (CP), and communication (CM) sub-areas are listed in columns 2 through 4 respectively. The scores for the interpersonal domain (IN) are listed in column 5 and is the total of the percentile scores in columns 2 through 4. Goal-setting and performance management (GP) and planning and task coordination (PT) are listed in columns 6 and 7 respectively. The scores for the self-management domain are recorded in column 8 and are the total percentile scores for the sub-area. Table 4 provides an overview of the scores for all participants who completed the test. It provides perspective and provides the data for Question 1.
Table 4

*Teamwork KSAs Scores for All Respondents*

<table>
<thead>
<tr>
<th>Respondents Raw score</th>
<th>1 T (%)</th>
<th>2 CR (%)</th>
<th>3 CP (%)</th>
<th>4 CM (%)</th>
<th>5 IN (%)</th>
<th>6 GP (%)</th>
<th>7 PT (%)</th>
<th>8 SM (%)</th>
<th>(5+6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 25</td>
<td>70</td>
<td>66</td>
<td>46</td>
<td>99</td>
<td>87</td>
<td>68</td>
<td>37</td>
<td>44</td>
<td>N/A</td>
</tr>
<tr>
<td>2 25</td>
<td>70</td>
<td>99</td>
<td>46</td>
<td>57</td>
<td>55</td>
<td>99</td>
<td>99</td>
<td>99</td>
<td>N/A</td>
</tr>
<tr>
<td>3 24</td>
<td>61</td>
<td>99</td>
<td>46</td>
<td>77</td>
<td>67</td>
<td>68</td>
<td>65</td>
<td>64</td>
<td>N/A</td>
</tr>
<tr>
<td>4 24</td>
<td>61</td>
<td>99</td>
<td>31</td>
<td>96</td>
<td>77</td>
<td>68</td>
<td>37</td>
<td>44</td>
<td>N/A</td>
</tr>
<tr>
<td>5 23</td>
<td>54</td>
<td>99</td>
<td>83</td>
<td>77</td>
<td>87</td>
<td>13</td>
<td>37</td>
<td>16</td>
<td>N/A</td>
</tr>
<tr>
<td>6 23</td>
<td>54</td>
<td>99</td>
<td>46</td>
<td>57</td>
<td>55</td>
<td>68</td>
<td>65</td>
<td>64</td>
<td>N/A</td>
</tr>
<tr>
<td>7 21</td>
<td>40</td>
<td>66</td>
<td>46</td>
<td>23</td>
<td>28</td>
<td>68</td>
<td>99</td>
<td>83</td>
<td>N/A</td>
</tr>
<tr>
<td>8 21</td>
<td>40</td>
<td>24</td>
<td>46</td>
<td>77</td>
<td>45</td>
<td>38</td>
<td>65</td>
<td>44</td>
<td>N/A</td>
</tr>
<tr>
<td>9 21</td>
<td>40</td>
<td>66</td>
<td>16</td>
<td>77</td>
<td>36</td>
<td>38</td>
<td>99</td>
<td>64</td>
<td>N/A</td>
</tr>
<tr>
<td>10 21</td>
<td>40</td>
<td>99</td>
<td>46</td>
<td>57</td>
<td>55</td>
<td>68</td>
<td>16</td>
<td>27</td>
<td>N/A</td>
</tr>
<tr>
<td>11 20</td>
<td>34</td>
<td>66</td>
<td>46</td>
<td>57</td>
<td>45</td>
<td>38</td>
<td>37</td>
<td>27</td>
<td>N/A</td>
</tr>
<tr>
<td>12 20</td>
<td>34</td>
<td>66</td>
<td>31</td>
<td>77</td>
<td>45</td>
<td>38</td>
<td>37</td>
<td>27</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*(table continues)*
Table 4 (continued).

Teamwork KSAs Scores for All Respondents

<table>
<thead>
<tr>
<th>Respondents Raw score</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5(2+3+4)</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>5+6</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 20</td>
<td>34</td>
<td>66</td>
<td>65</td>
<td>38</td>
<td>45</td>
<td>16</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 18</td>
<td>24</td>
<td>66</td>
<td>31</td>
<td>13</td>
<td>15</td>
<td>99</td>
<td>37</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>15 18</td>
<td>24</td>
<td>24</td>
<td>65</td>
<td>23</td>
<td>28</td>
<td>13</td>
<td>65</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>16 18</td>
<td>24</td>
<td>66</td>
<td>65</td>
<td>23</td>
<td>36</td>
<td>4</td>
<td>65</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>17 17</td>
<td>13</td>
<td>0</td>
<td>31</td>
<td>57</td>
<td>15</td>
<td>68</td>
<td>16</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>18 15</td>
<td>10</td>
<td>66</td>
<td>4</td>
<td>38</td>
<td>15</td>
<td>13</td>
<td>37</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>19 14</td>
<td>7</td>
<td>6</td>
<td>4</td>
<td>38</td>
<td>6</td>
<td>38</td>
<td>37</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>20 14</td>
<td>7</td>
<td>24</td>
<td>46</td>
<td>13</td>
<td>15</td>
<td>13</td>
<td>16</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>21 14</td>
<td>7</td>
<td>66</td>
<td>16</td>
<td>8</td>
<td>6</td>
<td>13</td>
<td>65</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>22 13</td>
<td>5</td>
<td>24</td>
<td>46</td>
<td>23</td>
<td>6</td>
<td>13</td>
<td>37</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>23 13</td>
<td>5</td>
<td>6</td>
<td>46</td>
<td>57</td>
<td>28</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>24 8</td>
<td>1</td>
<td>6</td>
<td>16</td>
<td>13</td>
<td>5</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
Table 4 is presented in descending order of the total score achieved by all students who responded. The total mean score is 21. Not all students who achieved a total score above the mean achieved a sub-area percentile score that was above the mean.

The 2 x 5 contingency illustrates the frequency of scores for the two domains and the five sub-areas of the Teamwork KSAs Test (see Table 5).

Table 5

Contingency Table of Scores Above and Below the Mean

<table>
<thead>
<tr>
<th>Sub-Area</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>2+3+4</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Above the Mean</td>
<td>13</td>
<td>16</td>
<td>14</td>
<td>13</td>
<td>11</td>
<td>14</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Number Below the Mean</td>
<td>11</td>
<td>8</td>
<td>10</td>
<td>11</td>
<td>13</td>
<td>10</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

Table 5 reveals that there are 13 students who achieved a total score above the mean. The analysis of the scores for all of the respondents was not the intent of this study. The purpose of gathering these data was to identify students having scores above the mean on the total score. There were 13 who scored above the mean. Seven of these students responded to a request for an interview. The analysis of the data from these 7 students serves to answer research question 1.

Sample of Cases

Seven of the 13 students who scored above the mean on the Teamwork KSAs Test responded to a request for an interview. Scores from the Teamwork KSAs Test
were calculated by the distributor of the instrument. “Zero” points were given for each incorrect answer and one for each correct answer; the raw scores ranged from “0,” indicating no answers correct to “35,” meaning all answers correct, and the total score (TS) is a percentile score.

The single case (see Table 6) analyses included each of these 7 students as a separate case. The cases are given fictitious names for anonymity. They are, Random Found Things, Hut, Sonshine, Rosey, Sergeant, Moonlight, and Broken Glass. A brief description of each case follows.
Table 6  
*Learner Characteristics, Environment, and Teamwork KSAs Scores*

<table>
<thead>
<tr>
<th>Low-income</th>
<th>First-gen.</th>
<th>Age</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Residential/Commuter</th>
<th>Major Academic</th>
<th>Academic Co-curricular</th>
<th>Non-academic</th>
<th>Total KSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Random Found Things</td>
<td>Yes</td>
<td>Yes</td>
<td>22</td>
<td>M</td>
<td>African American</td>
<td>Commuter</td>
<td>Studio Art</td>
<td>Yes</td>
<td>No work</td>
</tr>
<tr>
<td>Hut</td>
<td>Yes</td>
<td></td>
<td>26</td>
<td>F</td>
<td>Caucasian</td>
<td>Commuter</td>
<td>Business Administration</td>
<td>Yes</td>
<td>No work</td>
</tr>
<tr>
<td>Sonshine</td>
<td>Yes</td>
<td></td>
<td>22</td>
<td>M</td>
<td>African American</td>
<td>Commuter</td>
<td>Business Administration</td>
<td>Yes</td>
<td>Yes work</td>
</tr>
<tr>
<td>Rosey</td>
<td>No</td>
<td></td>
<td>21</td>
<td>M</td>
<td>Caucasian</td>
<td>Commuter</td>
<td>History</td>
<td>Yes</td>
<td>No work</td>
</tr>
<tr>
<td>Sergeant</td>
<td>Yes</td>
<td></td>
<td>23</td>
<td>F</td>
<td>Hispanic</td>
<td>Commuter</td>
<td>Political Science</td>
<td>Yes</td>
<td>Yes work</td>
</tr>
</tbody>
</table>

*(table continues)*
Table 6 (*continued*).

*Learner Characteristics, Environment, and Teamwork KSAs Scores*

<table>
<thead>
<tr>
<th>Low-income</th>
<th>First-gen.</th>
<th>Age Gender</th>
<th>Ethnicity</th>
<th>Residential/Commuter</th>
<th>Major Academic</th>
<th>Academic Co-curricular</th>
<th>Non-academic</th>
<th>Total KSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moonlight</td>
<td>Yes No</td>
<td>24 F</td>
<td>African American</td>
<td>Commuter</td>
<td>Business Administration/Accounting</td>
<td>Yes</td>
<td>Yes work (1 organization)</td>
<td>70</td>
</tr>
<tr>
<td>Broken Glass</td>
<td>Yes Yes</td>
<td>53 F</td>
<td>Caucasian</td>
<td>Commuter</td>
<td>Social Work</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
Random Found Things

Random Found Things is a 22-year-old, low-income, first generation studio art major. He commutes within 10 miles of campus. He made a raw score of 21 and a total score of 40.

Hut

Hut is a 26-year-old female who transferred from a local community college. Hut, age 26, will graduate with a degree in business administration. She commutes more than 10 miles. During her undergraduate years she worked her way from team member to manager at Pizza X. In addition to being a student and employee, she is also a wife and mother. She has a raw score of 21 and a total score of 40.

Sonshine

Sonshine is a 22-year-old low-income, first-generation male. He will graduate with a degree in business administration. He commutes approximately 10 miles. He has worked on campus in SSS for 4 years. He also made a raw score of 21 and a total score of 40.

Rosey

Rosey is a 21-year-old low-income male who will graduate with a degree in history. Soccer and religious group experiences were his primary team experiences. He commutes from within 10 miles of campus. He made a raw score of 23 and a total score of 54.
Sergeant

Sergeant is a 23-year-old, low-income, first-generation female who will graduate with a degree in political science. Specifically related to teamwork, at the center of her undergraduate experience was participation in soccer and a politically oriented co-curricular organization. She made a raw score of 24 and a total score of 61.

Moonlight

Moonlight is a 24-year-old low-income student. She will graduate with both a bachelor’s in business administration and a master’s in accounting. Moonlight has worked on a number of teams during college. She commutes within 5 miles of campus. She made a raw score of 25 and a total score of 70.

Broken Glass

Broken Glass is a 53-year-old, low-income, first-generation female. She is a social work major. Broken Glass commutes from within 5 miles of campus. She is an older student whose teamwork experiences were primarily outside her undergraduate experience. These experiences were built overtime with her family and social groups. She achieved a raw score of 25 and a total score of 70.

According to Stake (2006), these single cases are important because they belong to a collection of cases. These single cases share a common characteristic or condition and may be bound by phenomena. The quintain is a loose confederation, or a less simple pattern and more a mosaic (Stake, 2006). A quintain (pronounced kwin’ton) is an object, phenomenon, condition to be studied – a target, but not a bull’s eye; and
for a multiple case study it is the collective target – collection of cases. This collection of cases which are elements of the analysis phase of the instructional design model provides a framework. Analysis in the instructional design model includes the learner, the environment, and the skill. The quintain will from this point forward be referred to as the phenomenon.

Part 2: Data Management

This section describes data management, including the methodology, data sources, and framework for the presentation within each case.

Methodology

A multiple case study design was utilized to increase the rigor and quality of this research and to answer the three research questions. First, individual cases of seniors who scored above the mean on the Teamwork KSAs Test were studied separately. Phenomena were studied in the natural context of the university setting and from the individual participants’ perspectives.

The theoretical framework also provided guidance for the development of themes for which findings were ascribed. Marshall and Rossman (2006) contended that referring to the original theoretical framework is a way to counter threats to external validity. They suggested that the theoretical framework illustrates how data collection and analysis will be guided by concepts and models. Engagement, social capital, and collaborative learning were presented for this study.
In the single case analysis, the researcher performed procedures identified by Stake (2006): (a) read the collected reports (b) code each interview and information form data sources, (c) list the themes. (d) constantly compare notes within and then between cases; (e) rate expected utility; (f) rate theme-based assertions; and (g) triangulate data first within each case (for each individual student) and separately for the cross-case analysis. Stake defined triangulation within cases:

Each important finding needs to have at least three (often more) confirmations and assurances that key meanings are not being overlooked. Each important interpretation needs assurance that is supported by data gathered and not easily misinterpreted by readers of the report. (p. 33).

A cross-case analysis was utilized to increase the rigor and quality of this research. This methodology was used primarily to answer research question 2 cross-case analysis. Assertions were made during this analysis. Stake (2006, p. 10) described how assertions are developed: “Starting with a topical concern, case researchers consider the foreshadowed problems, concentrate on issue related observations, interpret patterns of data, and reformulate issues as findings or assertions” (p. 10). Question 3 required that the assertions from the multiple cases be synthesized. The synthesis began with restating question 3 and a chain of reasoning for arriving at the core findings (themes).

Data Sources

Transcript and Project Records

In addition to the interviews, students' transcripts and project database information were utilized. Participant transcripts from People-Soft/Enterprise Information
was used to verify students' majors and classification. The project database contained demographic and project eligibility information as well as contacts with project staff.

**Teamwork KSAs Test**

The Teamwork KSAs Test is a 35-item, multiple choice test with hypothetical teamwork situations. Scores range from “0,” indicating no answers correct to “35,” meaning all answers correct. The test presents 14 knowledge, skill, or ability competencies that are categorized into five sub-themes. The five categories are further assigned to two domains.

**Interviews**

Semi-structured interviews were conducted for each case covering three broad topics: (a) students’ teamwork experiences as an undergraduate, (b) distinction of experiences within an academic setting and non-academic and associated competencies and (c) competencies associated with each experience. Additional open-ended questions were asked to probe more deeply into the experiences of each case. The recording of the interviews included handwritten notes, audio files, and transcripts of each audio file.

**Framework for Presentation Within Each Case**

The analysis phase of the instructional design model provided a framework around which the data are presented. Analysis in the instructional design model includes the learner, the environment, and the skill. Themes were identified from
experiences by each student within the higher education environment that may have produced high scores for this population with low-income and first-generation participants. The assessment for each individual case was performed separately for phenomena above the mean.

The environment is the structural dimension of social capital relating to the location and frequency in the social structure (King & Furrow, 2004). The environment is a 4-year public institution serving approximately 22,000 undergraduates. The institution is the primary setting studied for the research participants as well as their experiences in this setting during their undergraduate career.

Part 3: Results

Single Case Analysis

Presented below are findings for students who scored above the mean and who also responded to the request for an interview. The cases described include: Random Found Things, Hut, Sonshine, Rosey, Sergeant, Moonlight, and Broken Glass. The analysis is presented utilizing the framework of the Instructional Systems Design (ISD) model analysis phase. In this phase, the instructional systems design involves an assessment of the learner, the environment, and the skills. These elements are referred to as the focus/foci. Findings are presented as direct quotes and are triangulated within each case in support of the focus’ themes. The single case analysis answers Research Question1:
Research Question 1

What is the interrelationship of the learner characteristics, undergraduate experience, and individual teamwork KSA for an individual case that represents a low-income/first-generation senior who scored above the mean KSAs Test?

This single case navigator (see Figure 1) serves as a guide the reader through each case and from one case to another.
<table>
<thead>
<tr>
<th>Case</th>
<th>Learner characteristic</th>
<th>Environment Teamwork</th>
<th>KSAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Random</td>
<td>Persistent</td>
<td>Academic Learning</td>
<td>Communication</td>
</tr>
<tr>
<td>Found Things</td>
<td>Understanding of</td>
<td>Collaborative Learning</td>
<td>Goal-setting and Performance Management</td>
</tr>
<tr>
<td></td>
<td>Teaming Concepts</td>
<td>Group Critiquing</td>
<td></td>
</tr>
<tr>
<td>Hut</td>
<td>Persistent</td>
<td>Non-engaging Academic Experience</td>
<td>Conflict Resolution</td>
</tr>
<tr>
<td></td>
<td>Engaged Employees</td>
<td>Familiar Collaborative Environment</td>
<td>Collaborative Problem Solving</td>
</tr>
<tr>
<td>Sonshine</td>
<td>Engaged</td>
<td>Academic Collaborative Learning</td>
<td>Communication</td>
</tr>
<tr>
<td></td>
<td>Self-Directed Familial</td>
<td>Teaming</td>
<td>Goal-Setting and Performance Management</td>
</tr>
<tr>
<td></td>
<td>Critical Member</td>
<td>Opportunity to Practice</td>
<td>Planning and Task Coordination</td>
</tr>
<tr>
<td>Rosey</td>
<td>Blessed</td>
<td>Collaborative Learning</td>
<td>Conflict Resolution</td>
</tr>
<tr>
<td></td>
<td>Preference for Familiarity</td>
<td>Familial Teaming</td>
<td>Collaborative Problem Solving</td>
</tr>
<tr>
<td></td>
<td>Confident</td>
<td>Faith-based Teaming</td>
<td>Communication</td>
</tr>
<tr>
<td></td>
<td>Service-Oriented</td>
<td></td>
<td>Goal-setting and Performance Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Planning and Task Coordination</td>
</tr>
<tr>
<td>Sergeant</td>
<td>Controlling</td>
<td>Group Development</td>
<td>Conflict Resolution</td>
</tr>
<tr>
<td></td>
<td>Reflective Observer</td>
<td>Engaging Co-curricular Experiences</td>
<td>Collaborative Problem Solving</td>
</tr>
<tr>
<td></td>
<td>Confident</td>
<td></td>
<td>Communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Goal-setting and Performance Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Planning and Task Coordination</td>
</tr>
<tr>
<td>Moonlight</td>
<td>Self-Directed</td>
<td>Collaborative Learning</td>
<td>Conflict Resolution</td>
</tr>
<tr>
<td></td>
<td>Critical Member</td>
<td>Opportunities to Practice</td>
<td>Collaborative Problem Solving</td>
</tr>
<tr>
<td></td>
<td>Engaged Learner</td>
<td></td>
<td>Communication</td>
</tr>
<tr>
<td></td>
<td>Service-Oriented</td>
<td></td>
<td>Goal-setting and Performance Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Planning and Task Coordination</td>
</tr>
<tr>
<td>Broken</td>
<td>Critical Family Member</td>
<td>Academic</td>
<td>Conflict Resolution</td>
</tr>
<tr>
<td>Glass</td>
<td>Persistent Familial</td>
<td>Teaming</td>
<td>Collaborative Problem Solving</td>
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<td></td>
<td>Resourceful</td>
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<td>Communication</td>
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<td></td>
<td>Service-Oriented</td>
<td></td>
<td>Goal-setting and Performance Management</td>
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<td>Planning and Task Coordination</td>
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</table>

*Figure 1. Single case navigator.*
**Case 1 Random Found Things (RFT)**

**Focus 1. Learner.**

RFT is a traditional aged, low-income, first-generation male art-major (see Table 7). He initially attended community college and then transferred to the university where he continued to major in art. It is likely that RFT attended the community college because of its proximity to his hometown in East Texas and the cost of attendance at the institution. At the university he attended, art is known to be a demanding major. Students who succeed in this program have a characteristic of persistence, one of the themes associated with this learner’s character.

**Theme: 1.1 Persistence.**

Literature as cited in Wells (2008) suggested that persistence is a student’s ability to overcome factors such as, academic performance, interactions with faculty members, residence on campus, and working while in school. RFT’s comments about his personal expectations of his work illustrate persistence.

I took 3 years. I actually graduated in 2 years, but I stayed an extra year to work on a portfolio, an art portfolio.

Even after meeting the requirements for his program of study RFT continued to meet his personal expectations and that of his chosen field/community of artists.

That helps me because, um, it helps me in the areas that I’m having problems with, um. If nobody like told me like that my composition is always, always put the figure right in the middle of the page . . . then I would just keep on doing that and I wouldn’t grow I don’t think, if people wouldn’t have told me that I need to put it off center. I think without critiques, you’re not growing as an artist.
During RFT's undergraduate education he worked minimum hours. This did not demonstrate a high value on earning money, but instead focused on the quality of his artwork. When asked about work hours per week, he stated,

Just about 5.

According to Christou and Haliassos (2005), for low-income students, although access to work is important, there is a disutility in work. It takes away free time, time to study and time to engage in leisure or other activities. With such limited work experience it is likely that RFT did not have the opportunity to practice teaming skills in other than his academic department.

Theme: 1.2 Understanding of teaming concepts.

RFT was asked to tell about his experience working in a team during his undergraduate experience. He initially hesitated when asked to respond to his experience working in a “team.” After some silence he responded,

Um.

When he was asked to tell about his experience working in a team at his community college he responded,

Ok.

and then still remained silent. His silence or look of doubt or uncertainty especially from obscurity or indistinctness may be described as an ambiguous understanding. He spoke as though he did not understand what was being asked. He was then asked if he had any art projects on which he worked with other students. And also, did they all have to do anything together? He responded,
Uh, not really, but, um, sometimes when we do like collaborations we help each other out.

He described a collaboration:

Oh, it’s just, um, like a bigger piece with uh, multiple students working together.

His hesitation may be indicative of his vocabulary or paradigm related to teaming.

It is likely that this does not have to do with cognitive ability, but rather his field of study, alternate terminology, and other social capital nuances within the community of artists.

*Focus 2. Environment.*

RFT’s responsibilities and commitments outside of school were limited. He worked an average of 5 hours per week while in school. He did not report participating in any extracurricular or co-curricular activities, perhaps because of the demands of his major and being a commuter student. His engagement was with instructors and peers.

In this focus, the findings supported two themes: collaborative learning and group critiquing.

*Theme: 2.1. Collaborative learning.*

When students of various performance levels work together toward a common goal, the instructional method is referred to as collaborative learning (Gokhale, 2004).

The specific methodology used in this case was “collaboratives.” Collaboratives were used during RFT’s time at the community college and also at the university level. He described his first class project at the community college. The instructor would provide an opportunity for students to gain familiarity with each other.
For like our first project, I guess to get to know each other and we also had like quizzes and like another, uh, we had like a name quiz where we had to uh, like write down, we would have like photos of each other and we’d have to write down the person’s full name and stuff.

The instructor asked each student to bring an object to class.

Yeah we'd just bring in just random found objects. Like I’m walking down the street, ‘oh there’s a can’.

At TJC we would always have like a collaboration art piece that would be like our first art piece and we would just work in groups and um, our goal was to recreate a, like a certain photo. And we used like different art pieces, well, different found objects to like recreate um, a photo.

Explaining how these random found objects turned into art he said that to achieve the goal of completing the project for a grade . . .

I guess we just talk to each other . . . everybody just kind of puts their ideas out there, so people are just kind of different.

He explained that the group would continue to talk about the possibilities of the object. How might the object be used? Where might it be aesthetically placed? He described that the freshman art students responding to the directives of the instructor gathered around, together reflecting on their randomly found object, each silently asking where to place this object. What are the possibilities of this object? What is the person next to me going to do with their object?

We would have to take some things apart and like cut and paint different things to make them look like something else.

Well we try to help each other and um, we just um, tell each other our ideas and what’s working and what doesn’t work.

RFT explained that the students would work with the understanding that placing the item randomly on the stage/canvas did not forever commit it to being in that initial
place; it was accepted that it may later be moved. This may indicate a detachment from one’s own ideas for the sake of the team goal.

The methodology of collaboratives was facilitated by the instructor and enhanced learning. This methodology suggested a value on simply talking, a creative process, detachment, as well as helping one another. And, if it was possible, listening with one’s eyes may have been a competency the professor may have been trying to develop. This type of collaborative learning was active and experiential.

Theme: 2.2 Group critiquing.

The methodology of group critiquing developed learner outcomes of giving and receiving constructive feedback. Group critiquing was also facilitated by instructors early on in RFT’s art education. He explained that instructors may vary in their method for doing critiques, and some are graded. RFT discussed that timely sharing of information and communicating was seen as a way to keep tasks coordinated.

Okay, like when we have paintings or drawings due we would show like what we worked on during class and then um, we just all get in a group and talk about like each other’s art work. And we say things that are positive and things that could be worked, that need more work.

I think it’s good because we have to say something positive and something negative about it. It’s not that, we don’t say like it’s bad and all that stuff, but we say like a painting seems like resolved on one side, it seems like the person’s been working on it hard on one side, but then like another side doesn’t look like it’s had as much work as this side. You would try to tell them that um, it just needs to um, (sigh) um, that it um, that you should work on it as like a whole. You don’t want to just focus just one part. You want to um, let it develop, um, all together. And that’s something I heard critiqued on one of mine and I also agree because that’s something that I need to work with.

I think it helps the artists because they’re learning what other artists are feeling about their piece . . . to be a more professional artist you have to know how your viewers are seeing your piece.
The constructive feedback also seemed to provide both a unique individual and group experience. RFT also felt positive about the constructive feedback his peers had given him. As an artist, the constructive feedback helped him in the areas of placement, composition, and simply growing as a professional.

The instructor’s ability to facilitate and use this methodology may be noteworthy. These methodologies may also be specific to RFT’s major and utilized consistently across 2 and 4-year institutions. The instructors’ use of collaboratives and group critiquing may have contributed to RFT’s high score in communication with the basic themes of talking, listening, and giving constructive feedback.

Focus. Individual teamwork KSAs.

RFT’s scores in the interpersonal domain and the self-management domain were relatively equal with a 45 and 44, respectively (see table 7). His highest ranking score was a 77 for the sub area of communication which is in the interpersonal domain; data supported this theme. Data were supported for Goal-Setting and Performance Management. His second highest score of 65 was in the Planning and Task Coordination in the self-management domain.

Table 7

Teamwork KSAs Test Scores for RFT

<table>
<thead>
<tr>
<th>Raw score</th>
<th>T - 1</th>
<th>CR - 2</th>
<th>CP - 3</th>
<th>CM - 4</th>
<th>IN (2+3+4)</th>
<th>GP - 6</th>
<th>PT - 7</th>
<th>SM (6+7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>40</td>
<td>24</td>
<td>46</td>
<td>77</td>
<td>45</td>
<td>38</td>
<td>65</td>
<td>44</td>
</tr>
</tbody>
</table>
Theme: 3. 1 Communication.

Stevens and Campion (1996) are clear that the ability to converse with others or maintain cordial associations does not mean that there is effective communication. The act of sharing information is not equated with effective communication. In collaboratives, RFT also made significant use of what he described as “talking.” He did not use the term communication.

Okay, well um, I don’t know it’s just, it’s just, I guess we just talk to each other ‘cause um, you have to, ‘cause you don’t want to overdo it and have like everything together, so um, I guess we just talk to each other. Like what fits and what doesn’t fit and stuff.

I guess we just talk to each other . . . everybody just kind of puts their ideas out there so people are just kind of like open.

Because when you don’t talk about the artwork itself, but the subject, that’s kind of rude. For example, if somebody draws a dragon for a subject and another person just doesn’t like dragons all together then that’s like, then that’s not criticizing about the piece itself. That’s just talking about the subject.

Though Stevens and Campion (1996) did not consider “talking” as high-level communication, RFT had developed knowledge, skill, and ability in this area that suggested that his “talking" was communication. He may have lacked the knowledge and use of appropriate terminology as indicated in Theme 2 .1, but he had competency in the sub-theme of communicating.

When asked if there was conflict in these groups he replied,

Oh, um, not really. Um, I guess we just talk to each other.

Maybe he never really had to use competencies associated with conflict resolution. He had been taught to have an appreciation for alternate views.
Theme: 3.2 Goal-setting and performance management.

There are four characteristics of goal-setting and performance management as defined by Stevens and Campion (1996), including the following:

(a) A clear definition is critical to team effectiveness

(b) Level of goal difficulty and goal acceptance are critical to team success

(c) Monitoring team effectiveness and progress is an attribute of effective team

(d) Addressing individual performance is important to avoid loss from social-loafing. (p.4)

RFT explained that his instructors varied in their method for doing critiques, and some were graded. Completing the project, a good grade, and artistic competence were expressed as goals. Responding to his experience with group critiques, Random Found Things further explained the goals:

‘Cause you don’t want to do it over and have like everything together, so um, I guess we just talk to each other.

If you truly want to know like how other people feel about your artwork, you don’t tell them like what the, emotion you were trying to portray. You just listen to see . . Yeah, you listen to see what they have to say about it and sometimes they will say it even without you having to say anything.

It helps the artists because they’re learning what other artists are feeling about their piece. And um, I guess to be a more professional artist you have to know how your viewers are seeing your piece and um, like what they think about it. Because um, because the viewers are the people that are suppose to buy your art and um, so you always have to think about like how they will view this as. Not how I see it but how will other people see this. And will they know like what I’m trying to portray if I’m trying to like express like a certain emotion. Does anybody else see that or do I just see sometimes um, in critiques, if you like really want to know how a person feels about it you don’t tell them like what you’re trying to express, you like sit there wait and see if they can figure it out on their own without looking at it.

While he described his environment as a “community” of artists, he did not understand the use of the word “teamwork.” Goal-setting and performance management
as outlined by Stevens and Campion (1996) have application for a community with varying individual goals. The following quotation suggested an alternate paradigm for teaming.

Yeah, I think in certain gallery artwork there’s collaboratives. That’s something um, that … it’s still interesting how people um, do collaborative artwork. I think um, mixing each others’ styles and stuff.

In addition to timely feedback from his peers, RFT discussed that timely sharing of information and talking were seen as a way to complete tasks by a deadline. For RFT, performance management seems to have a significant role for artists, their relationship to one another, and the community of artists as professionals. This feedback may have also served as a way for the artists to conduct individual self-appraisal.

Case Summary.

RFT’s character seemed to suggest high personal expectations and quality work. He persisted in seeking to develop his portfolio and in getting constructive feedback from his peers. He continued to perform self-appraisal. What seemed to have been reluctance to respond to his experience working in a team may be the language of his field compared to that of the researcher.

The term listening is never used by RFT, but seems to have been taught as part of the methodology of group critiquing. Through discussion of his experience with constructive feedback, one can imply that the instructors integrated the development of competence in listening. “Talking,” the term used by the respondent, combined with the instructor’s guidance was “communication.”
At the center of RFT’s undergraduate experience are instructors’ methodologies of utilizing collaboratives and group critiquing. This seems to relate to the participant’s skill in communicating; more specifically, the activities of talking and constructive feedback. It is apparent that this student’s major strongly integrated activities of communication. The ongoing opportunity to practice in classes facilitated by instructors for at least 5 years may also be related to his high score in the area of communication.

While the methodology of collaboratives might explain his high score in communication, it may have also provided less of an opportunity to practice working through conflict, perhaps because of the level of structure in these methodologies.

Collaboratives and group critiquing added value to “talking” among a community of artists. RFT expressed a responsibility to the “community of artists.” The quality of service he provided to others was expressed almost as a duty of citizenship. He suggested that in the community of artists, members contribute to each other’s development.

Case 2 Hut

Focus 1. Learner.

Hut is a traditional-aged, low-income, first-generation female (see Table 8). She transferred from a local community college where she had participated in the SSS program. She commuted more than 10 miles to her current institution. She is married and is the mother of two young children. During her undergraduate years she worked her way from team member to manager at Pizza X. Two themes were identified related to this learner’s characteristics; persistence and engagement. Data are provided below.
Theme: 1.2 Persistence toward success.

The literature has suggested that persistence is a student’s ability to overcome factors such as, academic performance, interactions with faculty members, residence on campus, and working while in school (Wells, 2008). Furthermore, the Pell Institute (2004) observed that low-income students could be “important economic contributors of their families, so their attempts to combine the roles of family provider and student, or their inability to contribute while enrolled, may undermine their academic commitment or performance” (p.6).

Hut stated,

I was in TRiO at Eastfield.

Low socioeconomic status and academic need are part of the eligibility requirement of the TRiO program; the learner characteristic of being low-income and first-generation made Hut eligible to participate in this environment. Hut worked to overcome the challenges suggested to be barriers. She had to balance roles of mother, student and employee.

I got… you know the kids... the kids are you know.

Referring to her spouse:

I just do what I’m going to do and tell him to do what I'm not doing.

She was a provider:

I worked at Pizza Hut. I'm a manager.

Each of these roles had its inherent challenges, and combined, requires competence in time-management and resiliency. She never discussed any
challenges related to these multiple roles. School and work also served to add to her stock of social capital and should eventually address her financial capital.

Overall, her character communicated a calmness and confidence with the pace at which she persisted. Goal-setting and Performance Management at work may have been one teamwork KSAs that contributed to her persistence and skill in managing multiple roles.

_Theme: 1.2 Engaged employee._

Glen (2006) related organizational processes, role change, values, work-life balance, information, stake/leverage/reward/recognition, and management, to employee engagement. Hut stated:

I mean, I started off answering the phones and then I was the driver and then I… and then, like… 8 months ago I became a shift manager. So, for like, 5 years I was… I mean I think I was a phone person for 2 and then driver for 3 and then shift manager for about 8 months.

It's kind of hard whenever you change from team member to management because you need to develop the respect whenever you're all the same level and then whenever somebody moves up. They still kind of have the conception of you of being on their level and whenever you try and tell them something it's kind of difficult. You still have to maintain being on their level.

She was challenged in her role as she moved from the employee to manager. Her talents were utilized and she communicated a level of satisfaction. Blessing White Inc. (2005) recognized that “engagement is an individualized equation because work is personal . . . each day employees are looking to utilize their unique skills and expertise . . . their job satisfaction depends on opportunities to use their talents” (p. 2). Hut discussed how she performed her job and worked with her team.
Some managers may sit in the desk… sit at the desk or stand at the front and not really get involved in the business or whatever, like actually doing stuff. And I think that that's what sets apart better managers from other managers teamwork-wise. Because if you're not, you know if you're not going to get your hands dirty, why should they… type thing.

She further discussed her role as a manager:

Well - trained people work better… you know they know what's what they're supposed to be doing. And, um ... you don't have to train new people ... and ... and you know, starting from scratch. And then again, you know begin a whole new relationship with, you know, with a person 'cause when they really first start, you know they've got their reservations and they've got the way that they are.

You know sometimes someone will just, you know grab up the broom and the dustpan and go outside and sweep the parking lot and nobody ever told them to and they're only doing that so that whenever customers come, they, you know they see a clean environment.

Hut engaged with employees as team members to reach shift goals and company goals. She also addressed her personal needs and goals of work-life balance and sustained employment. She valued being retained on the job, the reward and career leverage.

If somebody comes in and you ask them how they're doing, you get more than fine. You know, you get what's going on, you know and those kind of things are, you know, to actually know what's going on with a person is um, you know is really good to know because, you know they're having problems or something and… you know you might want to kind of, you know like, maybe not be on their backs to much, you know like if they've got a problem at home or something, that may be the reason why they're not as productive right now as some other time, you know. And, you might you know like kind of let that slide sort of, because you know something really is going on at home, so… and, um… and of course that, you know that helps build a relationship toward a like.. .they stay, you know. They don't want to leave.

Hut maintained awareness and information about employees' personal issues that may appear on the job, their job satisfaction, and their performance.
**Focus 2. Environment.**

Hut discussed her experience during her undergraduate career for three environments, this including an academic support program at the community college, class, and work experiences.

**Theme: 2. 1 Non-engaging academic experience**

“The concept of student engagement is based on the constructivist assumption that learning is influenced by how an individual participates in educationally purposeful activities” (Coates, 2005, p. 26). Hut described a non-engaging experience.

It's been a while since I had one. You know it seems like there was you know somebody that wasn't really doing much and then somebody that was trying to do it all and...but I think it’s like that with most teams that you know whenever you're trying to do...like a goal together. There are some overachievers and some underachievers.

You know, and everybody's trying to decide what to do. Um, you know I've seen like different people have different opinions and then they just like clash to the point that

The most they're doing is like throwing out their negative feedback”

Yeah... yeah it affects their team performance and their... you know ultimately makes... you know affects the whole team's performance, like the...mmmm

In the classroom negative experiences seemed to unfold. Hut described that particularly, because of how people responded to the negative feedback; an experience can be less than optimal:

Mmm, no but... you know like with... you know with other team members and talking and communicating, then it kind of... kind of breaks down, you know like it's not so dreadful, you know. It kind of breaks it down to where it's not really that big of a deal.
Hut demonstrated significantly less enthusiasm when talking about her classroom experience compared to work. In some cases, these students may feel that they do not belong or are not welcome on a campus that is an alien environment for them (Pell Institute, 2004). Consequently, they are neither firmly attached to the campus nor integrated into higher education, and the result is diminished academic progress. Furthermore, lower levels of involvement outside of the classroom, including interaction with peers, may be, in part, affected by the students’ work responsibilities, family commitments, and living off-campus (Lohfink & Paulsen, 2005; Pascerella, et al., 2004). The classroom seemed to have little influence on Hut’s teamwork-KSAs scores.

*Theme: 2. 2 A familial and collaborative learning environment.*

TRiO - SSS was one environment at Hut’s community college in which she became familiar with other low-income/first-generation students. Harrison et al. (2003) included the concept that familiarity is important in the beginning to foster coordination and integration.

They would be in the TRiO office, you know, pretty frequently and you know like, um, you know you go in there probably, like, maybe once a week just to do one thing or another.

We would pair up to study and work in small groups to do well academically and graduate.

So you got to know everybody and then like after a while it became like… you know, like everybody cared about everybody we would talk about how you’re doing and what kind of tests you have.

Yeah, it kind of felt like a team, like everybody was pulling for each other. It was more like a close knit relationship over there.

I think you know everybody working for a common goal; to do well and graduate, you know, learn.
Additionally, the activities offered through SSS provided collaborative learning experiences. When students of various performance levels work together toward a common goal, the instructional method is referred to as collaborative learning (Gokhale, 2004). Hut described one of the collaborative learning experiences of the SSS program:

They rotated to where you know you were… you would like work with somebody and then they would be able to look over your work and give you feedback, opinions and maybe you're leaning this way and maybe it will be better to go this way or whatever.

Some other time you'd meet with somebody else and… you know then you'd be like still doing the same type work. You know you'd get other opinions and different opinions but then you really got to know a whole lot of people.

You know a lot of opinions and were able to give opinions and like form friendships.

The learning experiences which were integrated into the academic skills development at TRiO – SSS addressed Department of Education regulations that programs promote a climate conducive to student success. The climate was interactive. These students had interactive experiences outside of the physical location of the program at the institution.

We'd have, you know, like socials and dinners, musicals and plays.

We would go on trips and they would have like different presentations and stuff.

TRiO - SSS may have played a role in Hut's early awareness development of teamwork KSAs. The environment provided for gaining familiarity, and foundational skills for working with people in a team, cohort/like group. The engaging experiences in this environment may have contributed to her score in the interpersonal domain.
Theme: 2.3 Work as an engaging environment.

Blessing White Inc. (2005) recognized engagement as a driver of productivity, competitive advantage, and customer loyalty, as well as shareholder return. “Engagement is an individualized equation because work is personal . . . each day employees are looking to utilize their unique skills and expertise . . . their job satisfaction depends on opportunities to use their talents” (p. 2). Hut was an engaged employee in an environment that provided her with the opportunity to gain skill and practice what she learned on the job overtime - on-the-job training.

I started off answering the phones and then I was the driver and then I... and then, like... 8 months ago I became a shift manager. So, for like, 5 years I was... I mean I think I was a phone person for 2 and then driver for 3 and then shift manager for about 8 months.

It’s kind of hard whenever you change... whenever you go from like... you know like a team member or whatever to management.

You have to like develop the respect and... um, you know whenever, like, whenever you're like all on the same level, you know, you're all the same level and then whenever somebody moves up, it's like, you know they still kind of have the... the conception of you of being on their level and whenever you try and tell them something.

If you're not, you know if you're not going to get your hands dirty, why should they?

Hut built upon her teaming skills primarily at her job at Pizza X. She was promoted, changed roles, and earned respect. As a manager, she created conversational space for attending to employee morale, customer satisfaction, team goals, and company goals. The conversational space was not the place for high-level communication skills.

Work seemed to have a stock of exposure that was motivating and rewarding for her. It not only paid her bills, but also gave her opportunity to practice and ascend the
career ladder at Pizza X. Near the end of the study she reported that she was going up for store manager. Perhaps, because Hut worked at a major fast food chain with significant structure to reach profit goals, she achieved a low score in planning and task coordination. Goals, metrics, and other tasks were already set.

Focus 3. Individual teamwork KSAs.

Hut made a raw score of 21 and a total score of 40. Scores in the interpersonal domain and the self-management domain were 55 and 27 respectively (see table 8). Her highest ranking score was a 99 for the sub area/theme of conflict resolution. She also scored a 68 in goal-setting and performance management. Collaborative problem solving, planning and task coordination were among her scores.

Table 8.

Teamwork KSAs Test Scores for Hut

<table>
<thead>
<tr>
<th>Raw score</th>
<th>T - 1</th>
<th>CR - 2</th>
<th>CP- 3</th>
<th>CM - 4</th>
<th>IN (2+3+4)</th>
<th>GP - 6</th>
<th>PT - 7</th>
<th>SM (6+7)</th>
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<td>21</td>
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<td>57</td>
<td>55</td>
<td>68</td>
<td>16</td>
<td>27</td>
</tr>
</tbody>
</table>

The findings supported Hut’s scores in the Interpersonal Domain. This domain includes interpersonal communication, collaboration rapport building, managing conflict and encouraging group discussion, and facilitating collective problem solving (Stevens & Campion, 1996).

Theme: 3.1 Conflict resolution.

Stevens and Campion (1996) described conflict resolution as negotiation strategy as opposed to compromise and concession.
With class assignments that you're trying to decide what to do, you know, and everybody's trying to decide what to do. I've seen different people have different opinions and then they just clash to the point that... you know what is it that we're doing, you know what are we going to do, you know we kind of choose one specific thing, but then there's still a couple of people that no matter what you say, they just don't like it.

At school type assignments...um... I mean it's kind of like a conflict because um the assignment will be due on a certain day you know and... so if you've got one person that's, you know, like a overachiever, but like you know like maybe not everybody agrees with that one person you know it's kind of like a timeframe... like you can't like... you don't really have so much time to like sit there and try and like talk them down.

Usually there's one person that's like that's just lame and there really isn't enough time

May have been beneficial for the whole team to address that issue with that one person but... you know mainly at that point in time, you know we didn't have much time and it... you know, it was more or less like you know... he's acting like a baby. You know it's not so much wanting to put time and effort into making him... you know, come back 'cause we're not... you know we're not going to do it... we're not all going to agree to do what you want us to do. We all agreed to do this way. And so, you know, pretty much... unless we're gonna change our mind and do it his way, he wasn't going to be happy.

Maybe we would be able to come to a better agreement, but I don't know if we would be able to like everybody in agreeance100%. I mean I don't really know like if like everybody is always 100% happy about the decision or whatever.

*Theme: 3.2 Collaborative problem solving in class.*

Members, rather than the supervisor (or, in this case, the professor) take initiative to solving the team’s problems and do so while considering the contributions of other team members. Members must be aware of obstacles to group problem solving and be capable of mitigating them. Hut talked about collaborative problem solving in class:

Mesh all of our ideas . . . make it work and make it, you know, flow, because... you know different ideas from different people... you gotta mend them together.

They are throwing out their negative feedback. They say what they wanted to say and maybe the other members of the group didn't agree with that one particular
thing and for the rest of the project they were like ... you know, just negative feedback or negative opinions.

We didn't so much resolve the issue. 'Cause like...you know, with time constraints and different people have different classes and... you know like... you know, you try and work out a time that everybody's available to meet up... you know and pretty much whenever you're there meeting up, you gotta get what you're there to do done, not so much.

Conflict seemed to create a need for collaborative problem solving - a not so positive experience. In the academic setting, Hut knows the team should bring their ideas together, but the team did not seem to have the leadership to take it in that direction. The team also lacked the time required to work through its problem. Time is not a commodity that Hut had with trying to balance her roles. As previously revealed, the classroom was a place where she found it difficult to engage; it seemed to be a nuisance for her.

**Theme: 3.3 Communication.**

Stevens and Campion (1996) described communication as the interpersonal competency of team members, and capacity to communicate effectively should not be confused with the ability to simply converse with others or maintain cordial associations. This level of communication may be relative to the level of employee engagement for the entire team.

Hut described that at Pizza X they would talk a lot sometimes. They were friendly with each other and had “open communication.”

We would talk about the problems such as cutting their hours, what's wrong and try to resolve it.

But sometimes the employees have their own problems, [and as she put it] They're not really trying to hear it.
Taking the time to build new relationships takes time . . . you know, they've got their reservations and they've got their way.

Helps address the communication and getting activities done when the workers can see you being a part of them.

She also experienced issues related to time:

We didn't so much resolve the issue. ‘Cause like...you know, with time constraints and different people have different classes and... you know like... you know, you try and work out a time that everybody's available to meet up... you know and pretty much whenever you're there meeting up, you gotta get what you're there to do done, not so much.

So if you've got one person that you know like a overachiever but like you know like maybe not everybody agrees with that one person you know it's kind of like a timeframe... like you can't like... you don't really have so much time to like sit there and try and like talk them down.

May have been beneficial for the whole team to address that issue with that one person but... you know mainly at that point in time, you know we didn't have much time.

Hut's score in the sub-area of communication revealed that this area is among her strengths. While she did talk and converse with employees she did not have high-level communication. Data suggested that as manager Hut mitigated obstacles in her work environment, unlike her behavior in the classroom. She appeared to be more invested in her work environment.

Findings related to Hut's scores in the Self-Management Domain are presented below. Stevens and Campion (1996) described this domain as relating to the team's basic managerial and supervisory functions that are performed by the collective members of the team.
Theme: 3.4 Goal-setting and performance management.

There are four characteristics of goal-setting and performance management as defined by Stevens and Campion (1996), including the following:

(a) A clear definition is critical to team effectiveness
(b) Level of goal difficulty and goal acceptance are critical to team success
(c) Monitoring team effectiveness and progress is an attribute of effective team
(d) Addressing individual performance is important to avoid loss from social-loafing. (p.4)

As a shift manager, Hut was evaluated on how her team performed. CHAMPS Cards were the tool her employer used to regulate performance. The performance metrics were: Cleanliness, Hospitality, Accuracy, Maintenance, Product quality and Speed (CHAMPS). CHAMPS Cards were also used as outward recognition for employees and also to meet performance goals as indicated by Stevens and Campion (1996). Hut described the following:

When you see somebody like working extra hard if you see them have like a really good experience with a customer or handling a complaint very well, you'd write a CHAMPS card and stick them all over the door so the employees can see. Its recognition but it's more than just my recognition to you, it's my recognition to you for everybody else to know, you know and it stays outward.

Deep engagement was required during a shift at Pizza X as Hut processed and performed multiple tasks to reach store goals associated with CHAMPS. The work involved observing quantity of labor (3 – 20 people) used, as well as inventory and sales. The company provided her with set procedures and technology to coordinate activities.

The CHAMPS thing, um, like there's another like a CHAMPS score thing, um, the company calls customers in our database and um they call like four or five times a week ... well between three and five times a week the customer. And they'll
feedback from customer, you know like on different like on all those things right there. And uh we get a score like um, one would be a 100 or whatever you know. They'll give us a score. And so if we get 15 in a row, then everybody gets a $40 gift card.

At the store level you know whenever the weekends, you know how you how you ended up with everything. But um you know then they rank us like on all the different areas they rank us. And, um you'll find you know like we're usually the ones that won for the area.

Referring to regional management, Hut stated:

They compare us on CHAMPS and then they compare us on um like the speed of like how fast the delivery drivers got the pizza to the people. And then um and labor and cost of sales. Like, like all those things are broke down and you see how you did for the week. And they see how other people did well, you know you already know how you did for the week. But you see how everybody else did for the week as, you know, compared to you.

As a manager at Pizza X, Hut felt that building relationships helped to promote employee retention. Hut actively participated with her staff to reach franchise goals. She said that it does the following:

Helps address the communication and getting activities done when the workers can see you being a part of them.

Is a waste of money to train people, so the goal of retention is important.

The metrics for Goal-setting and Performance Management - (CHAMPS) was not set by the team, but by the franchise. Goal-setting and methodology for performance management is predetermined and set at the corporate level.

Well, we have, you know, all those 10 goals, you know like all the same things that I said before but sometimes, um you know there are conflicts. You know there are… because I make the schedule and like the like part of the chance thing one of the big, biggest deals in the restaurant is that um in order for the customer to get the pizza in less than 30 minutes, then it has to leave the store in 18 minutes. And so, one of the things that they record throughout the day is what the percentage of orders gone out the door in under 18 minutes.
In the Pizza X environment, for these employees corporate directives meant that they were limitedly self-directed. While Hut’s work experience may develop her skills, the overall structure provided by the franchise may have limited the acquisition of higher teamwork KSAs.

Hut commented on the performance of academic teams that may experience conflict and negative feedback:

That's one less brain in the brainstorming and, um, you know like it, you know, like in like if you're going to like if you have to get up in front of the class and present the present what you were working on, that one person is like distant, you know, and they, they're not really like, maybe what their function is, maybe you can tell.

It affects their team performance and their, you know ultimately makes... you know, affects the whole team's performance.

_Theme: 3.5 Planning and task coordination._

Stevens and Campion (1996) described planning and task coordination as proper allocation of individual members to specific task, duties, and role assignments is important. Hut described that at Pizza X each person had a particular job and they also knew what the other person's job was. As an employee that has moved into the ranks of management, she is aware of the multiple roles and tasks of the team required to make the team function.

Even though she was engaged and had to consider a variety of activities to accomplish the team’s goals, she scored low on Planning and Task Management. This may have been due to the set processes and procedures for which she did not have to make decisions that required planning and task management skills.
Case Summary.

TRiO, at the place where Hut attended community college and work, seemed to be a place where Hut built relationships and fostered her own success. The TRiO Office seemed to have become a place for her to gain familiarity with people through a variety of activities, including social and academic experiences. The relationships in these places served as a source of social capital that she successively built upon. Although the communication was informal at the TRiO program, it provided for support and encouragement for participants to reach a goal - to graduate and do well academically.

Activities were organized to give students the opportunity to become familiar with each other and to develop collaborative learning skills. She expressed satisfaction with her participation in TRiO. TRiO may have helped her to relate to team members at work.

At the center of Hut’s undergraduate experience was employment at a large food franchise. She communicated developing competencies in her job from entry-level to management. Work was described at much greater length than team experiences in the classroom or in her family life, neither of which received much enthusiasm throughout the interview. In her role as a shift manager she exercised a full range of teamwork activities, including conflict resolution, collaborative problem solving, communication, goal-setting and performance management. She was an engaged employee; a unique and defining characteristic of the learner.

Hut had little to say about her experiences in the classroom setting and relationships outside of work. She did not indicate any extracurricular activities. This is
likely because work took precedence. Work is an engaging environment that also pays her bills.

Hut had the opportunity to practice individual teamwork skills through two experiences, TRiO – SSS and work at Pizza X. Through TRiO she was introduced to teaming experiences that may have contributed to her work experience. Beginning work at Pizza X and working her way up to management over the years seems to be a unique and centering experience for her.

She was aware of the skills she needed to utilize to connect with her team and reach company goals. The highly structured work environment, levels of management, defined and monitored performance metrics and limited opportunities for self-directed work teams may have overall negatively affected Hut’s individual teamwork KSAs.

Case 3 Sonshine

Focus .1 Learner.

Sonshine is a 22-year-old low-income, first-generation African American male. He entered UNT as a freshman and studied business administration. He lived off campus and works 16 to 25 hours per week. Engaged Critical Member and Self-Directed are the two themes that emerged from the focus on this learner.

Theme: 1.1 Engaged critical member.

“The concept of student engagement is based on the constructivist assumption that learning is influenced by how an individual participates in educationally purposeful activities” (Coates, 2005, p. 26). Sonshine’s experience in the undergraduate
environment centered on internships and student organizations. Below are data that provided a context for his engaged membership:

I was really dedicated to P.

Our big event was a community service project/educational project that we had to do for the community and we was doing it with, we was doing it with, it was a, like a housing place in, uh, Dallas. We had to stay up late at the senator’s office doing the programs, figuring out the layout, how we going to uh, serve the kids of the neighborhood.

Do some volunteer work, teach at the school or after school program or something, which I already did that. We teach kids steps at Calhoun.

We had, we had to coordinate getting different organizations together: a Christian organization, uh, Christian organization, the Democrats, the Republicans, the Conservatives, uh, Gay and Lesbian organization, all them coming together and expressed themselves because a lot of people don’t know about these organizations and a lot of people don’t know how they feel about certain things and when something is said about them what’s their reaction. So we brought them all together; that’s one of the biggest projects that we do, uh, here on the campus.

Through his organizational membership he also served others.

Sonshine contemplated increasing highly involvement:

Yes, for 2 years I was the second vice president. I had gone back up into the state level. I haven’t made that decision yet.

I’m working on other things. And noticed a lot of time that you have to dedicate to Organization P with everything that’s going on, with all the new initiatives that they have, with everything going on, on the national level.

Sonshine’s engaged critical membership, dedication, and service to others was indicative of his character and seemingly drove him. He provided direct service to others usually with a team through co-curricular and extracurricular experiences. He participated with others /organizations who shared serving others as a commonality. It appeared that in most cases he played a key role in planning. Again, this may have related to his high score in planning and task coordination.
Theme: 1.2 Self-directed.

Self-directed (social learning) is defined as “cognitions by which people attend to, or reflect upon, cues from their social environment in order to strengthen the confidence in their abilities at work (i.e., self-efficacy)” Tams (2008). Sonshine is self-directed and communicated a mature insight about his future and preference for the way organizations in which he is a member should be run. In addition to considering graduate school at the age of 23 he was planning for his retirement.

Trying to graduate, trying to make that decision if I'm going back to get that MPA. Doing business work for my business that I'm starting; working on a business plan, and all my classes I have projects, senior projects.

After I do my retirement then decide.

His self-directed practices were informed by research, analysis, decision making, and action:

I basically did my research about what was going on and figured out which of these questions would be best to ask that were, uh, that all the organizations on the panel would be able to answer.

The details need to be laid out for any other event that we have because we - as you saw the undergrad that was running the program wasn’t actually in the program while it was going on. We was running different areas, so everything needed to make sure that we have everything mapped out. And we need to map out what if this don’t come through? What if something happen?

He developed contingency plans for himself which includes preparing for the unexpected actions or non-action of those around him. He communicated a sense of confidence and pride in persisting past obstacles.

Program records indicated that Sonshine was raised by his grandmother and has a support pool of elders and mentors through a fraternal organization. It seems that
social capital in his environment has had an influence on his planning and task coordination and overall in the self-management domain.

**Theme: 1.3 Service-oriented.**

One who is service oriented is inclined toward helping others. Sonshine demonstrated his will to help serve through the organizations of which he was a member. In his fraternity he enjoyed:

Helping out the step team at Calhoun Middle School.

In Organization P he described that he was involved with,

Christian organization, the Democrats, the Republicans, the Conservatives, uh, Gay and Lesbian organization, all them coming together and expressed themselves because a lot of people don't know about these organizations and a lot of people don’t know how they feel about certain things and when something is said about them what’s their reaction. So we brought them all together; that’s one of the biggest projects that we do, uh, here on the campus.

And through his internship:

How we going to uh, serve the kids of the neighborhood.

He had served others in multiple environments for multiple years.

**Focus 2. Environment.**

The structural dimension aspect of social capital relates to the location and frequency in the social structure (King & Furrow, 2004). Further related to the environment, Kuh and Gonyea (2006) described engagement as deep learning, spiritual practices, working with faculty outside the classroom, community-based work as part of a course, community services/volunteerism, interaction with diverse peers (religious beliefs, political opinions, and personal values), interaction with diverse peers (race and
Sonshine had experiences in three environments during his undergraduate experiences: academic, co-curricular (internship), extracurricular (student organizations), and work. King and Furrow (2004) also noted that there is a relationship of positive outcomes that are connected in a social context through interpersonal, associational, and cultural social ties.

**Theme: 2.1 Collaborative learning.**

When students of various performance levels work together toward a common goal, the instructional method is referred to as collaborative learning (Gokhale, 2004). Sonshine described his experiences:

In each class I have a team project.

She had us work on assignments and each assignment was doing an analysis on a certain part of business.

On our first group project we were able to um, decide, uh, which group we were going to be in. She had students, uh, tell us what jobs they work for, who they work for, and according to the company they work for.

I enjoy it, but not some of the teachers. They make the class boring.

The other class, Organize, Design, and Change, it’s an Internet-based course so the teacher just put us in groups. I don’t know how he came up with it. I guess he pulled names out of a hat maybe and put us in the group.

Classes presented Sonshine with an opportunity for collaborative learning and practice participating in teams. There was even the opportunity for group projects through his Web-based class. He expresses limited engagement with the classroom teaming experiences.
Theme: 2.2 Familial teaming.

In student organizations (extracurricular/student organization) Ellis et al. (2003) examined, in part, how at the individual and team project levels, teams learn and how the rate of learning could be improved within groups who had no prior history (knowledge) or knowledge of each other’s strengths or weaknesses. For the purpose of this study the familial teaming is in a student organization that was officially registered with the university. Regarding familial participation in a fraternity, Sonshine stated,

The fraternity, uh, so many of my fraternity members, we’re similar in so many ways because we have great ideas and sometimes we are always on the same page until it comes to that one thing. But, I think that’s what draws people to different organizations because they think alike in so many ways and in so many ways they’re different.

It’s not in a teaching aspect; it’s uh, helping out the step team at Calhoun Middle School right here in Denton. We uh, we teach them steps, we just getting them ready for a Steps show that’s all. We even got together with the Steps Team, tryouts, and they practice every week almost.

Ellis et al. (2005) discussed the role of the critical team member who serves to support communication and control workflow. They revealed that critical team members with strong teamwork skills may be important as a conduit for good team functioning. A number of findings that suggested that Sonshine was a critical member for all of the organizations in which he participated. In Organization P,

I did that 3 years, since my sophomore year and was on the E-Board for 2 years, I was the second Vice President. P is a great organization. I was really dedicated to P.

The findings of Olivera and Straus (2004) suggested that it is efficient to use the team’s “best member” to solve problems which, in turn, provides the other team members the opportunity to learn problem solving strategies, thereby providing long-
term benefits for the organization. Here are two situations Sonshine’s organizations encountered.

They also try to meet with leaders on the campus such as the former Vice President for Equity and Diversity, Director of Multicultural Center, and the Dean of Students.

Some of the members of P felt that the homecoming ballot was done incorrectly. We typed up a letter and submitted it to Organization C. Organization C is an umbrella organization. The presidents of C and P met to set a plan of action and solved the problem. An advisory board and new protocol was set up. Additionally, organization advisors were made part of the plan.

Sonshine’s membership activities included leadership, decision making and negotiating with peers and stakeholders. Participation in the student organizations provided an opportunity to practice teaming skills that may be experienced in the larger society. While he had the opportunity to practice, the depth of his experiences was questionable because of the number of organizations in which he was involved. His practices seemed to result in higher scores in the self-management domain.

*Theme: 2.3 Opportunity to practice in a (non-academic) familiar co-curricular environment (internship).*

Yazici (2004) described the principle of “opportunity to practice,” which suggested that learning is improved more through talking than by simple observation. Sonshine described how the team worked on a project that had to be completed in a short amount of time. For the past 4 years Sonshine has participated in the Emmet J. Conrad Leadership Program, which is sponsored by state senators. Sonshine described the internship experience,
We had to stay up late at the senator’s office doing the programs, figuring out the layout, how we going to uh, serve the kids of the neighborhood. So it was just a lot of extra work.

He noted that the group would meet at 6:30 p.m.

You have to put in more work since it’s such a short notice. You can’t slack up. You have to get you a great, great team and teamwork is key.

For the past year (the third in his total participation) he has served as president of the internship program. He communicates with optimism about their performance. The participants met primarily during the summer to plan the events for the year. These events included a big community service project/educational project that might, for example, address housing in Dallas, neighborhood kids, and other activities.

Focus 3. Individual teamwork KSAs

Sonshine made a raw score of 21 and a total score of 40. Scores in the interpersonal domain and the self management domain were 28 and 83, respectively. His highest ranking score was a 99 for the sub-area of planning and task coordination. He also scored a 68 in goal-setting and performance management. Communication score was significantly lower than the other sub-areas.

Table 9

Teamwork KSAs Test Scores for Sonshine

<table>
<thead>
<tr>
<th>Raw score</th>
<th>T - 1</th>
<th>CR - 2</th>
<th>CP - 3</th>
<th>CM - 4</th>
<th>IN (2+3+4)</th>
<th>GP - 6</th>
<th>PT - 7</th>
<th>SM (6+7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>40</td>
<td>66</td>
<td>46</td>
<td>23</td>
<td>28</td>
<td>68</td>
<td>99</td>
<td>83</td>
</tr>
</tbody>
</table>
**Theme: 3.1 Conflict resolution.**

Conflict resolution was described by Stevens and Campion (1996) as negotiation strategy as opposed to compromise and concession. Below are conflict-oriented experiences in which Sonshine was involved.

There were some conflicts around UNT and we have protocol that we have to follow. We have to contact our National Board, I say, well we'll say District, then go on up the chain of command to find out what we can do as a chapter. Any other conflict we felt going on, we'd probably take action. We really can't protest without getting that approved. We can't really do too much when it come to things that's going on so we try to do some silently. We try to go through other people. We try to go through people outside the organization.

There’s always conflict. Conflict of when um, when we would meet . . . people not listening and going in circles and wasting time basically. When we don’t have enough time to do what we want to do. Um, other conflicts, we couldn’t get in contact with different people that we needed to be there. Got in contact with them at the last minute and however they showed up, so, um. This goes back to communication, you have to have great communication skills with your people in order to get through conflicts because something could happen and we would never know and in the end everything falls apart because they didn’t say anything. So stay in constant communication, stay on top of everything that you’re doing. When a conflict a rise you need to go through your plan process of getting to different solution or always have a plan B if plan A fails and if plan, if you have plan B fails make sure you have plan C. So you have to be proactive instead of reactive in this type of situation.

Addressing conflict, you have to know what’s going on. You have to be calm and anytime something arises you must come up with some type of step to get to the resolution before you meet with anybody,” said Sonshine. He has a rather calm approach to addressing conflict.

Also, how we handled conflict, basically, you just have to pick up all the slack. And that’s what happened. I had to pick up slack of other people. It sucks but somebody has to do it. But over all this year, the March was great. It just needed to be like from A all the way to Z, the details need to be laid out.

We’re similar in so many ways because we have great ideas and sometimes we are always on the same page until it comes to that one thing.

Our conflict comes when, uh, everyone doesn’t listen and everyone has their own opinion.
His strength in the interpersonal domain was conflict resolution. He describes conflict resolution with terms such as “protocol,” “plan/ process,” and “some type of step” to get to the resolution. This paradigm, his self-directedness and charisma have probably contributed to others seeking his leadership in co-curricular and extracurricular settings. It was likely that he had a greater familiarity and interaction with those in the familial settings compared to the classroom setting.

Note: There was no triangulation of findings for collaborative problem solving.

Theme: 3.2 Communication.

Communication was described by Stevens and Campion (1996) as the interpersonal competency of team member's capacity to communicate effectively; this should not be confused with the ability to simply converse with others or maintain cordial associations. Below are data related to Sonshine’s communication competence.

Yeah, it was like just talking basically. We just figure out, okay, here are some of the competitive, uh, competitors in the industry and here’s the finances, here’s the uh, the assets, the balance sheet, income sheet, okay, we might run into this problem, the risk of not having enough money to pay the employees that we have. The risk of not having enough time because we are the owners and also work for the company. In the beginning we will not be receiving pay so how will that work out, the risk of everybody not picking up their slack. So yes, we had to sit down and discuss all these different things as people was doing their different parts, like we had one person just do the owner along with the idea, she just did the vision, the mission, the history of the company and other one had to do the market analysis where they had to pick out the target market, uh, the demographics, the location of where we would be, find the uh, location with finding a building.

Sonshine stressed the importance of communication although he scored low in this sub-area. He used the word “communication” multiple times, but he spoke most the
behavior of talking or conversing. In addition to the excessive “talking,” these groups did not seem to listen - an important aspect of communication.

Communication is key; it has to be constant. It all has to be open. People always have to be available. If you don’t have communication then everything will fail because once something happens you must let the next person know, okay you can move onto the next task; this is done. Okay, what’s going on, if we have a problem that arises within that time frame, somebody needs to let somebody else know and they need to get back to the person in charge so we can figure out what we need to do next as soon as possible. So, communication, communication, you always have to have communication. Even if it’s not a project that you have to get done within a week because that makes everything easier, go by faster, you don’t have to worry about too many problems.

So they’re not listening basically. And just holding up the meeting; we had that problem the whole entire summer with the internship and that’s an everyday thing with my fraternity.

Timing was also an issue:

Well yes we did, it was trying to get everyone together. A meeting time for everybody to be there because one girl stayed in Arlington. And uh, we had like another commuter and it was just difficult for us to get together at the same time.

We had to stay up late at the Senator’s office doing the programs, figuring out the layout . . . so it was just a lot of extra work.

He noted that the group would meet at 6:30 p.m.

You have to put in more work since it’s such a short notice. You can’t slack up. You have to get a great, great team and teamwork is.

Theme: 3.3 Goal-setting and performance management.

Stevens and Campion (1996) defined Goal-setting and Performance Management: There are four characteristics of goal-setting and performance management as defined by the researchers. They are identified below, followed by Sonshine’s comments:

(a) A clear definition is critical to team effectiveness
(b) Level of goal difficulty and goal acceptance are critical to team success

(c) Monitoring team effectiveness and progress is an attribute of effective team

(d) Addressing individual performance is important to avoid loss from social-loafing. (p.4)

Sonshine described that the goal of P is:

Making sure that everyone is politically and educational sound. They also work toward uplifting, the community making sure everybody knows what’s going on in different states, in areas about politics. P works for Whites, Asians, Hispanics and other ethnic groups.

But our goal is to educate, uphold justice and equality of all people.

Regarding the level of goal difficulty and goal acceptance are critical to team success

Sonshine said:

A lot of time that you have to dedicate to Organization P with everything that’s going on, with all the new initiatives that they have, with everything going on, on the national level.

His observations from in-class experiences were as follows:

Yes, the biggest percent was based on that presentation and your peer evaluation. So we basically grade each other and overall we got an A I believe on the project.

Like I’m an Entrepreneurship major; that’s more management, and then we got accounting majors, finance majors, and uh.

From the fraternity Sonshine observed that:

Because you can have a team of individuals, but you’ll always have those slackers on your team. So you pull those individuals that you know are going to work regardless of anything. That’s going to be there, going to be on time, going to stay focused and try to reach that goal within the time frame. So you pull those individuals together and be like, okay here’s what we need to do. We need to get this done by Friday, I mean by Wednesday, today is Monday. If we have this done by Wednesday then we can look towards the weekend and I’m sure at the end of the week we will have a great success.
They was playing when they needed to be serious. Playing, playing around. And then, like, it kind of shows if you are a member or if you are an individual that can just look at something and tell.

Sonshine showed strength in Teaming KSAs related goal setting and performance management. He communicated positive thoughts about the structured experiences that he had in the classroom and at work. The student organizations have defined goals, but seem to have less structure, perhaps because they are not facilitated.

**Theme: 3.4 Planning and task coordination.**

Planning and task coordination was described by Stevens and Campion (1996) as the proper allocation of individual members to specific task, duties, and role assignments. Sonshine had a repertoire of experiences from which Sonshine expressed an awareness of planning and task coordination. Below are comments from experiences that support his score in this area.

They don’t have everything written out already. They just say, okay, here’s my event. This is what I want to do, and here’s how it’s going to go. And then as time continues to roll on, there’s still planning and doing other things like finding a location.

So we take it a step by step thing so see what everybody has to say. Uh, see what’s best for the fraternity, for the chapter and then we’ll take action.

We didn’t have those individuals to go there, because if we did have those individuals that was cooperating with everything that was going on it would have went smoother and before the march we would have had everything planned out. And uh, it was time consuming planning this event.

It’s to pull from the executive board. Those members that are on the executive board, because that’s the key team that runs the whole operation of the internship program of the summer. But you still have those slackers that don’t do anything and you figure that it’s within weeks of um, starting the internship program.
Contacting the people, especially I was doing that also working all day so, I had to contact the people. I had to get a list.

You have to make sure that you distribute the tasks evenly and to those people you know are going to get the job done. I wouldn’t have been able to get that job done by myself within a week, especially since I was also working all day.

My work, it was just, everything was divided up and once I got my work done, that was a check off and I just helped someone else as in getting contact with the organization, figuring out who was going to be there, figuring out who was going to be over the debate, who was going to run the debate and stuff like that. The location, just some minor things that needed to be done after I did my part I would help out with different things. I helped out a lot.

I’m not going to leave them like high and dry. I am dedicated.

Sonshine described that work in the SSS was done in a team. He said that there are planning and organization to a greater degree than other organizations for which he has been a part. In addition to being a participant of the program, he is also an employee.

Plan stuff here to the T and if you are working in another organization that is not necessarily planning stuff to a T . . . ya’ll take care of it.

Okay, I’m finished with this so what’s the next task? So, it’s, everybody still works together.” There are so many events coming up back to back that one person just can’t do that by themselves and there’s a lot of paperwork that has to be up-to-date and everything is correct.

The tasks are passed down, like, the chain of command. For instance, it’s passed down from a supervisor to a student employee, who may be the senior peer mentor, and if the senior peer mentor feels that they can’t handle all the duties then they pass it on to another employee within the office and um, make sure.

The student employees worked together to plan out the programs, and then a supervisor reviewed the plan for modifications. He stated that it is helpful when they can be in constant contact and constant communication with the supervisor. Regarding class he said:
In my business policy class the teacher put us together according to our majors and she had us work on 3, um, she had us work on assignments and each assignment was doing an analysis on a certain part of business, like in this case what would you do? Tell me a little about how you would start this business up. Which direction you are going, your vision, your mission? Um, my Entrepreneur Field Study class, on our first group project we were able to um, decide, uh, which group we were going to be in. She had students, uh, tell us what jobs they work for, who they work for, and according to the company they work for, for instance, I'm in a group where the young lady is in a business that do photographer franchises and according to…uh, going along with what I’m trying to do personally that would help me out learning about that industry and how I can make connection with the photographers and other things of that nature, but yeah, we are working on that project now.

Sonshine summarized the following related to Planning and Task Coordination:

1. You have to make sure that you distribute the tasks evenly and to those people you know who’s going to get the job done.
   a. Contacting the people
   b. Figuring out the layout

2. Communication was key; it has to be constant. It all has to be open. If you don’t have communication then everything will fail because once something happens you must let the next person know, okay you can move onto the next task this is done.

3. People always have to be available. You have to put in more work since it’s such a short notice. You can’t slack up.

Sonshine had an awareness of differences in levels of planning and task coordination, organizational outcomes, and individual burden. He suggested that effectively planning and coordinating task reduced the stress and conflict on critical members and effectively reach group goals.

Case Summary.

There was self-regulated structure for Sonshine’s experiences in the classroom, work, and student organization. The structure concerned, related goals, frequency and
duration, leadership, and activities. The classroom teams varied from being self-selected, assigned, and assigned by students’ majors. The structure of the class, task/goals, and performance evaluation also varied. The frequency and duration of team members' contact also varied due to delivery method of in-class teaming and Internet teaming.

Sonshine also had self-directedness that aligned with his organizational involvement. The fraternity had local organizational goals and national organization goals. Sonshine had a passion for serving others through organizational involvement and values structure, planned and coordinated activities. He communicated passion and engagement for the student organizations and work. King and Furrow (2004) described the relationship of positive outcomes that are connected in a social context through interpersonal, associational, and cultural social ties.

Sonshine was dedicated and worked hard for the student organizations in which he was a team member. He spoke highly of the organizations and their accomplishments. There were two activities that seem to symbolize his teaming preference: “Steps,” which involved a group of people making choreographed and synchronized movements to music and chants; and an “organized, peaceful march.”

He became very animated and upset about lack of organization. In addition to the lack of organization pressures he encountered were issues of student activism, structure, and time allocated for team planning. In both his extracurricular and co-curricular activities, meetings were held at the end of a work or school day. The active members met at nights and planned numerous events throughout the year. These late meeting times may have had some effect on team members’ mental alertness,
coherency, ability to listen, and deal with contingencies. He spoke of the activities that happened during the day as being more structured and productive.

While the advisors were occasionally present for the extracurricular meetings in which Sonshine participates, they did not appear to take an active role in the facilitation of the teaming process. Sonshine painted a picture which suggested that the other organization members had equal to or less than the skill level he has and that he applied skill acquired from work and the classroom environments to organizational environments. He was an asset for the teams in which he engaged. With his skill and participation engagement with other low-income/first-generation students; this may be a way to link social capital and alleviate poverty.

Although Sonshine was an asset to the organizations, his teamwork skills may have been affected by the breadth of involvement as opposed to in-depth involvement. At the conclusion of this study he was employed with another business for which he had interned prior to graduating. He was also maintaining close connections with his fraternal organization.

Case 4 Rosey

Focus 1. Learner.

Rosey was a 21-year-old history major. He came to the university as a freshman. He is a traditional student and will graduate in 4 years. The 4 themes that emerged regarding his characteristic include: being blessed, preferring familiarity, confident, and service oriented.
**Theme: 1.1 Blessed.**

Being blessed is described as having good fortune. In an informal discussion with Rosey he mentioned that his father was a preacher. The role of his parents seemed to significantly influence his life during his undergraduate experience. He followed the instruction of his parents and, in addition to church, joined a religious group.

I kind of got involved in it because my parents were like hey you should get involved in this thing outside of just going to church or whatever.

Furthermore, he stated specifically,

Like I’ve been blessed with a really awesome family that a lot of our students maybe don’t get blessed with. I grew up in a really good school district that taught me really well um, I really enjoyed learning. A lot of students don’t have that.

Rosey was considerably conscious of the people with whom he surrounded himself. He also placed a high value on the quality of his early education.

So I kind of did that and I also did it to kind of get to know people, like I was just in the business of trying to meet people in Denton, you know. Meet the ‘right kind’ of people.

Well, I was in Europe, but anyways. But at the same time I am still really glad I didn’t get involved with that right when I first moved up here because I think, I think that would have put a whole different dynamic on my college education. And I think had I started doing it then it would have been like party first, play first, do school and stuff later. And now because I’ve been grounded in like my education and stuff like that then I can go out.

His parental involvement, participation in church, and quality education may have added to his stock of social capital.

**Theme: 1.2 Familiarity.**

Social or member familiarity is based on the premise that familiarity is time dependent. Furthermore, Harrison et al. (2003) included the concept that familiarity is important in the beginning to foster coordination and integration.
Rosey said,

Especially like someone like me who’s played soccer since I was 5 years old and you know played on really good teams and all this stuff.

I didn’t really get to be friends with any of these people because they were going to be gone that year anyway so it was really, it was really kind of lame how they did it that year.

He also talked about familiarity in the classroom.

Probably first and foremost, well, I guess, they're all kind of... communication was a big one because when we first got together, none of us... we were like we all just had to put ourselves out there, I guess, more than we would normally so that it wouldn't be so awkward every time we were together.

In class, after taking some time to warm up from awkward situations, Rosey spoke in a manner that demonstrated that he became self-confident, outgoing, and not threatened by the former awkward situations. Familiarity was a significant factor in Rosey’s communication.

So it was really awkward the first, probably, month and a half or so. It didn't get... it wasn't like we were seeing each other every day where we could get to know each other.

Like, like I would say the first couple of weeks, everyone just kind of sat there and tried not to say anything and didn't want to stand out too much but I think everyone realized that wasn't getting a lot done. And the reason they were doing that was because they kind of felt awkward, or something.

So doing that, and like getting to know people’s names and stuff like that, that they weren’t doing initially. Which made the group probably work better because... well we got more work done because we were, you know, not just sitting there in silence.

I guess me being more like outgoing and more not like threatened by awkward situations, or whatever. Um. I kind of took it as my role to kind of be the one to facilitate the…getting people to talk and stuff like that.

Ellis et al. (2003) examined how the rate of learning could be improved within groups who had no prior history (familiarity) or knowledge of each other’s strengths or
weaknesses. Upon his return to a familiar work environment, Rosey felt awkward, not familiar with many of the current student employees. He also lacked attachment to the team. He described his experience:

I don’t really see that a lot now. I don’t know if that’s just because we got new people all the time. I think a lot of it has to do with the personalities of people.

As a team we all, we were all, we did stuff like that. I don’t really see that a lot now.

I think the people at the desk now um, they’re just, we’re just not as close as we were back then and that’s ‘cause we got a lot of new people and I think that’s pretty much the main difference.

That first year, I would come in and I would, I would tutor with Eugene in math and then we would go from there and we would go talk with everyone else and we’d all hang out and we’d all pile in Eugene’s car and he would drop us all off at our dorms.

I think we use to be a team, a lot more than we are now. I think the turnover’s kind of killed us a little bit. Um, there’s a few people who have been here for a while, uh, me, Jared, Zach’s been here a while. Other than that, everyone’s just sort of joined the crew in the last year or so. Um, I don’t know a lot of the tutors that we have now. I don’t know the new guy.

Maybe that’s because I’m a tutor now and not at a desk all the time when I’m in constant interaction with them. I guess it is more of an individual job, being a tutor.

His characteristic, attachment to familiar environments and affinity to defer to the past, may have affected his further teaming experience in his work environment. Rosey also expressed feelings of awkwardness associated with new environments in the religious-based group:

But as far as the group the first year it was a really, really awkward group. The leader was like, um, he was probably one of the most awkward guys I know, like to this day. He doesn’t have a lot of people skills, he’s really quiet and uh, it was also really weird because I was one of the only freshmen in the group. There were like six or seven of us and probably four or five, probably four of the guys in that group were graduating that year.
But it was really weird because it was me and my best friend like from high school was my roommate my freshman year.

They probably looked at us the same way, like oh, these annoying guys who are like best friends and have all these inside jokes that we don’t get.

Rosey’s early experiences seem to hold greater value to him than his current experience. His past, however, built his stock of social capital. It was as if he preferred not to deal with change or a changed situation.

Theme: 1.3 Confidence.

Confidence is described as positive outlook about one’s own knowledge, skill, and ability. Rosey was willing to step out and take risks to get to know people.

I guess me being more like outgoing and more not like threatened by awkward situations, or whatever. Um. I kind of took it as my role to kind of be the one to facilitated the…getting people to talk and stuff like that.

Because my head is screwed on right and I’m a good person I was able to say, you know what.

I was able to say, that’s okay. It’s not their fault. They didn’t know any better. That kind of how I was able to look at it.

Because I’ve been grounded in like my education and stuff like that then I can.

Even though I was not the team leader I kind of had to because that person was not necessarily stepping up class.

Rosey revealed confidence in general, in the religious group, and in soccer.

Because it was, because those teams were so bad and it was so easy to just run around them.

To have someone that uh, wasn’t, I don’t know, she wasn’t extremely, extremely talented. So to have someone like that trying to tell, you know screaming at you where to be and what to do with the ball and stuff like that, it just got really frustrating because it’s kind of one of those things you’re just like okay I don’t need this. I don’t need you telling me what to do you know. Uh, so on the one hand really good captain off the field.
He had years of experience with religious affiliations and in soccer. Perhaps because of his experiences and the grounded, stable life provided by his parents he communicated a strong sense of confidence.

**Theme: 1.4 Service-oriented.**

One who is service oriented is inclined toward helping others. Rosey demonstrated a dedication and commitment to the organization.

Obviously the guys were the ones that were helping do that while the girls were helping make the food for that night’s big dinner they were having and stuff because if it was backwards the guys would have.

We basically went out and worked with different homeless shelters, and different...it was on Spring Break, so it was still really cold up there.

Just to like go serve other people, just like, umm, just like, people that honestly are living cruddy lives just because they are on the streets and don’t have a home or whatever.

Lots of communication about where everyone was at on their goal of raising the money and where they were at on their goal of putting the miles in and stuff and doing the work and stuff like that. And that was really cool because everyone, everyone knew they were working for something specific.

**Focus 2. Environment.**

The structural dimension aspect of social capital relates to the location and frequency in the social structure (King & Furrow, 2004). Kuh and Gonyea (2006) listed the following as relevant to engagement: deep learning, spiritual practices, working with faculty outside the classroom, community-based work as part of a course, community services/volunteerism, interaction with diverse peers (religious beliefs, political opinions, and personal values), interaction with diverse peers (race and ethnicity), attending art events, exercising, relaxing, and socializing.
Rosey had experiences in a variety of environments during his undergraduate experiences. Four themes were revealed, including, collaborative learning (academic), intramurals (extracurricular), work (noncurricular), and faith-based teaming (noncurricular).

**Theme: 2.1 Collaborative learning.**

When students of various performance levels work together toward a common goal, the instructional method is referred to as collaborative learning (Gokhale, 2004). It is not specified as only in a classroom; thus, collaborative learning may occur outside of the classroom. Rosey experienced some degree of collaborative learning in class and outside of class. He described his experience in class:

Big study group last year for an archaeology class I had.

That we met like once or twice a week, so I guess that's kind of a team effort. Because we all kind of broke up the work, and... split up and stuff like that.

We, would like, kind of split up the readings . . . when we came together we all kind of knew one area, we all kind of focused on one area and outlined it. And so, we would come together and explained those things and give each other the outlines and stuff and kind of teach that part to the other person so that way everyone wasn't stressed.

Regarding the structure of another class:

Once a week , weeks.

I think they were usually like upperclassmen that were taking the class.

We didn't get to pick like our group or whatever. It was like we were placed in the group by the professor. Probably about 12 groups, so each group had a team leader. Plus there was like a 50 point bonus if you went to group a certain amount of times, so that was another incentive. I guess the goal would be to utilize the group enough that it helped you get an A on the test or something.
The classroom provided a structured experience, with assigned groups, familiarity activities, and clear goals. This structure encompassed location, frequency, and duration. The structure was originally facilitated by the instructor. The religious group also provided for group learning. He discussed this experience.

Like over, like there was like a trip leader who was over basically the whole bus and uh and then kind of the same thing, each team had their own individual leaders.

I think in those situations the leaders that we had were a lot better about um, if there was conflict, even though there wasn’t a lot of conflict, if there had been conflict, I knew they would have been, I guess I really respected them and they would have been a lot better, they would have handled it a lot better.

The leader was a lot cooler and actually wanted to hang outside of that hour on Thursday nights and was just a really cool guy.

Leaders are like married couples, like young married couple in the church. Um, which is really cool, because you know, I guess they just have kind of been through a lot of the stuff that we're going through now or whatever you know.

You know, I don’t know if it was just luck of the draw that we just got a lot closer or what, but definitely I think the leader had something to do with it. He definitely made more of an effort to not just be our group leader on Thursday night you know. It was definitely like a whole year type of thing.

The learning environment in the religious group was externally facilitated, as opposed to peer performance management. Additionally, the content in the church group was relevant to life experiences and not an academic discipline.

**Theme: 2.2 Intramurals.**

Rosey’s intramural soccer experience is primarily described throughout Focus 3. Soccer, for which he developed skills throughout high school, became a setting that provided him with an opportunity to practice a variety of teaming skills in addition to showing off his competence in the sport.
Theme: 2.3 Work.

Rosey’s work experience is described in 1.2 Familiarity.

Theme: 2.4 Faith-based teaming (non-curricular).

Organized religious activities that were noncurricular group activities describe faith-based teaming. Rosey stated that it was,

something I’ve been involved with since my freshman year. So I’ve been in four, this is my fourth different one. It’s just like basically a group.

The faith-based experience provided a familiar experience.

We went to, we took a bus. We were one group of like 5 or 6. So there were about sixty people. There were like 10 people in our group I think. We took a charter bus to Minneapolis.

I mean now there was definitely there was definitely like some things that happened like the air conditioning kind of went out on the bus for a while. So it was really hot and so everyone was, I mean I guess that is a conflict, but it was easier because it was a church group.

So it was real easy to like not get caught up and, and that type of stuff I guess because it was a church trip and stuff like that.

You know just kind of like uh, getting to know each other and uh, you know learning everybody’s struggles and stuff like that and praying for everybody in the group and stuff like that. Um, that’s pretty much what it looked like the first 3 years.

Rosey was engaged in the church group all 4 years of his undergraduate experience. These experiences were outside of the university setting, but seemingly integrated into the life of its members. The group served each other and the community.

It was also a fundamental component of his undergraduate experience.
Focus 3. Individual teamwork KSAs.

Rosey's scores can be found in Table 10. He made a raw score of 23 and a total score of 54. Scores in the interpersonal domain and the self-management domain were 55 and 64, respectively. His highest ranking score was a 99 for the sub-area of conflict resolution. Collaborative problem solving was among his lower scores. Soccer and the religious group experiences were his primary team experiences.

Table 10

Teamwork KSAs Test Scores for Rosey

<table>
<thead>
<tr>
<th>Raw score</th>
<th>T - 1</th>
<th>CR - 2</th>
<th>CP - 3</th>
<th>CM - 4</th>
<th>IN (2+3+4)</th>
<th>GP - 6</th>
<th>PT - 7</th>
<th>SM (6+7)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>23</td>
<td>54</td>
<td>99</td>
<td>46</td>
<td>55</td>
<td>68</td>
<td>65</td>
<td>64</td>
</tr>
</tbody>
</table>

Theme: 3.1 Conflict resolution.

Stevens and Campion (1996) described conflict management as negotiation strategy as opposed to compromise and concession. Rosey described the conflict in soccer.

So to have someone like that trying to tell, you know screaming at you where to be and what to do with the ball and stuff like that, it just got really frustrating because it's kind of one of those things you're just like okay I don't need this. I don't need you telling me what to do you know. Uh, so on the one hand really good captain off the field. On the field not so much and I think a lot of people kind of got frustrated with her.

I would say I probably had the most conflict with her on the team because like all of the guys that play on the co-rec team aren't, aren't like didn't really play a whole lot.

I didn't even want to approach her with anything on the field because I got so sick of hearing from her duh, duh, duh, this and this and that. And so, uh, so yeah, I didn't... I just kind of took what she said and just listen to it and let it go in one ear and out the other.
Because of his significant and prior experience in soccer, Rosey had the most conflict with someone whom he saw as less experienced than himself, a female soccer captain. In two situations Rosey attributed conflict resolution to leaders that of the teams:

In these two situations, the archeology and the church group, I think in those situations the leaders that we had were a lot better about um, if there was conflict, even though there wasn’t a lot of conflict, if there had been conflict, I knew they would have been, I guess I really respected them and there would have been a lot better, they would have handled it a lot better.

I mean now there was definitely there was definitely like some things that happened like the air conditioning kind of went out on the bus for a while. So it was really hot and so everyone was I mean I guess that is a conflict, but it was easier because it was a church group.

I was able to say, that’s okay. It’s not their fault. They didn’t know any better. That kind of how I was able to look at it. You’re forgiving, huh? Yeh!

Rosey thought the conflict might have been easier because he was in a church group. Perhaps his leadership abilities, his faith-based and forgiving behavior helped him to more successfully deal with conflict in team situations and resulted in a high score in the conflict resolution sub-area of teamwork KSAs.

Theme: 3.2 Communication.

Stevens and Campion (1996) described communication as the interpersonal competency of team members and capacity to communicate effectively. This should not be confused with the ability to simply converse with others or maintain cordial associations.

So, once, once I think people got over that, then they kind of put themselves out there by opening up and like talking more about... even if it was just like
answering the question or something, it was something that people weren't doing right off the bat.

Getting to know people's names and stuff like that, that they weren't doing initially. Which made the group probably work better because... well we got more work done because we were, you know, not just sitting there in silence.

And so let’s see communication is probably the, again probably the biggest key just because when you’re in a situation like that like you're kind of out of your comfort zone.

Communication is also important in other environments. Rosey commented:

I guess communication is another big key. Obviously, anytime I think probably with any sport communication is a key.

Soccer it's like you need just you need to be talking all the time kind of where you’re going, what you’re doing with the ball on the field or whatever, so communication is a real big thing.

We would all wait for the people to finish and stuff like that . . . a lot of togetherness I guess.

Theme: 3.3 Goal-setting and performance management.

Stevens and Campion (1996) made four points about goal setting and performance management:

1. A clear definition is critical to team effectiveness.

2. Level of goal difficulty and goal acceptance are critical to team success.

3. Monitoring team effectiveness and progress is an attribute of effective team.

4. Addressing individual performance is important to avoid loss from social-loafing. (p.4)

Rosey was a member of teams that set goals. Regarding class he said,

But I guess what I mean by there wasn't any lot of goal setting; it wasn't like week to week we would say, OK, let's set a goal to do this or whatever. It was kind of like, overall the main goal was just to help, help your test grades. So, I guess the
goal would be to utilize the group enough that it helped you get an A on the test or something.

Plus there was like a 50-point bonus if you went to group a certain amount of times, so that was another incentive.

From his experience with Teams-in-Training, a fundraising program for leukemia, lymphoma and other blood cancers, he commented:

Lots of communication about where everyone was at on their goal of raising the money and where they were at on their goal of putting the miles in and stuff and doing the work and stuff like that. And that was really cool because everyone, everyone knew they were working for something specific.

He discussed peer leader leadership and performance management related to soccer, classroom, and in soccer:

On the co-rec team, there was a girl that was our captain and she was really, she’s a really like type A personality and she is really organized so she was the one that always got, got the team signed up and made sure we all knew when our games were and stuff like that. Made sure we all got our shirts and paid our money and all that stuff. So I guess she was a really good off the field captain . . . but once we got on the field she, she used those same personality traits and it was kind of like okay, chill out, it’s just intramurals.

And she would say that if I had tried to address something she would have said, ‘I’m the captain.’ She’s one of those personalities that would have just said hey I’m the captain.

Like I was the captain of the team but I didn’t like exert like captain authority or anything like that on the team. Like maybe if I was playing back on my high school team like when I was the captain it was a lot more, a lot bigger role and a lot more important but this was just intramurals and so it was.

For a class project he described the following:

The person that was our team leader didn’t really do a lot to.

She did a good job of getting everyone there, but once we got there we just sat because that was not really her personality to, you know what I mean.

Even though I was not the team leader I kind of had to because that person was not necessarily stepping up.
There were distinct leaders in all of the environments in which Rosey had engaged. There were differences in how he respected the peer leaderships in each of the environments, which varied from the soccer team to the church groups. Overall, he was eager and willing to assume leadership that addressed goals and performance in all but the church groups. On the church he was less assertive. Interestingly, there seemed to be a difference associated with his interaction and the gender of the leader. This was observed in the classroom, soccer team, and church setting; the latter had male leadership.

Theme: 3.4 Planning and task coordination.

Stevens and Campion (1996) noted that the proper allocation of individual members to specific tasks, duties, and role assignments is important. Rosey made the following comments:

On the co-rec team, there was a girl that was our captain and she was really, she’s a really like type A personality and she is really organized so she was the one that always got, got the team signed up and made sure we all knew when our games were and stuff like that. Made sure we all got our shirts and paid our money and all that stuff. So, I guess she was a really good off the field captain.

I could have easily scored I would pass it off and let like a either a girl score or just somebody else on the team score for the good of the team because they are worth more if the girls score.

So we had, it was a group of guys probably like five or six of us and we had a tea, we had a community group leader and then we kind of had a sister group who had a community group leader and we teamed up and we were one team in Minneapolis. And they were our two leaders.

Oh and I guess task coordination, too, on that one because every place we went we would all do different stuff and it kind of, it was kind of geared toward like our individual strengths, you know. Like somebody who was not a real people person would probably say, well I want to go work with this lady and help her fold blankets, you know and like I remember one day I folded blankets for three hours
because people would donate them and you have to fold them and get them organized and stuff. Ummm, but then we’d go somewhere else and like you know a person like me or this other guy that was on the trip, would get the jobs where we’re like directly working with people because we like that and so the tasks were like kind of geared toward your own … each person’s individual strengths.

Obviously, the guys were the ones that were helping do that while the girls were helping make the food for that night’s big dinner they were having and stuff because if it was backwards the guys would have.

Rosey often associated one’s gender to specific roles. Based on how he analyzed a person he allowed an equitable amount of influence. He also recognized strengths and talents of individuals. In experiences that were segregated by gender he suggested a greater confidence in his own gender.

Rosey recalled planning and task coordination in academic teams:

We didn't get to pick like our group or whatever. It was like we were placed in the group by the professor. Probably about 12 groups, so each group had a team leader. Plus there was like a 50 point bonus if you went to group a certain amount of times, so that was another incentive. I guess the goal would be to utilize the group enough that it helped you get an A on the test or something.

I wasn't the team leader but that person was kind of in charge getting everybody together and e-mailing everybody and stuff like that.

He also described how task were coordinated:

1. Split up the reading
2. Split up the review and stuff like that
3. Talk about them in our groups
4. Came together . . . we all kind of knew one area
5. We all kind of focused on one area and outlined it.
6. We explained those things . . . kind of teach that part to the other person so that way everyone wasn’t stressed.

The church group also utilized task coordination.

Oh, and I guess task coordination, too, on that one because every place we went we would all do different stuff and it kind of, it was kind of geared toward like our individual strengths, you know. Like somebody who was not a real people person would probably say, well I want to go work with this lady and help her fold blankets, you know and like I remember one day I folded blankets for 3 hours
because people would donate them and you have to fold them and get them organized and stuff. Ummm, but then we’d go somewhere else and like you know a person like me or this other guy that was on the trip, would get the jobs where we’re like directly working with people because we like that and so the tasks were like kind of geared toward each person’s individual strengths.

Obviously the guys were the ones that were helping do that while the girls were helping make the food for that night’s big dinner they were having and stuff because if it was backwards the guys would have.

Case Summary.

Rosey, a history major, emphasized his engagement in a religious organization and soccer during his undergraduate education. He expressed great confidence in himself and in his own gender and also placed a higher value on working for more than just money and higher pay.

He had teaming experiences in his classes. What he did not mention is that he has taken honors classes; which was revealed from his transcript. Honors courses for a history major would be a uniquely engaging experience that most others in the discipline would not have had.

He was uncomfortable and agitated when he talking about entering a new group. Rosey’s communication seems to depend on a certain amount of familiarity, sharing of common interest and values. His faith base may have helped him to have a positive outlook on involvement in teams during peace and conflict.

Case 5 – Sergeant

Focus 1. Learner.

Sergeant 23, both a low-income and first-generation female will graduate with a degree in political science (see Table 11). Specifically, related to teamwork, at the
The center of her undergraduate experience was participation in soccer and a politically oriented co-curricular organization. Three themes were revealed for Sergeant within this focus.

**Theme: 1.1 Controlling.**

Allessandra and Hunsaker (1993), described controlling types as being task oriented; keeping their distance; having a poker face; and as restrictive in verbal, vocal, and visual expression. Sergeant described herself:

I have to have my own defined kind of thing to take care.

This was evident to her as early as middle school when:

I would start telling them which colors to use. You know like what size of picture could be used… stuff like that.

And now, she commented as follows:

If we have a paper in Middle East and it's a group paper, but each person has a section that they have to take care of, I can handle that because at least I know my section will be about me - what I want to write. I know. I'm a really, really, really bad team player when it comes to like group projects and stuff like that. I'm really selfish when it comes to group projects.

Sergeant communicated that she has consistently shown controlling behaviors. She described how she dominated team projects in middle school and now in college.

She demonstrated this primarily in educational settings. Sergeant's domineering personality was consistent with her low score of 31 in collaborative problem solving.

**Theme: 1.2 Reflective observer.**

Sergeant noted that she liked to watch others. Her behavior was consistent with what Kolb (1984) described as the learning preference of opting to watch the others
involved and reflecting. In her first semester she participated in the organization in Pi Sigma Alpha. She noted,

At first I was I used to be in the pre-law fraternity, which isn't an organization. But they call it a fraternity.

She did not actively engage.

I was just a member.

She discussed the way she observed and reflected through her ongoing membership in MIO:

Well, the first semester that I was in it... I really didn't do anything, I was just kind of a member.

But, while we while I was in the conference itself, I didn't do anything. I just sat around. I was I just kind of watched people and I didn't really learn anything from a conference.

And so the first semester, I was kind of um, I was a sophomore. And so I was kind of contaminated. 'Cause in order to participate in these things, you have to know parliamentary procedure. So, you have to know how to speak in the in the third person, which is really weird at first. And so, what I did is I went as a, as a co-delegate with somebody else.

And then, but I would go to like events and meetings and stuff. I just wasn't officially on the roster.

Like I don't hold an office or anything but I'm more involved with it now.

And then, this semester, I've been more... more involved... more active with it. And so, I am going to be a delegate at the (recording unclear) this time.

But it's different this time 'cause I... um... I think it got a little bit more organized.

She described her behavior during intramural soccer:

I like to sit in the crowd and just watch the interaction between people... see what their responses are. And stuff like that. So, whenever I wasn't playing, I used to just sit out and like I would watch people. I'm like the... I'm like a stalker, you know. I just follow them with my eyes.

But it was really interesting to see how... how teams would um... I don't know if they like specifically sought out girls that were bigger but a lot of teams had
bigger girls, like stronger girls. And, man, I got knocked down a couple of times by one of the… by some of those girls and it hurts.

At work, Sergeant observed the roles and culture of the environment:

I was working at this restaurant for… for awhile and um. I was a cashier. I can… I guess you could say I was part of a team. . . . I was a cashier and the… the waiters had to come to me. . . Well, during work, we really didn't have time to like talk, at all. Like because everybody's… a really busy restaurant. But then, after work… sometimes we got together and we just hung out. But it was just more of a, you know… it was kind of a rumor thing, where you… somebody would invite somebody and then, that person would invite somebody and that… it would just spread. We didn't do anything. We just sat around and… and like watched TV . . . We could just talk. Well, for me, it didn't really relate to anything because um I was working in Fort Worth and I was living in Denton. And a lot of the… the people who were working at the restaurant, they lived in Fort Worth. They went to TCU. So I really didn't like understand anything about school from them or… like, if they were talking about school, I did know what the… they were talking about. So, unless they were talking about work, I didn't… I had no clue what they were talking about. . . . 'Cause uh, the first day that I started working there, I got invited to one of these parties and I started talking to some of the other people that I worked with and then, next day at work, I have friends.

Sergeant studied situations prior to and related to her active participation. She watched; she did not play. She stalked and followed people with her eyes on the soccer field. At work one could draw from these latter experiences that she watched people as they worked in the busy environment. She seemed to keep herself at a distance from people, perhaps so that she could maintain control. The reflective observing behavior probably helped her to negotiate her environments.

Theme: 1.3 Confident.

Confidence is described as positive outlook about one’s own knowledge, skills, and ability. Sergeant communicated confidence in being a nerd and in her participation with educationally purposeful activity.
MIO were composed of like nerds. Not really athletes. We're more into academic stuff than really liked soccer, or... you know any kind of... you know athletic games.

We're... you know nerds in the sense that we care more about education than being athletic.

We, the young people of America. Well, it's, I guess in high school we learned... I learned that a nerd is somebody that cares more about education... about like excelling in classes and stuff... than about athletic abilities.

Her confidence and description of her activities suggested she was also a critical member. Ellis et al. (2005) discussed the role of the critical team member who serves to support communication and control workflow. They revealed that critical team members with strong teamwork skills may be important as a conduit for good team functioning.

Yeah. And so I learned parliamentary procedure. And um, so I feel more prepared to go to OAS now.

Sergeant described the intricate process of how the UNT delegation will “represent” three countries, and the roles of each person on the team. Countries, delegates, committees, role combining, role switching, and more mirror real-life activities. They served on committees such as,

Security, human rights, um, economics, stuff like that. So, I'm in human rights.

So, me, this other person, and I are going to be the human right delegates. But, I'm the head delegate. 'Cause I know parliamentary procedure now. I have a co-delegate. I don't know if she knows or doesn't know parliamentary procedure. But if she does, then we'll combine roles. You know like, we'll ... we'll switch off.

She further described the scenario:

I'll be sitting at a table as a representative of Columbia. And I pass a proposal. And as soon as that proposal is done, we start a whole new proposal and a whole new resolution.

Sergeant called herself a nerd and was confident in herself. Being a nerd was not new to her since she was one in high school and now in college. She suggested that it
was cool to be a nerd. Sergeant will graduate with a degree in political science. Involvement in the student organizations is “academic stuff” and “academic stuff” is consistent with who she was – a nerd. During her years at UNT, she has participated in three co-curricular activities. She was engaged in these environments and has high overall teamwork KSAs.

**Focus 2. Environment.**

The structural dimension aspect of social capital relates to the location and frequency in the social structure (King & Furrow, 2004). Kuh and Gonyea (2006) listed the following as relevant to engagement: deep learning, spiritual practices, working with faculty outside the classroom, community-based work as part of a course, community services/volunteerism, interaction with diverse peers (religious beliefs, political opinions, and personal values), interaction with diverse peers (race and ethnicity), attending art events, exercising, relaxing, and socializing.

Sergeant’s experience reflected a unique structural dimension. Her experiences were connected by links between members and the academic environment. Her experiences are described here.

**Theme: 2.1 Group development: in extracurricular activities.**

Smith (2005) discussed this development in Bruce Tuckman’s forming, storming, norming and performing in groups. Sergeant first described her involvement with a coed intramural soccer team. This phase of participation was interrelated with or extends into participation in another extracurricular activity, but with the same group.
Sub-theme: 2.1.1 Forming.

Forming is described as a stage of orientation/testing and dependence, Tuckman (as cited in Smith, 2005). Additionally, Ellis et al. (2003) gave consideration to how at the individual and team project levels teams’ learning and rate of learning could be improved within groups who had no prior history (knowledge) or knowledge of each other’s strengths or weaknesses. The forming of the soccer team illustrates this as described by Sergeant:

Some people had never been to our practices, so they just came with whatever skills they had brought in the beginning.

We entered the noncompetitive league. I like it, but I can't play it. But I tried. It was fun.

A lot of the people who played had never really been on a soccer field before. Or, kicked a ball. Like I… I did it in high school but that was a long time ago. So, three of us had done it in high school.

None of our members were really really good at it. Which is kind of unfair. There were people who never showed up to practice and just brought the skills that they that we had all been bringing from the beginning, their game didn't improve at all. A transition occurred in the team.

In the beginning, the noncompetitive nature of the team may have helped the members, including Sergeant, with an opportunity to gain familiarity with each other. Team members had a variety of skill levels and seemed to be accepting of other individuals skill levels. Also, perhaps since it was noncompetitive, members were willing to accept the skills with which other members came.

Theme: 2.1.2 Storming.

Conflict is consistent with the storming stage (Tuckman, as cited in Smith, 2005). The team members did not necessarily have conflict with one another, but conflict about the motives/goal of the team.
You know, we were all losing and we were a team.

Well, we all kind of came to… it was kind of a general consensus that we all wanted to win! Like, ‘cause that’s when pride started kicking in, too!

And, uh, it was… it started to get really aggressive, like even on the field. And so people started to get like angry. A guy got pushed down a bunch of times and… it was… we just started to… like once we started getting more physical, that’s when we started to get more competitive. ‘Cause at first we were just kicking the ball around. We figured noncompetitive fun.

The other teams started changing girls, so that… you know the girls who play were a little bit bigger… a little bit stronger, you know, ‘cause they were going up against everybody else. So… and the girls were worth more in the game.

Yeah... yeah like a...as...as the... as the season progressed, the girls in the game started to get tougher.

The group decided to start practicing more instead of just coming and playing.

They made a conscious decision that they needed to get better. They decided that by practicing, they would get better. While the team still wanted everyone to play, they started being selective. They became really aggressive. Sergeant related that people started to get angry. They bacame more competitive.

We ended I think second to last, but we weren't last.

I mean, MIO were composed of like nerds. Not really athletes. We're more into academic stuff than really liked soccer, or... you know any kind of... you know athletic games.

Sub-theme: 2.1.3 Norming.

The discussion of the soccer team transitioned to a discussion of MIO. MIO was composed of the same members of the soccer team, a cohesive team Tuckman (as cited in Smith, 2005). According to Sergeant,

Every ... every fall, they...they hold a workshop in Monterrey, Mexico. They... we did that just this past weekend. Like 12 hours. I learned parliamentary procedure. And um, so I feel more prepared to go to Organization of American (OAS) now.
So, like uh the first… every fall, there's a model States that they go to in San Antonio. Is kind of like model UN.

They also traveled together to San Antonio – a 5 hour trip. On another occasion MIO coordinated an activity similar to OAS, but it was planned for high school students.

Saturday tomorrow, we're hosting the UNT invitational model UN for high school students. So, they're all coming to… to the Union and we're just kind of… it's like their… I guess their yearly UN… little summit thing that they do. And we host it.

**Theme: 2.2 Engaging co-curricular experiences.**

“The concept of student engagement is based on the constructivist assumption that learning is influenced by how an individual participates in educationally purposeful activities” (Coates, 2005, p. 26). Supporting findings are parallel to the group development findings. However, the engaging environment encompasses the physical social capital provided by the related academic department. Sergeant participated in MIO (described above) “On and off, about 3 years.”

I used to be in the pre-law fraternity, Pi Sigma Alpha, which is a political science fraternity; which isn't an organization. But they call it a fraternity. Well, we don't have like all their rituals like the real Greeks have.

Pi Sigma Alpha about two years.

MUEVE, 2 years, so.

She stated the organization’s motto:

It works really close with the work like the political science department, the international studies. And anything that has to deal with politics and stuff like that. And um, we work together with them to bring speakers and all host events that um… that kind of um… inform the general public about… about different things in the world.

This past week, the Syrian Ambassador came.
The students in the co-curricular student organizations supplemented academic (which represented International Studies, Political Science and Peace Studies) or curricular activities with “extra” curricular engagement - soccer. Or perhaps vice versa.

**Focus 3. Individual teamwork KSAs.**

Sergeant made a raw score of 24 and a total score of 61. Scores in the interpersonal domain and the self-management domain were 77 and 44, respectively. Her highest ranking score was a 99 for the sub-area of conflict resolution. She also scored a 96 in communication. Collaborative problem solving, planning and task coordination were among her scores, 31 and 37.

Table 11

*Teamwork KSAs Test Scores for Sergeant*

<table>
<thead>
<tr>
<th>Raw score</th>
<th>T - 1</th>
<th>CR - 2</th>
<th>CP - 3</th>
<th>CM - 4</th>
<th>IN (2+3+4)</th>
<th>GP - 6</th>
<th>PT - 7</th>
<th>SM (6+7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>61</td>
<td>99</td>
<td>31</td>
<td>96</td>
<td>77</td>
<td>68</td>
<td>37</td>
<td>44</td>
</tr>
</tbody>
</table>

**Theme: 3.1 Conflict resolution.**

According to Stevens and Campion (1996), conflict resolution is negotiation strategy as opposed to compromise and concession. There are no data to support Sergeant’s high score of 99 in conflict resolution. Her only statement about conflict was that “with Fraternity - Yeah, we… everybody agrees. Well, in this case, we are all political scientists.”
Theme: 3.2 Collaborative problem solving.

Stevens and Campion (1996) observed that collaborative-problem solving members rather than a supervisor take initiative in solving a team’s problems and do so while considering the contributions of other team members. Members must be aware of obstacles to group problem solving and be capable of mitigating them. In soccer, a self-directed activity, the team conducted an informal SWOT analysis and renewed team strategy, which is further described in Theme 3.4.

Below are data which are provided primarily from Sergeant’s participation in a MIO workshop similar to Organization of American States (OAS). Sergeant said that it was interesting and that she understood the bureaucracy of it all and how difficult it was to come to a resolution.

But, you know, if a country doesn't agree with another one and they have power, they can always like build alliances and all that good stuff. You can convince other people not to vote for those countries resolution.

Cause they're going to be like, oh well, you know that sounded really bad. Like maybe we shouldn't take their side on anything.

She discussed a voting process.

So, whenever you...you vote on... on stuff, you can say yes... no... no with rights... or abstain. So, you know like they take a roll call vote. You have your little placard and you... and they... they call your name - your country and you either say yes or no, or no with rights, or abstain. And so, let's say that you said no.

No, with rights. The resolution passes and they come back to you. And they're like, alright, you said no with rights. Like, no with rights means that you… that you want to talk about it. 'Cause I mean you can… if you say yes or no, then nobody questions it.

That's like the basic difference. You… there are some things that you can vote on. There are some other things that you can just like you know raise your placard for it. Just depends on the rules. They have different rules but it's kind of the same deal.
From soccer she has also practiced coming to a consensus as a form of collaborative problem solving:

We all kind of came to... it was kind of general... general consensus that we all wanted to win.

Theme: 3.3 Communication.

Communication was described by Stevens and Campion (1996) as the interpersonal competency of team members and capacity to communicate effectively. This should not be confused with the ability to simply converse with others or maintain cordial associations.

Sergeant related her skills. There was very little time for “talking” at work, which resulted in her spending time to getting to know people more outside of work than at work. The following is an example of how this was manifested. She became aware of an upcoming party.

But it was just more of a, you know... it was kind of a rumor thing, where you... somebody would invite somebody and then, that person would invite somebody and that... it would just spread.

After the party she said, as follows:

I started talking to some of the other people that I worked with and then, next day at work, I have friends.

Next thing you know, we end up at a house. Stuff like that. It wasn't really like we sat down and discussed which house we were going to go to.

If they were talking about school, I did know what the... they were talking about. So, unless they were talking about work, I didn’t... I had no clue what they were talking about.

Communication was an aspect of her participation in her fraternity; for example,
Well, at the beginning of the… we have a meeting. And we kind of nominate people that we want to bring. Then we take a vote. And then, we try to raise funds to bring that person. So we hold fundraisers.

Highly structured communication was required in MIO:

And so the first semester, I was kind of um… I was a sophomore. And so I was kind of contaminated. ‘Cause in order to participate in these things; you have to know parliamentary procedure. So, you have to know how to speak in the… in the third person, which is really weird at first. And so, what I did is I went as a… as a co-delegate with somebody else.

But, I'm the head delegate. ‘Cause I know parliamentary procedure now.

“She's going to have to defend in general assembly.”

So, you know… to some extent, we do bend the rules when it comes to parliamentary procedure, but we try to stick as close as we can. It's just … it's a really interesting process you know.

I'm going to be like, no… I don't agree with it. And then, I can get like speaking time. So, I'll stand up and I'll be like… I'll butcher that resolution like to shreds. And I'll be like… I propose that I submit a resolution. And then, that's when like you know pride starts kicking in, so.

Highly structured communication was required for one of the activities of the student organization. Speaking time, parliamentary procedures, voting, consensus, and resolutions guided their performance. Sergeant believed that talking and discussion were integral to conflict resolution. In the simulations once a resolution was passed you could start “talking” about the actual components of the resolution. All of the discussion had to go through 30 or so countries before it actually happened – yet they still talked and discussed.

Communicating outside of work did not make for high-level communication at work where everybody “did their thing” (Sergeant’s way of describing work). Getting together and going to peoples' houses was expressed as a common and popular
activity for gaining familiarity. Communicating outside of work did seem to give them an opportunity to get to know each other.

Theme: 3.4 Goal-setting and performance management.

Stevens and Campion (1996) included the following in their description:

1. A clear definition is critical to team effectiveness.

2. A level of goal difficulty and goal acceptance are critical to team success.

3. Monitoring team effectiveness and progress as an attribute of effective team was not specifically supported.

4. Addressing individual performance is important to avoid loss from social-loafing. (p.4)

In soccer, Sergeant’s team started with one goal and then changed. The initial goal was fun; the change in goal influenced their performance.

‘Cause like I said we were not the best soccer players out there and so practice did really make… a little bit of improvement. So, the people who never showed up to practice and just brought the skills that they… that we had all been bringing from the beginning, their game didn't improve at all. So, you know that's when we started to… we would… we were still trying to let everybody play but that's when whenever we started selecting.

We didn't care, we were like, oh, and we had a great game, guys. Like we're getting better, right? Did you see me kick that ball? And stuff like that. And then later... later it started to be like, man we're like losing big-time and, you know, like... we need to like... we need to practice and to where we would have like during the week practices or weekend practices before the actual game. So, it started to get... and we were like, ah man, this like totally defeats the fun.

Well after we lost one game and we figured, ah fluke. We lost a second game and we were like, ah man. We're like... we're really sucking at this. And then, the third game that we lost, we kind of had like a little...you know... little huddle.

After we got like beat like three times in a row and uh... and we felt like the other teams were a little bit more prepared than we were. A little bit more competitive, so we decided, you know, we had to step up our game.
After other teams were beating them, the goal of Sergeant’s team became to win.

We need to win at least once.

It was fun but it was just… we were trying a lot harder… ‘cause we wanted to win, at least once. And we ended up winning once. We ended I think second to last, but we weren’t last.

The group assessed their performance and changed their behavior. These data are described in the theme 2.1.1 – 2.1.3 of the environment focus.

Sergeant stated the goal in MIO:

I guess more aware of… of situations… the issues in the world. So, actually make the students more aware.

This goal was unrelated to the team’s goal in soccer, but would seem to have instilled a certain attitude in the group.

The goal for Mueve, another co-curricular group in which Sergeant participated was as follows:

Everybody wants to take over the world we're doing it!

It works really close with the work like the political science department, the international studies. And anything that has to deal with politics and stuff like that. And um, we work together with them to bring speakers and all host events that um… that kind of um… inform the general public about… about different things in the world.

Theme: 3.5 Planning and task coordination.

Stevens and Campion (1996) described planning and task coordination as the ability to plan, coordinate, integrate, and sequence tasks and information. This also involves the proper allocation of individuals’ members to specific tasks, duties, and role
assignments were important. Sergeant provided examples of team planning and task coordination from a variety of settings.

It was that like conflicting schedules ‘cause a lot of people couldn't make Sunday practice. And then, you know like I guess that kind of showed on Wednesday games.

And it was also a lot of emphasis put on girls... little bit more pressure ‘cause um... the... each team had to have at least... it was mini football.

If a girl scored a goal it was worth two points and if a guy scored, it was one. So then... then we sent... men started like building up their too ‘cause guys were saying that it wasn't fair that girls were getting more points.

Since girl points were worth more... they... girls were expected to score more often. So, we... we had a little bit more pressure. So, what ... what my team did... it's like the girls were on the offense and the guys were on the defense.

We as girls... it was kind of like our obligation or... to score, you know ‘cause.

This other person and I are going to be the human right delegates. But, I'm the head delegate. ‘Cause I know parliamentary procedure now. I have a co-delegate... I don't know if she knows or doesn't know parliamentary procedure. But if she does, then we'll combine roles. You know like, we'll ... we'll switch off.

Well, at the beginning of the... we have a meeting. And we kind of nominate people that we want to bring. Then we take a vote. And then, we try to raise funds to bring that person. So we hold fundraisers.

*Case Summary.*

Sergeant communicated that she is controlling. She adamantly stated that she does not like class projects. Taking over the project and becoming a dictator was how she labeled her action. Her strong attitude was more evident in situations in which she was going to be graded on the product of the group. She repeated several times that the grade was her rationale for being a dictator.

At the center of Sergeant’s undergraduate experience was her participation in soccer an intramural/non-competitive activity, and a political-oriented student
organization. They played together in soccer and then worked together in MIO. Sergeant described the evolution of the team from unfamiliar and unskilled to bonded, with increased team performance. It seemed to be a unique and positive experience for this team to have worked together in more than one environment.

Sergeant’s description of the soccer team’s transition from fun to competition and on to solid group activities was unique, but also modeled levels of group development. Soccer, which was initiated for fun seemed to promote group formation, communication, a common goal, unity, and a sense of empowerment among a group that did not originally see themselves as strong members in the unfamiliar environment of Mexican futbol.

Sergeant’s participation in MIO may have served as a method for developing and strengthening the performance of MIO. Her participation in MIO, and particularly in the United Nations “simulation” activity provided strategies for communicating in formal organizations – not necessarily collaborative problem solving. While the methodology may have simulated an actual work-environment or civic process, it did little to develop skills for self-directedness. The activity was held at a conference and did not extend the skills for any duration after the training provided at the conference.

It was likely that, the multiple, but related co-curricular student organizational involvement and Sergeant’s major in political science contributed to higher teamwork-KSAs scores. She was involved in three related student organizations and also held roles as leader and member. Such related and extended engagement may be uncommon. Sergeant’s practice of observing is likely to have contributed to her individual teamwork KSAs.
Case 6 Moonlight

Focus 1. Learner.

Moonlight is 24 and will graduate from a 5-year program which will conclude with a bachelors and a master’s degree (see table 12). She is a commuter student and has participated in a number of teams during her undergraduate experience. Moonlight is self-directed, a critical member, service orientated, and an engaged learner.

Theme: 1.1. Self-directed.

Self-directed (social learning) is defined as cognitions by which people attend to, or reflect upon, cues from their social environment in order to strengthen the confidence in their abilities at work (i.e., self-efficacy) (Tams, 2008). Moonlight reflected on herself. She said she tries to be fair; she expected efficiency, quality, and maintaining a high regard.

I was the assigner . . . I really tried to be fair.

Regarding her first internship experience, she stated the following:

So, I mean I did what I could, you know, but that wasn’t, it wasn’t the best experience, just because I felt like I didn’t really add value to anything that they were doing.

You don’t want to have your name sitting by something that was done incorrectly or that didn’t need to be done or, you know, like you want, you want your name to stand by something that you feel was done with um, you know, with care and with, you know, you did it to the best of your ability and things like that, so.

Um, so they, you know, I had a lot of responsibilities and things that so, that was interesting and um, I think I did well given the circumstances.

It seemed important to Moonlight that she added value, did a good job, and was efficient and effective. She expressed confidence and pride in her work. She desired that her organization perform well. Her individual performance was communicated as
having a relationship to the performance of the team; this may be observed in her experiences and resulting teamwork KSAs scores.

**Theme: 1.2 Critical member.**

Ellis et al. (2005) discussed the role of the critical team member who serves to support communication and control workflow. They revealed that critical team members with strong teamwork skills may be important as a conduit for good team functioning. For one class assignment Moonlight indicates her role:

I was the assigner . . . I really tried to be fair.

In organization B she commented that,

Being apart of um, executive board, you know, we were responsible for creating um, the basis of what Organization B, you know, what, like how people were going to see Organization B. You know, what, um, topics we held, you know, it was all stuff that we had to organize and figure out what, you know, what exactly we were going to do.

Moonlight held critical positions as a member of the co-curricular student organization and then also in her internship. Ellis et al. (2005) stated that there may be members who, because of expertise or position, are likely to assume a critical role within various teams in organizations. In the student organization she says,

I've been a few things. Um, I was Community Service, Director of Community Service, um, I was also Vice President of Public Relations and um, Social Events Coordinator. I'm just a member now.

In the internship:

I was given, you know, I was put in charge of certain areas, um, of the audit. Like I was in charge of prepaid expenses or um, prepaid assets and things like that. So...those things, it was, it feel on me to do it and to get it done.

I was responsible for what was going into you know, what was being recorded.
During her undergraduate education Moonlight experienced being a member, a follower, and a leader. She seemed to have a full perspective of roles on a team. Additionally, she was comfortable in each of the roles. It was not apparent that she had any animosity about her role change from leader to member. Particularly, in Organization B, she was able to take leadership and then became a member who followed.

**Theme: 1.3 Engaged learner.**

“The concept of student engagement is based on the constructivist assumption that learning is influenced by how an individual participates in educationally purposeful activities” (Coates, 2005, p. 26). She indicated that one of her most educationally purposeful activities was an internship. Moonlight described her internship, which was an experiential learning activity.

But um, just starting off and it being my first time it was kind of um, it just took a little bit of getting use to. To see how it was really going to be in the real world. I think that was probably the most relevant experience that I’ve had so far.

It kind of took me a while to get use to it because it’s like, you know, me coming into it and they’re like yeah go talk to them, you know, senior financial accounting analyst or, you know, it’s like these are impor..., you know, they’ve been in the business for who knows how long and I’m in my first internship. Like, I’m not, I’m not ready.

It was really um, it was really important just to, just learn what I needed to do and I just had to observe a lot and see what the other people were doing.

And then just in a situation like that where you’re expected to, I mean they don’t expect you to know just everything, I mean, of course they want you to ask questions and get to know the processes and things like that.

Um, one of my clients, and this was the best one I had, um, I worked for M.D. Anderson for a couple of weeks and, um, there was a first year girl there, so she was, you know, kind of, she was still new, but she had been there long enough
to, I mean, you know, she was more experienced than I was, but she was still kind of at the same level that I was, um, with her being her first year, and, and she kind of took me under her wing a little bit and would help me, like if I had to go and request like documents from, uh, from someone, like I asked her if she wanted to come with me, you know, just to, just to maybe if they said something and I didn’t pick up on it like, you know, she’d able to pick up on it so we could communicate that back to our senior.

So I wasn’t you know, left holding the bag, like uhhh, well, she said something about some, some leases, but I don’t really know what that is, so I was just shaking my head and going along with it, you know. So it was like it was like, it was kind of like reinforcement you know. I wasn’t just doing it by myself and that was, it made me a lot comfortable, a lot more comfortable and um, and I feel that it helped me learn better what I suppose to do because she kind of picked up on where I was lacking and you know she would kind of step in.

Gave me feedback on what I did well and things like that so it was really, um. It was real beneficial.

Moonlight “noticed,” she felt, she “observed,” she “asked questions,” “got to know processes,” and accepted feedback. In class she learned principles and teaming practices, then gained competence and confidence in student organization. She was a leader in the organization and shifted her resources as she progressed through her internship/work experience. She also sustained membership in the student organization she helped to re-establish; not as a leader, but as a follower.

**Theme: 1.4 Service-oriented.**

One who is service oriented is inclined toward helping others. Moonlight demonstrated a dedication and commitment to the organization. Again, she had "served" as a leader and "served" as a member.

I was part of the rebuilding or kind of a new beginning of and just. I love organization B.

We were there because we chose to be there. We wanted the organization to benefit other people out there. I guess we did what we could or what we thought
we could in order to um, to improve it and to get it back you known on the map and recognized as an organization.

The group wanted to be productive in doing what was beneficial for other business students. Helps the organization reach its goal is a tax workshop that they have successfully conducted for the last 2 years another good one.

It wasn’t the same, uh, it’s not the same. It was certainly different. And maybe it’s because we were in charge of it. Like it was, it was our student chapter, like we, we didn’t have to be there, we didn’t have to be doing that.

Moonlight’s service was to an organization that was vested in serving others. Her academic studies and internship were closely related to this extracurricular organization. She did not state that there was a defined relationship between her academic department and the related student organization.

Focus 2. Environment.

The structural dimension aspect of social capital relates to the location and frequency in the social structure (King & Furrow, 2004). Kuh and Gonyea (2006) listed the following as relevant to engagement: deep learning, spiritual practices, working with faculty outside the classroom, community-based work as part of a course, community services/volunteerism, interaction with diverse peers (religious beliefs, political opinions, and personal values), interaction with diverse peers (race and ethnicity), attending art events, exercising, relaxing, and socializing. Moonlight had experience in the classroom, a student organization and an internship.

Theme: 2.1 Collaborative learning in the classroom.

When students of various performance levels work together toward a common goal, the instructional method is referred to as collaborative learning (Gokhale, 2004).
Moonlight described two teams: one that was unassigned and self-directed and another that was assigned and self-directed. First, the unassigned teams: or.

We just, it was just some friends um, in the class and we just all got together and decided to do that, um, for that one particular class to have our assignments uh, done in a timely manner; timely basis, before the due date.

All of us were there to try to get a decent grade and to learn the material and all that good stuff so, we kind of just set that aside and do what we needed to do to get the job done.

Then the assigned team:

I had an accounting class and we had um, we were assigned teams for the semester. That was like our homework teams, our projects teams.

The first part was the manual part where you have to go through and actually, it was like journal entries.

She was excited about another class in which the team went through a “full cycle.” The class was experiential in nature in that the activities related to typical business situations and transactions.

It took you like through a full cycle. Like from, I mean we had different areas so say from like purchasing some things to uh, and you know accruing that debt to going ahead and paying it out in the future and stuff like that. And just the other things that go on um, in typical you know business situations and transactions like that.

One instructor also utilized manual methods and computer based methods for collaborative projects.

And then with the whole computerized thing it was the exact same project I mean, um, I guess a smaller, or a smaller scale. But um, you know focused on the actual computer.

She explained the difference between assigned and self-selected teams:

Um, just the people that the group is comprised of, I mean you can pick who you want to work with. You, I mean it’s up to you. You can choose whether you want to work with this individual person or people in this group or not. When you’re um, assigned a group you don’t, there is no option. You don’t have that choice
and you just have to you know, whatever issues or conflicts that may come up you just have to kind of figure out a way to deal with it.

It is likely that the methodologies used contributed to the learner’s preparation and adaptability for the workforce.

*Theme: 2.2 Opportunities to practice.*

Yazici (2004) described the principle of “opportunity to practice,” which suggests that learning is improved more through talking than by simple observation.

*Sub-theme: 2.2.1 Extracurricular.*

Moonlight participated significantly in one student organization. The extracurricular organization seemed limitedly structured and was in a stage of forming. Forming is described as a stage of orientation/testing and dependence, according to Tuckman (as cited in Smith, 2005). Additionally, Ellis et al. (2003) gave consideration to how at the individual and team project levels, teams’ learning and rate of learning could be improved within groups who had no prior history (knowledge) or knowledge of each other’s strengths or weaknesses. Moonlight said,

> I was part of the rebuilding or kind of a new beginning of and just. I love organization B,” stated Moonlight.

> We pretty much brought B back. Organization B was kind of nonexistent; the people that are part of the organization she says all having a common interest.

> We were there because we chose to be there. We wanted the organization to benefit other people out there. I guess we did what we could or what we thought we could in order to um, to improve it and to get it back you known on the map and recognized as an organization.

> We worked through it. I guess because we all figured out you know we were there for a common purpose, you know.
The organization seemed to provide a good opportunity for her to serve and to practice. She communicated with confidence and competence and exercised leadership in this environment. She redirected her energy from this organization to an internship later, not serving as a leader, but solely as a member.

*Sub-theme: 2.2.2 Co-curricular internship: “A Beneficial Experience.”*

The National Society for Experiential Education described experiential learning: “Regardless of the experiential learning activity, both the experience and the learning are fundamental. In the learning process and in the relationship between the learner and any facilitator(s) of learning, there is a mutual responsibility”.

Well um, my internship that I worked there the last two summers. So like this summer and last summer. Um, but this summer, well this past summer is more when I actually had more of the experience with the teams.

Moonlight commented on how her learning was facilitated:

She kind of took me under her wing a little bit and would help me.

I wasn’t just doing it by myself and that was, it made me a lot comfortable, a lot more comfortable and um, and I feel that it helped me learn better what I suppose to do because she kind of picked up on where I was lacking and you know she would kind of step in.

She participated in the accounting internship for two summers. She was assigned to three different clients and three different engagement teams for three different clients. She described an engagement team as the people that you are working with from the company.

Oh that’s just what they call it. Like the um, when you’re an auditor, you um, and well for the company that I work for it’s a public accounting firm. So they have, you know, all these clients and um, they, the people that do scheduling or whoever, they come up with, you know the schedules and they get these teams
together. It’s like whoever, you’re engagement team is whoever you work with on a particular client. You know the client that you’re working on; the people that you’re working with from, you know, from our company. Like I was saying, there might be an intern, uh, a staff, a couple of staff, um, managers senior, partner, things like that. So those people would comprise the team.

But, um, with the teams they uh, it just, that was good. It was a good experience. . . I was actually given work.

The engagement teams also utilized cooperative learning with a diverse group of people.

Most of the time it’s pretty diverse so you have to learn to work well with other groups of people and just the communication is important. Everyone is going to have their differences and it is important to look past it or see what you can do to um, maybe mitigate that a little bit," she exclaims.

**Focus 3. Individual teamwork KSAs.**

Moonlight made a raw score of 25 and a total score of 70. Scores in the interpersonal domain and the self management domain were 55 and 99, respectively. Her highest ranking score was a 99 for conflict resolution, goal setting, performance management, planning and task coordination. She scored a low 46 in collaborative problem solving. Table 12 describes her experiences.

**Table 12**

*Teamwork KSAs Test Scores for Moonlight*

<table>
<thead>
<tr>
<th>Raw score</th>
<th>T - 1</th>
<th>CR - 2</th>
<th>CP - 3</th>
<th>CM - 4</th>
<th>IN (2+3+4)</th>
<th>GP - 6</th>
<th>PT - 7</th>
<th>SM (6+7)</th>
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</thead>
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<tr>
<td>25</td>
<td>70</td>
<td>99</td>
<td>46</td>
<td>57</td>
<td>55</td>
<td>99</td>
<td>99</td>
<td>99</td>
</tr>
</tbody>
</table>
Theme: 3.1 Conflict resolution.

Conflict resolution is described by Stevens and Campion (1996) as negotiation strategy as opposed to compromise and concession. Moonlight had mastery in conflict resolution. She recognized that conflict comes up with assigned groups and friends. She explained that people have their own opinions no matter who they are or where they come from.

Unforeseen things do happen and you know personalities clash and things like that, but I just think it's more so when you don't have any control over it.

I just think that’s just what that is because everybody’s got their own opinions you know, no matter who you are or where you come from. I mean there’s going to be differences no matter what. It’s just important to look past it or see what you can do to um, maybe mitigate that a little bit. I mean it’s always going to be there, but you know it doesn’t have to be, I guess a strong presence, you know. If we focus on what needs to be focused on.

She suggested that conflict is part of a group’s dynamics and can be handled.

She says that conflict:

Is going to be there, but you know it doesn’t have to be, I guess a strong presence, you know, if we focus on what needs to be focused on.

She had feelings that conflict comes up with assigned groups and friends. In the workplace, most of the time it is pretty diverse so one has to learn to work well with other groups of people and just the communication is important to mitigate conflict.

Theme: 3.2 Collaborative problem solving.

In a class-based team, Moonlight observed the time constraints associated with problem solving. She cited timing issues, but the strength of her team when it came to “working through” things and coming up with a plan.
I guess that was a conflict resolution because um, we took something that could have been a problem; with not being able to meet up you know a specific day of the week or you know, something like that, a specific time and we kind of figured out what we could do um, to avoid that and to get, and still get that task accomplished.

And there’s just, I won’t say problems . . . but just things that you have to pay attention to.

Uh, but we didn’t and I just, I guess that’s um, mostly due to scheduling and people you know, have different schedules and things.

You don’t have that choice and you just have to you know, whatever issues or conflicts that may come up you just have to kind of figure out a way to deal with it.

I mean we had other things we had to do together as groups, but it was pretty much the same issue. Just getting everyone together and figuring out what would work for our team. Um, yeah, so I think that was probably it on that.

The group thought they were not going to be able to meet at a specific time, but they then “figured out” what they could do to accomplish their task and avoid a problem. Again, less formal terminology was used as opposed to collaborative problem solving or negotiating (explicated by Stevens & Campion (1996). Team members “talk,” “figure out,” and “work things through.”

Theme: 3.3 Communication.

Communication is described by Stevens and Campion (1996) as the interpersonal competency of team members and capacity to communicate effectively should not be confused with the ability to simply converse with others or maintain cordial associations. Moonlight believed that talking and discussion are integral to conflict resolution. She discussed how things go in her student organization:

I mean it depends on what you’re working on. Deadlines are important, I mean. You have to focus on that first, I mean you know, it’s always good to be, um, I
guess a little bit more laid back and more casual and just have the time to, just speak with other people and just see where they’re coming from and what they, just how they are as individuals. There’s nothing wrong with that. But I mean if you have a task at hand, you do have to prioritize and figure out what’s more important. But it may be a good idea to, excuse me, when you first get a part of a group, excuse me, do, do that first, you know. Just sit down and brain storm and just everything out. Put everything on a table and see where everybody’s head is. And then focus on, okay now that we know each other this is what we need to do.

We shot the breeze enough now. Let’s get on task.

To some degree less formal communication may be productive, perhaps specific to the team. Collaborative sequencing or shared thinking positively affects knowledge elaborations and knowledge acquisition. The speech overlaps observed in collaborative sequencing give the impression of several minds thinking out loud together. The achievement and productivity of the group will be elevated when a group has adequate social skills, a feeling of responsibility for the group’s performance, interdependent goals, a willingness to teach each other the skills needed for the work, and occasional evaluation of the group’s performance (Janz & Prasarnpharich, 2003). Skilled and critical team members such as Moonlight may provide leadership for developing “speaking,” “talking,” and being less formal, but collectively accept interactions into formal communication.

Just lack of communication - which is always a problem. Um, but I guess in order to resolve that you just, that just goes back to the communication; like you can’t really resolve things without communicating, you know, first what the problem is and second what you’re going to do to uh, fix it or to work on it.

Conflict - Yeh, at times just because…just because uh, and I think the most, the biggest thing would probably just be lack of communication.

She also shared communication in the internship:

It kind of took me a while to get use to it because it’s like, you know, me coming into it and they’re like yeah go talk to the, you know, senior financial accounting
analyst or, you know, it’s like these are impor..., you know, they’ve been in the business for who knows how long and I’m in my first internship. Like, I’m not, I’m not ready.

Just the communication it was really um, it was really important just to, just learn what I needed to do and I just had to observe a lot and see what the other people were doing.

But, but as far as, as far, I just feel the basics, the building blocks, and the fundamentals are all the same. Just like the communications skills, the, you know, all of that is going to be the same in any kind of team that you’re a part of. No matter what, you know, the team is working on.

Moonlight referred to “speaking” and “talking” as communication (or lack of) that are activities which lie in the interpersonal domain. She commented that lack of communication, which may be equal to “speaking,” “shooting the breeze,” and “talking,” is related to team performance and productivity. Brainstorming seemed to arise when the groups talk.

**Theme: 3.4 Goal-setting and performance management.**

Stevens and Campion (1996) defined goal-setting and performance management as having four characteristics, which are identified and supported by data below:

1. A clear definition is critical to team effectiveness.

2. Level of goal difficulty and goal acceptance is critical to team success.

3. Monitoring team effectiveness and progress as an attribute of effective team was not specifically supported.

4. Addressing individual performance is important to avoid loss from social-loafing. (p.4)

Moonlight commented about the classroom:

We just, it was just some friends um, in the class and we just all got together and decided to do that, um, for that one particular class... to have our assignments uh, done in a timely manner, timely basis, before the due date.
All of us were there to try to get a decent grade and to learn the material and all that good stuff so, we kind of just set that aside and do what we needed to do to get the job done.

She commented on goal-setting and performance management in an extracurricular environment, which was less structured and more self-directed than her classroom experiences.

I was part of the rebuilding or kind of a new beginning of and just. I love organization B."

We pretty much brought B back. Organization B was kind of nonexistent; the people that are part of the organization all having a common interest.

We were there because we chose to be there. We wanted the organization to benefit other people out there. I guess we did what we could or what we thought we could in order to um, to improve it and to get it back, you known on the map and recognized as an organization.

We worked through it. I guess because we all figured out you know we were there for a common purpose, you know.

Moonlight’s participation on Organization B’s executive board involved setting the agenda for the public presentation, topics and activities.

The executive board was a team within the organization that had to organize, lead and figure out “what, you know, what exactly we Organization B would do.

Being a part of um, executive board, you know, we were responsible for creating um, the basis of what Organization B, you know, what, like how people were going to see Organization B. You know, what, um, topics we held, you know, it was all stuff that we had to organize and figure out what, you know, what exactly we were going to do.

Further explaining their purpose/goal of the co-curricular organization, she observed:

The group wanted to be productive in doing what was beneficial for other business students. Helps the organization reach its goal is a tax workshop that they have successfully conducted for the last two years another good one.

It wasn’t the same, uh, it’s not the same. It was certainly different. And maybe it’s because we were in charge of it. Like it was, it was our student chapter, like we, we didn’t have to be there, we didn’t have to be doing that.
About performance management in the organization, she stated,

We feel like things could be done in a more efficient manner you know some people feel like oh we’re spending too much time on this and we need to focus on who’s coming to our meeting next week.

Like people have bad days sometimes and they don’t want to be bothered I guess with others or whatever so. Sometimes it would just be a little hard to uh, to just, I guess all get on the same page.

Regarding the internship, she said,

You know, so just a lot of prioritizing and like time management and stuff like that so, um. That was, you know, I had to coordinate my work load everyday and, and it was good because throughout the day my senior would come over and ask me how I was doing.

Gave me feedback on what I did well and things like that so it was really, um. It was real beneficial.

Moonlight made an observation about the goals of classroom projects and the internship:

There are correlations, um, I mean definitely. I, I feel as though there’s, there’s strong correlations. Just, I mean an internship is a job, so it’s more, I want to say more formally, kind of more important a little bit. I mean, in a certain sense and just because this is, this is real money, its real companies, its real people, it’s you know, we don’t want to have no Enron or you know, nothing like that.

Theme: 3.5 Planning and task coordination.

According to Stevens and Campion (1996), planning and task coordination as proper allocation of individual members to specific tasks, duties, and role assignments is important. In classroom experiences Moonlight noted the following:

Just timing issues and things like that but um, I mean we worked through things and we came up with um, plans. How we were going to get our assignment done and what we were going to do to get everything done on time?
And we just figured that we would all work individually instead of all meeting because we had homework due, you know, like once a week.

So instead of us meeting up to sit and do homework together like study hall or something, we would just, we had a person that was the um, like the reporter, a person that was the um, uh, I forget the name but the person that would like assign the um, the problems out. So everybody would just have their maybe four or five or six problems and we would just do them on our own and the person who was the reporter, we would just email them to that person and they would compile it.

No, I really tried to be fair.

In another class the instructor facilitated more structure for teams. Moonlight made the following comments:

Well, I had an accounting class and we had um, we were assigned teams for the semester. That was like our homework teams, our projects teams, what not.

I mean yeah, for, I mean everything, I mean 'cause it's, it's like, I mean as a whole the audit, you know, needs to be performed, but, specific you know like, they'll be in charge of this, you can be in charge of that, we'll all work together on this, or you know, things like that so. I mean for the most part, yeah, I was responsible for what was going into you know, what was being recorded, what was being written down, you know, so even now or in the future, like my name's gonna be on stuff that, that was done, and you know, you want to do things right.

Like doing the data entry and things like that or um, when it came to actually performing the tasks that we had to do within the chapters. Um, if somebody was more proficient in that, you know, they would take over. Uh, so we just tried to highlight peoples' I guess strengths and focus on that. And you know let them do what they were best at and um, it worked out well. It worked out pretty well.

Similarly, in the internships there was planning and task coordination. Moonlight commented:

Coordination of tasks, just with that, um, team, like 'cause, I, like I said before, I was on three different teams. My first engagement team I had absolutely no work. I was assigned to three different clients. Um, so that was three different groups of people that I worked with on those different clients. Well, they were kind of at a different, different, different stage of the process.
And the partner and manager aren’t necessarily there everyday, but the um, the lower level people like the first; I guess maybe first through third-year staff level would be there.

In the internship, Moonlight experienced what is needed to help junior members feel involved; communicating feedback related to performance was also valuable, according to Moonlight. She reported that during her internship a senior intern and team member gave her feedback on what she did well. She felt it was beneficial.

So I wasn’t you know, left holding the bag, like uhhh, well, she said something about some, some leases, but I don’t really know what that is, so I was just shaking my head and going along with it, you know. So it was like it was like, it was kind of like reinforcement you know. I wasn’t just doing it by myself and that was, it made me a lot comfortable, a lot more comfortable and um, and I feel that it helped me learn better what I suppose to do because she kind of picked up on where I was lacking, she would kind of step in and be like okay well we need this or well, can you explain to me why you do your accounting like this or you know just questions that we had to ask just you know so at the end of the day somebody could come back and re-perform what we did.

You know, consult with anybody on the team if you have questions. Here you go. And it was up to me to figure out if this was more important than this. What do I need to do first? What can wait?

Moonlight’s strengths were in the self-management domain. The structure of her academic experiences and opportunity to practice in co-curricular internship probably contributed significantly to these high scores of 99 for both competencies. It is also likely that her academic discipline – accounting – which relies on the use of teams, paralleled her academic and co-curricular experiences.

**Case Summary.**

She “noticed,” she felt, she “observed,” she “asked questions”, “got to know processes,” and accepted feedback. She exercised practices that are illustrative of a well-rounded learner. In class she learned and gained competence and further
confidence in student organizations. She built social capital and was comfortable as a leader and as follower/member of a team. She was willing to serve others and share her talents in a variety of environments.

Moonlight communicated with enthusiasm about all experiences which were related to her studies. She had satisfying and productive experiences. One was a student organization closely related to an academic department and two others were internships. She had a highly structured ongoing co-curricular experience and ongoing involvement in a single organization.

Moonlight’s classroom experiences and related student organization experience preceded her internship and may have contributed to her internship which lasted for 10 weeks for two summers. It was likely that the academic department provided physical social capital through courses, support of extracurricular organization, and internships. She described with pride and confidence her participation with the “engagement teams” at M.D. Anderson.

She stressed that there are going to be differences no matter what, and an awareness of differences, she suggested benefited the team. She expected diversity to play a large part in the industry that she will enter. This awareness and expectations about cultural differences in communication could be a key component in her communication style. She also attributed the awareness of diversity as important in collaborative problem solving, she further explained that one has to be mindful of differences that may exist in the communication styles of different cultures.

In class Moonlight worked with friends, in the student organization they shared a common purpose. Accuracy and completion of tasks were unstated goals of the
engagement teams during her internship. The classroom experiences involved activities for learner outcomes, and in the internship there were “real” business outcomes. She emphasized, “this is real money, it’s real companies, it’s real people, it’s, you know, we don’t want to have no Enron or you know, nothing like that.”

*Case 7 Broken Glass*

*Focus 1. Learner.*

Broken Glass was a 53-year-old, low-income, first-generation female (see table 13). She was a social work major. Broken Glass commuted from within 5 miles of campus. She was an older student whose unique teaming experiences were primarily outside her undergraduate experience and were instead with her family.

*Theme: 1.1 Critical family member.*

Ellis et al. (2005) discussed the role of the critical team member who serves to support communication and control workflow. They revealed that critical team members with strong teamwork skills may be important as a conduit for good team functioning. Broken Glass discussed how critical membership evolved in her family. She gave an overview of this process in her family.

I remember my great-great-grandma. You know and like that was the oldest of that generation. And like that was the head of the generation so she like was boss over her family and then my great-grandmother was the boss over her family when the other one got too old. They take care of their elders. Now my mother is up in her ‘70s and that’s about when the next generation has to start taking over is around in the ‘70s. Mom’s in her ‘70s; I’m in my ‘50s. So, now I’m the head of the generation and I happen to have five siblings.
Olivera and Straus (2004) explained these relationships, stating that it is efficient to use the team’s “best member” to solve problems which, in turn, provides the other team members the opportunity to learn problem solving strategies, thereby providing long-term benefits for the organization. There may be members who, because of expertise or position, are likely to assume a critical role within various teams in organizations (Ellis et al., 2005).

Broken Glass discussed the relationship with her mother:

We live in a motor home. It’s one big room. I’m going to be watching T.V. A lot of studying I’m going to be getting done. And I’d read three sentences and she’d say, “Oh, did you see that?” So I packed my books. I said my sisters needed to step up to the plate. I’m out of here. I have to go some place to study.

Mamma, I’m going to exercise you and you’re going to let me. Together we’re going to do this. I mean we’re going to do it simple.

I make her go some places because she needs to go. And she tries real hard and you know I’m worried about her exercising enough and keeping her blood pressure down so it becomes a team effort for us to do this.

And we have our finances in a team. I have money when she doesn’t. I buy when she can’t then when I can’t she buys. We’re taking turns buying cigarettes now. We’re trying to get enough money to get enough medications.

Broken Glass has three sisters and two brothers. She is the oldest, and she said,

Our whole team has been raised to believe that I am in charge. And unless I call them by their first name and their middle name, they will go about their business. But if I get to the point that I have to resort to calling them by two names, they will turn around and pay attention, in a heartbeat.

She talked about her daughters:

Well, my oldest daughter, God forbid, she teaches me the meaning of, to persevere. That if you really want it you could do it and don’t let anyone stand…she helps me deal with my co-dependency because she’s not. You know.

Other daughter - Um, she fills the holes in my head. I had never heard it that way. Yeah, yeah, but the holes, she meant like in her thinking. When I see something this way, she’ll come along and make me look at it this way. And so it
kind of comes together and it just kind of fills the holes and the logic in her thinking. And that’s the way teams work. They kind of fill the holes in each other’s head. The logic and the thinking come together.

Broken Glass seems to have inherited the responsibility of being the critical family-team member – she will become the matriarch. It was her mother before her and her grandmother before her mother. The fundamental teaming skills taught in elementary and secondary education may have created an understanding and awareness; life experiences overtime with her family may have been the basis for her high score on the Teamwork KSAs Test.

Theme: 1.2 Persistence.

The Pell Institute (2004) observed that low-income students could be “important economic contributors of their families, so their attempts to combine the roles of family provider and student, or their inability to contribute while enrolled, may undermine their academic commitment or performance” (p.6). Broken Glass commented on her pursuit:

And mom told me when I was 14 that I had to look at the big picture. Women in our family grew up, got married, and had babies. So at 15 I was pregnant. I quit school at 15. Um, I went into drugs, alcohol, men, married, unmarried, children. I only had two children because God ordained that.

And I went into treatment in maybe the ‘80s. I’d have to look it up. And when I came out they put me in a half-way house and then I went into a counseling program to keep me straight.

This was in ’89 when I finally got to school. I was 35 when I finally started college.

And I said I can’t work and go to school. You know, I have this thing about focus and this is what I got to do. I’ve got to give it my all. So I quit school and tried to be a good wife, but it ate at me.
She discussed her struggles with leaving behind some of the familial groups and associated activities for new ones.

And it took me another 15 years to apply to the University of North Texas. Since 2005, I've done 3 years.

I'm going to die an old drug addict woman, with nothing. And um, I only applied to one university. The University of North Texas. I don't know why I chose this place; maybe because it was Mean Green. You know, it was mean green. It meant that I could come from the meanest circumstances and I could get there. I could go, green, go!

Because I fought hard to get where I was.

Sixteen hours is what I got left. I could do it in one semester, but I'm afraid of overloading myself and I want, I want this so bad that I don't want to lose it in the last quarter.

Family and overcoming a dysfunction competed with Broken Glass's desire and goal of going to school. She demonstrated resiliency and cited a relationship with God, which seemed to be a source of social capital for her. Her persistence which spanned almost 17 years may have contributed to her teamwork KSAs scores.

*Theme: 1. 3 Resourceful.*

Broken Glass's characteristic of being resourceful is illustrated in her ability to use what is available to meet her needs and achieve her goals. She demonstrated resourcefulness in a variety of ways:

I had rocks. I even took, um, a 1 by 12 piece of plastic board that was probably 20 inches long, so in case I needed a desk top - something solid to write on. I mean I was prepared.

I make sundaes. 'Cause the sundaes are like 4 or 5 bucks at Braum's and I don't always have the money for that and everybody wants something different. So you can buy the ingredients and have 12 or 15 sundaes for the same prices as those two.
To her mother she said:

If too hot outside for you to walk around the block, we’ll go to Wal-Mart.

In a minor medical emergency she described her treatment:

I scooted on the ground like that on a piece of glass . . . about 4 inches that wide through my jeans, through my skin . . . went into the bathroom and cleaned it up. Only one cheek and duct taped it shut. That’s all we had was duct tape.

Out of necessity, she and a team of friends worked together to solve a problem.

*Theme: 1.4 Service-oriented.*

One who is service oriented is inclined toward helping others. Broken Glass discussed this characteristic in herself.

Yeah, it says I’m a humanitarian, but I can be a leader, but I don’t want to be the leader.

I’ve been helping people all my life. Old people were important to me so uh.

Worked in a nursing home in Houston once when a hurricane came to ground. That was work, volunteer, and or other. Couldn’t go home; as a nurse, you couldn’t go home. Patients had to be taken care of and other people couldn’t get to work. It was flooded out. It was an emergency team, um. We had a team meeting, a support group meeting. This is how we’re going to do this to keep everything counted up.

Regarding service in the Bike Club:

I mean they don’t go out, at least the people that I ran with weren’t real charitable organized as they were brotherly organized. You know, they wanted to help someone that was close to them but they didn’t go out looking for causes to, to support. If they knew someone that was down and out; they would help them up. But they wouldn’t necessarily go out and look for a crippled child and buy braces for.

We fought things like helmet laws. Helmets should be worn by anyone who is under 2 years riding on a motorcycle. First 2 years is when you’re going to kill yourself on one of them things. You know we enacted um, stood up for laws, the right to choose on the motorcycle, yes have insurance, yes have training periods,
uh, no not everybody else should pay for your accident through medical insurance.

ABATE always had the Red Rock Run. Um, the Naysayer’s had the Toys for Tots Parade. That would be an excellent one because the Toys for Tots Parade brought all the clubs together and to give to the Marines for the Toys for Tots Parade. And we did it every year. We always rode and the parade would be five or six motorcycles long as wide and 2 miles long.

*Focus 2 – Environment.*

The structural dimension aspect of social capital relates to the location and frequency in the social structure (King & Furrow, 2004). Kuh and Gonyea (2006) listed the following as relevant to engagement: deep learning, spiritual practices, working with faculty outside the classroom, community-based work as part of a course, community services/volunteerism, interaction with diverse peers (religious beliefs, political opinions, and personal values), interaction with diverse peers (race and ethnicity), attending art events, exercising, relaxing, and socializing. Broken Glass discussed her experience at UNT:

*Theme: 2.1 Academic.*

My social work class, when I was doing social work I got to know five girls really well . . . I still meet them on Mondays; every other Monday we meet at Rip Rocks. And um, discuss classes.

Oh, well, my Spanish class we’re learning to work in a group, but…Okay we don’t have to talk about.

That’s kind of an academic experience I would say because I met them through school. I don’t have a lot of friends. I have a lot of family.

Christou and Haliassos (2005) wrote that for low-income students, although access to work is important, there is a disutility in work. It takes away free time, time to study, and time to engage in leisure or other activities. With such limited work
experience it is likely that Broken Glass did not have the opportunity to practice teaming skills in other than her academic department.

*Theme: 2.2 Familial teaming.*

For the purpose of this study, familial teaming is teaming in a civic, or group whose members have a common interest or goal. In addition to Broken Glass’s blood family she had a familial social group/organization.

I never belonged to a motorcycle club, but I did run in the rallies. ABATE. A Brotherhood Against Totalitarian Enactments. They changed it to A Brotherhood Aiming Toward Education. We all knew each other. You know just riders.

That club respected me; gave me a lot of respect. I was one of the first women who built my own motorcycle.

The motorcycle club provided her with familiarity and respect even though she was not officially a member. In pride she said, "I was one of the first women who built my own motorcycle."

I mean they don’t go out, at least the people that I ran with weren’t real charitable organized as they were brotherly organized. You know, they wanted to help someone that was close to them but they didn’t go out looking for causes to, to support. If they knew someone that was down and out; they would help them up. But they wouldn’t necessarily go out and look for a crippled child and buy braces for.

We fought things like helmet laws. Helmets should be worn by anyone who is under 2 years riding on a motorcycle. First 2 years is when you’re going to kill yourself on one of them things. You know we enacted um, stood up for laws, the right to choose on the motorcycle, yes have insurance, yes have training periods, uh, no not everybody else should pay for your accident through medical insurance.

Broken Glass had an intervention teaming experience.

And I went into treatment in maybe the ‘80s. I’d have to look it up. And when I came out they put me in a half way house and then I went into a counseling program to keep me straight.
AA is just like teamwork on um, nobody presses their beliefs on each other. That’s where I learned just believe or try it because I believe. If you can’t believe in God, just believe that I believe in God. And that way you can look at it a little more human effect.

Um, how it works is that a team is just knowing that there are others who experience the same kinds of things that you experience. As far as um, emotional, financial, spiritually, it’s different degrees, but it’s the same kind of things.

Is that we’re all struggling with the same thing.

But your big collaborative problem solving is usually with your sponsor. Because there’s a lot of things you don’t want to just spout out in front of a bunch of people . . . whereas with your sponsor it is total confidence.

The intervention also had an individual component:

So with AA it’s in the…it’s strict individuality with common problems. And that’s usually drinking. Um, they come together. It’s more prescribed exact times. The reason that I think that it works is because you almost, AA has a set thing that if there’s an 8 o’clock meeting and at 8 o’clock that meeting starts and at 9 o’clock that meeting’s over, period. And that gives people the opportunity to regulate their lives.

So, communication, that’s with the whole group. Goal setting, that’s within yourself and um, you’re allowed to share it with the group and they will support you in your goals and tell you if you’re being realistic or not.

These familial teaming activities suggest a certain amount of trust in team members. There was commonality in the purpose of the teaming intervention which relates to social capital. Broken Glass understood that individuals also have a responsibility and that there are roles for team members.

Focus 3. Individual teamwork KSAs.

She achieved a raw score of 25 and a total score of 70. Scores in the interpersonal domain and the self-management domain were 87 and 44, respectively.
Her highest ranking score was a 99 for the sub area of communication. Collaborative problem solving, planning and task coordination were among her lower scores with a 46 and 37, respectively. Table 13 highlights her scores.

Table 13

*Teamwork KSAs for Broken Glass*

<table>
<thead>
<tr>
<th>Raw Score</th>
<th>T - 1</th>
<th>CR - 2</th>
<th>CP - 3</th>
<th>CM - 4</th>
<th>IN (2+3+4)</th>
<th>GP - 6</th>
<th>PT - 7</th>
<th>SM (6+7)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25</td>
<td>70</td>
<td>66</td>
<td>46</td>
<td>99 87 63</td>
<td></td>
<td>37</td>
<td>44</td>
</tr>
</tbody>
</table>

*Theme: 3.1 Communication.*

Communication was described by Stevens and Campion (1996) as the interpersonal competency of team members and capacity to communicate effectively should not be confused with the ability to simply converse with others or maintain cordial associations. Broken Glass highlighted her experience:

We argue like a couple. And we discussed it on the way home yesterday because she felt good about seeing her brother, my uncle, and um, you know we discussed that I hurt her feelings and I didn’t mean to hurt her feelings.

I said, well, Mama, if I hurt your feelings you gotta to say so because I really don’t mean to. She said, Oh, I know but, I said, you gotta speak up and say so I don’t do it again. I said that maybe we can sit down and talk about it before I do it. I said because I run away.

The world would be a much better place if everybody would just sit down and have a bowl of ice cream together.

If they had communicated better without the animosity or the superiority complex or whatever they probably could have solved that.

Take it all in and throw out the shaft. You gotta take it all in and then you let your body or your spirit or your whatever, what makes you, you separate it and throw out what’s not usable. But then you can always have corn oil, you can have
wheat bran. I mean there’s so much that is useable in different parts. That maybe you have very little shaft. But take it all in.

**Theme: 3.2 Goal-setting and performance management.**

Stevens and Campion (1996) included the following in their description.

1. A clear definition is critical to team effectiveness.
2. Level of goal difficulty and goal acceptance are critical to team success.
3. Monitoring team effectiveness and progress as an attribute of effective teams was not specifically supported.
4. Addressing individual performance is important to avoid loss from social-loafing. (p.4)

Broken Glass revealed,

I like working in teams and I don’t feel whether one person is working harder than another person. I believe everyone should give what they can give and no one should be put down for what they can’t do. Because I believe everyone should.

Being a part of the team and expecting the rest of the team to hold up their bargain; their part of the deal and someone let it slip.

The purpose of life is to do the very best we can do, to help when we can help. To step back and let someone else take the applause when they need it more. And to step out front to hold out your hand to pull up that other guy behind you.

But everybody should put in what is their best. And defer sometimes to the judgment of others even though it seems wrong to yourself, you know.

It is they should do that because sometimes you’ve done things habitually for so long that to step outside your norm is too frightening. And so if someone encourages you or says that, believe it because I believe it. You don’t necessarily have to believe it. I’m not trying to push my beliefs off on you, but just this time, try it because I believe it. And if it doesn’t make a difference, you can always go back to your regular way.

Broken glass expressed this about the way she thinks people should act together:
They should do that because sometimes you’ve done things habitually for so long that to step outside your norm is too frightening. And so if someone encourages you or says that, believe it because I believe it. You don’t necessarily have to believe it. I’m not trying to push my beliefs off on you, but just this time, try it because I believe it. And if it doesn’t make a difference, you can always go back to your regular way.

You got to take it all in and then you let your body or your spirit or your whatever, what makes you, you separate it and throw out what’s not usable. But then you can always have corn oil, you can have wheat bran. I mean there’s so much that is usable in different parts. That maybe you have very little shaft. But take it all in.

Case Summary.

Over her lifetime Broken Glass had teamed in a variety of environments. She had minimum engagement during her undergraduate experience, most likely because of her age, commitment to family, and being a commuter student. Some basic teamwork KSAs may have been developed in secondary education, before a less turbulent time in her life.

The hardships of Broken Glass’s life have also been unique. She shared a wisdom or attitude about teams that may have been developed with the intervention teaming; this is not an activity typical of undergraduates. She also shared a wisdom or attitude about teams that may have been learned from the women in her family. She described the expectations and roles of the eldest woman to lead the family team.

She has had sporadic undergraduate attendance and as such, post-secondary education may have had less of an impact on her individual teamwork KSAs. The actual amount of time that she had in training is likely to have been equitable to an undergraduate who was has been more engaged during their undergraduate
experience. This time-on-task over an extended time with opportunities to practice may be consistent with similar scoring participants.

Cross-Case Analysis

In the previous section, individual case analysis was performed for all seven cases. In this section a cross-case analysis is performed to answer research question 2:

How do the learner characteristics, undergraduate experiences and individual teamwork KSAs interrelate from one case to the other?

Stake (2006) offered technical cross-case procedures for identifying findings and making assertions. In identifying findings he noted that triangulation serves the same purpose as in the individual case analysis. Stake provided the following definition of triangulation within cases:

Each important finding needs to have at least three (often more) confirmations and assurances that key meanings are not being overlooked. Each important interpretation needs assurance that is supported by data gathered and not easily misinterpreted by readers of the report. (p. 33)

To reduce repetition, data which have been triangulated and presented in the individual case analysis are limited in this section. Data that provided a unique or contrasting perspective have been included. The findings are organized by focus – learner characteristics, environment, and individual teamwork KSAs. They are noted 1-3, respectively. Within each focus are themes and assertions.

Stake (2006) also described how assertions are made:

Starting with a topical concern, considered the foreshadowed problems, concentrate on issue related observations, interpret patterns of data, and reformulate issues as findings or assertions. (p. 10)
While assertions are made for the teamwork-KSAs sub-areas, the scores themselves are not validated. Stevens and Campion (1996) suggested that the subscale scores only be used for assessing training and development needs. The Cross-Case Navigator (see Figure 2) serves as a map for the focuses, associated findings/themes, and assertions.
### Focus 1: Learner Characteristics

**Theme 1:** Sample Specific Characteristics

- **Sub-theme 1.1.1:** Age
- **Sub-theme 1.1.2:** Residence and Participation
- **Sub-theme 1.1.3:** Financial Aid
- **Sub-theme 1.1.4:** Engaged

Assertion 1.1

**Theme 2** Persistence Toward Success

Assertion 1.2

**Theme 3** Familiarity

Assertion 1.3

**Theme 4** Critical Team Member

Assertion 1.4

**Theme 5** Service Oriented Attitude

Assertion 1.5

### Focus 2: Environment

**Theme 1** Facilitation of Experiences

Assertion 2.1

**Theme 2** Academic

Assertion 2.2

**Theme 3** Non-Academic

Assertion 2.3

**Theme 4** Co-curricular

Assertion 2.4

**Theme 5** Academic Support

Assertion 2.5

**Theme 6** Work

Assertion 2.6

**Theme 7** Frequency and Duration

Assertion 2.7

### Focus 3: Teamwork KSAs

**Theme 1** Conflict Resolution

Assertion 3.1

**Theme 2** Collaborative Problem solving

Assertion 3.2

**Theme 3** Verbal Exchanges

Assertion 3.3

**Theme 4** Goal-Setting and Performance Management

Assertions 3.4a, b

**Theme 5** Planning and Task Coordination

Assertion 3.5

*Figure 2. Cross-Case Navigator*
Focus 1 – Cross-case analysis of learner characteristics.

Focus 1 – Learner Characteristic is presented below and includes the following themes: Sample Specific Characteristics, Persistence Toward Success, Familiarity, Critical Team Member, and Service Oriented-Attitude. Five assertions are made.

Themes: 1.1 Sample specific characteristics.

The traditional age and living practices of college students are described throughout student development literature. Experience related to students' career and personal goals; their grade point average; their family income, ethnicity, citizenship, and gender; their work experience while in school; the extent to which they relied on financial aid; and their areas of major, which are asked on the Higher Education Data Sharing Consortium (2004) graduating senior survey, are of interest.

Table 6 provides an overview of the cases. It highlights the demographic information and engagement of each case. The data that follow are intended to draw a more holistic perspective of the cases. The sample specific characteristics include students’ age, dependency on financial aid, residence status, and experience.

Sub-theme: 1.1.1 Age.

At the time of the interviews, project records indicated that, with the exception of Broken Glass, the average age of the participants was 23. Broken Glass, who is 53-years-old, also scores above the mean. She shares contrasting frequency and duration of time-on-task in developing her individual teamwork KSAs compared to the other participants in this research. This potentially indicates that frequency and duration of
time-on-task in developing is of greater importance than age. The majority of her experiences were also outside of her undergraduate education.

Sub-theme: 1.1.2 Residence and participation.

University policy requires that freshmen live on campus unless they receive a waiver. Moonlight lived in the residence halls and shared the following: “in my first year I stayed in Mozart.” At the time the study was conducted all students were living off campus. Professional practice has suggested that commuter students must make an extra effort to participate in student organizations. Sonshine, Rosey, Sergeant, and Moonlight maintained active participation in student organizations even though they commuted.

Sub-theme: 1.1.3 Financial aid.

Based on federal financial aid, 4 (RFT, Rosey, Sergeant and Moonlight) of the 7 students were considered dependent students for the majority of their undergraduate experience. Students under the age of 24 and still supported by their parents are considered “dependent.” Sonshine was under the age of 24, but had a special circumstance resulting in independent status. Hut had independent status and children. Broken Glass had independent status and no dependent children. RFT and Broken Glass did not work and depended primarily on financial aid.

Sub-theme: 1.1.4 Engaged.

In 4 of the cases (Sonshine, Rosey, Sergeant, and Moonlight), participants were engaged undergraduates. Kuh and Gonyea (2006) give examples of engagement: deep
learning, spiritual practices, working with faculty outside the classroom, community-based work as part of a course, community services/volunteerism, interaction with diverse peers (religious beliefs, political opinions, and personal values), interaction with diverse peers (race and ethnicity), attending art events, exercising, relaxing, and socializing. The students’ engagement in student organizations and in co-curricular work environments is particularly noteworthy. These experiences are highlighted in their individual case analysis and in Focus 2 Environment.

In 3 of the cases, research participants were engaged in a professional work-environment. Blessing White (2005) recognized that “engagement is an individualized equation because work is personal . . . each day employees are looking to utilize their unique skills and expertise . . . their job satisfaction depends on opportunities to use their talents” (p. 2). She was less engaged in her role as a student than she was as an employee. Hut built upon her teaming skills primarily at her job at Pizza X. She was promoted, changed roles, and earned respect. Work seemed to have a stock of exposure that was motivating and rewarding for her. It not only paid her bills, but also gave her opportunity to practice and ascend the career ladder at Pizza X.

Sonshine and Moonlight were also engaged in their co-curricular work environments - internships. Sonshine was an engaged intern. He said,

We had to stay up late at the senator’s office doing the programs, figuring out the layout, how we going to uh, serve the kids of the neighborhood. So it was just a lot of extra work.

He noted that the group would meet at 6:30 p.m.

You have to put in more work since it’s such a short notice. You can’t slack up. You have to get you a great, great team and teamwork is key.

Referring to her internship, Moonlight stated,
But um, just starting off and it being my first time it was kind of um, it just took a little bit of getting use to. To see how it was really going to be in the real world. I think that was probably the most relevant experience that I’ve had so far.

The peers and supervisors, she said,

Gave me feedback on what I did well and things like that so it was really, um. It was real beneficial.

**Assertion 1.1.**

As a whole, the findings revealed that the sample specific characteristics of the students studied included an average of 23 years old, both low-income and first-generation, commuted, and depended on financial aid. Though they may have taken more than 4 years to graduate, they persisted to arrive at their senior year with valuable experience. Three business majors were represented, 1 student was an art major and 3 were social science majors. There was a balance of gender and ethnic representation. They achieved total teamwork KSA scores above 21.

Persistent and self-directed students who had the opportunity to practice in engaging work environments exhibited high individual teamwork KSAs. They were student personnel - employees who demonstrated an ability to utilize their unique skills and expertise; this also contributed to their job satisfaction and satisfaction as a student. Their work experience and relationship to their individual teamwork KSAs are detailed in their individual case reports and in Focus 2 Environment.

This study revealed the uniqueness of learners who participated in a project that is unique to campuses that demonstrated a need based on a significant number and percentage of students who were low-income/first-generation and had an academic need and their individual teamwork KSAs. This phenomenon was not presented
together in the overall literature for this study; this finding in itself is a basic addition to the literature.

The literature referenced for Assertion 1.1 is Stevens and Campion (1994), who asserted that human resource management systems are applied to individuals; people are hired as individuals, given an individual paycheck, and so on. Similarly, according to Coates (2005), the responsibility for learning lies with the individual, who is ultimately the agent in conversations about engagement. These findings add to the literature insight on the individual characteristics that exist within a specific population in a specifically defined environment and at a specific point in time of their lives – during their undergraduate education.

**Theme: 1.2 Persistence toward success.**

The description for this theme is provided by literature as cited in Wells (2008). Persistence is a student’s ability to overcome factors such as the following: academic performance, interactions with faculty members, residence on campus, and working while in school. Based on this definition, Rosey’s experience was not a good example of persistence. Rosey, who was also only low-income and whose socioeconomic status (SES) changed positively over the course of his undergraduate career, did not communicate barriers in which he has to persist to overcome. He had a timely graduation, only taking 4 years to complete his degree. In contrast to the persistence of the other students, Rosey was an exception to the theme of persistence. He stated the following:
Like I’ve been blessed with a really awesome family that a lot of our students maybe don’t get blessed with. I grew up in a really good school district that taught me really well…um, I really enjoyed learning. A lot of students don’t have that.

Socioeconomic status (SES) and need to work may have detracted from academic performance. RFT and Broken Glass, who were both low-income and first-generation students received a financial aid package that covered their cost of attendance. Neither student worked, which allowed them the opportunity to focus on their academic performance. Noteworthy were RFT’s achievements in art as indicated by the showcasing of his work in a student art exhibit. Other students who maintained a low SES depended on financial aid and work to pay for school.

Sonshine and Hut were students who maintained a low SES over the course of their undergraduate studies. Their financial status did affect their academic performance and timely graduation. These students experienced challenges during their undergraduate education, which also may have affected the development of their individual teamwork KSAs. At different points in his undergraduate experience Sonshine was either working and participating in three organizations simultaneously or engaged in at least one student organization, working one job, and doing an internship simultaneously. He commented that he was,

Yeh, like trying to graduate, trying to make that decision if I’m going back to get that MPA. Doing business work for my business that I’m starting; working on a business plan, and all my classes I have projects, senior projects.

Sergeant was a low-income and first-generation student who took advantage of an engaging opportunity to research with and be mentored by a faculty member in the TRiO, Ronald E. McNair project. Prior to the completion of this study she also had
studied abroad. Her persistence was reaching an exceptional standard. This was also the case for Moonlight.

Moonlight, who was also only low-income, did not communicate any barriers. She was on schedule to complete both a bachelor’s and master’s degree in a total of 5 years. Her undergraduate career included persisting to reach an exceptional standard.

Assertion 1.2.

The barriers affecting student achievement and motives for overcoming or persisting varied, in addition to the obvious barrier of it taking the majority of these students longer than a traditional 4 years to complete an undergraduate degree. Uniquely, for those who did take longer than 4 years, their experience often seemed to be accompanied by valuable experiences and recognizable achievements.

The literature referenced to make assertion 1.2 is presented here: The Pell Institute (2004) observed that low-income students could be “important economic contributors to their families, so their attempts to combine the roles of family provider and student, or their inability to contribute while enrolled, may undermine their academic commitment or performance” (p. 6). The findings were inconsistent with this literature. The current literature focuses more on the barriers to persistence, while the findings of this study communicate persistence as a positive characteristic that contributed to students’ value added experience and the development of individual teamwork KSAs.

Additionally, Pascerella et al. (2004) stated that “first-generation students perhaps benefit more from their academic experiences than other students because these experiences act in a compensatory manner and thus contribute comparatively
greater incremental increases in first-generation students’ stock of cultural capital” (p.280). This finding is in line with the findings of this research.

**Theme: 1.3 Familiarity.**

According to Harrison et al. (2003) said that social or member familiarity is based on the premise that familiarity is time dependent. The finding is directed by this literature. The time dependence aspect of familiarity is communicated in the community college Student Support Services (SSS) environment experienced by Hut and presented in the single case analysis. The concept of familiarity is also presented by Moonlight. She communicated the familial relationship with her student organization in which she has participated for over 3 years:

> I wouldn’t want to work with people I felt like I didn’t know, or, I mean. You know, just at least a little bit about not necessarily saying I have to know, you know, their whole history and everything like that, but you know, a few little points about them might be good to know.

> Like we all had a common interest in it, but again, that doesn’t mean that we’re all going to get along or we’re all going to see or have the same ideas or see the same things.

Sonshine also related familiarity to others who were like him:

> My fraternity members, we’re similar in so many ways because we have great ideas.

> In the cases of Sonshine and Sergeant, there were additional examples associated with familiarity by association and/or traditions. Two activities symbolized Sonshine’s teaming and familiarity preference: “steps” which involved a group of people making choreographed and synchronized movements to music and chants; and an
“organized, peaceful march.” Sonshine commented about his involvement in a “steps”
group:

Well, we don't have like all their rituals like the real Greeks have.

Yeah, they do crazy rituals. I mean, we did do like induction ceremonies and stuff
like that but... but we didn't haze our members.

Sonshine and Sergeant also participated in co-curricular organizations related
to/familiar to/ associated with their academic major. Their activities included co-
curricular and extracurricular activities over the duration of their undergraduate
experience. The participation and work experience of these two communicate familial
bonds in their work environment. They were both participants and worked in Student
Support Service at the 4 year public institution for 3 years each.

Sergeant’s experience on the soccer team was symbolic of how team members
were able to form an initial acceptance of each other, acknowledge performance levels,
assign tasks and manage performance together.

People come with the skills they have.

I like it, but I can't play it. But I tried. It was fun.

The soccer team members assessed their performance and strategically planned to
reach their goal.

We ended I think second to last, but we weren't last.

These findings provide insight into the types of familiarity, traditions, or rituals
that may attract members to particular organizations. Becoming acquainted with one
another; learning about each other’s talents, strengths, and interests; and building trust
contributed to the development of individual teamwork KSAs. The idea of the research
participants’ activity of becoming acquainted is illustrated in a variety of settings, from Hut’s and her participation in SSS to Broken Glass’s membership in her blood family.

Assertion 1.3.

Participants take time to interact with others, get to know them, and become familiar with them in a variety of settings. They participate in groups such as SSS that over time might have impacted the development of their individual teamwork KSAs. Sergeant’s experience provides unique insight into group development that crosses extracurricular and co-curricular settings. The literature describing the concept of familiarity supported this finding. Harrison et al. (2003) noted that social or member familiarity is based on the premise that familiarity is time dependent.

Additional literature referenced to make Assertion 1.3 including a study by Pascerella et al. (2004). Citing an anonymous source, they suggested that extracurricular and peer involvement may expose first-generation students to classmates who have a better understanding of behaviors that help individuals succeed and maximize the benefits of college. The literature supports the finding.

Theme: 1.4 Critical team member.

All participants were motivated members. They represented a community of artists, a church group, a soccer team, a student organization, and a family. Perhaps the familiarity they developed with each other, through their common interests and other similarities, contributed to a feeling of belonging. Such membership and affiliation may
be of importance in developing individual teamwork KSAs for low-income/first-generation students who participate in programs such as SSS.

With the exception of RFT, the data revealed that the research participants played a critical role in the teams in which they were members. In two cases these critical members also demonstrated retention and satisfaction as “members” on their team even after high involvement at a leadership level. Sergeant commented on her growth within the organization:

Well, the first semester that I was in it… I really didn't do anything, I was just kind of a member. And I'm still just a member. Like I don't hold an office or anything but I'm more involved with it now.

Moonlight stated the following about her involvement:

I've been a few things. Um, I was Community Service Director of Community Service, um, I was also Vice President of Public Relations and um, Social Events Coordinator. I'm just a member now.

In contrast, Sonshine demonstrated becoming increasingly and highly involved:

Yes, for 2 years I was the second vice president. I had gone back up into the state level. I haven't made that decision yet.

I'm working on other things. And noticed a lot of time that you have to dedicate to Organization P with everything that's going on, with all the new initiatives that they have, with everything going on, on the national level.

**Assertion 1.4.**

As critical members of their families and the organization in which they find themselves participating, these participants expended additional resources because of the role they played in the teams. This critical membership may have had dual, but competing, roles in their persistence, experiences, and opportunity to gain individual teamwork KSAs. These students would benefit from assisting with navigating their
choices. While the students may have played key roles in these non-biological families in which they participated, the impact of their membership may have effects on the perceived importance of higher education and degree attainment, depending on where the student employers’ allegiance lies as well as their maturity.

The study referenced for Assertion 1.4 was Pizzolato (2006). According to Pizzolato, “Without rich, networked information about how to achieve their hoped-for possible selves, it may be challenging for them to create possible selves, hence aspiration achievement discrepancy” (p.59). This study supported that these critical members may have internal conflict regarding critical members.

**Theme 1.5 Service-oriented attitude.**

Participants seemed motivated by service to others. In the case of Rosey, it was mission work; for Sonshine, it was through his work for the community with his fraternity and summer internship; for Sergeant, it was oriented toward public service and politics; and for Moonlight, it was service to a co-curricular student organization and to her clients. The frequency and duration varied, as well as did direct versus indirect service. RFT shared how he served his community:

Well we try to help each other and um, we just um, tell each other our ideas and what’s working and what doesn’t work.

Broken Glass said,

Yeah, it says I’m a humanitarian.

I’ve been helping people all my life.
Near the conclusion of the study, Broken Glass, who had no formal work experience, reported that her Texas Rehabilitation Commission counselor assisted her with transferring her volunteer work to skills on her resume.

The literature referenced for Assertion 1.5 is presented here: Kuh and Gonyea (2006) supported the concept of deep learning, which seems to describe the types of activities preferred by these students. The data reveal that these participants were motivated by serving others. Furthermore, they describe service as one of the deep learning experiences.

Assertion 1.5.

There is promise in service as an intervention for developing individual teamwork-KSAs. With the exception of Hut, all participants seemed motivated by service to others. In all of the cases where students served, they provided direct service to another student, the group, or clients; the frequency and duration varied. Service projects may enhance the learning of individual teamwork KSAs because of the cooperative effort.

The literature on familiarity and cohesiveness also supported students’ motivation to serve in these settings and supports the findings of students’ service through student organizations. Olivera and Straus (2004) stated that such groups enhance the sense of identification and concern for others.

Focus 2. Environment.

The university in which the study was conducted was a 4-year public institution that served approximately 22,000 undergraduates. According to Olivera and Straus
(2004), institutions should make available the time and physical space that provides opportunities for groups to practice collaboration. Additionally, they stated that students should be afforded the opportunity for problem solving, facilitation, and the opportunity to ask questions. Because group interaction may change over time, it may be important to facilitate this process, involving members in multiple experiences.

The structural dimension aspect of social capital relates to the location and frequency in the social structure (King & Furrow, 2004). The primary settings were academic and non-academic settings. Coursework, scales of measurement involving interactions with peers, academic effort/involvement, on or off campus residence, extracurricular involvement, participation in intercollegiate athletics, Greek affiliation, participation in volunteer work, and work responsibilities were more specific to the structural dimension of social capital for the participants of this study. These settings are illustrated in Table 14. Olivera and Straus (2004) suggested that within the social structure or the institution, these groups should also be afforded the opportunity for problem solving, facilitation, and the opportunity to ask questions.
<table>
<thead>
<tr>
<th>Social Capital in Higher Education Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Academic</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>Random Found Things</td>
</tr>
<tr>
<td>Hut</td>
</tr>
<tr>
<td>Sonshine</td>
</tr>
<tr>
<td>Rosey</td>
</tr>
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<td></td>
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</table>

*(table continues)*
<table>
<thead>
<tr>
<th></th>
<th>Academic</th>
<th>Extracurricular</th>
<th>Co-curricular</th>
<th>Non-Academic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sergeant</td>
<td>16 weeks repeated with different groups over undergrad</td>
<td>Soccer at least weekly One session during one semester</td>
<td>Student organization 12 hours bus trip to Monterey &amp; moderately structured activity</td>
<td>Work less than 20 hours per week (work-study eligible)</td>
</tr>
<tr>
<td>Moonlight</td>
<td>16 weeks repeated with different groups over undergrad</td>
<td>Organization B weekly</td>
<td>Weekly Meetings Internship - 2 summers (high structure) 10 weeks each</td>
<td>Work less than 20 hours per week</td>
</tr>
<tr>
<td>Broken Glass</td>
<td>minimum</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
</tbody>
</table>
Students’ experiences during their undergraduate education ranged from RFT and Broken Glass who had only classroom experiences during their undergraduate years, to Sonshine, Sergeant, and Moonlight, who in addition to academic classroom experiences, participated in student organizations, had co-curricular experience (internship or student organization), and worked. Hut worked in addition to her classroom experience. Rosey’s experience added intramurals and noncurricular faith-based engagement, which was primary to his undergraduate experience. Sonshine’s, Sergeant’s, and Moonlight’s undergraduate experience included engagement in academic, extracurricular, co-curricular and non-academic areas. Two themes span these areas and the 7 cases: facilitated/non-facilitated experiences and social capital.

Theme 2.1 Facilitation of experiences.

The university offered classes in a 16-week semester. In classes, the design for group assignments varied. Groups were either assigned by the instructor or self-assigned (common interest). Academic experiences provided for discipline-related content, theoretical practices and procedures, limited facilitation, and mostly self-directed teams.

Sonshine shared an engaging facilitated classroom experience:

She had us work on assignments and each assignment was doing an analysis on a certain part of business.

On our first group project we were able to um, decide, uh, which group we were going to be in. She had students, uh, tell us what jobs they work for, who they work for, and according to the company they work for.

Course learning was also facilitated in his on-line class:
The other class, Organize, Design, and Change, it’s an Internet-based course so the teacher just put us in groups. I don’t know how he came up with it. I guess he pulled names out of a hat maybe and put us in the group.

In theme 2. 2 A Familial and Collaborative Learning Environment, Hut described SSS as an academic support environment where competencies in collaborative learning were facilitated. She shared:

We would pair up to study and work in small groups to do well academically and graduate.

Moonlight discussed the role of an advisor or facilitator in her internship, a role that was sometimes filled by a peer.

Sonshine, Sergeant, and Moonlight participated in student organizations.

Sonshine was the only research participant who specifically discussed the “advisor” role. While the advisors were occasionally present for the extracurricular meetings in which Sonshine participated, they did not appear to take an active role in the facilitation of the teaming process.

Our advisor plays like the liaison or just we, like I, we really didn’t have to submit anything to our advisor, we just know what’s going on and we do all the planning on our own.

We talk to our advisor or someone like that and I talk to an old member to see what we should do and then we'll take it from there.

A workshop provided as an activity of Sergeant’s student organization suggested a high level of facilitation by other than a peer. The workshop was a simulation activity that gave participants an opportunity to practice collaborative problem solving. While there seemed to be high engagement in non-academic activities such as student organizations, the university did not ensure facilitation and advising of these teams, as the literature suggested. Facilitation was revealed in academic settings.
The literature referenced for Assertion 2.1 is Lohfink and Paulsen (2005), who stated that participation and involvement in academic activities may be more important to first-generation students than are social activities. Similarly, Pascerella et al. (2004), add that “first-generation students perhaps benefit more from their academic experiences than other students because these experiences act in a compensatory manner and thus contribute comparatively greater incremental increases in first-generation students’ stock of cultural capital” (p.280). Olivera and Straus (2004) also supported the idea that should organizations should afford students the opportunity for problem solving, facilitation, and the opportunity to ask questions.

**Assertion 2.1.**

Facilitating the development of competencies for self-directed work teams in an academic setting may ultimately increase individual teamwork KSAs. With issues such as timing and inabilities of members to listen (see Focus 3), facilitated training prior to initial participation in student organizations may improve individual teamwork KSAs in non-academic environments. Students may be able to achieve competency in structured academic environments and improved practices for non-academic environments, where there are limited facilitators.

Gilbert (1979) and Rummler (2004) (as cited in Surgrue, 2004) supported the development of such competencies in a structured academic setting. They stated that the systems and work processes must necessitate and facilitate the application of new knowledge. Olivera and Straus (2004) observed that in addition to the time, physical space, and opportunities for groups to practice collaboration, these groups should also
be afforded facilitation. Furthermore, because group interaction may change over time, it may be important to facilitate this process, involving members in multiple experiences.

Theme: 2.2 Academic engagement.

Receiving a high grade was the primary motivator for classroom-based projects. Competency in learning individual teamwork KSAs was highlighted in one case. RFT described specific methodologies utilized to develop individual teamwork KSAs – collaboratives and group critiquing. Additionally, findings in the case of Rosey, Sonshine, and Moonlight revealed engaging academic activities.

Rosey’s records indicate that he took Honors classes which, he said provided engaging experiences. Sonshine described engaging classroom experiences:

And all of them dealing with um, analysis of the business, um, what can we do to make the business better, increase profits, what’s wrong with the business, um, we’re marketing, target market, have to do organization of charts, figure out who’s going to be CEO, who’s going to be president, who’s going to be um, over marketing, who’s going to be over distribution, and so each one of those classes, I’m experiencing the different aspects of going in business. Like, I have e-commerce that’s doing business on line.

Not all of Sonshine’s academic experiences had been this way. Sonshine said this about his studies:

I enjoy it, but not some of the teachers. They make the class boring.

Moonlight described a class that was experiential in nature in that the activities related to typical business situations and transactions.

It took you like through a full cycle. Like from, I mean we had different areas so say from like purchasing some things to uh, and you know accruing that debt to going ahead and paying it out in the future and stuff like that. And just the other things that go on um, in typical you know business situations and transactions like that.
One of Moonlight’s instructors utilized manual methods and computer-based methods for collaborative projects.

And then with the whole computerized thing it was the exact same project I mean, um, I guess a smaller, or a smaller scale. But um, you know focused on the actual computer.

**Assertion 2.2.**

Every student had a team-based academic project. Grades were the primary motivator for their performance, and they each took them very seriously. They valued the grade they would receive. These students learned through a variety of activities. These activities included the following: collaboratives, an Internet-based course, analysis of the business, a full business cycle, typical business situations, increasing profits, marketing, distribution, transaction, and manual and computer-based methods.

The findings of this study might indicate that there is a relationship between the target population’s preferred activities and the development of individual teamwork KSAs. Draskovic et al. (2004) supported the activities of small groups; in most small groups, learners are actively engaged in problem solving and working on projects, with problem solving being the most predominant activity. The work of Kuh and Gonyea (2006) stressed the importance of the engagement such activities provide.

**Theme: 2.3 Non-academic engagement.**

The university provided the time, physical space, and opportunities for development of individual teamwork KSAs outside of the classroom. Intramurals and student organizations were extracurricular activities in which these students actively
participated. Participants in this study participated in two primary non-academic activities: intramurals and student organizations.

Soccer was a nonfacilitated extracurricular experience where Sergeant found people with limited skills who were willing to have fun in what started out as a noncompetitive activity. Rosey also played soccer. Intramural soccer also contributed to fun and cultivated competition. Sonshine also participated in intramurals, but it did not seem to make much of a contribution to his undergraduate experience: “I did it my sophomore and junior year, basketball.”

Sergeant said of her experience:

We did soccer. I like it but I can’t play it, but I tried. It was fun. We entered the noncompetitive league.

Rosey was matter-of-fact about his experience:

Oh yeah, I did intramurals . . . played intramural soccer for… about to be my fourth year.

Sonshine, Sergeant, and Moonlight participated in student organizations. The majority of the student organizations were self-directed. Participations in an organization where members are alike may result in high individual teamwork KSAs. Greek-affiliated and ethnic-based student organizations represented a significant amount of frequency and duration among its members. In two of the cases the participants were significantly involved in student organizations that were related to their major: political science for Sergeant and accounting for Moonlight. Sonshine, Sergeant, and Moonlight communicated, dedication, commitment and passion for these groups.

The Pell Institute (2004)supported this, noting that low-income students could be “important economic contributors to their families, so their attempts to combine the roles
of family provider and student, or their inability to contribute while enrolled, may undermine their academic commitment or performance” (p.6). This does not support the finding for engagement in non-academic activities.

Assertion 2.3.

The non-academic activities provided an opportunity for members to get to know each other, practice problem solving, facilitation, and ask questions. Furthermore, participation in an organization related to one’s academic studies may have resulted in even higher individual teamwork KSAs scores. Specific examples are cited in the single-case analysis.

The majority of the research participants did not have biological families for which to provide – they did not have a primary family role. This gave them opportunity to feel connected during their undergraduate experience.

Theme: 2.4 Co-curricular engagement.

Three of the members had co-curricular experiences - internships. Two were in student organizations closely related to an academic department and 2 others were internships. Sonshine held an internship intensively during the summer and continued in a limited capacity during the school year for 3 years. The student organization in which Sergeant participated was closely related to her major. Moonlight was also involved in a co-curricular student organization as well as an internship. She shared these ideas about her experience:

I was part of the rebuilding or kind of a new beginning of and just. I love organization B.”
We were there because we chose to be there. We wanted the organization to benefit other people out there. I guess we did what we could or what we thought we could in order to um, to improve it and to get it back you know on the map and recognized as an organization.

The group wanted to be productive in doing what was beneficial for other business students. Helps the organization reach its goal is a tax workshop that they have successfully conducted for the last 2 years another good one.

Moonlight’s internship lasted for 10 weeks for two summers. One of the experiences she highlighted was that her team gave her feedback.

They gave me feedback on what I did well and things like that so it was really, um. It was real beneficial.

Her major, extracurricular membership, and internship were closely related. Sergeant and Moonlight had higher individual teamwork KSAs scores compared to other high-scoring cases.

Assertion 2.4.

The findings suggested that not only academic courses, but in fact co-curricular experiences such as internships, should be included because those that increase one’s stock of cultural capital and contribute to the development of individual teamwork KSAs, particularly for the target population. Perhaps the academic experiences, academic (co-curricular) student organizations, and internships are particularly beneficial to students who are both low-income and first-generation. Carini et al. (2006) asserted that the more students study or practice a subject, the more they tend to learn about it. This supports the finding.
Theme: 2.5 Academic support.

All participants were accepted into the SSS project based on an academic need. Student records indicated that participants received personal and academic guidance. The type of academic support, time, and frequency of participation varied. Some students had been involved in the project for as little as 1 year and as long as 4 years.

In SSS, Hut became familiar with other students at the community college. The students would pair up to study and work in small groups to do well academically and graduate. She commented that she noticed that she would see her peers almost weekly in the TRiO office. They would talk about how they were doing and what kind of tests they had and topics like that. (Although the communication was informal, it provided support and encouragement to graduate and do well academically.) She interacted with her peers almost weekly in the TRiO office. In the individual case analysis Hut described in detail one of the collaborative learning experiences of the SSS project. These TRiO participants also had experiences with each other outside of the physical location of the project.

We’d have, you know, like socials and dinners, musicals and plays.

We would go on trips and they would have like different presentations and stuff.

In addition to receiving academic support from the project, 3 participants also worked in the project. Student employment provided job security while they attended to grades and other activities. This job security was especially the case for Rosey, who returned to SSS after a less-than-enjoyable experience at a fast-food restaurant.

Cracker Barrel - I’ve kind of blocked that out of my life. Um, Cracker Barrel, well one of the things that I hated about that place is that no one was really a team at all. . . Yeah, so it was an awful experience.
And so did the employees, you all didn’t get together because everybody was there for themselves so you all didn’t get together and say ‘hey.’ Yeah, I mean, the people that work there were either young college students that were just, just there to make money or they had been working there for 30 years and you know. There was one guy that had worked there for probably like 50 years that was one of the managers. He had the worst communication skills I’d ever seen. There were a lot of Hispanic workers that like, uh, were dishwashers or uh, on the grill or something like that. And he would go back there and just yell their names out like whatever they were, like “Gloria, etc. say their names and then say “mases, mases, mases,” Like go clean the tables basically and they all stand there and they were like “we speak English, you don’t have to speak Spanish to us.

So yeah, communication was bad. Goal setting was like I’ve got to get my money. Task coordination was just like handed out by the managers, ‘you’re working this section.’ The managers never listened to your requests, they never...it was just like “you’re working this, you’re working this, you’re working this.” ‘Hey I’ve got a huge paper tonight can I be one of the first ones cut?’ ‘Well, we’ll see what happens.’ And then they purposely leave you on the board until 11:00 you know. Just uh, it was, it was frustrating. The task coordination was bad. The communication was bad. Uh, problem solving, I didn’t really see a whole lot of problem solving going on. There was a lot of problem.

Rosey returned to SSS to work and stayed for another 2 years and completed his undergraduate education. Next, Sonshine described his work at SSS:

Okay, I’m finished with this so what’s the next task? So, it’s, everybody still works together. There are so many events coming up back to back that one person just can’t do that by themselves and there’s a lot of paperwork that has to be up-to-date and everything correct.

The tasks are passed down, like, the chain of command. For instance, it’s passed down from a supervisor to a student employee, who may be the senior peer mentor, and if the senior peer mentor feels that they can’t handle all the duties then they pass it on to another employee within the office and um, make sure.

Moonlight also participated in the project and tutored business courses in the project for one semester. At the end of the study while completing her 5th year of study in the accounting program she still sought SSS for support and networking with alumni. She communicated a dedication to the project.
Assertion 2.5.

SSS added a dimension to the influences on higher education not mentioned in the literature. It was an academic support unit, which in the case of Hut has been demonstrated to provide methodologies that promote the development of individual teamwork KSAs and furthermore, workforce readiness. Additionally, it was an environment in which its participants may also work as student employees receiving supervision (facilitation) of individual teamwork KSAs.

Project personnel are also charged with creating a climate conducive to the success of the target population. They may be able to influence factors in the environment such as training individuals who can facilitate teams whose members are composed of that like the target population; promoting co-curricular experiences, directing students to co-curricular student organizations; providing motivation such as volunteer service; and coordinating training to develop individual teamwork KSAs among its members.

This finding adds to the literature. Pascerella et al. (2004) provided a sample of the four types of influences on the higher education setting, as shown in Table 2. These influences are (a) demographic and pre-college characteristics; (b) institutional characteristics; (c) college academic experiences; and (d) college nonacademic experiences. Academic support programs were not included in the description of the influences.

Current literature focuses primarily on academic settings for the development of the competencies associated with the themes of individual teamwork KSAs (conflict management; collaborative problem solving; communication; goal setting and
performance management; and planning and task coordination). It may be of interest to the field to consider academic support units as a setting for the development of individual teamwork KSAs.

**Theme: 2.6 Work experience.**

Hut, Rosey, and Sergeant worked off campus and at fast-food chains. Only Hut identified significant and positive teaming experience at her job. In fact, it is where she primarily engaged and may have contributed to the development of her individual teamwork KSAs. Sonshine, Rosey, and Moonlight also worked on campus and more specifically in SSS. Sonshine and Rosey had been student employees who also received work-study. As low-income students they qualified to receive work-study, a federal program in which the employer pays approximately 30% of the students’ wages and the federal government pays the remaining wages.

RFT and Broken Glass did not reveal any significant experiences related to work. In the case of Hut and Sonshine, their experience was associated with their work. Both Rosey and Sergeant communicated issues of comfort, trust, and familiarity related to the work environments presented.

**Assertion 2.6.**

The work environment could be promising as a setting for helping to develop individual teamwork KSAs for the target population. Socioeconomic status also created a need for research participants to work. These students had to work to pay for school.
and qualified for work-study because of their income levels. Sonshine and Rosey had been student employees who also received work-study.

There was a uniqueness of this finding. For the participants in this study, work possessed more value for these students than the literature suggested. As indicated in Focus 1, work helped the student employees pay for school and as indicated in Focus 3 it provided the opportunity to practice teamwork KSAs.

Baskin et al. (2005) discussed the vocational purpose of higher education and the employability skills gap of some graduates. This supported the finding that work could support skills development according to Christou and Haliassos (2005), stated that there is, however, a disutility in work because it takes away free time, time to study, and time to engage in leisure or other activities. This is contrary to the finding.

Theme: 2.7 Frequency and duration.

Frequency relates to the number of times a student engages in an activity for a duration of time. When accounting for the frequency and duration of time spent on the varying activities in the environment, the findings revealed that while research participants may have spent the greatest amount of time in the classroom, their engagement in teams outside of the classroom endured for an average of 3 years over the course of their undergraduate experience. Familiarity and an opportunity to practice were frequently associated with Rosey’s faith-based activities, Sergeant’s and Moonlight’s academic student organizations, and the internships of Sonshine and Moonlight.
**Assertion 2.7.**

Team membership that extends over the majority of a student’s undergraduate experience may support the development of individual teamwork KSAs. The literature on familiarity and opportunity to practice supports this. “A priori familiar teams with members connected by strong ties worked faster and created higher quality products (Harrison et al., 2003). Yazici (2004) described the principle of “opportunity to practice,” which suggests that learning is improved more through talking than by simple observation. Furthermore, the results showed that the collaborative instructional tools resulted in an effective collaborative environment and enhanced critical thinking, communication, and teamwork skills. Again, Harrison et al. (2003) discussed that social or member familiarity is based on the premise that familiarity is time dependent. This research adds to the literature the role of talking to develop familiarity.

**Focus 3. Individual teamwork KSAs.**

One organization representing those with a major interest in postsecondary education is the National Postsecondary Education Cooperative (NPEC). Its mission is to promote quality, comparability, and utility of postsecondary education data at the federal, state, and institution levels. The Teamwork KSAs Test is one of the instruments posted by this agency.

The Teamwork KSAs Test by Stevens and Campion was used for this study. The Teamwork KSAs Test is a psychological test instrument designed to measure essential KSAs that are predictive of working in teams and focuses on KSAs, team, and the individual (Stevens & Campion, 1996).
Table 15

*Teamwork KSAs Test Scores for Respondents Scoring Above the Mean Including Total Score for Each Sub-area.*

<table>
<thead>
<tr>
<th></th>
<th>Raw score</th>
<th>Total score</th>
<th>Interpersonal Domain</th>
<th>Conflict Management</th>
<th>Collaborative Problem Solving</th>
<th>Communication</th>
<th>Self-management</th>
<th>Goal-Setting &amp; Performance Management</th>
<th>Planning &amp; Task Coordination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Random Found Things</td>
<td>21</td>
<td>40</td>
<td>45</td>
<td>24</td>
<td>46</td>
<td>77</td>
<td>44</td>
<td>38</td>
<td>65</td>
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<tr>
<td>Hut</td>
<td>21 40</td>
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<td>27</td>
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<td>21 40</td>
<td>28</td>
<td>66</td>
<td>46</td>
<td>23</td>
<td>83</td>
<td>68</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>Rosey</td>
<td>23 54</td>
<td>55</td>
<td>99</td>
<td>46</td>
<td>57</td>
<td>64</td>
<td>68</td>
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</table>

*(table continues)*
### Table 15 (continued)

Teamwork KSAs Test Scores for Respondents Scoring Above the Mean Including Total Score for Each Sub-area.

<table>
<thead>
<tr>
<th>Raw score</th>
<th>Total score</th>
<th>Interpersonal Domain</th>
<th>Conflict Management</th>
<th>Collaborative Problem Solving</th>
<th>Communication</th>
<th>Self-management</th>
<th>Goal-Setting &amp; Performance Management</th>
<th>Planning &amp; Task Coordination</th>
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<tr>
<td>1</td>
<td>2</td>
<td>3 (4+5+6)</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7 (8+9)</td>
<td>8</td>
<td>9</td>
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</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Raw score</th>
<th>Total score</th>
<th>Interpersonal Domain</th>
<th>Conflict Management</th>
<th>Collaborative Problem Solving</th>
<th>Communication</th>
<th>Self-management</th>
<th>Goal-Setting &amp; Performance Management</th>
<th>Planning &amp; Task Coordination</th>
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<tbody>
<tr>
<td>Sergeant</td>
<td>24</td>
<td>61</td>
<td>77</td>
<td>99</td>
<td>31 96 44</td>
<td></td>
<td></td>
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<td>Broken Glass</td>
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<td>70</td>
<td>87</td>
<td>66</td>
<td>46 99 44</td>
<td></td>
<td></td>
<td>68</td>
<td>37</td>
</tr>
</tbody>
</table>
The Teamwork KSAs Test is validated only for an overall teamwork score and not the sub-areas. The raw score listed in column 1 reflects the total number of items the subject answered correctly. The total scores for all of the participants is listed in column 2. Teamwork KSAs, as presented by Stevens and Campion (1996), are arranged into two domains. The interpersonal domain (column 3) includes the sub-areas of conflict resolution, collaborative problem solving, and communication. The self-management domain (column 7) includes goal setting and performance management and planning and task coordination. Next, are findings for each sub-area.

**Theme: 3.1 Conflict resolution.**

Students resolved conflict in a variety of settings. No single learner’s characteristic was found to triangulate within cases or across cases related to conflict. It seems that teams should expect conflict, not focus on it, but take the time to talk and work through it. Conflict resolution was the highest scoring interpersonal area for all cases. The highest scoring members had the greatest frequency and duration within single organizations. The experiences where conflict was expressed were not facilitating.

Sonshine said:

> Addressing conflict, you have to know what’s going on. You have to be calm and anytime something arises you must come up with some type of step to get to the resolution before you meet with anybody.

Our conflict comes when, uh, everyone doesn’t listen and everyone has their own opinion.

Sergeant commented:

> And that's why nothing good happens 'cause the countries don't agree with it.
Rosey and Moonlight shared what they saw as the positive attributes of conflict:

Rosey:

I mean I guess that is a conflict, but it was easier because it was a church group.

Moonlight:

We worked through it. I guess because we all figured out you know we were there for a common purpose, you know.

Going to be there, but you know it doesn’t have to be, I guess a strong presence, you know. If we focus on what needs to be focused on.

Assertion 3.1

In cases where conflict was better accepted, the research participants’ teamwork KSAs scores were generally higher. Training for the development of individual teamwork KSAs scores may include developing characteristics associated with being calm, being reflective, being a member of a faith-based, group and accepting that conflict is going to happen. These were characteristics of the students represented in this cross-case analysis. These students scored above the mean on the Teamwork KSAs Test for their total score. Stevens and Campion (1996) consider negotiation exclusive of any other conflict resolution strategy. Conflict was omitted from the literature. The literature presented for this study does not sufficiently support this finding.

Theme: 3.2 Collaborative problem solving.

Overall, the collective cases scored the lowest in collaborative problem solving. Two areas are revealed as potential threats to high scores for these participants: timing
issues and members’ inability to listen. The experiences of RFT, Hut, Sonshine, Sergeant, and Moonlight are described here:

RFT:
Okay, like when we have paintings or drawings due we would show like what we worked on during class and then um, we just all get in a group and talk about like each other’s art work. And we say things that are positive and things that could be worked, that need more work.

Sonshine:
It was just a big problem because we didn’t know what to expect because it was such, on such delay notice that we had to plan this event and having such short time. I’m sure you ran into a problem like that.

So you pull those individuals that you know are going to work regardless of anything. That’s going to be there, going to be on time, going to stay focused and try to reach that goal within the time frame. So you pull those individuals together and be like, okay here’s what we need to do.

Every organization I’m sure has conflict.

For Sonshine, in addition to the amount of time wasted, the time of day the organizations met was a critical factor:

Our meetings are at night. It’s at ten o’clock at night.

With the internship program he says, “Our meetings uh, 6:30.

Sergeant commented on student schedules:
It was that like conflicting schedules ‘cause a lot of people couldn’t make Sunday practice. And then, you know like I guess that kind of showed on Wednesday games.

Moonlight commented:
Just timing issues and things like that but um, I mean we worked through things and we came up with um, plans. How we were going to get our assignment done and what we were going to do to get everything done on time.

Participants revealed issues in teams related to deadlines and time constraints.

Deadlines and time constraints seem to also affect problem solving and planning.
Research participants also described challenges related to listening. In one setting Moonlight shared the following:

But, um, I try to listen to what the whole group is saying.

In supervising her employees, Hut stated:

Sometimes the employees have their own problems, and as she put it, “they're not really trying to hear it.

One of the problems Sonshine encountered with his teams was:

Peoples’ inability to listen.

He felt this was a problem because people,

Miss important information, asked for it to be repeated or even repeat it themselves.

He expressed that the not listening,

Wastes time and burdens other team members.

Rosey commented,

I just kind of took what she said and just listen to it and let it go in one ear and out the other.

Assertion 3.2.

Competency in collaborative problem solving may be addressed by training students how to handle timing and how to listen. Additional competencies may be targeted for development. They include reflecting, observing, and providing constructive feedback. These were characteristic of the individuals who scored highest in the area of communication despite their low scores in collaborative problem solving.

Interestingly, Sergeant, the one student who received training and an opportunity to practice collaborative problem solving, scored the lowest in this sub-theme. One
explanation is that the type of collaborative problem solving was inconsistent with the instrument and perhaps not self-directed. Overall, it is possible that the subjects did not have an understanding of the phraseology/terminology utilized on the Teamwork KSAs Test or they may not have utilized collaborative problem solving in the manner presented in the instrument.

Stevens and Campion (1996) have attributed the variable of timing and listening to the sub-theme of communication. The literature presented for this study did not explore the relationship of collaborative problem solving and communication. Relating their low scores in this sub-areas and the challenges revealed suggest a need for further study.

Themes: 3.3 Verbal exchanges.

Data from the cases reveal that information were shared using a variety of levels of verbal exchanges. They range from “shooting the breeze,” to talking, and to developed communication. Talking was important for team members to gain familiarity. It is discussed first.

Sub-theme: 3.3.1 Talking.

Talking, “shooting the breeze,” and conversing are how the students became familiar with each other. While simple talking and discussing are not accepted by Stevens and Campion (1996) as communication, these activities seemed to set a foundation for teamwork.

RFT:

Okay, like when we have paintings or drawings due we would show like what we worked on during class and then um, we just all get in a group and talk about like
each other’s art work. And we say things that are positive and things that could be worked, that need more work.

Hut:

We would talk about the problems such as cutting their hours, what’s wrong and try to resolve it.”

Sonshine’s dialogue provided insight on student organization meetings.

But you say something and it’d be that one person that never listen that say the totally opposite and then when you get to the end of that whole conversation, they say exactly what you already said. So they waste time or we have to be like, okay we moving on and they get angry within the meeting and we really can’t move on because we can’t be productive according to that one person because it’s distracting everyone else. So that’s one problem that we have because we'll spend 30 minutes on one subject when we get to the end of that 30 minutes we say the same things as the opening remarks of that whole topic. So, that is a problem.

Because you would tell them something and they be like, okay I don’t want to do that and then they come back around to it and somebody else will say something and they be like okay I agree with that, but once they agree with someone then someone is saying something that somebody else said, just differently. And it would be the same thing. So they’re not listening basically. And just holding up the meeting; we had that problem the whole entire summer with the internship and that’s an everyday thang with my fraternity

Participants of SSS were provided with time and space to talk about current and historical issues – often with two or three conversations going on at one time. A review of students’ records reflects high contact and talking with Sonshine, Rosey, and Broken Glass individually. Sonshine and Moonlight were observed during this study and were noted to have demonstrated talking that is better described as “collaborative sequencing.” Collaborative sequencing or shared thinking positively affects knowledge elaborations and knowledge acquisition (Janz & Prasarnpharich, 2003).

Collaborative sequencing was observed in the separate meetings of both Sonshine and Moonlight and on the occasion of Sonshine and Moonlight together in the
SSS Office. Highly verbal groups may require skilled facilitation to help individuals and teams transform talking into productive verbal exchanges and high-level communication.

While there is unanimity regarding communication being “key,” taking time to listen may support collaborative problem solving. This competency was best revealed in data presented by RFT; Sergeant, who listens most with her eyes; and Moonlight. The facilitation may also positively contribute to advancing the development of collaborative problem solving which is dependent upon communication among team members. This study did not assess the research participants’ KSAs in listening - a competency relative in the communication process.

Sub-theme: 3.3.2 Communicating.

Communication was among the higher scores for the collective cases. Students overwhelmingly stated that communication was important. However, the students who were business majors scored among the lowest in addition to the history major. Below are participants’ reflections on communication:

Sonshine:

Communication is key; it has to be constant. It all has to be open. People always have to be available. If you don’t have communication then everything will fail because once something happens you must let the next person know, okay you can move onto the next task; this is done . . . So communication, communication, you always have to have communication.

Hut:

Helps address the communication and getting activities done when the workers can see you being a part of them.
Mmm, no but… you know like with… you know with other team members and talking and communicating, then it kind of… kind of breaks down, you know like it's not so dreadful, you know. It kind of breaks it down to where it's not really that big of a deal.

Rosey:

I guess communication is another big key. Obviously anytime I think probably with any sport communication is a key.

Soccer it's like you need just you need to be talking all the time kind of where you're going, what you're doing with the ball on the field or whatever, so communication is a real big thing.

Moonlight:

Lack of communication which is always a problem . . . but I guess in order to resolve that you just, that just goes back to the communication; like you can’t really resolve things without communicating,” extolled Moonlight.

Broken Glass:

If they had communicated better without the animosity or the superiority complex or whatever they probably could have solved that.

Communication was among the higher scores for the collective cases. Students overwhelmingly stated that communication was important. Business and history majors scored the lowest. The students who scored the highest in the communication sub-area likely had the most experience (Broken Glass) or demonstrated high competency in observation and reflection (RFT and Sergeant).

Assertion 3.3.

What lies between talking and the high-level communication suggested by Stevens and Campion (1996) may be valuable for the development of individual teamwork KSAs of low-income, first-generation students. Communication is in fact a process. This domain as a whole seems to rely on basic communication. In the
Interpersonal Domain, which is comprised of conflict resolution, collaborative problem solving and communication, there is a dynamic sequencing of verbal exchanges that occurs as groups develop.

The value of knowledge elaborations and knowledge acquisition (Janz & Prasarnpharich, 2003) from talking is supported by the literature. Janz and Prasarnpharich (2003) concluded that the achievement and productivity of a group were elevated when a group had adequate social skills, feelings of responsibility for the group’s performance, interdependent goals, willingness to teach each other the skills needed for the work, and occasional evaluation of the group’s performance. This literature supported that verbal exchanges in talking are important and potential contributors to formal communication.

The Teamwork KSAs Test was not a performance-based test. Chen et al. (2004) related that the test may instead capture a significant cognitive ability component. Additionally, the cases were studied and analyzed in isolation from one another, with the one exception presented above, regarding the time and when Sonshine and Moonlight were observed engaging in “collaborative sequencing.” The literature presented for this study does not explore the competencies of this basic process.

Themes: 3.4 Goal-setting and performance management.

Sub-theme: 3.4a Goal-setting.

The data revealed that goals were consistently set related to academic performance and non-academic involvement. Academic Goals are presented here:

RFT introduced the concept of group critiques and grades:
Oh, yeah, it's always like the group critiques. Like, um, I think different teachers make you do them differently because you’re graded on how you do the critiques also. So, it’s always a percentage of your grade.

Hut also addressed the collective’s grade and feedback:

Like a lot of times you get a group grade based on the collective assignment that you send in. But for ... in this particular case the person ... they got graded based on how they gave their feedback ... to someone, not even you know just like okay what the group grade is.

Squash the negative feedback and go ahead and um complete the… complete the project for your grade? Everybody wasn't happy. You did it because you had to do it to get the grade. So, how did you all then... how did you all work together to accomplish the goal?

Sonshine additionally commented on feedback in the form of peer evaluation:

Yes, the biggest percent was based on that presentation and your peer evaluation. So we basically grade each other and overall we got an A I believe on the project.

Sergeant explained the conditions under which she would work toward the collective grade:

It depends on the type of project. It depends on how the grades are gonna to be done. Depends on how the project is organized.

If I'm going to grade... get a grade out of it, I become like this dictator. 'Cause I want it to be perfect. So,... unless, you know like... like if it's a project where everybody has their own like deal allocated to them, and I'm good at that ‘cause, you know, everybody can handle their own business. But it is like a… a project that everybody's name… like it's going to be like a thing, then I become a dictator. I'm not good at those.

Non-Academic goals were also set:

Sonshine said,

But our goal is to educate, uphold justice and equality of all people.

Sergeant stated the goal of Mueve a student organization.

Everybody wants to take over the world... we're doing it!

Moonlight shared the goal of the student
We pretty much brought back it was nonexistent; it wasn’t. I was part of the rebuilding or kind of a new beginning of and just. I love organization B.

We worked through it. I guess because we all figured out you know we were there for a common purpose, you know.

Hut’s well-defined goals were related to work. The metrics for Goal-setting and Performance Management (CHAMPS) are not set by the team, but by the franchise. Goal-setting and methodology for performance management were predetermined and set at the corporate level.

Assertion 3.4a.

In addition to achieving a high grade, student goal orientation was also driven by service to others, may be used as a motivator. From students trying to sustain organizations for the good of their peers and community to helping people living on the streets, there was motivation for students to serve.

Sub-theme: 3.4b – Performance management.

In the data provided on goal setting, participants also revealed shared comments on performance management.

Hut commented on feedback in a course:

The most they’re doing is like throwing out their negative feedback.

Yeah… yeah it affects their team performance and their… you know ultimately makes… you know affects the whole team’s performance, like the…mmm.

Sergeant described her behavior during intramural soccer:

But it was really interesting to see how… how teams would um… I don't know if they like specifically sought out girls that were bigger but a lot of teams had
bigger girls, like stronger girls. And, man, I got knocked down a couple of times by one of the... by some of those girls and it hurts.

After we got like beat like three times in a row and uh... and we felt like the other teams were a little bit more prepared than we were. A little bit more competitive, so we decided, you know, we had to step up our game.

Moonlight observed:

Somebody was more proficient in that, you know, they would take over. Uh, so we just tried to highlight people's I guess strengths and focus on that. And you know let them do what they were best at and um, it worked out well. It worked out pretty well.

You don't want to have your name sitting by something that was done incorrectly or that didn't need to be done or, you know, like you want, you want your name to stand by something that you feel was done with um, you know, with care and with, you know, you did it to the best of your ability and things like that so.

Gave me feedback on what I did well and things like that so it was really, um. It was real beneficial.

Broken Glass commented:

The purpose of life is to do the very best we can do, to help when we can help. To step back and let someone else take the applause when they need it more. And to step out front to hold out your hand to pull up that other guy behind you.

**Assertion 3.4b.**

Activities such as group critiquing and peer evaluation encourage participants to act together in academic teams to achieve a collective goal. The case of RFT highlighted significant experience in performance management through the use of group critiquing. Others also experienced performance feedback, but did not indicate being specifically trained in how to do so, as was RFT.

Providing constructive feedback was utilized to guide performance. As a collective, the members received the second highest score for the Goal Setting and Performance Management sub-area. According to Stevens and Campion, (1996)
monitoring team effectiveness and progress is an attribute of an effective team. Goal setting and performance management seems to rely on basic communication. The literature presented for this study does not explore the competencies of the basic communication process. Specifically, giving and receiving feedback, and performance evaluation were not presented in the literature.

*Theme: 3.5 Planning and task coordination.*

In the theme of planning and coordination, two sub-themes were identified. One is a general theme, and the other applies to specific strategies the research participants utilized to assign tasks.

*Sub-theme: 3.5.1 General.*

RFT provided an elementary explanation of planning and task coordination associated with a collaborative:

Yeah we'd just bring in just random found objects. Like I'm walking down the street, 'oh there's a can'.

At first, but uh, we would have to take them apart, take some things apart and like cut and paint different things to make them look like something else.

So then you cut and paint to make it look like something else then, like so how do you work with the other people to determine what that, like where you're going to put that piece?

Hut contributed this:

You know what are we going to do, you know we kind of choose one specific thing, but then there's still a couple of people that no matter what you say, they just don't like it.

Mesh all of our ideas ... make it work and make it you know, flow, because... you know different ideas from different people... you gotta mend them together.
In the individual case analysis, Sonshine and Rosey described in detail their experience with planning coordinating tasks for classroom assignments. Sonshine also shared the following:

So you pull those individuals that you know are going to work regardless of anything. That's going to be there, going to be on time, going to stay focused and try to reach that goal within the time frame. So you pull those individuals together and be like, okay here's what we need to do. We need to get this done by Friday, I mean by Wednesday, today is Monday.

Sergeant discussed task coordination for her student/co-curricular organization:

This other person and I are going to be the human right delegates. But, I'm the head delegate. 'Cause I know parliamentary procedure now. I have a co-delegate... I don't know if she knows or doesn't know parliamentary procedure. But if she does, then we'll combine roles. You know like, we'll ... we'll switch off." "Well, at the beginning of the... we have a meeting. And we kind of nominate people that we want to bring. Then we take a vote.

Broken Glass gave her broad philosophy on how she looks at task coordination:

You gotta take it all in and then you let your body or your spirit or your whatever, what makes you, you separate it and throw out what’s not usable. But then you can always have corn oil, you can have wheat bran. I mean there’s so much that is usable in different parts. That maybe you have very little chaff. But take it all in.

Sub-theme: 3.5.2 Specific strategies for division of tasks.

Looking across cases it is clear that a number of techniques were used to assign tasks, including the following: by gender; by skill/performance/ proficiency; by nominating/voting.

3.5.2 a. By gender.

Rosey:

I could have easily scored I would pass it off and let like a either a girl score or just somebody else on the team score for the good of the team because they are worth more if the girls score.
He commented how tasks were managed for a church mission trip:

Obviously, the guys were the ones that were helping do that while the girls were helping make the food for that night’s big dinner they were having and stuff because if it was backwards the guys would have.

Sergeant:

And it was also a lot of emphasis put on girls... little bit more pressure ‘cause um... the... each team had to have at least... it was mini football.

If a girl scored a goal it was worth two points and if a guy scored, it was one. So then... then we sent... men started like building up their too ‘cause guys were saying that it wasn't fair that girls were getting more points.

Since girl points were worth more... they... girls were expected to score more often. So, we... we had a little bit more pressure. So, what... what my team did... it's like the girls were on the offense and the guys were on the defense.

“We as girls... it was kind of like our obligation or... to score, you know ‘cause.”

The following are data related to task coordination based on skill and performance management.

3.5.2 b. Skill/Performance.

Sonshine:

You have to make sure that you distribute the tasks evenly and to those people you know who’s going to get the job done.

Sergeant:

This other person and I are going to be the human right delegates. But, I'm the head delegate. ‘Cause I know parliamentary procedure now. I have a co-delegate... I don't know if she knows or doesn't know parliamentary procedure. But if she does, then we'll combine roles. You know like, we'll ... we'll switch off.

Moonlight:

If somebody was more proficient in that, you know, they would take over. Uh, so we just tried to highlight people’s I guess strengths and focus on that. And you know let them do what they were best at and um, it worked out well. It worked out pretty well.
Broken Glass:

The purpose of life is to do the very best we can do, to help when we can help. To step back and let someone else take the applause when they need it more. And to step out front to hold out your hand to pull up that other guy behind you.

The following are data related to task coordination based on nominating/voting:

3.5.2 c. Nomination/Voting

Sergeant:

Well, at the beginning of the... we have a meeting. And we kind of nominate people that we want to bring. Then we take a vote.

Across cases the ability to plan and coordinate tasks was a strength. Strategies for planning and task coordination were demonstrated in numerous settings.

Assertion 3.5.

Research participants' familial characteristics and experiences over time contribute to an unstated position on team members' performance which supported their scores in planning and task coordination. Research participants planned and coordinated tasks based upon gender, skill/performance/proficiency, and by nominating/voting. These strategies may have contributed to the scores in the Self-Management Domain. It is clear that research participants acknowledge members' performance, yet it is unclear if such acknowledgements were spoken or unspoken.

The literature supports the role of familiarity: “A priori familiar teams with members connected by strong ties worked faster and created higher quality products” (Harrison et al. 2003). The findings of Olivera and Straus (2004) also suggested that it is efficient to use the team’s “best member” to solve problems which, in turn, provides the
other team members the opportunity to learn problem solving strategies, thereby providing long-term benefits for the organization. There may be members who, because of expertise or position, are likely to assume a critical role within various teams in organizations (Ellis et al., 2005).

Cross-Case Analysis Summary

This cross-case analysis used the 7 individual cases of seniors scoring above the mean on the Teamwork KSAs Test and related them to one another of three focuses: Learner, Environment, and Skill. Four data sources were used for each case. The analysis revealed 13 assertions.

Until this point the findings have been analyzed. Research question 3 required that the assertions from the multiple cases be synthesized. The synthesis began with restating question 3 and a chain of reasoning for arriving at the core findings to answer this research question. The chain of reasoning includes: the background for the study, an excerpt of recent and relevant developments, and stakeholders considered.

After the chain of reasoning there is a brief description of the steps used to identify the core themes. The core themes are organized by focus (element of the analysis phase: learner, environment, and individual teamwork KSA). Tables, 18, and 19 show the core themes and the core findings at the conclusion of this section. A restating of research question 3 is necessary here:

What themes emerge from the findings that may be useful in designing a curriculum to develop individual teamwork KSAs that promote higher workforce readiness for the target population?
Chain of Reasoning

Background

During the War on Poverty, Lyndon Baines Johnson supported the Higher Education Act of 1965. This legislation created TRiO programs to serve low-income and first-generation students for the purposes of access, achievement, and success in earning a 4-year degree. In 1968, SSS (SSS) projects were established nationally as one of the three original TRiO programs to serve students in postsecondary education; the other two were established to serve pre-college students. The SSS began at the university where the sample was selected in 1984.

The Pell Institute (2004) noted that more emphasis is being put on projects such as SSS to not only help these low-income students get into colleges and universities, but to also help them stay in school and complete a degree. Relevant to this study, the U. S. Department of Education Office of TRiO Programs encouraged collaborative and group services in the 2005 issue of Let’s Talk. Also, recent Higher Education Act amendments will impact the delivery of project services.

Excerpt of Recent and Relevant Development

The Higher Education Opportunity Act of 2008 (H.R. 4137) was signed into law on August 14, 2008. Two relevant and newly required services are listed here:

1) Advise and assist participants in postsecondary course selection;

(2)(A) Provide information on both the full range of Federal student financial aid programs and benefits (including Federal Pell Grant awards and loan forgiveness) and resources for locating public and private scholarships; and

(B) Assist students in completing financial aid applications,
including the Free Application for Federal Student Aid described in section 483(a).

In the War on Poverty, educational opportunity is the strategy for addressing poverty. Recent developments may have an impact on project-level opportunities to prepare students for the workforce. The new requirements provide a closer link to economic outcomes for students. The legislation, stakeholder accountability, and the standards provide guidance to connect the development of individual teamwork KSAs.

**Stakeholders Considered**

In addition to accountability to the U. S. Department of Education, the SSS project also has accountability to the host institution, limited accountability to the institution's governing agency - The Texas Higher Education Coordinating Board and the Southern Association of Colleges and Schools. The Council for the Advancement of Standards (CAS) also provides guidance for best practices for TRiO Programs. The relevance of individual teamwork KSAs for the stakeholders is described below.

For the institution from which the cases were selected, the following were outlined as components and related exemplary education objectives for a core curriculum: (a) to participate effectively in groups with an emphasis on listening, critical and reflective thinking, and responding; and (b) to understand and apply basic principles of critical thinking, problem solving, and technical proficiency in the development of exposition and argument.

The Texas Higher Education Coordinating Board (1998) listed the core curriculum at the postsecondary level. Basic intellectual competencies included are speaking, listening, and critical thinking. SSS participants must take these core classes.
The Southern Association of Colleges and Schools (2007) encouraged institutions to conduct a program of continual self-evaluation which should include, but is not exclusive of (a) program improvement, (b) advances in student achievement, and (c) effective use of resources in the institution’s service to its internal customers and external constituents. Furthermore, the results should be used in the future planning of academic programs. SSS (SSS) is included in this assessment as a non-academic unit.

In the Council for the Advancement of Standards (CAS) in Higher Education (2003) for TRiO Programs, five achievement indicators for collaboration are listed: (a) works cooperatively with others, (b) seeks the involvement of others, (c) seeks feedback from others, (d) contributes to the achievement of a group goal, and (e) exhibits effective listening skills. These standards advance the professionalism of TRiO Programs.

Core Themes

Steps for Identification

The legislative purpose of SSS, recent developments, stakeholder interest, and additional focus of workforce readiness guided the synthesis and development of core themes from this point. As suggested by Stake re-think, re-order, combine, edit, and consider evidence. When combining findings from the individual case analysis and the cross-case analysis “themes may take the form of Core Themes” (Stake 2006).

What follows are core themes organized by the three focuses: learner, experience and teamwork KSAs. Supportive findings are not listed in the response to question 3 to avoid repetition. Descriptions accompany each core theme. Consideration
for whether or not the usualness limits or enhances the generalizability/applicability of these core themes was suggested by Stake (2006); this is discussed in chapter 5, along with a discussion of related literature. Disconfirming data have also added to the confirmation of Core Themes and uniqueness of a newly developed quintain. One case was noted: In the case of Broken Glass her primary teaming experiences were with her family and outside of her undergraduate experience. Her age suggested that she had significant time to develop individual teamwork skills that she may have developed earlier in her life.

Focus 1 Learner characteristics core themes.

The cases of RFT, Hut, Sonshine, Rosey, Sergeant, and Moonlight were most relevant for identifying themes to promote workforce readiness. Findings presented for the previous two questions revealed that across cases these research participants were primarily traditional learners; were persistent or self-directed; were oriented to serve others and sought familial environments. The core themes presented are, College Students as Personnel, Driven to Add Value, Academic Membership and Familiarity, and Service Oriented.

Core Theme 1.1 College students as personnel.

Participants were an average of 23 years old at the time of the interviews. They depended on financial aid, lived off campus, and worked. Socioeconomic status created a need for research participants to work. Work experience may be as meaningful to low-
income students in building their social capital as academic experiences are to first-generation students.

As these students are uniquely both low-income and first-generation, both work and school are important. Work-study employers can address the workers who are also students helping them to gain greater individual teamwork KSAs and workforce readiness skills. Since first-generation students are likely to enter college with a lower stock of cultural/social capital than their peers, one might anticipate that their levels of academic, and perhaps even social engagement, during college will function in ways that may help them make up for this (Pascarella et al. 2004).

Core Theme 1.2 Driven to add value.

Research participants attended to and/or reflected upon cues from their social environment to strengthen confidence in their abilities in school. They were self-directed; students persisted through barriers such as academic achievement, interaction with faculty, commuting, and working while in school. Unique to this first-generation target population were their experiences of navigating their way through their undergraduate experience in a manner that added value to the attainment of their degree. For 4 of the students, this took longer than 4 years.

The above finding parallels what the Pell Institute (2004) observed, which was that low-income students could be “important economic contributors to their families, so their attempts to combine the roles of family provider and student, or their inability to contribute while enrolled, may undermine their academic commitment or performance” (p. 6). Furthermore, lower levels of involvement outside of the classroom, including
interaction with peers, may be in part affected by the students’ work responsibilities, family commitments, and living off campus (Lohfink & Paulsen, 2005; Pascerella et al., 2004). The students in this study took advantage of academic/curricular, co-curricular, and academic support that did not undermine or decrease their involvement.

**Core Theme 1.3 Academic membership and familiarity.**

Although the research participants committed time to academics and work, they made time to talk to people, get to know them, and become familiar with them in a variety of settings. The findings also reveal levels of familiarity, traditions, or rituals which may attract members to particular organizations. Essences of family are influences from these organizations. They were proud members of their student organizations.

Co-curricular membership may be a unique environment for and contributor to the development of interpersonal skills development for low-income/first-generation students. Membership in a familial co-curricular organizations may foster an environment that promotes the development of individual teamwork KSAs – specifically, interpersonal skills. Such “membership” may also be a motivator. Perhaps the familiarity students developed with each other, common interest, and understated academic goals contributed to a feeling of belongingness for the research participants.

The literature supports the role of familiarity experienced by research participants, Harrison et al. (2003) noted that familiarity is important in the beginning to foster coordination and integration. Olivera and Straus (2004) examined social cohesion and concluded that groups enhance the sense of self-identification and that the extent
to which individuals learn from group participation can affect future group performance. Their research communicated that group collaboration, including its cognitive elements, fostered transfer of learning to individuals. Cohen and Prusak (2001) listed a stock of active connections among people, including, trust, mutual understanding and shared values, and behaviors that bind the members of human networks and communities and make cooperative action possible.

Core Theme 1.4 Service-oriented.

Students were driven by service to others. From students trying to sustain organizations for the good of their peers and community to providing service to people living on the streets, there was motivation for students to give their time and effort. The research participants expressed a unique passion for their organizations; they served the organizations and volunteered to help others through their organizations’ team efforts.

Olivera and Straus (2004) argued that such social cohesion enhances the sense of identification and concern for others. This passion may also serve as a motivation or incentive and uniquely – social capital. There must be adequate incentives to apply the new skill, and the systems and work processes must necessitate and facilitate the application of the new knowledge, according to Gilbert (1979) and Rummler (2004) (as cited in Sugrue, 2004).

Focus 2 Environment.

The structural dimension is the aspect of social capital related to the location and frequency in the social structure (King & Furrow 2004). The greater the depth and
dimension of the participants’ experiences in single settings, the higher their teamwork KSAs score. The Core Themes in this focus are: Academic Settings with Engaging Collaborative Experiences and Facilitation for Self-Directed Teams.

Core Theme 2.1 Academic settings with engaging collaborative experiences.

The target population’s preferred activities in academic settings demonstrated usefulness in the development of individual teamwork KSAs. The research participants were purposefully selected from the SSS in project an academic support environment. SSS is the primary setting for the improvement of practices to support the development of individual teamwork and workforce readiness. Additional academic settings are classes, co-curricular student organizations and internships.

2.1.1 Academic support.

The type of academic support, time, and frequency of participation in SSS varied. Some students had been involved in the project for as little as 1 year and some as long as 4 years. Graduating was an understated academic goal of participants, which was presented in individual and cross-case analysis.

SSS project personnel were also charged with creating a climate or setting conducive to the success of the target population. Project personnel provided a familiar place and opportunity to build interpersonal skills. This academic support environment, services and nuance of delivery were uniquely designed for the target population. Project personnel had an understanding of the student personnels’ characteristics. This is consistent with Gilbert (1979) and Rummler (2004) (as cited in Sugrue, 2004, para.)
3), who stated a need for the awareness of the “conditions (of performers and work environments) under which the new learning will have the greatest chance of impacting performance.”

Recent developments suggest the delivery of services for groups instead of individuals. Legislative changes now require SSS personnel to provide advising on course selection; financial literacy and money management may provide additional opportunity. The next two focuses were documented in this study; they may also provide guidance for SSS project personnel.

2.1.2 Classes.

Every student had a team-based academic project. Achieving a high grade was the primary goal/motivator for the participants in this study. Team-based activities included the following: collaboratives; group critiques; honors classes; an Internet-based course; analysis of a business; a full business cycle; typical business situations; increasing profits; marketing; distribution, and transaction; and manual and computer-based methods. Overall, these activities provided simulating situations and real opportunities to practice in teams. Research participants took the grades for these group projects seriously and did acknowledged the team effort.

2.1.3 Co-curricular teams.

Three of the members had co-curricular experiences. Sergeant participated in a student organization that was closely related to her major. Sonshine held an internship that was intensive during the summer and regularly during the school year for 3 years.
Moonlight’s internship lasted for 10 weeks for two summers. Her major, extracurricular membership, and internship were closely related. She said: “I think that was probably the most relevant experience that I’ve had so far.” Co-curricular (either academic student organizations or internships) teams provided an opportunity to practice outside of the classroom and walls of the university. Paid internships may be of particular interest for developing the individual teamwork KSAs of low-income students who depend on work to get through school.

Core Theme 2.2 Campus based employment.

Sonshine, Rosey, and Moonlight also worked on campus and more specifically in SSS. Socioeconomic status created a need for these students to work. Sonshine and Rosey had been student employees who also received work-study. As low-income students they qualified to receive work-study, a federal program in which the employer pays approximately 30% of the students’ wages and the federal government pays the remaining wages.

The on-campus work environment could be promising as a setting for helping to develop individual teamwork KSAs for the low-income students. As low-income students they qualified to receive work-study. As these students were uniquely both low-income and first-generation; both work and school were important. The literature parallels the finding regarding first-generation students and “academic” experiences. According to Pascerella et al. (2004) “First-generation students perhaps benefit more from their academic experiences than other students because these experiences act in a
compensatory manner and thus contribute comparatively greater incremental increases in first-generation students’ stock of cultural capital” (p.280).

The findings are contrary to what Christou and Haliassos’s (2005) argument for low-income students, although access to work is important; there is, a disutility in work. It takes away free time, time to study, and time to engage in leisure or other activities.

**Core Theme 2.4 Facilitation for self-directed teaming.**

The discussion for this Core Theme is taken directly from Assertion 2.1., as cited in the cross-case analysis. Facilitating the development of competencies for the development of self-directed work teams in an academic setting may ultimately increase individual teamwork KSAs. With issues such as timing and inabilities of members to listen (see Focus 3), facilitated training prior to initial participation in student organizations may improve individual teamwork KSAs into non-academic environments. Students may be able to achieve competency in structured academic environments and improved practices for non-academic environments where there are limited facilitators. Furthermore, academic environments such as classes and academic support units may serve as an environment for a structured training intervention.

In the 2005 Issue of *Let’s Talk*, the U. S. Department of Education Office of TRiO Programs encouraged collaborative and group services. SSS is an environment to provide an intervention to affect later opportunities to practice for eventual outcomes in the strengthened workforce readiness. Additionally, “the conditions of the performer and work environment under which the new learning will have the greatest chance of impacting performance” according to Gilbert (1979) and Rummler (2004) (as cited in
Sugrue, 2004, para. 3) are available in the SSS environment. They stated that “the systems and work processes must necessitate and facilitate the application of the new knowledge.” Olivera and Straus (2004) also supported SSS as an environment for training. They noted that in addition to the time, physical space, and opportunities for groups to practice collaboration, these groups should also be afforded facilitation.

In the *Core Curriculum Evaluation Instructions* (1998), the Texas Higher Education Coordinating Board listed the core curriculum at the postsecondary level. Basic intellectual competencies included speaking, listening, and critical thinking. Additionally, for the institution from which the cases were selected, the following were outlined as components and related exemplary education objectives for a core curriculum: to participate effectively in groups with an emphasis on listening, critical and reflective thinking, and responding. The researcher was not able to triangulate that research participants, during their undergraduate education, received training for the development of collaboration problem solving for self-directed teaming, in the classroom or otherwise. It is not clear where they received training. It is clear that they practiced teamwork skills in environments outside of academic experiences. Research participants discussed student organizations that were primarily self-directed. Student organizations that were approved by the university offered little in the way of facilitation or training to help promote the development of individual teamwork KSAs. Excessive talking, people not listening and timing issues related to teaming activities were most notable in the student organization setting.
Focus 3. Individual teamwork KSAs.

Stevens and Campion (1996) identified five sub-areas. Here the researcher attempted to isolate opportunities and strengths. All five domains are not represented. The two core themes in this focus are Cultivating the Asset of Talking for Improved Communication, and Leveraging Strengths in Task Coordination and Performance Management.

Core Theme: 3.1 Cultivating the asset of talking for improved communication.

Research participants overwhelmingly stated that communication was important. This sub-area was among the higher scores for the collective cases. Participants labeled talking as a way to become familiar with others. Oral traditions such as talking are unique to groups significantly represented in low-income communities. Three of the research participants focused on were low-income and from ethnic minority populations.

They expressed significant use of talking and interacting with their classmates, peers and coworkers. Group members talked to gain familiarity with each other and to develop social cohesion and interpersonal skills. Talking may be used to build other communication skills. Team members “talked,” “figured out,” and “worked things through.” Collaborative sequencing or shared thinking positively affects knowledge elaborations and knowledge acquisition (Janz & Prasarnparich, 2003). Alessandro (1993) supported the idea of activities such as talking. He suggested that talking supports such competencies and qualities as brainstorming for possible solutions, decision making, openness, empathy, supportiveness, positiveness, and equality.
Core Theme: 3.2 Leveraging strengths in task coordination and performance management.

Strategy was demonstrated for all environmental settings. Tasks were assigned based on knowledge, skills, ability, and gender. Talking and participation together over time may have provided opportunity for research participants to become familiar with these characteristics. Cohen and Prusak (2001) listed a stock of active connections among people that including: trust, mutual understanding, and shared values, behaviors that bind the members of human networks and communities and make cooperative action possible.

Research participants’ familial characteristics and experiences overtime contributed to an understood position on team members’ performance. Research participants planned and coordinated tasks based upon gender, skill/performance/proficiency, and by nominating/voting. These strategies may have contributed to the scores in the Self-Management Domain. It is clear that research participants acknowledged members’ performance, yet it is unclear if such acknowledgments were spoken or unspoken.

In the Council for the Advancement of Standards (CAS) in Higher Education (2003) for TRiO Programs, five achievement indicators for collaboration are listed: (a) works cooperatively with others, (b) seeks the involvement of others, (c) seeks feedback from others, (d) contributes to the achievement of a group goal, and (e) exhibits effective listening skills.

Activities such as group critiquing and peer evaluation encourage participants to act together in academic teams to manage performance and achieve collective goals.
The case of RFT highlighted significant experience in performance management through the use of group critiquing. Others also experienced performance feedback, but did not indicate being specifically trained in how to do so as was RFT.

Summary

The first part of this chapter recaptures the population of interest and describes sample cases. Part 2 describes the data management, including the methodology, data sources, and framework for the presentation of the data. Part 3 delineates how each case was individually analyzed to identify theme-related findings. The focuses in each of each case were then related to each other. The final core themes preserve the phenomenon (learner characteristic, setting, KSAs) and yield three core findings. Tables 16, 17 and 18 summarize the conditions of the learner, the environment, and individual teamwork KSAs that summarize the themes revealed to promote the development of individual teamwork KSAs and to promote higher workforce readiness among the target population.
### Table 16

**Summary Table of Core Themes and Core Finding on Learner Characteristic:**

<table>
<thead>
<tr>
<th>Core Themes</th>
<th>Core Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 College Students as Personnel</td>
<td>The student personnel in this research relied primarily on financial aid and work to pay for college and sustain themselves. They persisted with a drive that added value to undergraduate experience including work experience and developed individual teamwork KSAs. They possessed passion for the organizations of which they are members and were motivated by serving others.</td>
</tr>
<tr>
<td>1.2 Driven to Add Value</td>
<td></td>
</tr>
<tr>
<td>1.3 Membership and Familiarity</td>
<td></td>
</tr>
<tr>
<td>1.4 Service Oriented</td>
<td></td>
</tr>
</tbody>
</table>
Table 17

*Summary Table of Core Themes and Core Finding on Environment*

<table>
<thead>
<tr>
<th>Focus 2 - Environment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Themes</td>
<td>Core Finding</td>
</tr>
<tr>
<td>2.1 Academic Settings with</td>
<td>SSS, an academic</td>
</tr>
<tr>
<td>Engaging Collaborative</td>
<td>support environment, provided a home away from home with project personnel who have a unique understanding of the conditions associated with the targeted college student personnel. Project personnel facilitated academic groups, participation in co-curricular student organizations and internships which can create an awareness and understanding of individual teamwork KSAs.</td>
</tr>
<tr>
<td>Experiences</td>
<td></td>
</tr>
<tr>
<td>2.2 On-campus Employment</td>
<td></td>
</tr>
<tr>
<td>2.3 Facilitation for Self-</td>
<td></td>
</tr>
<tr>
<td>Directed Teaming.</td>
<td></td>
</tr>
</tbody>
</table>
### Focus 3 – Teamwork KSAs

<table>
<thead>
<tr>
<th>Core Themes</th>
<th>Core Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Cultivating The Asset of Talking for Improved Communication</td>
<td>Talking, though not formal communication, contributes to members gaining familiarity with each other; and supports planning and assigning of tasks based on knowledge, skill, ability, and criticality. Cultivating an understanding and skill in reflecting, observing, listening, giving and receiving feedback, brainstorming for possible solutions, and decision making may support basic communication skills and the development of collaborative problem solving skills among low-income/first-generation college student personnel and increase their workforce readiness.</td>
</tr>
<tr>
<td>3.2 Leveraging Strengths in Strengths of Task Coordination and Performance Management.</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 5 includes the following: an overview of the research; a two-part
discussion of the Researcher’s Reflections (meaning of the findings listed above and a
retrospective of changes to the research process); Implications for the Field (Newly
corporalized quintain); Relationship of Findings to Previous Research (cited in
chapter 2); and Recommendations for Future Research.
CHAPTER 5

DISCUSSION, RECOMMENDATIONS, IMPLICATIONS, AND CONCLUSION

Overview

This chapter includes four sections: Discussion, Recommendations for Future Research, Implications for the Field, and Conclusion. The Discussion section includes a summary of the study, the findings for each question, the meaning the researcher made of the findings for each research question, the researcher's personal comments regarding the research process in retrospect for each research question, and connections to previous literature for each question. The Recommendations for Future Research section provides guidance for those considering their own research in this area. The Implications section includes the applicability of the findings and how the study has added to the body of research. The final section is the Conclusion.

The purpose of this multiple case study was to analyze learner characteristics, the higher education environment/undergraduate experience, and the individual teamwork knowledge, skills, and abilities (KSAs) of students from a senior cohort of the TRiO – Student Support Services (SSS) project at a 4-year public student-centered research institution. The research yielded local and systematic themes to improve practices that support the development of individual teamwork KSAs for the participating students and promote their workforce readiness. The research questions are as follows:

Research Question 1

1. What is the interrelationship of the learner characteristics, undergraduate experience, and individual teamwork KSA for an individual case that represents a low-income/first-generation seniors who scored above the mean Teamwork KSAs Test?
Research Question 2

2. How do the learner characteristics, undergraduate experiences, and teamwork KSAs test scores interrelate from one case to the other?

Research Question 3

3. What themes emerge from the findings that may be useful in designing a curriculum to develop individual teamwork KSAs which promote higher workforce readiness?

Discussion

The setting/environment for this study was a 4-year public institution. At the time the study began, the institution served approximately 22,000 undergraduates. Four data sources were used for 7 cases of SSS seniors who scored above the mean on the Teamwork KSAs Test instrument. Data were identified from project and university records, interviews with each student regarding his/her undergraduate experiences, and teamwork KSAs.

The multiple case study design and the analysis phase of the instructional design model provided a framework for the presentation of the data within each case, across each case, and for the resulting core themes. The figure multi-case study methodology for instructional system design (ISD) model - analysis phase was developed as guidance through the research process.
Figure 3. multi-case study methodology for ISD model - analysis phase.
Included in the discussion are the findings for each question, the connections to previous literature, the researcher’s retrospective personal comments regarding the research process, and the meaning the researcher made of each finding. The researcher began with the administration of the Teamwork KSAs Test to identify 7 individual cases of respondents who scored above the mean on the Teamwork KSAs. The analysis of each case was restricted to the single respondent, included the four data sources for the respondent, and was not compared to other cases. Question 1 is restated here:

1. What is the interrelationship of the learner characteristics, undergraduate experience, and individual teamwork KSA for an individual case that represents a low-income/first-generation senior who scored above the mean on the Teamwork KSAs Test?

The Single Case Navigator a summary of the findings that answered this question (see figure 1). Answering this research question resulted in the exposure of numerous themes and the uniqueness of each research participant and provided data to answer subsequent research questions. This was a stage of discovery for the researcher. Meaning was made from discovery and in connecting the data to the theoretical framework. Marshall and Rossman (2006) contended that referring to the original theoretical framework is a way to counter threats to external validity. They suggested that the theoretical framework can illustrate how data collection and analysis will be guided by concepts and models. Low-income/First-generation, social capital, engagement, collaborative learning, and teamwork KSAs were provided for this study.
For this research question, the findings/data originated from the theoretical framework and are consistent with that same body of literature. Examples of findings not specifically presented in, but related to, the original theoretical framework are Blessed (social capital), Reflective Observer (learning style), Controlling, and Talking. These themes are further identified with an asterisk in the Single Case Navigator. It was not reasonable in the literature review to cover all topics that would arise in a qualitative study of human behavior. According to Stake (2006), in a multiple case study, at the case level of analysis no additional meaning is expected to be assigned.

The literature supports the individual and unique findings that arose. Blessing White, Inc. (2005) recognized that “engagement is an individualized equation because work is personal . . . each day employees are looking to utilize their unique skills and expertise . . . their job satisfaction depends on opportunities to use their talents” (p. 2). Stevens and Campion (1994) also asserted that human resource management systems are applied to individuals; people are hired as individuals, given an individual paycheck, and so on. Similarly, according to Coates (2005), the responsibility for learning lies with the individual, who is ultimately the agent in conversations about engagement. It is likely that because of such individuality there were unique findings that were outside the narrow scope of literature presented for this study. The methodology prescribed by Stake (2006) makes it clear that these cases should be analyzed separately.

Research question 1 was a process question. In retrospect, this question may not have been included as a primary question. Also, in retrospect, the research may have been improved with an assessment of each individual research participant’s learning style. This would have provided greater insight regarding the learners. Also, an
observation of the research participants’ individual teamwork KSAs in a natural setting may have provided additional data on the individual teamwork KSAs competencies of each student. Additionally, the researcher acknowledged that there may be some limitations of the Teamwork KSAs Test. This is supported by Chen et al. (2004), who stated that the test may only capture a significant cognitive component.

Research question 2, also a process question, is presented and discussed below:

2. How do the learner characteristics, undergraduate experiences, and individual teamwork KSAs interrelate from one case to the other?

To arrive at the findings for research question 2, a cross-case analysis was performed and data were triangulated across all cases. The following themes were revealed as findings for each focus. Themes for the focus on learner characteristic were Sample Specific Characteristics, Persistence Toward Success, Familiarity, Critical Team Member, and Service-Oriented Attitude. Themes for the focus on the environment were Facilitation of Experiences, Academic Engagement, Non-Academic Engagement, Co-curricular Engagement, Academic Support, Work Experience, and Frequency and Duration. Themes for the focus on the individual teamwork KSAs were Conflict Resolution, Collaborative Problem solving and Verbal Exchanges, Goal-setting and Performance Management, and Planning and Task Coordination. Assertions accompanied each of the identified themes.

The researcher would like to clarify how the research process of triangulation was applied. In addition to useful single data (quote) that could be identified in a single case, data that could be identified from two other separate cases were combined to
make three sources and thus comprised a finding/theme. Though the data may not have been triangulated within one case, data from three separate cases may have substantiated the identification of a theme. The researcher observed that the process of triangulating across themes required significant attention to the coding phase of the analysis for each separate case as well as continuous, repetitive, and tedious referencing across the cases.

Finally, in the cross-case analysis meaning can be found the findings. This meaning comes in the form of an assertion. The literature referenced for the assertions is presented in chapter 4.

Returning to the research process, it should be noted that multiple case study methodology required that the themes and assertions from research question 2 be synthesized. Procedures recommended by Stake (2006) were applied with consideration for the legislative purpose of SSS, recent developments, and stakeholder interest. Both an assessment of learning styles and an observation discussed in the single-case analysis would have contributed to the final synthesis. The planned synthesis did, however, lead to the answer for research question 3. Question 3 is restated here:

3. What themes emerge from the findings that may be useful in designing a curriculum to develop individual teamwork KSAs that promote higher workforce readiness?

After merging the findings from research question 2 (which depended on the findings of question 1), core themes were established. These core themes answer research question 3 and are expected to contribute to the instructional design for
developing individual teamwork KSAs and promoting workforce readiness for the target population. The themes, which are described in chapter 4 are as follows: College Students as Personnel, Driven to Add Value, Membership and Familiarity, Service Oriented, Academic Settings with Engaging Collaborative Experiences, On-campus employment, Facilitation for Self-Directed Teaming, Cultivating the Asset of Talking for Improved Communication, and Leveraging Strengths in Task Coordination and Performance Management. These core themes were then assigned to the original elements of the analysis phase – learner, environment, and KSAs to establish core findings.

Core Finding: Focus 1 – Learner Characteristic.

The student personnel in this research relied primarily on financial aid and work to pay for college and sustain themselves. They persisted with a drive that added value to undergraduate experience including work experience and developed individual teamwork KSAs. They possessed passion for the organizations of which they were members and were motivated by serving others.

As these student personnel are uniquely both low-income and first-generation, both work and school are important social capital. Student employment can be social capital that contributes to the development of individual teamwork KSAs. This finding is, however, contrary to what Christou and Haliassos (2005) stated for low-income students. They said that although access to work is important, there is a disutility in work. They further suggested that work takes away free time, time to study, and time to engage in leisure or other activities.
The finding is also contrary to what the Pell Institute (2004) observed: “Low-income students could be important economic contributors to their families, so their attempts to combine the roles of family provider and student, or their inability to contribute while enrolled, may undermine their academic commitment or performance” (p. 6). The students in this study depended on work. Work was a pillar to their success and valuable undergraduate experience.

Gilbert (1979) and Rummler (2004) (as cited in Surgrue, 2004) highlighted what may contribute to the drive possessed by these learners. They stated that the learner must be motivated to apply the new knowledge; there must be adequate incentives to apply the new skill; and the systems and work processes must necessitate and facilitate the application of the new knowledge. This research supports the role of service as an activity that may motivate the target population to persist and gain valuable experiences that develop their individual teamwork KSAs. In addition to school and work, students with individual KSAs increasing above the mean also had an engaging undergraduate experience.

**Core Finding: Focus 2 - Environment.**

SSS, an academic support environment, provided a home away from home with program personnel who have a unique understanding of the conditions associated with the targeted college student personnel. Program personnel facilitated academic groups, participation in co-curricular student organizations, and internships that can create an awareness and understanding of individual teamwork KSAs.
Pascerella et al. (2004) supported this finding, noting that first-generation students perhaps benefit more from their academic experiences than other students because these experiences act in a compensatory manner and thus contribute comparatively greater incremental increases in first-generation students’ stock of cultural capital.” The U. S. Department of Education also support this finding with the encouragement of collaborative and group services for SSS for participants.

Rather than being subject matter experts, SSS personnel are experts on the learner. This is consistent with the literature Gilbert (1979) and Rummler (2004) (as cited in Surgrue, 2004) observed, the stated that by being aware of the conditions of those performing the job and the conditions of the environment there is an improved chance that the new learning will contribute to a positive change in performance. The literature on familiarity and opportunity to practice further supports the idea that SSS can facilitate the development of communication competencies for the target population. According to Olivera and Straus, (2004) organizations should afford students the opportunity for problem solving, facilitation, and the opportunity to ask questions. They also commented that familial groups enhance the sense of identification and concern for others. Harrison et al. (2003) noted that teams that work most effectively are a priori familiar teams, with members connected by strong ties.

**Core Finding: Focus 3 - Individual Teamwork KSAs.**

Talking, although not formal communication, contributes to members gaining familiarity with each other and supports planning and assigning of task based on knowledge, skill, ability, and criticality. Cultivating an understanding and skill in
reflecting, observing, listening, giving and receiving feedback, brainstorming for possible solutions, and decision making may support basic communication skills and the development of collaborative problem solving skills among low-income/first-generation college student personnel and increase their workforce readiness.

In terms of communication skill level, talking is an activity or informal forum for intervening with the target population. The data revealed that talking has benefits for the target population, especially for developing familiarity and getting to know each other. It is a building block. The literature supported this. Collaborative sequencing or shared thinking positively affects knowledge elaborations and knowledge acquisition (Janz & Prasarnpharich, 2003). They further described that speech overlaps observed in collaborative sequencing give the impression of several minds thinking out loud together. A review of literature by Harrison et al. (2003) also included the concept that familiarity is important in the beginning to foster coordination and integration.

The sub-area of collaborative problem solving (CPS) was the weakest. It was almost as if low-income/first-generation students were not trained to be self-directed to solve their problems. The literature presented for this study was limited in regards to some communication competencies that may have contributed to higher scores in collaborative problem solving.

Collaborative problem solving was not presented in the literature to sufficiently make a connection of the results of this research and this literature. The literature supports the idea that interpersonal skills should be cultivated among undergraduates. Interpersonal communication and technical skills are improved by collaborative work environments that are similar to those they will experience in the professional
environment (Yazici, 2004). The opportunity for students to practice collaborative problem solving is supported by Yazci (2004).

The review of literature by Harrison et al. (2003) also included the concept that familiarity is important in the beginning to foster coordination and integration. This study revealed a variety of verbal activities as a constructive method for developing the communication skills in a broader sense than suggested by Stevens and Campion (1996). In communication, discussion and problem solving, Janz and Prasarnpharich, (2003) described that collaborative sequencing or shared thinking positively affected knowledge elaborations and knowledge acquisition. Interestingly they highlighted that speech overlaps observed in collaborative sequencing gave the impression of several minds thinking out loud together.

In retrospect, the multiple case design produced results. From the researcher’s perspective, utilizing multi-case study design has promise for the analysis phase of instructional design. Additionally, the identification of core themes is useful for program design. The design, however, did not easily lend itself to the establishment of clear interrelationships. There were variables identified by theory related to the learner, environment, and teamwork KSAs that could have been interrelated utilizing a quantitative design. At the conclusion of the study are additional questions to be answered that might be of interest to those looking to conduct research in this area.

Recommendations for Future Research

Throughout the study the researcher maintained a list of areas for future research. The list of recommendations includes the following:
1. A pretest/posttest control group design of low-income/first-generation freshmen’s’ teamwork KSAs scores should be conducted to capture the effectiveness of the intervention. The posttest data may identify a statistically significant difference in scores to lend merit to the intervention.

2. A longitudinal multi-case study that assesses the development of individual teamwork KSAs over the matriculation of a cohort may provide insight on the development of individual teamwork KSAs over the course of the undergraduate experience.

3. A job analysis of on-campus student work environments for low-income/first-generation freshmen may provide insight into employers that foster the development of individual teamwork KSAs. Such a study would provide further insight on the specific role of on-campus work for the development of teamwork KSAs. Other environments that might be considered for future study are; classes/academic disciplines; student organizations; citizenship/civic capacities/student volunteer projects; and internships

4. A study involving the comparison of the target population and control group may provide insight on the low scores in the sub-area of collaborative problem solving.

5. Additional insight into academic support as an influential environment, the role of facilitation and verbal exchanges, and utility of students work experience was not adequately supported by the literature presented for this research. Additional research may be warranted.
Implications

In chapter 1 the researcher introduced the focuses that paralleled those of the analysis phase in the instructional design model (learner, setting, and skill). The response to question 1 discussed the role of the single cases for this research. According to Stake (2006), these single cases are important because they belong to a collection of cases. Data from 7 cases were synthesized as the quintain. This quintain (pronounced *kwin*ˈtɒn*), as defined by Stake, is the phenomenon or condition to be studied; it is a target, but not a bull’s eye. He noted that it is a collective target – collection of cases. The implications for practice are presented below.

*Learner*

Instead of targeting seniors, the designed intervention should target freshman student personnel who are required to live on campus. Freshman Orientation is also a time when students are likely not to have been hired for on-campus employment. The findings suggest that these student personnel depend on financial aid, must often work, are motivated to provide services, and are persistent in graduating with valuable experience.

Also, freshman year students may have limited engagement in student organizations. SSS personnel have an understanding of the condition to promote success among these learners. There is a narrow opportunity for an intervention that creates an awareness and understanding among these students about how to build their skills for the workforce while getting a 4-year degree.
On-campus employers may benefit from a “train the trainers” workshop that would help them to foster the individual teamwork KSAs of their student employers. This would further any goals of addressing the vocational purpose of higher education and skills gaps needed for the workforce. Of note is that low-income students may qualify to receive work-study.

Low-income and first-generation work-study students should be targeted as early as the freshman year to initiate the development of their individual teamwork KSAs with attention to the development of competencies for collaborative problem solving.

Environment.

SSS program personnel are positioned to provide for the development of individual teamwork KSAs among its participants. In this direction, the SSS project endeavors to encourage participation by freshman cohorts and enhance the use of familial academic groups. SSS is a home away from home, an academic “counterspace” (Malone, 2008) that supports students with navigating their way to engaging work, providing study groups, and other experiences that contribute to the development of individual teamwork KSAs. SSS (a structural aspect of social capital) can facilitate connections to courses with engaging collaborative experiences, membership in co-curricular student organizations, internships, and campus employment that further provide opportunities to practice teamwork. In addition to being structural capital, the engaging experiences establish cultural capital.

Training provided by the SSS staff to these student personnel as they begin careers with on-campus employers could address skills gaps between secondary
education and what is needed to successfully participate in workplace teams during their undergraduate experience. The setting is ideal for “talking” as a method for becoming familiar with each other, building trust, sharing information; familial/cohort - membership in scholarly student organization; a home away from home or “counterspace” as described by Malone (2008); social/cultural experiences; study groups - set like academic goals and participate in collaborative learning experiences; and group service projects.

Critical Competencies.

The data revealed the need for the development of competencies related to basic communication: reflecting, observing, listening, giving and receiving feedback. Collaborative Problem Solving was the primary teamwork KSA with distinct deficiency. The strategies for collaborative problem solving that were not triangulated in the data included the following: brainstorming for possible solutions, decision making, and collaborative problem solving.

Explicitly, the findings of this research add to the literature the identification of critical competencies that SSS can facilitate for low-income and first-generation students who depend on financial aid and have been hired to work on campus. The competencies were identified to have a relationship in the development of individual teamwork KSAs for these students. The previous literature did not reveal studies involving this population of learners or this specific environment and individual teamwork KSAs. Themes were identified with the purpose of supporting a design for an intervention for the academic support unit from which the sample is drawn. The core themes may be applied to a similar target population.
Contribution to the Literature

In the discussion, a connection was made to the literature. This study adds to the body of knowledge in the following ways.

1. Work experience has high utility for low-income student personnel. This experience could add to their stock of social capital.

2. Academic support, and more specifically, Student Support Services, is an addition to the influence on the higher education experience. This support may include helping students to navigate their way into co-curricular student organizations and internships in which students have an opportunity to practice individual teamwork KSAs.

3. Involvement in extracurricular student organizations that are not facilitated by an advisor may have a disutility in the undergraduate experience.

4. The activity of talking is important for the development of individual teamwork KSAs for low-income/first-generation students.

5. Identification of a deficiency in collaborative problem solving skills for the target population.

Implications for the Institution.

At the macro-level, institutional resources aimed at facilitating self-directedness and collaborative problem solving for the target population may prove beneficial. “The opportunity for institutional change lies in the possibility that individual participants will transfer their learning to other contexts within the institution, enable others to learn and to change” (Bensimon et al. 2004, p.113). An increased number of critical members who have higher competencies may support achievements in the classroom and non-
classroom experiences. These experiences should be facilitated. The institution that then graduates students who are more prepared for the workforce enhances the civic capacities of communities.

**Implications for Employers.**

Promoting paid internship connections with academic departments to this target population should be given greater attention. Investing in this talent pool that demonstrates drive, compassion, and a commitment to quality may create a recognizable return on investment.

**Conclusions**

The single case analysis exposes a significant amount of data that contribute to the cross-case analysis and the overall multiple case study. Considering the stakeholders and the level of influence of the academic support unit from which the sample is drawn and for which the results are to be applied, the implications are refined or rather narrowed to contribute to an applicable instructional design that promotes the development of individual teamwork KSAs for the target population. The development of these KSAs should increase their readiness to meet the teaming demands of today’s employers.

The SSS project personnel can facilitate the development of individual teamwork KSAs of low-income/first-generation college student personnel. These underrepresented students are often stereotyped as lacking social capital and for some areas of student employment may also be overlooked as critical members in student
employment teams. Individuals from the target population achieve valuable experiences and play a critical role in their familial teams.

With an engaging undergraduate experience, inclusive of interaction with faculty members and collaborative learning with their peers, structured opportunities to practice individual teamwork KSAs in a work setting or internship, these underrepresented students may be an asset that is needed to meet the global workforce needs and fill civic capacities in their home communities.
APPENDIX

INTERVIEW GUIDE
Interview Guide

This completion of this questionnaire helps to provide additional information about the experiences that may have had an impact on your individual teamwork skills.

Please complete the entire document and press the submit button. Your name will then be entered into the drawing for the airline gift certificate.

Thank you for your input.

1. UNT Identification: ___________

2. Major: _________________________

3. Cumulative Semester Hours: _________________________________________

4. What is your age?
   A. 18-20    B. 21-23    C. 31-40    D. 41-50    E. 50+

5. Date of Graduation: ____________________________________________

6. Please indicate your status when you first enrolled at UNT.
   A. Beginning Freshmen    B. Transferred

7. How many years did it take/will it have taken you to finish this degree (at UNT and other schools if a transfer student).
   A. 1 year    E. 5 years
   B. 2 years    F. 6 years
   C. 3 years    G. 7 or more years
   D. 4 years

8. Indicate the number of hours you are/were in your last semester at the University.
   A. 1-3    B. 4 – 6    C. 7-9    D. 10-12    E. 12+

9. Do you work/did you work while enrolled?
   A. Yes    B. No

10. If yes, how many hours a week do you work?
11. I live/lived . . .
   A. In a residence hall
   B. In the City of Denton
   C. Within 5 miles of Denton
   D. Within 10 miles of Denton
   E. Beyond 10 miles of Denton.

12. Are you/were you a member of a fraternity or sorority?
   A. Yes      B. No
   If you are a member, specify the length of your membership.
      A. Less than one year – 1 year
      B. 1-2 years
      C. 2-3 years
      D. 3-4 years
      E. 4+

13. Were you at any time been a member of a registered student organization?
   A. Yes      B. No
   If yes, in how many organizations have you been associated with per year while enrolled at the university?
      A. One       B. two       C. three     D. more than three

14. Did you participate in Intramurals?
   A. Yes      B. No
Let’s start by you telling me a little about yourself

Topic 1: Undergraduate Teamwork Experience

Please describe in detail your experience(s) working in a team
As an undergraduate

Topic 2. Academic and non-academic experiences

Further describe your experiences within the academic setting and non-academic settings.

Tell me more about each of the following areas of experiences:

a. An academic experience (related to a course or course assignment) or;

b. A non-academic university experience (student organizations, intramurals, etc.) or;

c. A non-university experience (work, volunteer, community organization, church, or other).

Topic 3: Associated Skills

From the skills illustrated tell me which you feel you gained from each of the experiences previously mentioned.

a. Conflict Resolution
b. Collaborative Problem Solving
c. Communication
d. Goal-setting
e. Task Coordination


