Redefining transfer student success:
Transfer capital and the Laanan-transfer students' questionnaire (L-TSQ) revisited

by

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DEDICATION

This dissertation is dedicated to my dad, Bob, and my mom, Barb, the greatest cheerleaders of all time. And to my beloved son, Holden, may you be inspired to live a life of learning, pursuing your dreams with confidence and determination. Finally, to my husband and best friend, Greg, for all you do for me and for everything you did to help make this possible. I can never truly thank you all for your love and support.

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ABSTRACT

Many researchers have examined the factors that affect student success in college, and some have generated conflicting results when exploring the role of various student characteristics on success in higher education settings (Baker & Velez, 1996). In addition, others have raised concerns about the lack of a strong reliance on theory in much of the student success research, pointing to a reliance on empirical data over theoretical models (Smart, Feldman & Ethington, 2006). The issue becomes even more complicated when one factors in community college transfer status (i.e., vertical transfer students, transferring from a 2-year to a 4-year institution) when attempting to determine the strongest predictors of success in college. The purpose of this study was to reexamine the Laanan-Transfer Students' Questionnaire, a survey designed to provide new ways of studying transfer students at 4-year institutions (Laanan, 1998, 2004). The addition of five new constructs to the questionnaire, in consideration of new research in the field, helped to further clarify transfer student capital as a theory and a construct. The construct of transfer student capital was further operationalized and its impact on transfer student success was explored. The results of this study provide a framework for the reexamination of the programs and offerings on campuses that are currently in place to promote the success of transfer students. Important practical implications for this investigation exist as institutional officials and student affairs leaders continue to strive to improve success for transfer students, a rapidly growing subset of the population at their institutions.

CHAPTER 1. INTRODUCTION

Throughout history, universities have existed as social organizations designed to provide teaching, research, and other services to the public (Scott, 2006). In essence, institutions strive to provide their students with a strong educational foundation as well as analytical and practical skills to ensure student success and contributions to the greater society. In theory, this institutional obligation was tied to the mission of service to all students; however historically, reality has not always fit with institutional goals. Students from diverse backgrounds, including transfer students, socioeconomically disadvantaged students, underprepared students, and students from various racial and ethnic groups often fall through the cracks of the very system designed to serve them. Students from these groups face many more challenges in their quest for success at the university than do "typical" or traditional students at those institutions.

Much of the research and theory on student success examines the factors that impact the typical student (Carini, Kuh, & Klein, 2006; Chickering & Gamson, 1987; Pascarella & Terenzini, 1991). At present, at many institutions across the nation, however, the typical student is typical no longer. The average student today is female, she is older than the traditional college age, many times she has a family to support, and she is most likely taking classes part time, and often at a community college (Baker & Velez, 1996). One finds a vast body of research on student success in college (Chickering & Gamson, 1987; Kuh, Kinzie, Schuh, & Whitt, 2005; Pascarella & Terenzini, 1991), but does one really know how well these 21st century students are performing? Although many institutions are doing very well in understanding and addressing the needs of all students, it is imperative that the factors that

most impact these students and their transition from the 2-year (or community college) to the 4-year institutional environment are examined.

These observations occur in parallel to a rapid increase in (a) the number of students attending higher education institutions and (b) the diversity of those students pursuing their postsecondary degrees (Brint, Proctor, Murphy, Turk-Bicakci, & Hanneman, 2009). As student bodies diversify, they bring with them various characteristics that have significant impact at the institutional level. What exactly does this shift look like? The number of white students graduating from high schools in the United States is steadily declining, whereas the numbers of students from non-white backgrounds are on the rise. The result is that sometime in the near future, probably just after the year 2020, minority students will outnumber white students on college campuses for the first time in history (Western Interstate Commission for Higher Education, 2008).

Clarification of the Problem

Over the past several decades, research examining the influence of certain background characteristics, such as socioeconomic status (SES), social class, race/ethnicity, and gender, among others, on student success in college has yielded mixed results. One argument is that students from low SES backgrounds have lower educational aspirations, persistence rates, and educational attainment than do their peers from high SES backgrounds prior to and during college (Walpole, 2003). Other researchers have indicated that community colleges with higher transfer rates to 4-year institutions have student populations of traditional age with higher SES (Wassmer, Moore & Shulock, 2004). Conversely, Baker

and Velez (1996) stressed the declining importance of socioeconomic advantage, highlighting academic ability as a predictor of retention and graduation. Along with the perceived removal of the financial barriers to attend college was the expanded outreach of the community colleges. Higher education was more affordable and more accessible as these colleges opened up within commuting distances of most people, regardless of SES (G.E. Thomas, Alexander, & Eckland, 1979).

The environment at present is much different than the landscape 30 years ago. More recently, community colleges still have had a wide outreach to their constituents (Cohen & Brawer, 2008) but enrollment is increasing at an exceptional rate as economic factors pressure students to take other considerations into account when planning for their college education. In addition, in some states, articulation agreements between 2- and 4-year institutions are making it exceedingly simple to transfer courses taken at a community college to a 4-year institution. A decrease in state support has increased tuition dramatically, placing a larger burden on students and their parents. Therefore, although some of the research from several decades ago may not find a relationship between SES, access and success, the state of the economy today is much more unforgiving and could have an impact on the modern college student in tough financial times.

Measuring the impact of these changes on the educational experience itself creates new challenges for those in higher education. These demographic shifts make it progressively more difficult to measure the influence of college on students. According to Pascarella and Terenzini (1998), the confluence of a number of factors, including demographic, institutional, economic, and technological forces, may alter the way one thinks

about what it means to go to college. They recognized the intricacy involved as institutions create and expand curricula to educate such a diverse group of students while acknowledging that it will be necessary to critically examine the various factors and conditions that represent and impact the college students of today. These authors indicated that much research has focused on the outcomes traditionally valued by the ideal of liberal education in a residential setting, but the research has failed to examine how these outcomes are impacted by factors such as student body diversity, including gender, race and ethnicity, familial status, transfer status, occupational status, and so on. Generalizability between groups may not be possible in these studies of traditional students. Longitudinal data collection is especially difficult as students move in and out of the educational setting (Pascarella & Terenzini, 1998). Therefore, the measurement of student success and the definition of success in general must be reexamined in the context of the contemporary educational experience.

Several factors determine student success in college, but eventually institutional leaders must choose specific measures to track student progress and success. Although using grades as an indicator of student development is sometimes questioned, grades allow institutions to use a concrete value to indicate success at the university. Kuh, Kinzie, Buckley, Bridges, and Hayek (2006) pointed out that grades are especially important in the first college year, and as discussed earlier, many students are choosing to take that first year of college at a different institution from the one from which they intend to receive their final degree. This presents some challenges measuring success for these students. Many transfer students experience a brief dip in their grade point average (GPA) when they first transfer to a 4-year institution (Townsend & Wilson, 2006). Otherwise known as "transfer shock"

(Hills, 1965), this phenomena can cause transfer students' GPA to be lower than that of nontransfer students. Although it would appear that transfer students are not as successful, they may do just as well as nontransfer students once they get over the initial "shock" of their transfer experience. It is necessary to be aware of the potential confounding variables when GPA is considered as a measure for transfer student success.

Cohort retention and graduation rates also are used often to measure success. By examining retention patterns from year to year, institutions can gain a good understanding of success rates by student type. How are these students retained from year to year? How many students from one cohort continue on to graduate within four years? Depending on the information gleaned institutions can adjust programming based on observed discrepancies between different groups of students. The examination of retention and graduation rates for transfer students is a much different process, however. Given that students transfer at various points in time during their academic career, it becomes challenging to create transfer student cohorts. Transfer students often move in and out of the institution at various points in time (an issue discussed in Chapter 2 in greater detail), making it difficult to calculate retention due to their high attrition rate. Attrition, a large contributor to student retention, has been found to increase with age and decrease with first-quarter GPA (Murtaugh, Burns, & Schuster, 1999). Transfer status may also be a contributing factor in attrition and retention, with many transfer students being of a nontraditional age upon enrollment. Research has shown that transfer students sometimes have a difficult time adjusting to the culture of the institution to which they transfer, leading to less engagement and poorer academic outcome (Townsend & Wilson, 2006). Ensuring continuing success for transfer students will involve

a process of monitoring grades and retention, among other indicators, as well as institutional initiatives specifically targeting transfer students as they transition into the new institution.

One other possible confounding argument in the examination of previous work on student success was proposed by Smart, Feldman, and Ethington (2006). These authors postulated that the current work on student success in higher education captures only some of the relationship between student background characteristics and student success in higher education given the fact that the conceptual models guiding modern work are either overly broad or not sufficiently developed. They indicated that, in an environment disconnected from the theoretical underpinnings of the problem, researchers are left to rely on the examination of observed data, irrespective of the theory behind it (e.g. Murtaugh et al., 1999). This argument underscores the necessity for a strong empirical study that is clearly tied to various theoretical models examining student success in higher education.

Although almost half of all students enrolled in public higher education are enrolled at community colleges (Cohen & Brawer 2008), little research has been conducted to understand and clarify the experiences of community college transfer students from a social and psychological perspective (Laanan, 2004). A variety of studies have examined what happens to transfer students when they transition to the 4-year college or university (Townsend & Wilson, 2006) but few have specifically proposed that the knowledge and skills that students gain regarding transfer will positively impact their transition to their transfer institution. The notion of transfer shock (Hills, 1965) explains the cognitive outcome of transfer student adjustment (measured by GPA), but it fails to explore the other potential mechanisms that are involved as a student moves from one institution to another

(Laanan, 2004). Using Astin's (1984) theory of student involvement and Pace's quality of effort concept (as cited in Laanan 2004) to provide a strong theoretical foundation, Laanan (1998, 2004) created an instrument designed to address the various other factors that impact successful transition from the community college to a 4-year college or university.

In the present study, the experiences of transfer students from community colleges at the University of Northern Iowa (UNI) were examined. A comprehensive university located in the Midwest, UNI boasts a broad curriculum encompassing a large variety of programs and degree offerings. The largest portion of the student body (22.3% in Fall 2010) is found in the College of Education (the rest are divided almost equally among the remaining colleges), and there are more females (58.5% in fall 2010) than males (UNI, 2010b). These statistics may not be surprising given UNI's roots as a state normal school and then a state teachers college. There has been some degree of negative opinion of community college transfer students on campus, with some faculty in certain departments and colleges having stronger opinions on the matter than have others (UNI, 2009). There has been active research on the part of a few departments to determine whether students taking their major core classes at a community college will perform as well as students taking the courses at UNI, causing some departments to require that certain courses be taken at UNI. With the projected demographic shifts in enrollment in higher education institutions, coupled with the changes in the number of high school graduates and the persistent record enrollments at community colleges across the state and the nation (Iowa Department of Education, 2011), UNI might not be fully appreciating what impact this population of students can have on the institution, especially if their needs are not sufficiently met. Conversely, it is also plausible

that community colleges are not adequately preparing students to succeed once they transfer to the university. It was the intent of this study to shed light on this problem and the potential implications for UNI, the region, and the state of Iowa.

Purpose of the Study

The purpose of the present study was to reexamine the Laanan-Transfer Students' Questionnaire (L-TSQ), a survey designed to provide new ways of studying transfer students at 4-year institutions (Laanan, 1998, 2004). In addition, the study examined the factors that have the greatest impact on transfer student success at 4-year institutions. The development and refinement of the L-TSQ addressed the need for a questionnaire that has a strong link to several theoretical models that impact student success in higher education. The L-TSQ was created in an effort to better understand the time of transition for transfer students with a particular focus on the social and psychological implications for the transfer student (Laanan, 1998, 2004). The present study examined the L-TSQ in an effort to refine the questionnaire in light of new research in the field. In addition, the revised instrument was used to examine the influence of various factors (student, institutional, and others) on transfer student transition and success at 4-year institutions. Finally, this study attempted to further operationalize the concept of *transfer student capital*, first coined by Laanan in 2004 (Pappano, 2006), by testing this construct to determine the effects of transfer student capital on community college students' success and their transition to the university. Transfer student capital refers to the process through which community college students acquire knowledge and skills necessary to navigate through the transfer process (Laanan, Starobin, & Eggleston, 2010). Laanan et al. (2010) had tested this construct initially, but the present

study further refined this construct, testing it in an additional setting to determine the generalizability of the construct to other institutions of higher education.

Research Questions

The following research questions were proposed for this study:

1. Can the concept of transfer student capital, defined as the accumulation of knowledge and skills to assist community college students in their successful transition to the 4-year university, a construct first suggested by Laanan (1998, 2004) and further conceptualized in Laanan et al. (2010), be operationalized?

2. Which factors (student background characteristics, community college factors, and UNI characteristics) best predict transfer student success (GPA, satisfaction, and coping skills)?

3. Is student success (GPA, satisfaction, and coping skills) influenced by financial variables?

4. Does negative stigma toward community college transfer students have an effect on successful transition to the transfer institution, as measured by GPA, satisfaction, and coping skills?

5. Do students involved in a mentoring relationship (with a faculty and/or staff member) at the community college perform better at the university (GPA, satisfaction, and coping skills) than students who have not been in a mentoring relationship?

6. Does faculty validation, or the presence and the quality of interactions between professors and students in the classroom setting at the community college, influence success (GPA, satisfaction, and coping skills) at the transfer institution?

7. Does staff validation, or the presence and the quality of interactions between staff members and students at the community college, influence success (GPA, satisfaction, and coping skills) at the transfer institution?

8. Does transfer student capital predict the success of community college transfer students (as measured by student GPA, satisfaction, and coping skills) at their transfer institution?

Significance of the Study

It is clear that measuring student success is a challenging process. Student success in higher education is influenced by a variety of factors, including institutional and student characteristics. Hagedorn (2005) provided several suggestions for measuring student success at the community college level. She pointed out that the typical measures of retention and persistence provide misleading evidence of success and lack of success, particularly at the community college. Retention at the community college is consistently lower than that of new freshmen at the university (Iowa Department of Education, 2011). In addition, the success of the community college student could mean that he or she will leave the institution (hence, will not be retained) and will enroll at a 4-year college or university. Therefore, using retention as a measure of student success might not be an accurate indicator. Hagedorn (2005) suggested alternatives for measuring success including the computation of a course completion ratio, implementing a tracking mechanism to measure system persistence (i.e.,

moving between community colleges within a larger district or system, not just institutional

persistence), and rethinking how graduation rates are calculated (Hagedorn, 2005). This

model could prove to be useful at 4-year colleges and universities as well, as students move

from one institution to another with greater frequency. In order to capture the true measure

of student success, it is essential to understand the multiple facets of the concept of student

success and how that outcome is affected by the various factors that presented here. More

importantly, institutional leaders need to develop a plan to collect data to measure student

progress and achievement at an institutional level in order to monitor this trend in course

selection and mode of delivery. Brint et al. (2009) identified higher education leaders as the

primary change agents during this revolution in higher education. They asserted that

administrators, institutional researchers, and faculty are most sensitive to the changing

student population and as a result are receptive to efforts that influence the education

requirements at their institutions.

Conceptual and Theoretical Framework

The conceptual and theoretical frameworks for the present study are detailed below.

The conceptual framework, or research paradigm, provides an explanation for how the

research questions for the present study were explored. In this framework, the researcher

attempts to identify various concepts that can be logically grouped together to study the

numerous factors that influence transfer student transition and success. The theoretical

framework details the established theories that were used to inform the selection of the

research questions and the conceptual framework (Creswell, 2009). Blending the various

conceptual and theoretical frameworks below allowed the researcher to propose the constructs that were examined in the present study.

Student Involvement Theory

For the present study, Astin's (1999) input–environment–outcomes (I–E–O) model was used to investigate how community college transfer students acquire the knowledge and skills necessary to navigate through the transfer process and to assist them in their transition to and success at the 4-year institution. This model highlights the interactivity between student background characteristics and the college environment, providing a broad context in which to measure student retention and success (Kelly, 1996). In Astin's (1999) student involvement theory, inputs are defined as the characteristics of the student at the time of entry to the institution; environment refers to the various programs, policies, faculty, peers, and educational experiences to which the student is exposed; and outcomes refer to the student's characteristics after exposure to the environment (Astin, 1993). Although previous studies have used Astin's (1993) model to look specifically at student retention and attrition (Kelly, 1996) by examining student experiences at the university, the present study examined the influence of several pre-college student characteristics; the students' experience in their educational environment at the community college, during their transition, and at their 4-year transfer institution and the impact of these on student success as measured by GPA, retention, and graduation.

Social Capital Theory

The constructs proposed for the present study have strong ties to various theories in education, sociology, and psychology, to name a few. Social capital theory, first proposed by Bourdieu (1986) and supported by the work of countless others (Adler & Kwon, 2002; Baker & Velez, 1996; G.E. Thomas et al., 1979) has been examined in a variety of circumstances throughout the literature. The concept of social capital refers to the presence of an institutionalized set of relationships, or membership in a particular group, that provides the members of such groups with an advantage over individuals not part of the group (Bourdieu, 1986). Bourdieu originally focused on the social and cultural components of capital, and to some extent economic factors, and how they intersect to advance the human experience. His concept is strongly tied to external influences that combine resources that are tied to social relationships or networks (Adler & Kwon, 2002). This theory has been used in a variety of fields and disciplines, from education to psychology to business. Organizational theorists have applied this theory to the operation of large corporations and businesses, utilizing the various components that can impact social capital, including social relationships, motivation, abilities, etc., to improve the function of the organization as a whole. For the present study, social capital was applied to understand the factors that impact student transition and success at 2-year and 4-year institutions of higher education.

Human Capital Theory

Human capital theory also was studied to expand upon the construct of transfer student capital (Laanan, Hardy, & Katsinas, 2006). Laanan et al. (2010) explained that

human capital theory helps to clarify the benefits of education. Human capital is defined as the "activities that influence future real income through the imbedding of resources in people" (Becker, 1962, p. 9). The authors suggested this notion could be used to examine the role of transfer student capital in the transition and academic success for students who transfer from a community college to a 4-year university. In particular, the present study proposed a construct that comprises the acquired knowledge of transfer students that benefits their transition process, including the information students receive from their academic advisor and at the organization level, such as the transfer process itself, transfer orientation, financial counseling, and the degree audit. It was hypothesized that students possessing this capital are more successful than are students who did not gain these skills during their time at the community college.

Interactionalist Theory

Faculty/staff validation is a new construct that was examined in the present study. The validation concept was first proposed by Rendón (1994, 2002), but recently was operationalized and measured by Barnett (2010). Barnett (2010) explained that validation is the set of interactions between students and faculty (and others in the campus community) that develop the self-confidence and self-efficacy of the student. Based on the work of Tinto (1993, as cited in Barnett, 2010), Barnett proposed that validation is a precursor to the integration that students must experience to impact student persistence in higher education as indicated by the interactionalist theory. More specifically, Barnett argued that, for transfer students in particular, the interactionalist theory does not hold up due to the nature of involvement of transfer students as whole. She indicated that the bulk of interactions that

transfer students have on campus is with the faculty members within the academic setting. Barnett went on to suggest that quality interaction and validation from faculty members helps transfer students to feel more integrated in their educational experience.

Organizational theory

The present study also sought to explore the role of organizational theory in transfer student success and transition to the 4-year institution. Berger and Braxton (1998) also examined social integration as a predictor of persistence in higher education, but they argued that the various ways students experience the organizational characteristics of a college or university plays a role in their social integration into the institution. They examined three organizational factors for their potential impact on student intent to persist: institutional communication, fairness in the enforcement of policies and rules, and the opportunity for participation in university governance activities. Berger and Braxton found that all three institutional attributes had a positive impact on the social integration of the student, affecting either peer relations or faculty relations. As a result of this research, and given the findings of other researchers investigating the role of organizational factors in higher education (Smart et al., 1996; Tierney, 1988), the present study proposed a construct related to the organizational function of the higher education institution.

Ecological Theory

Ecological theory as it applies to higher education relates to the whole student in the context of his or her environment. More specifically, it is concerned with the processes and conditions that influence the lifelong development process within the environment in which

the student lives (Bronfenbrenner, 1994). What motivates a student to succeed in school? A variety of factors within a student's personal environment must be examined to understand their full impact on student success. In the past, much of research involving ecological theory focused on nonacademic-related influences: family, social acquaintances, etc. According to Ogbu and Simons (1998), educators typically did not use ecological theory in developing strategies for student learning because of the influence of out-of-school factors that were not readily accessible for teachers. The authors argued that it may be necessary to enlist the support of parents and the community to ensure the success of at-risk student populations. Within the study of transfer students, it may be difficult to determine the influence of the role of parental and community support, but it is possible to measure student perceptions of these factors in their environment to determine the role of these factors in students' experiences in higher education.

Definition of Terms

Concurrently enrolled transfer: A student who enrolls in both a community college and a 4-year college at the same time (Hagedorn & Castro, 1999).

Double-dipping: Concurrent attendance at two institutions (de los Santos & Wright, 1990).

Horizontal (lateral) transfer: Students who begin their postsecondary education at one 4-year college/university and transfer to another 4-year college/university (McCormick, 2003).

Persistence: Involving more of an unmeasured factor that can play a role in student behavior, it is defined by factors that influence two people with broadly similar circumstances

to take different courses of action; these are primarily psychological but are likely to be influenced by factors that are more sociological in character (Yorke, 2004).

Retention: A concept important for institutional managers (not the least of which because of the implications for income streams) and for government and its agencies (which are concerned with matters relating to the return on the investment of public monies in higher education; Yorke, 2004), it can be thought of as a "supply-side" concept for understandable supply-side reasons. In an educational setting, it refers to whether or not a first-time full-time freshman student is still enrolled at the institution after three semesters, or in his or her sophomore year.

Reverse transfer: A student who begins at a 4-year college, transfers to a 2-year college, and then transfers back to a 4-year college (Townsend, 2002).

Summer sessioner (temporary transfer): A regularly enrolled student in a 4-year institution who enrolls in summer school at a community college with the intention of transferring the credits toward a degree program at the 4-year institution (Hagedorn & Castro, 1999).

Swirling: Back-and-forth enrollment among several 2-year and 4-year colleges rather than moving in a linear path from one community college to one 4-year college (de los Santos & Wright, 1990).

Undergraduate reverse transfer: A student with previous college credits from a 4-year institution who enrolls in a community college for the purpose of future transfer or vocational credits (Hagedorn & Castro, 1999).

Vertical transfer: A student who begins his or her postsecondary education at a 2-year

      (community college) and transfers to a 4-year college/university (Kirk-Kuwaye &

      Kirk-Kuwaye, 2007); the "traditional" definition of a transfer student.

Summary and Outline of Dissertation

The present study examined the needs of transfer students who transitioned from 2-year colleges to a 4-year institution with the administration of an instrument to transfer students at a public institution in the Midwest. The construct of transfer student capital was further operationalized and its impact on transfer student success explored. Important practical implications for this investigation exist as institutional officials and student affairs leaders continue to strive to improve success for transfer students, a rapidly growing subset of the population at their institutions. Chapter 2 provides a review of the literature on topics related to transfer student transition and success. Chapter 3 presents the methodology and research design of the study. Chapter 4 presents the results of the study. Finally, chapter 5 summarizes the results of the study and presents the discussion, conclusions, implications, and recommendations for future research, policy, and practice.

CHAPTER 2. LITERATURE REVIEW

Academic achievement in higher education has roots in several student background characteristics and precollege experiences (Kuh et al., 2006). Some of these factors are outside the realm of control at the university level as a student enters the institution, but all must be considered when evaluating the success of students as they advance at the institution (see Figure 2.1 for an outline of the factors). Factors such as transfer status, gender, race, ethnicity, and SES are fixed, but outreach at the secondary level and programming on campus can assist with preparatory and transitional issues with diverse groups of students. As one examines other precollege attributes, such as age and first-generation college student status, it is apparent that the priorities of students that fall into these groups are different than those of other, more traditional, students (Kuh et al., 2006). Tuition costs and convenience of course delivery are much larger considerations for students who may be working full time, raising a family, and attending school at the same time.

Traditionally, institutions have relied on seven categories to measure the characteristics of a good collegiate experience: student–faculty interaction, cooperation among students, active learning, prompt feedback, time on task, high expectations, and respect for diverse approaches to learning (Chickering & Gamson, 1987). Although these factors still resonate today, it can be difficult to measure these constructs as the student body becomes more and more diverse. Many of these principles were developed and tested with traditional students from majority groups. It is now known that different interventions and
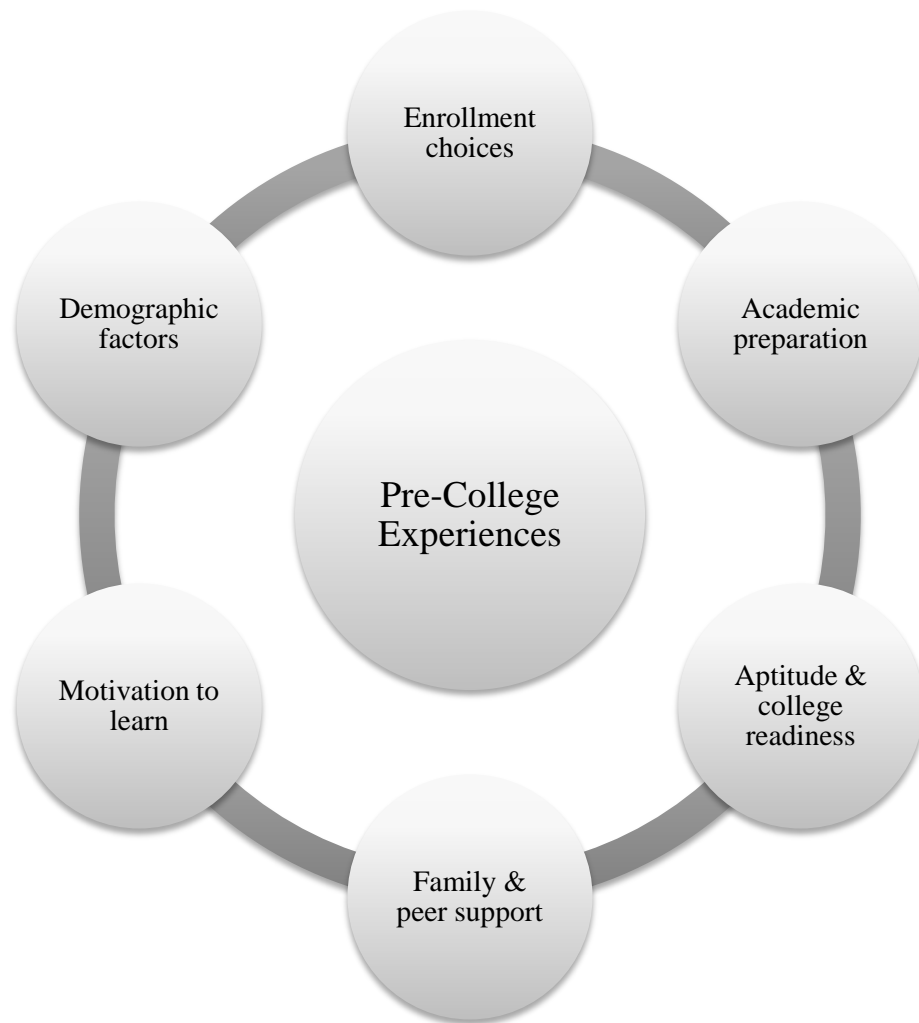
Figure 2.1. Factors influencing student success (Kuh et al., 2006).

programs work exceptionally well for some students groups, but fail to produce the desired

outcomes in other groups (Pascarella & Terenzini, 1998). As a result, it is imperative that

researchers continue to explore avenues to investigate the factors influencing transition,

achievement, and success for all types of students that are specific to their particular

background (including transfer status), needs, and abilities.

An important factor to consider when examining the impact of college on students is the institutional organization itself (i.e., 2-year community college versus 4-year institution). It is necessary to consider the role that the community college plays in educating students and preparing them for transfer to the 4-year institution. To completely understand this role, it is necessary to briefly examine the meaning of a liberal arts education. Hubbard (2001) defined a liberal education as two interrelated concepts: First, the quest for liberal knowledge is linked to the problems or mysteries in the world that individuals attempt to explain through further investigation, and secondly, liberal knowledge itself is theoretical; it is not about practical functions or ideas. Liberal learning is concerned with the solutions to problems about the workings of the world, the world in which one lives, and endeavors to understand, "but not a world we make" (Hubbard, 2001, p. 180). More simply put, the liberal arts are part of a greater liberal education, leading to further exploration and preparation for future study (McInerny, 1987). Hubbard (2001) divided the liberal arts into four general categories: the traditional liberal arts, the fine arts, the cultured knowledge of a subject, and the disciplines that endeavor to explain the workings of the world. He stated that a liberal education should include studies comprising all four of these components.

The early focus on liberal education is now in conflict with a necessity for more practical skills, which has resulted from the societal transformations that have occurred in the United States and the world as society has moved through the industrial revolution and into the knowledge revolution (or high-tech revolution). Rather than attempting to understand broad ideas and theories, students need to learn practical skills that are required for the employment positions of today. Students must know higher-order communication, problem-

solving, and reasoning skills (Grubb & Lazerson, 2005) that they may not immediately obtain in the pursuit of a liberal arts degree. The rapid globalization of the 21st century has also led to an internationalization of university missions, with students seeking skills that will help them to remain competitive in a global market (Scott, 2006). This movement from traditional liberal arts education toward professional programs at colleges and universities, which started at West Point in 1802 (Grubb & Lazerson, 2005), was further strengthened by the Morrill Act in 1862 and the establishment of the land grant universities. This change within higher education also has led to the expansion of many technical and professional programs at community colleges across the nation, leading to a large growth in community college enrollment over the past 30 years, and especially within the past 10 years.

To fully appreciate the change that has occurred in general education in the United States in the latter part of the 20th century, it is necessary to make a distinction between general education as a cultural phenomenon and liberal education as an organizational trend (Brint et al., 2009). In the early part of the 20th century, institutions such as Sarah Lawrence, Columbia, and the University of Minnesota had a renewed and intense commitment to providing a well-rounded education for their students, with a goal of an interdisciplinary understanding of the contemporary world around them (Brint et al., 2009). This model for education operates on the notion that a liberal education is much more than a compilation of course credits (Astin, 1999). Over time, this cultural concept of general understanding became increasingly tied to the breadth of the requirements at the institution (Brint et al., 2009) and became associated with curriculum planning, in general, at many institutions rather than being associated with the institutional and educational culture of the institution.

Eventually, as institutions grew and expanded, general education requirements adapted to suit the needs of the institution.

The professionalization of higher education has not only reduced the practicality and importance of a liberal education for some students, it has fundamentally changed the way other students look to complete these core liberal arts courses as they pursue their bachelor's degree. No longer is the path to a bachelor's degree as proscribed as it used to be. Students are choosing the institution they attend based on factors such as cost and convenience. In addition, the resurgence of practical arts/professional programs at the university within the past 30 years has greatly affected the organization of the university and academia as a whole (Brint, Riddle, Turk-Bicakci, & Levy, 2005). Although a liberal arts degree is still recognized as a superb foundation for many job opportunities, it does not provide training for specific employment positions (Goldenberg, 2001). Conversely, many students are placing a large emphasis on their professional training without truly understanding what it means to receive a liberal education. In a survey of business CEOs, although 37% of business leaders felt that professional programs tailored to specific trades was the best choice for students in the marketplace of today, most CEOs valued the long-term outcomes of college education over the practical skills learned in professional programs (Hersh, 1997). They felt those students with a broad general education were better prepared with the skills (e.g., critical-thinking and problem-solving skills) to help them succeed on a long and often varying career path.

With general education requirements (or core courses) making up approximately one-third of the undergraduate degree requirements (Brint et al., 2009), it is crucial to examine

the experiences that students have in these courses and the effect those experiences have on these students should they choose to take these courses at a community college. Pascarella and Terenzini (1991) pointed out that students in pursuit of a bachelor's degree are about 15% less likely to obtain the degree if they begin their postsecondary education at a community college rather than at a 4-year institution. At the same time, community college enrollment is increasing at an exceptional rate as economic factors pressure students to take other considerations into account when planning for their college education. In addition, articulation agreements between two- and 4-year institutions make it exceedingly simple to transfer core courses taken at a community college to the 4-year institution. Therefore, it is imperative to determine which programs and other experiences (both at the community college and at the university) have the greatest impact on student success.

Measuring Student Success

An important component in the measurement of the impact of college on students is the criteria for measuring and defining student success. According to Kuh et al. (2006), student success is defined as academic achievement; engagement in educationally purposeful activities; satisfaction; acquisition of desired knowledge, skills, and competencies; persistence; attainment of educational objectives; and postcollege performance. Tinto and Bean provided the major theoretical framework for understanding factors that have an impact on student success in college. Tinto's work provides a sociological perspective that recognizes the importance of academic integration and social integration in predicting student success and persistence (Kuh et al., 2006). He stressed that the institution needs to help with the integration process by facilitating peer group and faculty interaction with the

various programs and initiatives it supports (Wild & Ebbers, 2002). Bean's model comes

from an organizational standpoint: he indicated that student beliefs are influenced by their

experiences with the institution (Kuh et al., 2006). As one can imagine, given the variety of

characteristics that the student bodies at various institutions possess, the measurement of true

student success is convoluted in nature and completely dependent upon the features of the

students being measured. What constitutes success for one group of students may mean

something entirely different for another group of students.

Given the difficulty in measuring student success in nontraditional student

populations, careful consideration and attention must be made in the development of

instruments designed to assess the factors that contribute most to their academic progress.

Laanan (2004) detailed an extensive review of the literature that preceded the development

and design of the L-TSQ. He explained the theory involved in the creation of his transfer

student questionnaire, specifically focusing on Astin's (1984) theory of student involvement

and Pace's (1980, 1984, 1992, as cited in Laanan, 2004) concept of quality of effort.

According to Astin's (1984) theory of student involvement, many behavioral factors impact a

student's persistence in college. Involvement is the key component of a student's likelihood

of remaining in college. This theory explicitly recognizes the amount of psychological and

physical time and energy devoted by students as they pursue their academic studies (Astin,

1984). The extent to which students achieve certain goals is dependent on the effort that they

spend on the various activities to support goal achievement (Laanan, 2004). Laanan (2004)

explained that this theory typically has been used to gain a better understanding of the

persistence of traditional college students and explained the importance of applying this

theory to transfer students at 4-year institutions to determine if the same set of mediators holds for nontraditional students.

In addition to proposing the theory of student involvement, Laanan (2004) detailed the concept of quality of effort developed by Pace. This idea states that what a student gets out of college is dependent on both what the college does or does not do for the student and the extent and the quality of the effort that the student puts into his or her academic experience (Laanan, 2004). In other words, student success is a product of institutional inputs, such as orientation activities, advising services, and types of clubs and organizations as well as the energy that the student applies to his or her quest for knowledge and education. Laanan (2004) acknowledged that this examination of effort and engagement is important when examining the success of transfer students. Using the quality of effort concept as the basis for his instrument, Laanan (2004) sought to determine which student characteristics were crucial in impacting the quality of their educational experience. His instrument specifically addresses several factors that impact student success while seeking to determine, in particular, the quality of effort that these students put into their endeavors at the institution and how that impacts overall success. Laanan (2004) hypothesized that, consistent with Astin's (1999) theory of student involvement, social demographics, student experiences at the community college, and their experiences at the university would influence or explain a student's academic and social adjustment (Laanan, 2004). Involvement and engagement at the transfer institution are significant factors in student growth and development (Laanan, 2004). By assessing student involvement in the various experiences at the community college level, a better understanding of the factors that impact social and academic adjustment at students' 4-year transfer institution can be obtained (Laanan, 2004).

Examining the transition process in its entirety, including the community college experiences and the university perspective (in addition to the personal and background characteristics that impact student success) can provide a comprehensive look at this complex process. This suggests the importance of programming and institutional efforts designed to not only develop the student experience on campus but also improve the transition process for students from the community college to the 4-year institution.

Factors Impacting Success

This section includes an examination of the various factors that have been determined to impact student success in higher education. Examining these factors assists in cultivating an understanding of the complexity of the issue at hand while providing a robust rationale for the inclusion of many of the sections within the instrument used in the present study. An explanation of cultural capital, social capital, and ecological theory provides a strong knowledge base of the human influences on student behavior and success. An examination of organizational theory and the organizational contributions to college student success allows one to fully appreciate the influence that various institutional attributes have on student achievement. Exploring engagement on campus, and the notion of validation of experiences within the educational setting, also provides a good review of the classroom experiences that impact student accomplishments on campus. The introduction of the concept of transfer student capital intersects these factors, investigating the transfer student experience with a holistic approach. Finally, a discussion of the various types of transfer illustrates the complex nature of the transfer experience.

Cultural Capital

This section comprises an examination of the various factors that have been determined to impact student success in higher education. Examining these factors assists in cultivating an understanding of the complexity of the issue at hand while providing a robust rationale for the inclusion of many of the sections within the instrument used in the present study. An explanation of cultural capital, social capital, and ecological theory provides a strong knowledge base of the human influences on student behavior and success. An examination of organizational theory and the organizational contributions to college student success allows one to fully appreciate the influence that various institutional attributes have on student achievement. Exploring engagement on campus, and the notion of validation of experiences within the educational setting, also provides a good review of the classroom experiences that impact student accomplishments on campus. The introduction of the concept of transfer student capital intersects these factors, investigating the transfer student experience with a holistic approach. Finally, a discussion of the various types of transfer illustrates the complex nature of the transfer experience.

Traditionally, community college students have been a diverse group of students, many of whom come from lower socioeconomic backgrounds and with assorted racial and ethnic roots. It is essential that institutions address the needs of these students in a context that may not be typical for the majority of traditional students they serve, or they stand the very real chance of hindering the success and development of these students. Kingston (2001) argued that researchers have amassed an excess of factors classified as cultural capital that are designed to measure success without truly understanding the role that cultural capital

plays in student development and success. Kingston also contended that the very nature of

the educational system today rewards the cultural practices of the best students at the

exclusion of other, less elite students. Some habits, such as daily reading between a parent

and child during childhood, have direct implications on success in school and, ultimately,

success in higher education. Other habits could be completely ignored within the educational

context because they may not appear to have a strong influence on student success, when

they actually could be used as tools to expand the learning process and encourage student

learning (Center for Educational Policy and Analysis, 2003). Kingston stated that, although

some cultural practices actually assist all students in education, regardless of their cultural

background, it is important to appreciate all cultural practices within the educational setting

in order to gain a complete understanding of the cultural factors that influence success.

Therefore, the present study sought to gain a better understanding of the factors that impact

student success that could be defined within the cultural capital realm of student experiences.

Social Capital

A second form of capital that has a strong impact on student success is social capital.

Social capital refers to the presence of an institutionalized set of relationships or membership

in a particular group that provides the members of such groups with an advantage over

individuals not part of the group (Bourdieu, 1986). This notion can be linked to the idea of

support networks and social support that individuals experience as they move through

various stages throughout their lives. If the environment in which students live is supportive

of their desire to pursue higher education, they will have an advantage. Bourdieu also saw

social capital as a method to control certain groups for the benefit of other groups (Palmer &

Gasman, 2008). Palmer and Gasman (2008) argued that students can accrue social capital within their experiences and interactions on the college campus, thus elevating them to the level of the dominant group. Understanding this capital and measuring the factors that are most important to the accumulation of this capital is a central component of the present study.

Social capital at the institutional level can be formed with the development of mentoring relationships between students and faculty. In an article describing a study that examined the role of social capital in mentor/mentee relationships, Smith (2011) stated that the main purpose of an academic mentoring relationship is to provide students with the support and skill sets necessary to successfully move through the educational pipeline. Much like the relationship between a mentor and mentee, the relationship between the transfer student and the academic advisor or other staff member can facilitate a student's capital. The relationship(s) create information channels to assist the student in navigating the often-confusing transfer process. They provide students with an on-campus support system, and in the best case scenario, the cultural capital of the mentor is transferred to the mentee, thus improving the mentee's academic achievement and success (Smith, 2011).

The notion of social capital can be applied directly to the concept of transfer student capital. As previously stated, transfer student capital refers to the process by which community college students acquire knowledge and skills necessary to navigate through the transfer process (Laanan, 2010). Coleman (1990) indicated that a main component of social capital is the notion of creating norms and information channels. In the world of transfer students, this translates to their ability to understand the correct flow of information and to apply the information that they learn to their planning efforts as they transition from the

community college to the 4-year institution. Thus, the norms established for transfer students at their community college, and later at their transfer institution, influence their ability to succeed at the 4-year institution.

Organizational Influence

In addition to the cultural and social capital that a student builds at the community college, organizational attributes can influence the progression of the development of skill sets and the necessary knowledge to successfully transition to a 4-year institution. These attributes can include such factors as institution size and selectivity, but they also refer to organizational features such as campus decision-making opportunities, communication efforts, and campus rules and regulations (Berger & Braxton, 1998). One can look at these institutional factors in the form of an institutional habitus of sorts. L. Thomas (2002) defined institutional habitus as the influence of social and cultural capital on individual success, which is facilitated by various organizational attributes. Institutional policies and programming, by their very nature, must focus on the practices and beliefs of the majority if they are to reach the greatest number of students within the educational setting. This practice sometimes occurs, however, at the expense of the minority. Institutional leaders must prioritize course offerings and programmatic decisions with efficiency and cost in mind, and it is often the case that the values and mores of the dominant group are assumed to be advantageous for all students regardless of social or cultural background (L. Thomas, 2002).

Also important is student perception of these organizational attributes and their impact on student satisfaction with services and opportunities provided on campus in addition to actual student participation in these organizational features. Given the evidence

of lack of involvement of transfer students (Kuh et al., 2006), it may be more important to measure perceptions of these services rather than actual participation in these events. L. Thomas (2002) found that an institutional habitus that embraces the diverse backgrounds of all its students will be more likely to retain those students, particularly if the institution has mechanisms in place for assisting students with their transition to the university. Whether or not students perceive that the services available on campus meet their needs, based on their experiences and unique background characteristics, could potentially impact their overall transition and adjustment. Therefore, the present study included several factors designed to assess student perception of institutional support and commitment as it is related to student success.

Engagement Versus Validation

Another factor influencing student success once a student arrives at the institution is student engagement (Astin, 1999). Many of the precollege experiences mentioned earlier directly influence students' engagement in their educational experience. Transfer students as a whole do not achieve the engagement levels of traditional students for a variety of reasons, including the fact that many have full-time jobs, have families to support, and live off campus, making after-class engagement and involvement at their community college difficult, if not impossible. Once they arrive at their transfer institution, their reality is not much different. Kuh et al. (2006) found that community college transfer students who transferred later in their plan of study interacted less with faculty, participated in fewer enrichment activities, and gained less from college than did their peers who began and persisted at their original institution. They offer several explanations for these findings, but

ultimately this has direct implications for student success at the institution, as engagement is directly related to student GPA and, consequently, student success (Kuh et al., 2006).

Barnett (2010) proposed an alternative measure of engagement for community college transfer students. She argued that, given the nature of the community college student experience (employment, age, familial status, socioeconomic status, residency status, etc.), the bulk of the interactions that transfer students have are with the faculty members within the academic environment. Many of these students come to campus for class and leave immediately once their classes have finished in order to take care of their other responsibilities. Hence, they do not have the time or the opportunity to become involved with the extracurricular opportunities available to students with fewer responsibilities and commitments.

Given the traditional models of engagement and student success, this puts these students at a disadvantage from a measurement perspective, as what is typically used to assess success and engagement with traditional students will not come close to assessing the reality of the situation for this type of student. Instead, Barnett (2010) proposed a measure of validation introduced by Rendón (1994, 2002) wherein student involvement is examined within the context of the quality of interactions with their professors in the classroom setting. Rendón (1994) defined validation as interactions with students, originated by faculty and others in the campus community (including staff members), that develop self-worth and a belief in the student's ability to succeed academically (as cited in Barnett, 2011, p. 196). Barnett stated that measuring the impact of validation on student success (defined as intent to persist at the institution) is a more accurate predictor of student success with nontraditional

and underserved students than is student engagement and involvement within the social environment of the community college campus.

Ecological Influence

From an ecological perspective (Bronfenbrenner, 1994), the characteristics of the student's personal environment also play a large role in student adaptation and transition to a 4-year institution. Academic success is a function of both personal characteristics, such as mental ability, academic skills, motivation, and goals, and the characteristics of the environment, which can be conceptualized as a system of nested interdependent structures (Muuss,1996, as cited in Dennis, Phinney, & Chuateco, 2005, p. 224). Among these environmental factors is the influence of parental and peer support on student success. Dennis et al. (2005) proposed that peer support is a stronger predictor of college success than is familial support, particularly because peers provide support (i.e., formation of study groups, sharing of notes) that directly impacts college success, whereas parents, especially parents of first-generation students, lack the background and experience with these types of activities.

As community college is a route often taken by first-generation students, it is plausible that peer support also impacts transition to a 4-year institution with greater strength than parental/familial support does. However, the fact that transfer students are not as engaged with their peers as traditional students are presents an interesting paradox. On the one hand, institutional officials fully appreciate the impact of peer groups, often creating conditions to foster and cultivate relationships both in and out of the classroom. Conversely, given the responsibilities of transfer students, who often are older, most likely working at a

job in addition to their academic pursuits, and sometime raising children while attending

school, the types of programming encouraged by intuitions may not appeal to the very

students they are designed to serve.

As research shows that peer support is an important aspect of successful adjustment

to university life, efforts focused at helping transfer student engage and interact with their

peer network may provide valuable tools for students as they transition to a 4-year institution.

Understanding the needs of different types of student groups and planning accordingly will

provide opportunity for involvement among peer groups. Looking at Barnett's (2010) work

as a model, it is important to consider engagement strategies within the classroom itself given

that, as she indicated, the bulk of the time that transfer students spend on the college campus

is classroom time. Observing student development from an ecological perspective, both peer

and faculty interactions within the classroom could have a strong impact on student success.

Transfer Student Capital

Transfer student capital is a construct that includes a variety of factors that are

involved in successful transition to and achievement at the 4-year institution. More

specifically, it is defined as the process by which community college students acquire

knowledge and skills necessary to navigate through the transfer process (Laanan et al., 2010).

As students move through the various institutional processes and procedures, the experiences

they have and the tools they gain assist them in their transition process. It has been

hypothesized that the more transfer capital a student acquires, the easier the transition to the

4-year institution. Interactions with community college personnel, including faculty

members and instructors, academic advisors, financial aid office representatives, and other

student services staff, potentially add to this capital, providing students with an advantage as they move to the 4-year higher education environment. Transfer student capital encompasses the factors that impact this process, examining various components of the university transfer process including students' understanding of transfer articulation agreements, admission requirements of transfer institutions, and awareness of resources available to them as transfer students at the institution.

Building upon the work of Laanan (2004) and Laanan et al. (2010), the present study added several items to the transfer student capital construct. Exploring the literature on transfer students, it was evident that a variety of other factors could be helpful in building students' transfer student capital. By incorporating constructs and theories from a variety of sources, it was possible to further operationalize the notion of transfer student capital, creating a robust measure that would then predict factors that have the greatest impact on student transition and success from the 2-year to the 4-year institution. The literature map that guides this study can be found in Figure 2.2. The organization of the map illustrates not only the theoretical model that guides this study but also the various constructs proposed and the literature that supports the inclusion of such constructs. Integrating student background characteristics with input from both the community college environment and the 4-year organization, and including the transfer student capital construct provides evidence of the factors that have the strongest predictive capability in terms of transfer student transition and success at a 4-year institution.

Input

Ecological theory
- Bronfenbrenner (1994)
- Ogbu & Simons (1998)

Organizational Theory
- Berger & Braxton (1998)
- Smart (1996)
- Tierney (1988)

Adjustment process
- Kashdan (2004)
- Ryff (1989)
- Ryff & Keyes (1995)
- Smith & Wertlieb (2005)

Pre-college characteristics
- Walpole (2003)
- WICHE (2008)

Prominent education theory
- Chickering & Gamson (1987)
- Kuh, Kinzie, Schuh & Whitt (2005)
- Pascarella & Terenzini (1991, 1998)

E1: Community College

Academics/ General Courses
- Brint, Proctor, Murphy, Turk-Bicakci, & Hanneman (2009)
- Osborne (1997)

Faculty Interaction/ Validation
- Sidelinger & Booth-Butterfield (2010)
- Barnett (2010)

Transfer process
- Berger & Maleny (2003)
- Eggleston & Laanan (2001)
- Hagedorn, Moon, Cypers, Maxwell, & Lester (2006)
- Wild & Ebbers (2002)

Student Factors

Perceptions of the academic environment
- Smith & Wertlieb (2005)

Student expectations
- Townsend & Wilson (2006)

Learning and Study
- Sidelinger & Booth-Butterfield (2010)

Diversity
- Interactions / conversations with diverse students
- Kuh, Kinzie, Schuh & Whitt (2005)

Student Involvement
- Astin (1999)
- Sidelinger & Booth-Butterfield (2010)

Transfer Capital

Advising/ transfer services at CC
- Laanan, Starobin, & Eggleston (2010)

Admission Partnership Program

Transfer student capital
- Laanan, Starobin, & Eggleston (2010)

Social Capital
- Adler & Kwon (2002)
- Astin (1999)
- Baker & Velez (1996)
- Bourdieu (1986)
- Dougherty & Kienzl (2006)
- Thomas, Alexander & Eckland (1979)

E2: UNI

Engaged Learning
- Kuh, Kinzie, Schuh & Whitt (2005)

Sense of Purpose/ Intent/Career Goals/ Reasons for transfering
- Bers & Smith (1991)

Peer support/ satisfaction
- Dennis, Phinney & Chuateco (2005)

Self efficacy/ motivation
- Cote (1997)
- Dennis, Phinney & Chuateco (2005)

Student Involvement
- Astin (1999)

Satisfaction with experience at UNI
- Kuh, Kinzie, Schuh & Whitt (2005)

Output

Retention
- Hagedorn (2005)
- Herzog (2005)

GPA Graduation

Figure 2.2. Literature map for the present study

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Types of Transfer

In the study of the transfer phenomenon, it is sometimes difficult to paint a comprehensive picture of the transfer process across students. One transfer student following his or her educational pursuits could have (and most likely would have) a completely different path than a similar student at the exact same point in his or her educational career. More often than not, the transfer process is disorganized, often twisting back and forth in a less than predictable fashion (Hagedorn, Moon, Cypers, Maxwell, & Lester, 2006). Universities traditionally embrace students who move in a linear fashion, moving from one institution to another on a seamless path. In order to truly understand the complexity of university transfer, one must examine the various types of transfer that are seen in the landscape of higher education today.

Vertical Versus Horizontal Transfer

A student who moves directly from a 2-year community college to a 4-year college or university is recognized as a vertical transfer student (Kirk-Kuwaye & Kirk-Kuwaye, 2007). According to Kirk-Kuwaye and Kirk-Kuwaye (2007), most of the policies and procedures in place at 4-year institutions are designed to specifically address the needs of this type of transfer student. The authors detailed an large body of work that has focused on this type of transfer student while also pointing out that this practice has helped to spawn a variety of partnerships and cooperative agreements between 2-year and 4-year institutions based on this focus. Horizontal (lateral) transfer students differ from vertical transfer students in that, although these students also move in a linear progression from one institution to the next, they move from one 4-year institution to another 4-year college or university. Although

these students would be expected to have fewer issues with transition because of their prior experience at a 4-year institution, they often have a harder time engaging on campus and seem to perform at or below the level of their vertical transfer counterparts (Kirk-Kuwaye & Kirk-Kuwaye, 2007).

Reverse Transfer

Reverse transfer students make up good a portion of the transfer students on college campuses today. Townsend and Dever (1999) identified two common types of reverse transfer students. They labelled one group undergraduate reverse transfer students and the other group postbaccalaureate reverse transfer students. Hagedorn and Castro (1999) further explored the model of reverse transfer, defining undergraduate reverse transfers as students with credits from a 4-year college or university who choose to reverse their course by enrolling at a 2-year community college after they have attended the 4-year school. A subset of reverse transfer is the "summer sessioner." This type of student attends a 4-year college or university but enrolls at a community college over the summer to take additional courses to apply toward his or her degree program (Hagedorn & Castro, 1999). The authors noted that reverse transfer also can occur after a student has obtained his or her bachelor's degree. In this situation, students may work for a short time in their degree field and choose to enroll in a program of study in a vocational or technical program to gain new skills or certifications (Hagedorn & Castro, 1999). Obviously, the needs of these students can vary widely, creating challenges on campuses regardless of institution type.

Townsend and Dever (1999) discussed the implications, particularly for the community college, of accepting reverse transfer students. They stated that, given that the

mission of the community college is to serve students who would not have been admitted to the 4-year college or university, it somewhat goes against the community colleges' mission to accept students who previously had been enrolled at a 4-year institution. They indicated that students fitting into the category of those students needing a second chance (after poor performance and sometimes suspension from the university) are more in line with the goals and missions of the community college. However, as most community colleges pledge to serve the community as a whole, both types of students typically are admitted to the community college (Townsend & Dever, 1999).

The reverse transfer experience appears to have positive benefits for some transfer students. Townsend and Dever (1999) indicated that undergraduate reverse transfer students show an increase in their university GPA after their transfer to the community college. In addition, they stated that undergraduate reverse transfer students also record an improvement in their university GPA after they transfer back from the community college. The authors suggested that a good understanding of both community college experiences and university experiences is essential to completely understand the root causes for this phenomenon. The present study included a section on both types of experiences in an effort to assess the impact of both types of experiences on student success at the university.

Swirling

Even as many students transfer from one institution type to the next (e.g., moving from a 2-year community college to a 4-year university) to obtain their degree, another group of students attends multiple institutions, often at multiple points in time. Rather than progressing through the institutions in a sequential manner, these students choose to enroll in

a "back-and-forth" pattern, attending one institution for one term, moving to a second institution the next term, and then transferring back to the original institution in the next academic term (McCormick, 2003). This phenomenon has been termed "swirling." Although this definition appears widespread within the literature, some have attempted to clarify this definition a bit further, stating that a student needs to have attended at least three institutions prior to graduation to be grouped in the swirling category (de los Santos & Wright, 1990). All agree that the back-and-forth attendance pattern is the hallmark of this type of student.

According to McCormick (2003), in an effort to increase enrollment at their schools, many institutions have sought to monopolize on stop-out students and nonmatriculated students, thus perpetuating the swirling pattern. Institutions specifically target these students with programs created precisely to address their needs and thus creating this swirling behavior. McCormick (2003) stated that there are many reasons that these students may choose to attend institutions in this manner, among these a desire to accelerate their progression through their program, to test out an institution to determine if it suits their needs, and to expand the list of courses from which to choose. Institutions generate schedules and program offerings to appeal to these students, enabling this type of attendance behavior without fully investigating the impact that this attendance pattern has on student success.

This swirling behavior makes it very difficult for institutions to (a) track students as they move from campus to campus and (b) measure the success and progress of these students. The definition of a first year student becomes a bit blurry and the continuity of support programs and curricula in general is disrupted (Borden, 2004). Many institutions

struggle to accommodate this type of student when the assessment of learning gains and outcomes is essentially impossible given the variety of institutions the student has attended. Other institutions are promoting consolidated enrollment, allowing students to take a portion of their courses at one institution but permitting the bulk of their credits to come from two or more different institutions (McCormick, 2003). These institutions are propagating this behavior, creating partnerships between community colleges and universities whereby students are concurrently enrolled at both institutions, thus creating a new version of dual enrollment (Bontrager, Clemesten, & Watts, 2005).

Double Dipping

Students also engage in double dipping, which is concurrent enrollment at two institutions (McCormick, 2003). In the case of double dipping, a student could be taking a full load of courses at one institution but supplementing his or her course experiences by adding one or two more at another college or university. If a student is having difficulty in a particular subject or course, that individual could take part in this process, choosing to take one of those courses at an institution that is known to be less difficult or not as challenging as the other and transferring that course back to his or her first institution at the completion of the term. Again, this behavior creates difficulty for institutional officials seeking to create an environment conducive to student learning and success. In addition, measuring the success and progress rates of these students can prove to be an extremely daunting task. Without the presence of detailed transcript analyses (see Hagedorn, Cypers, & Lester, 2008) the full impact of this behavior may not be completely understood.

Rationale for Survey Revision

Given the environment in higher education today, the present study came at an opportune time. The initial rationale for the present study can be traced to Laanan et al. (2010) and their appeal for future studies to examine various aspects that impact the accretion of transfer student capital. More specifically, these authors put particular focus on student knowledge of transfer policy, their understanding of the available financial aid to transfer, and other factors and programming that could potentially support students in their transition to a 4-year institution. The present study added several items to specifically address these factors in light of contemporary research in the field related to transfer student transition and success.

The variety of transfer types detailed in this chapter demonstrates that the nature of transfer is extremely complex. These behaviors and patterns are also confounded by the various background characteristics that transfer students possess. With this information in mind, it is clear that traditional measures of success would not be adequate for the groups of students who do not follow a linear path to degree completion. A typical measure of persistence or time to degree to indicate the success of a student looks extremely different based upon an individual student and that individual's transfer behavior. For this reason, it is vital to understand the factors that impact the transfer process, including experiences at the community college, the factors that impact student transition, and the experiences and opportunities that can best optimize student success at a 4-year college or university. The present study examined transfer student success using a more creative approach in defining student success. In this manner, it was possible to define student success apart from the more

traditional measures that colleges and universities have used in the past (such as student persistence and retention). By adding various factors to assess the socioemotional and affective outcomes of transition, rather than taking a purely academic measure of success, a more complete understanding of the transfer transition process was obtained.

Summary

This chapter detailed the body of research surrounding the transition and adaptation of transfer students in higher education. The chapter highlighted the work that informed the decision making for the present study, guiding the selection of the variables to be included in a predictive model of student success. The present study added several items (and constructs) to the L-TSQ, addressing the calls for future studies to measure the impact of transfer articulation agreements, financial aid available to transfer, and the negative stigma of transfer, on top of the other factors that most impact transfer student degree attainment. By combining items directly related to human capital theory, organizational theory, and ecological theory, the present study contributes a better understanding of the complex nature of the time of transition for community college transfer students. Finally, an examination of the various types of transfer behavior provided a rationale for using less traditional measures of student success to examine the transition process and success for community college transfer students to 4-year institutions.

CHAPTER 3. METHODOLOGY

The present study examined the L-TSQ, an instrument designed to assess the needs of community college transfer students who transition to 4-year institutions. According to Laanan (2004), the L-TSQ is an improvement upon previous instruments because it measures the complex adjustment process of transfer students rather than focusing on academic success alone for these students. The purpose of this study was twofold: (a) to refine the items on the questionnaire in light of new research in the field and (b) to add to the body of research that has examined the transitional issues that transfer students face during the course of their schooling. After initial refinement of the L-TSQ, the survey was administered to a group of transfer students at a midsized comprehensive university in the Midwest (UNI). Subsequent to the collection of data, the results were analyzed to examine the psychometric properties of the revised instrument. The results of this study have the potential to have a significant impact on the research related to transfer student success with the operationalization of the notion of transfer student capital and the examination of the effect of this capital on transfer students in addition to assessing the issues that most effect community college transfer to a 4-year university.

The original L-TSQ is a 301-item instrument that was designed to measure transfer students' noncognitive or affective traits in addition to other aspects of the students' environment in an effort to predict success at the 4-year institution (Laanan, 1998). Using the College Student Experience Questionnaire (CSEQ) developed by Pace (1980, 1984, 1992, as cited by Laanan, 2004) as a model, Laanan (2004) divided the L-TSQ into three sections: (a) social demographics, (b) community college experiences, and (c) university

experiences. Using an exploratory factor analysis, Laanan (2004) created 20 factors

representing attitudes and behaviors of transfer students, the community college

environment, and the 4-year institution environment. The instrument was retested and

further refined more recently, reducing the number of items to 133 (Laanan et al., 2010; see

Appendix A for a list of all questions). The present study examined the factors involved in

the creation of the L-TSQ and, using current research, updated the survey items, creating new

factors and constructs related to these revisions. More specifically, the present study

examined the literature related to the environment at community colleges and the

socialization process of students once they arrive at 4-year institutions to determine if any

new constructs should be added to the instrument. After this review of the literature, an

additional 73 questions (see Appendix B) were added to the L-TSQ for a total of 206 items

on the questionnaire (see Appendix C for the final version of the questionnaire).

Laanan (2004) already had done extensive work to ensure the reliability and validity

of his instrument. His efforts ranged in scope from conducting simple reliability analyses on

the composite variables to checking for internal consistency of the instrument. In addition,

Laanan (2004) conducted a pilot study prior to the administration of the L-TSQ to measure

the validity of the questionnaire. Upon the development of the L-TSQ, the instrument was

field tested at a large, urban public research university in southern California. Laanan (1998,

2004) collected data from approximately 700 students who transferred to the institution from

64 community colleges between 1994 and 1995. The data were collected retrospectively

from former community college students, allowing future researchers to develop research

designs that employ a longitudinal perspective that can be tested using various designs and

applications (Laanan, 2004). Given Laanan's (2004) extensive attention to the sound

creation of the instrument, the present study sought only to confirm the consistency of the instrument and the new constructs that were created.

The revisions of the current instrument necessitated additional testing to ensure validity and reliability of the instrument. First, the revised survey was evaluated by 5 experts in the field for their feedback and critique of the revised measures to evaluate the construct validity (the extent to which an instrument measures all aspects of the conceptual theory the instrument is intending to measure; Grimm & Yarnold, 2000) of the proposed additions to the L-TSQ. After the experts' suggested changes were implemented, the revised instrument was then field tested with a small group of students at UNI. Finally, the refined instrument was used to collect data from a group of transfer students at UNI to examine the various factors affecting the successful transition and academic success of transfer students at the 4-year institution.

Research Questions

The following research questions were used to guide this study:

1. Can the concept of transfer student capital, defined as the accumulation of knowledge and skills to assist community college students in their successful transition to the 4-year university, a construct first suggested by Laanan (1998, 2004) and further conceptualized in Laanan et al. (2010), be operationalized?

2. Which factors (student background characteristics, community college factors, and UNI characteristics) best predict transfer student success (GPA, satisfaction, and coping skills)?

3. Is student success (GPA, satisfaction, and coping skills) influenced by financial variables?

4. Does negative stigma toward community college transfer students have an effect on successful transition to the transfer institution, as measured by GPA, satisfaction, and coping skills?

5. Do students involved in a mentoring relationship (with a faculty and/or staff member) at the community college perform better at the university (GPA, satisfaction, and coping skills) than students who have not been in a mentoring relationship?

6. Does faculty validation, or the presence and the quality of interactions between professors and students in the classroom setting at the community college, influence success (GPA, satisfaction, and coping skills) at the transfer institution?

7. Does staff validation, or the presence and the quality of interactions between staff members and students at the community college, influence success (GPA, satisfaction, and coping skills) at the transfer institution?

8. Does transfer student capital predict the success of community college transfer students (as measured by student GPA, satisfaction, and coping skills) at their transfer institution?

Research Design

This study was conducted in four phases: Phase 1, the examination of relevant literature to determine if existing constructs should be modified or if additional questions/constructs should be added to the L-TSQ; Phase 2, the vetting of the instrument

with 5 nationally known experts in the fields of community college research and higher education; Phase 3, a pilot survey administration to 42 students to test the psychometric properties of the revised instrument; and Phase 4 the administration of the revised survey to a different sample of 1,598 transfer students at UNI (see Figure 3.1 for an illustration of this process).

The expert panel consisted of 5 individuals: Frankie Santos-Laanan, creator of the L-TSQ and the PI's major professor; Stephen Handel (College Board); Trudy Bers (Oakton Community College); Christine Keller (APLU); and David Hardy (University of Alabama). Frankie Santos-Laanan, Interim Director of the Center for Excellence in Science, Mathematics, and Engineering Education and associate professor in the Department of Educational Leadership and Policy Studies at Iowa State University, is extremely active in research involving the community college, with his work recognized by many within higher education as critical to the understanding of community college transfer students. Stephen Handel is the Executive Director of Higher Education Relationship Development and Community College Initiatives at The College Board. Dr. Handel has a thorough understanding of the factors impacting community college students at the national level. Trudy Bers is the Executive Director of Research, Curriculum and Planning at Oakton Community College. Dr. Bers has an extensive history with community college research; focusing much of her work on understanding learning gains at the community college and the college choice process. Christine Keller is the Director of Research and Policy Analysis at the Association of Public Land-grant Universities and the Executive Director at the Voluntary System of Accountability. Dr. Keller specializes in the design and development of

models for tracking student progress and success in postsecondary education at the national

level. Finally, David Hardy is the Associate Dean for Research and Service and an associate

professor in higher education at the University of Alabama. Dr. Hardy focuses his research

on various financial, administrative, faculty, and student issues at the community college.

During Phase 3, 9 transfer students participated in the survey after the proposed

changes to the survey instrument were reviewed by the expert panel. Informed consent was

obtained by students agreeing to a consent statement at the beginning of the survey and

completing the questionnaire and submitting it to the PI online. After the analysis of Phase 3

data collection was complete, a few minor revisions were made. All revisions were then sent

to the Institutional Review Board at Iowa State University (see Appendix D) for final

approval before Phase 4 began. Once these revisions were approved, the revised L-TSQ was

completed by 319 community college transfer students at UNI.
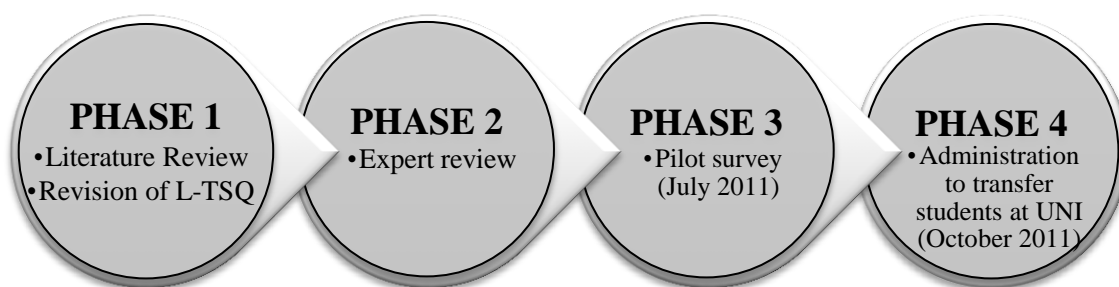

PHASE 1
•Literature Review
•Revision of L-TSQ

PHASE 2
•Expert review

PHASE 3
•Pilot survey (July 2011)

PHASE 4
•Administration to transfer students at UNI (October 2011)

Figure 3.1. Phased research design

The revised L-TSQ was administered to 1,598 transfer students at UNI who entered the university as transfer students in Fall 2009, Spring 2010, Summer 2010, Fall 2010, or Spring 2011 (excluding the 9 participants from Phase 3). Participants were invited via e-mail to participate. The surveys were administered in web format to the students in October 2011. A total of 319 community college transfer students completed the survey in its entirety. This study utilized an online survey tool created for use at UNI that intersects directly with the student information system. All students were sent an e-mail informing them about the study and directing them to the link to the survey (see Appendix E). The link then took them to the UNI online survey tool, where the individuals had to log on with their institutional identification credentials (CatID) and agree to the confidentiality statement prior to beginning the survey. Individuals were then sent reminder e-mails three times during the course of the survey administration (one every week until the survey period closed). Students were given 5 weeks to complete the survey. Individuals could choose to opt out of the survey at any time without penalty. Students were also reminded of the survey in the online newsletter sent to students on a weekly basis. At the close of the survey administration period, the survey responses were merged with demographic data from the Office of the Registrar and then completely de-identified. The PI did not at any time have access to the survey responses when they were linked to student identifying information.

Incentives were used to encourage participation in the present study. Students completing the survey within the first 48 hours after the survey period began were entered into a drawing to win one gift certificate to an online retailer worth $100. Any student completing the survey at any time during the administration period was then entered into a drawing for 1 of 30 gift certificates worth $20 to the same online retailer. Funds for the gift

certificates were provided by the Office of Community College Research and Policy at Iowa State University. If a student did not respond within the allotted time to claim a prize, an alternate was selected.

Confidentiality of respondents was consistently maintained. It was impossible to connect survey responses to an individual. Results were presented to the PI in aggregate form only. Using data analysis tools, the results were parsed by selected demographics; however, results were not displayed if the sorting reduced the results to 5 or fewer respondents. The data were stored on an Oracle secure server and transmitted using SSL encryption over the web. Access to the data could occur only through a password-protected desktop computer to which only the PI had access.

Hypotheses

Several of the research questions in the present study did not demonstrate the need for the creation of a hypothesis; however there were some hypotheses that could be derived based on the remaining research questions:

1. The concept of transfer student capital can be operationalized and measured.

2. Transfer student capital affects the success rates of community college transfer students as measured by university GPA, student satisfaction, and student coping at UNI, whereby students with greater capital demonstrate higher rates of success than do students lacking transfer student capital.

3. Students who feel that their ideas and feelings are validated by a faculty or staff member at their 2-year college will have greater success at the university (measured

by university GPA, student satisfaction, and student coping at UNI) than will students

who do not have validating experiences at their 2-year college.

4. A quality faculty/student mentoring relationship at the community college has a direct

   relationship to transfer student success at their transfer institution (measured by

   university GPA, student satisfaction, and student coping at UNI).

5. Negative stigma regarding transfer students at a 4-year university negatively impacts

   the adaption to and success of transfer students at the 4-year transfer institution

   (measured by university GPA, student satisfaction, and student coping at UNI**).**

Theoretical Constructs

To develop additional questions to add to the L-TSQ, an extensive literature review

was conducted to examine the research related to transfer student transition and success that

had been conducted since the creation of the original L-TSQ. Once this review was

conducted, it was apparent that the survey would benefit from the addition of several new

items related to the following concepts:(a) faculty mentoring, (b) faculty validation, (c) staff

validation, (d) the accumulation of transfer capital, (e) financial variables, (f) peer

interactions, (g) stigma of transfer, (h) motivation, (i) organizational impact, (j) coping, and

(k) social support. Each of these items was selected after a thorough review of the relevant

research and theory in higher education and beyond. As shown in Figure 3.2, the majority of

proposed constructs are linked directly to a prominent theory in the literature. After the

collection of data related to these concepts, the responses were added to the items from the

original TSQ to determine if the original constructs would be supported in a new

environment and to create several new constructs with the addition of the revised questions.

Every attempt was made to use existing scales of measurement for these constructs whenever

possible, however it was not possible to find a scale to precisely measure all items. In these

cases, the researcher designed questions to directly assess the concept being examined.

Principal components analysis and confirmatory factor analysis were used to understand the

relationship between items and to create the variable constructs.

Construct	Theory
Faculty mentoring	• Social Capital Theory (Bourdieu, 1986)
Faculty/staff validation	• Interactionalist Theory (Tinto, 1993) • Validation Construct (Rendón, 1994, 2002)
Transfer student capital	• Human Captial Theory (Becker, 1993)
Financial variables	• Ecological Theory (Bronfenbrenner, 1994; Ogbu & Simons, 1998) • Social Capital Theory (Bourdieu, 1986)
Peer interactions	• Student Invovlement Theory (Astin, 1999)
Social support	• Social Capital Theory (Bourdieu, 1986)
Motivation	• Ecological Theory (Bronfenbrenner, 1994; Ogbu & Simons, 1998) • Quality of Effort (Pace, 1980, 1984, 1992)
Organizational impact	• Organizational Theory (Berger & Braxton, 1998; Smart, 1996; Tierney, 1988)

Figure 3.2. Connection between proposed constructs and relevant theory.

Validation

Expanding upon the validation research by Rendón (1994) and adding to the research

conducted by Barnett (2010), the present study included a section on faculty validation

experiences and also added a construct related to staff validation. Barnett stated that, given

that the majority of interactions that community college students have during the course of

their studies are with faculty at the community college as part of their classroom-based

experiences, it makes sense to include faculty-related experiences when examining student success or, in Barnett's study, intent to persist. The present study added to the notion of the importance of faculty validation by including a measurement of the validation from staff members as well. Staff members from various offices on campus, including academic advising, admissions, financial aid, etc., have the potential to build the transfer student capital that may be predictive of greater success upon transfer. In an effort to provide additional data to norm the work of Barnett, it was decided that the validation construct created by Barnett from Rendón's (1994) validation research would be used in its original form; however the questions would be asked of students from both a faculty and staff perspective to better understand the role that both faculty and staff play in student success.

Coping and Social Support

An institutional departure study conducted through a series of surveys administered to first-time freshmen who did not persist into their sophomore year at UNI asked students their major and minor reasons for not returning to the institution. Of the potential reasons listed ($N = 41$), 60% of students indicated that personal and transition issues were a major factor in their decision to leave the university. In addition, another 40% of students listed family as a major reason for nonpersistence (Iowa Board of Regents, 2011). Given this information, a section on two psychosocial factors that could contribute to student success was added to the instrument: social support (parental and peer) and student coping skills. Here, students were asked to complete the student coping scales of SCOPE, an instrument designed to measure student coping ability (Struthers, Perry, & Menec, 2000) In addition, they were asked to respond to a series of questions created by the present study's PI.

Transfer Student Capital

The notion of transfer student capital was first measured by Laanan (2004) and further conceptualized by Laanan et al. (2010). Transfer student capital refers to how community college students accumulate knowledge, such as understanding credit transfer agreements between colleges, grade requirements for admission into a desired major, and course prerequisites, in order to negotiate the transfer process (Laanan et al., 2010). The authors hypothesized that the more transfer student capital students gain, the more successful they will be with their transition to their 4-year transfer institution. The present study tested this hypothesis but also added several items to further refine the concept of transfer student capital.

Laanan et al. (2010) provided several insights for future research in the area of transfer student capital. In particular, they mentioned assessing transfer students' prior knowledge of numerous factors including financial aid available to transfer. To address this issue, in the present study students were asked several questions about their knowledge of financial aid available to students, not only while they were at their community college, but also once they enrolled at the 4-year institution. It was hypothesized that prior knowledge of financial aid would positively impact student success, as measured by GPA, academic adjustment, and coping at UNI.

Laanan et al. (2010) also recommended that transfer student stigma at the transfer institution be studied in greater depth. As previously mentioned, this problem is anecdotally apparent at UNI. Therefore, in the present study the impact of negative stigma on transfer student success also was examined. Students were asked to indicate their perception of how

they were welcomed and received by faculty members and by their peers at UNI upon their enrollment from the community college. It was hypothesized that a negative stigma regarding the position of transfer students on campus would have a negative influence on transfer student success.

Setting

This study was conducted at UNI, a mid-sized comprehensive university located in the Midwest. UNI is a public institution serving a student body of approximately 13,000. Of these students, the vast majority (88.2%) are undergraduate students. The bulk of the students (90.7%) are residents of Iowa, 5.6% of the student body identified as out-of-state students, and 3.6% identified as international students. Transfer students account for just over one-third (36.5%) of all new students at UNI (UNI, 2010b). Of these students, 72.8% are from 2-year public colleges within Iowa (UNI, 2010a).

Population and Sample

For the present study students were contacted at two different points in time, one for the initial pilot study and the other for the follow-up data collection using the revised L-TSQ. After the revision of the L-TSQ, 42 students were contacted in July 2011 and asked to complete the revised instrument in an effort to measure reliability of the revised instrument. A total of 9 students comprised the pilot study sample. Upon testing of the instrument, the final L-TSQ (with revisions; see Appendix C) was administered to a sample of 1,598 UNI transfer students in the Fall semester of 2011. Students who entered UNI as transfer students in Fall 2009, Spring 2010, Summer 2010, Fall 2010, or Spring 2011 were invited to participate in the survey. A total of 319 community college transfer students responded to

the final survey. The transfer students for the present study were derived from student data

generated by the Office of the Registrar at UNI. Upon identifying the target population,

participants were sent via e-mail a cover letter (see Appendix E) along with a link to the

survey instrument. Students who responded to the survey within the first 2 days were entered

into a drawing for a $100 gift card to an online retailer. In addition, students completing the

survey at any time during the administration period were entered into a drawing for 1 of 30

gift cards to the same online retailer worth $20 each. The survey was administered via the

UNI online survey tool. The survey tool was created for use at the university and resides

within the student information system on campus. Students were sent a link to the survey,

which directed them to the online survey tool site. Once inside the site, the students were

required to click on a link in their announcements section to be taken to the survey

instrument. Use of the campus survey tool allowed for the direct linkage of student

demographic information to survey responses. Thus the need to ask background questions in

the survey itself was eliminated.

Reliability and Validity

An essential step in the development of new measures or constructs is testing the

reliability and the validity of these scales. Cronbach and Meehl (as cited in Clark & Watson,

1995, p. 310) stated that a researcher must include three steps in the development of a new

scale: (a) link a set of theoretical concepts to the proposed items, (b) create ways to measure

the proposed constructs, and (c) test the relationship(s) between the scales and the obtained

results. They stressed the importance of a strong tie to theory in the development of any new

scale of measurement. As seen in Appendix B**,** the proposed additions to the L-TSQ have

ties to several theoretical concepts and frameworks. The presence of a pilot study and then a

follow-up administration to transfer students at UNI was intended to aid the PI in collecting

data regarding the reliability and validity of the instrument.

Additions to the L-TSQ

After a thorough review of the literature, 11 areas of focus emerged from the body of

research concerning the measurement of student success and transition in higher education

that were not included in the original L-TSQ instrument: (a) faculty mentoring, (b) faculty

validation, (c) staff validation, (d) the accumulation of transfer capital, (e) financial variables,

(f) peer interactions, (g) stigma of transfer, (h) motivation, (i) organizational impact, (j)

coping, and (k) social support. As suggested by Clark and Watson (1995), a larger pool of

questions was created than the PI believed was needed to aid in the development of

constructs related to the areas of focus. The intent with this step was to include items that

were correlated and also to incorporate items that may be found to be completely unrelated as

a way to test the strength of the construct being measured. It was also imperative to be

mindful of the wording of new questions (Clark & Watson, 1995) and use simple and

forthright text. All new questions were measured using a Likert-type scale. See Appendix B

for a complete list of the new items.

Study Variables

Dependent Variables

The dependent variables for the present study were UNI GPA, student satisfaction

with academic experiences and advising, and student ability to cope with problems. Two

derived constructs were used as dependent variables in the present study: (a) student

satisfaction at the university: academic experience and advising, answered on a 4-point scale

ranging from 1 (*very dissatisfied*) to 4 (*very satisfied*) and (b) student coping, answered on a

4-point scale ranging from 1 (*disagree strongly*) to 4 (*agree strongly*). These constructs were

chosen not only for their predictive ability when it comes to student success, but also due to

the understanding of their effects within the literature on student success.

Independent Variables

A large number of independent variables were analyzed in the present study. Careful

attention was given to the size of the sample when selecting the number of independent

variables to include in the regression analyses. According to Howell (1997), correlation

estimates obtained in a regression model are directly related to the size of the sample and the

number of predictors. Howell recommended that there should be at minimum 10

observations for every predictor. The independent variables were structured into four

different categories, or blocks. The first category comprised various student characteristics,

including gender, age, race/ethnicity, paternal educational attainment, parental income, and

associate's degree completion. The second category included community college factors,

containing constructs related to student experiences with general courses at the community

college and to their experiences with faculty at the community college. A third block

addressed the influence of the constructs of transfer student capital, which included the

following constructs: faculty mentoring, faculty validation, staff validation, financial

variables, academic counseling experiences, faculty interaction, coping style, and perceptions

of the transfer process. The fourth category included factors particular to UNI including

course learning, experiences with faculty, transfer student stigma, peer support/social support, sense of purpose and student motivation, and overall perceptions of UNI. See Figure 3.3 for an illustration of the conceptual model guiding the study and for a list of the dependent and independent variables.

Data Analysis

The data were coded as shown in Appendix F and then analyzed using IBM SPSS Statistics 19 and SPSS AMOS 19. A range of tests were performed on the proposed additions to the L-TSQ to test the content validity and reliability of the revised L-TSQ and to examine the relationships between the independent variables and the dependent variables. Principal components analysis, along with CFA, was employed to test the constructs that emerged within the study variables. Once the factors were derived, hierarchical linear multiple regression was used to examine the effect of the independent constructs on the dependent variables.

In preparation for the regression analysis, an exploratory factor analysis was conducted to determine which patterns and relationships existed among the newly proposed measures. A descriptive look at the variables was conducted first to identify any outliers within the data and to observe the variability within the responses. As Clark and Watson (1995) suggested, if a test of the homogeneity of variance reveals that there are items within the scale that are answered in the same manner by the majority of the respondents, this sends little if any information regarding the proposed construct. It is desirable to include items that have a wide range of variability among respondents. A factor analysis was conducted (with

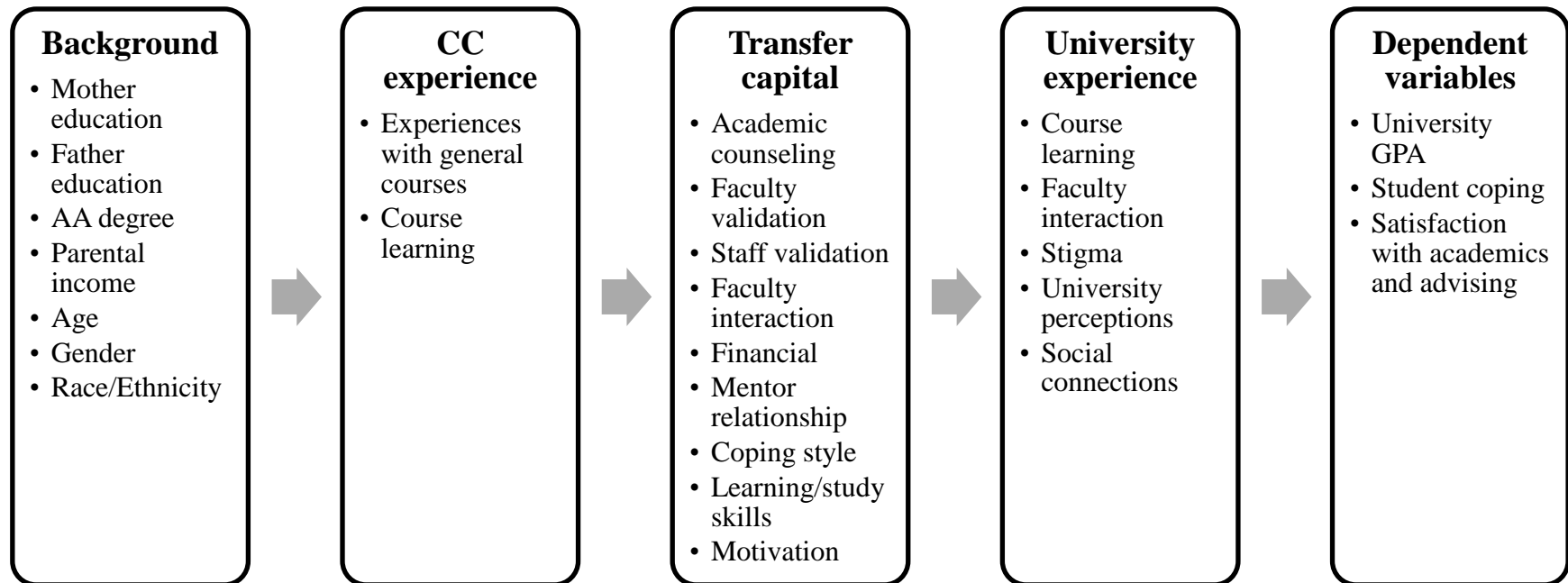| **Background**	**CC experience**	**Transfer capital**	**University experience**	**Dependent variables**
• Mother education • Father education • AA degree • Parental income • Age • Gender • Race/Ethnicity	• Experiences with general courses • Course learning	• Academic counseling • Faculty validation • Staff validation • Faculty interaction • Financial • Mentor relationship • Coping style • Learning/study skills • Motivation	• Course learning • Faculty interaction • Stigma • University perceptions • Social connections	• University GPA • Student coping • Satisfaction with academics and advising

Figure 3.3. Conceptual model guiding the study.

varimax rotation), creating a range of constructs from the proposed questions. Inter-item correlations were examined at the onset of the factor analysis with the expectation that items to be included in the same construct would be moderately correlated at the very minimum. The Cronbach's alpha coefficients were then measured to determine the internal consistency of the proposed constructs. Constructs with alpha scores at or above .70 were created. Factors with eigenvalues greater than 1.00 were included. The results of the factor analysis provided the factors that were loaded into the regression model to determine the predictive capability of the independent variables on the student success measures. As previously stated, an extensive descriptive analysis was performed prior to the exploratory factor analysis to investigate the distribution of each variable before conducting the factor analysis. Recoding of variables occurred in an effort to correct for the reverse scaling of some items.

After the constructs derived from the exploratory factor analysis were examined for proper factor loadings and alpha reliabilities, a CFA was conducted to examine the relationships between the research hypotheses and the latent constructs that were formed from the exploratory analysis. A latent construct, or hypothetical construct, is a variable that cannot be directly observed or measured. Instead, it is inferred from a set of other variable that are observed within the data (Grimm & Yarnold, 2000). In this study, 26 latent constructs were created, thus necessitating the need to confirm the reliability of these hypothesized variables. At the completion of the CFA, all but two of these constructs held, supporting their inclusion in the revised L-TSQ. After Phase 4 (collection of data from the sample of UNI transfer students in the Fall 2011 semester) was complete, a variety of descriptive and multivariate statistics were used to analyze the data. Again, all identifiers were removed and the data were reported in aggregate form.

Prior to the multiple regression analysis, an extensive descriptive analysis was again performed to make certain that the variables to be included in the model were appropriate and suitable for the analysis. Each variable was examined to ensure a normal distribution of that variable using descriptive analyses and scatter plots. Next, the variables were compared with one another to examine the collinearity of the variables. Although it was expected that the independent variables would be somewhat correlated, it was important to confirm that the independent variables were not extremely highly correlated with one another. If the independent variables were too closely related, they were deleted from the model. In addition, the correlations between the dependent variables and the independent variables were examined, with any items correlated over $r = .70$ removed from the analysis. Chapter 4 provides a discussion of this in greater detail. After the final exploration of the variables, a hierarchical multiple regression analysis was conducted to determine the predictors of transfer student success at the university. Variables were entered into four blocks of the regression model. The order of the independent variables in these blocks was dictated by the theoretical framework from Astin's (1999) I–E–O model.

Ethical Considerations

An application for approval of research involving human subjects was submitted to the Institutional Review Board at Iowa State University in March 2011. The application was approved in May 2011 (see Appendix D). The pilot study was then conducted in July 2011. Because the revisions to the instrument following the pilot study were minor (no major changes in content or topic), an addendum to the IRB application was not required (see Appendix D). The review board at UNI granted approval of the study given the approval by

the Iowa State University board (see Appendix D). Upon approval of the application, the

pilot student and subsequent data collected for the research study were collected via an online

survey tool. All responses to the surveys were kept completely confidential. The survey

responses were merged with demographic data from the Office of the Registrar and then

completely de-identified. The PI did not at any time have access to the survey responses

when they were linked to student identifying information. All data from the analysis is

presented in aggregate form only. In addition, to protect the confidentiality of the

respondents and make identification of individual subjects extremely difficult if not

impossible, when reporting of group data is necessary, information is not reported if group

numbers were less than five per group.

Delimitations

The present study was delimited to community college transfer students who had

enrolled at the university in Fall 2009, Spring 2010, Summer 2010, Fall 2010, or Spring

2011. Given the nature of the questionnaire and the fact that students were asked to recall

their past experiences at the community college it was necessary to delimit the study to

include only those students who had recently transferred to the university. The goal of this

delimitation was to limit the errors that could occur when students were asked to recall their

experiences at the community college. The study was could also be delimited to the state of

Iowa and the comprehensive university, although previous examination of this instrument has

been conducted in other states and at other types of institutions. It would be important that

results of this study not be generalized to other states or other institution types without

additional testing of the instrument within these settings.

Limitations

One limitation of the present study was the size of the pilot study sample. Given the size of the transfer student population at UNI, it was necessary to derive a sample of transfer students from the past four semesters to obtain sufficient responses. It would have been detrimental to sample a large number of these students for the pilot study, because it would have effectively reduced the size of the study sample. Although it is recommended that pilot study samples be around 300 subjects on average (Clark & Waston, 1995), the PI decided it was more important to have a large study sample.

Although students were selected for this study based on certain criteria (including date of entry to UNI and the requirement that a community college be the transfer sending institution), a coding issue resulted in the inclusion of several students who had transferred from 4-year institutions. The bulk of students transferring to UNI were community college transfer students (72.8%), with the remainder horizontal transfers, and some were included in this study. Their responses were carefully examined and considered. However the concept of transfer student capital at present pertains to students moving from a 2-year to a 4-year institution, and the data was parsed to fit this definition. This coding issue also impacted overall response rate, which was another limitation of this study. Despite multiple recruiting methods and the use of survey incentives, the response rate for the present study (20.0%) is a limitation. After excluding the horizontal transfer students who were inadvertently included in this study, the response rate was further reduced. However, the error in coding community college transfer students could potentially impact the true response rate, given that it was impossible to determine how many students out of the 1,598 students in the original

population were true community college transfer students. The response rate would mostly like increase if the PI were able to remove all horizontal transfer students from the original population. Non-response bias must be taken into consideration when examining the results of this study. Given that the PI did not have access to identifying information of the sample, it was not possible to examine the characteristics of non-responders to determine if and how they differed from the respondents in the present study.

An additional limitation of the present study was the lack of access to community college GPA. The collection of demographic information of respondents was limited to data from the Office of the Registrar that was merged with the survey responses and then completely de-identified. Prior to the implementation of this study, it was not possible to collect transfer GPA with the campus survey tool. Given that the PI did not at any time have access to the survey responses when they were linked to student identifying information it was impossible to go back to obtain this information about respondents. It will be important for future studies to include this variable in their analyses to examine the impact of community college GPA on student success. In addition, the PI was unable to access the number of credits that the students had brought to the university from the community college. This is another limitation that should be addressed in future studies to obtain the most complete understanding of the student transfer experience. Along with the inability to examine the number of credits, it was not possible to determine how long a respondent had been enrolled at the university. Some of the effects seen in the present study might be explained by how long a student had been enrolled at the university. Obviously a student who has been at the university for two or three semesters will report a different experience than a student who is in his or her first semester at the institution. It will be important to add

this variable to future studies in an effort to create a more robust measure of community college transfer student success.

Another limitation of the study was the composition of the sample of transfer students. Because the majority of students at UNI are Caucasian/White from the state of Iowa, it may be difficult to generalize the results of this study to campuses with greater student body racial and ethnic diversity. Typically, though, community college transfer students represent a variety of perspectives, as evidenced by the examination of the characteristics of the transfer students as compared to the native students, which could compensate for some of the lack of diversity of the overall population. Finally, the cross-sectional design of the current study presented limitations not found in longitudinal designs. Given the nature of the present study, it was not possible to follow students over time. Examining students with a cohort approach is effective, but it does not allow for the examination of changes in responses over time.

Summary

The details of the methodological design for the present study were described in this chapter. The research questions, research design, and study hypotheses were clarified. The theoretical constructs, setting, population and sample, and reliability and validity were explained. In addition, the proposed L-TSQ additions, study variables, data analysis plan, ethical considerations, and limitations and delimitations of the study were highlighted.

CHAPTER 4. RESULTS

Overview

This chapter provides a synopsis of the quantitative results of the study. The chapter is divided into seven sections. The first section provides an examination of the results of the pilot study conducted in July 2011. The next section describes the sample selection and the derivation of the final sample for the present study. The third section presents a descriptive analysis of the demographic characteristics of the students in the sample. The following section examines the experiences that community college transfer students had at the community college that were similar to experiences they had at their transfer university. The fifth section discusses the results of several regression models that were applied to the present study. The sixth section examines the results of the study as delineated by the research questions that were chosen to guide the framework of the study. Finally, the last section provides a summary of the chapter.

Pilot Study

Given that several new questions, and potential constructs, were added the L-TSQ prior to the final administration of the instrument, a pilot study was conducted in July 2011 to test the validity of the survey. A small group of community college transfer students ($N = 42$) who first enrolled at UNI in Spring 2011 were invited to participate in the pilot study. These students were sent an e-mail invitation to participate in the survey, which was administered via an online survey tool within the campus information system. The use of this structure allowed for the collection of demographic variables directly from the mainframe system, reducing the potential for errors. Given that the pilot study was

conducted during the summer, it was anticipated that it would difficult to get an adequate pilot sample size. In an attempt to alleviate this problem, students were asked to indicate if they would be willing to participate in a focus group to discuss the survey and to determine if the students had any difficulty with the survey mechanics. Unfortunately, none of the students eligible for the pilot study were interested in participating in a focus group. Of the 42 students invited to participate in the survey, 9 completed the questionnaire, for a response rate of 21.4%. Although this is an acceptable response rate given the initial size of the pilot study sample, it did not allow for a great deal of comparison because it is difficult to make meaningful conclusions based on the responses of only nine students. It did allow for the testing of the face validity of the revised L-TSQ.

Prior to the administration of the pilot study, it was the PI's intent to examine the pilot study data to determine if the constructs held when compared to the original L-TSQ instrument and to examine the properties of the new items added to the questionnaire. However, given the small number of respondents who completed the survey, it was determined that a meaningful and statistically sound analysis could not be performed. Aside from a few comments from students regarding the speed of the survey tool itself, it was decided to forgo the rest of the analysis of the pilot study data and to move on to the implementation of the full survey. A few minor edits, mainly grammatical revisions, were made to the final version of the revised L-TSQ before it was administered to the final group of transfer students (less the students from the pilot study).

Descriptive Analysis of Overall Sample

As stated in Chapter 3, transfer students account for just over one third (36.5%) of all new students at UNI (UNI, 2010b). Of these students, 72.8% are from 2-year public colleges within Iowa (UNI, 2010a). By examining admission semester to the university, transfer students were selected for inclusion in this study based on the amount of time they had been at the university. Of all transfer students attending UNI in the Fall 2011 semester, 1,598 community college transfer students who had first enrolled at the university at one of five possible entry points (Fall 2009, Spring 2010, Summer 2010, Fall 2010, or Spring 2011) were selected to participate in this study. Out of these students, a total of 511 students responded to the present study. This resulted in an initial response rate of 32.0%. An analysis of partial completers of the survey revealed that 147 respondents (28.8%) did not complete enough of the survey to warrant their inclusion in the sample. Given the length of the instrument, it was not surprising that some respondents dropped out of the survey before they had completed the entire questionnaire. Therefore, these individuals were removed from the sample, leaving 364 surveys completed in the final sample for a response rate of 22.8%.

Although all students who were invited to participate in the study were coded as 2-year (community college) transfer students in the university information system, upon further examination it was revealed that 45 students out of the 364 in the sample (12.4%) were really transfer students from other 4-year institutions. After more exploration, it was determined that the conversion to a new student information system in Fall 2011 resulted in some coding errors that impacted the transfer type listed in the student records. The system was set up to

record the most recent transfer credit and transfer sending institution. For example, students who had completed 50 hours at a 4-year university but also took a summer course at a community college prior to transfer to UNI were listed as a community college transfer student, as the summer course was more recent than the courses taken at the transfer university. An analysis of all transfer credits that each respondent had obtained was conducted to determine if a student qualified as a true vertical transfer (a community college transfer student) or whether a student was considered a horizontal transfer student—an individual who moved between two 4-year institutions. It was determined that 45 of the respondents were horizontal transfer students. Although all of these students had some community college credit, the bulk of their transfer credits were earned at a 4-year institution. Hence, these students were removed from the sample. Once 4-year transfer students were eliminated, the final sample size was 319 students, all of whom were true community college transfer students. Although including horizontal transfer students was not desired when the population was selected, it did allow for a useful comparison of responses between community college and the 45 4-year transfer students on some of the questions in the survey.

Descriptive Analysis of Study Results

Community college transfer students and 4-year transfer students were compared to determine if any differences existed between the two groups. An independent samples t test revealed that community college transfer students were significantly more likely to experience a dip in grades during their first semester at the university than were their 4-year transfer peers, $F(1, 340) = 19.22$, $p < .001$. In addition, 4-year transfers had a significantly

higher GPA once at UNI than did the community college transfers, $F(1, 340) = 15.76$, $p <$ .01. Although this is not entirely surprising, it is important to interpret this result with caution, as a test of simple main effects is prone to conceptual errors, and one cannot be absolutely certain without further examination. Table 4.1 provides a complete description.

A descriptive analysis was performed to gain a better understanding of the characteristics of the respondents. Two-thirds (66.6%) of the community college transfer students arrived at UNI with an associate's degree. Upon comparison of the 2-year and 4-year transfer students, no significant differences were found between the two groups in degree aspirations. The majority of students, 85.2% of 2-year transfer students and 80.0% of 4-year transfer students, intended to complete a bachelor's degree at UNI. In addition, over one third (36.7%) of community college transfer students intended to complete a master's degree at an institution in the future (12.9% at UNI). This compares to 47.7% of 4-year transfer students anticipating the attainment of a master's degree at some point in the future.

Although the contrast between 2-year and 4-year transfer students was informative, the intent of the present study was to examine the traits of 2-year (community college) transfer students. Therefore, the background characteristics of community college transfer students were examined in detail. The bulk of the community college transfer students fell within the traditional age category for transfer students. That is, 77.7% of these respondents were among those in the 21 to 24 year age range and an additional 10.2% indicated they were between the ages of 18 and 20 years. At UNI, transfer students are considered to be of traditional age if they are under the age of 25 (K. Woods, personal communication,

Table 4.1

T *Test Examining Community College and 4-Year University Transfer Students*

Variable	CC M (SD)	UNI M (SD)	t	df	p	95% CI
Gender	1.63 (0.48)	1.62 (0.49)	0.11	357	.914	–0.14, 0.16
Cumulative GPA	3.16 (0.47)	3.31 (0.37)	–2.00	348	.047*	–0.30, –0.00
Race/ethnicity	1.41 (0.09)	1.09 (0.09)	1.39	354	.165	–0.13, 0.76
Age	22.70 (0.23)	22.60 (0.86)	0.17	357	.866	–1.24, 1.48
Adjustment to academic standards at UNI	2.93 (0.87)	3.30 (0.83)	–2.64	334	.009*	–0.65, –0.10
Experienced GPA dip during first semester at UNI	2.47 (0.07)	1.67 (0.13)	4.24	341	.000**	0.42, 1.16
UNI GPA	3.08 (0.61)	3.38 (0.42)	–3.02	348	.003*	–0.48, –0.10
Highest degree planned at UNI	1.18 (0.03)	1.20 (0.06)	–0.29	353	.770	–0.17, 0.13
Highest degree planned at any institution	1.75 (1.98)	0.06 (0.14)	–1.36	355	.175	–0.55, 0.10

*$p < .01$. **$p < .001$.

December 6, 2011). The majority of respondents were female (63.1%), which is slightly

more than the proportion of women on campus overall (58.5%; UNI, 2010b). Most of the

respondents (92.0%) were White, with a higher percentage (6.4%) of community college

transfer students indicating they were from a racial/ethnic minority group than the

respondents from 4-year institutions (2.2%). The majority of respondents (65.6%) were

seniors, 27.7% of respondents were of junior class standing, and 4.8% were classified as

sophomores. Six students (1.9% of respondents) were classified as graduate students. Given

that the survey was retrospective in nature, and considering that the same amount of time had

passed, on average, for these students compared to the remaining respondents, it was

concluded that these students could remain in the sample without having detrimental effects on the data. A large number (72.2%) of transfer students reported that they lived off campus. As discussed in Chapter 2, much of the engagement in which a transfer student is involved occurs within the classroom setting, as many transfer students live off campus and cannot engage in the traditional sense with the campus community (Barnett, 2010). See Table 4.2 for a complete examination of the background characteristics of the present study sample.

Major and college information was collected to examine in which major fields of study the transfer students within this sample were enrolled. Although college information was more complete ($n = 292$), the organization of majors at the university is rather broad, thus not a great deal of knowledge regarding major categories was gained using just college designation alone (see Table 4.2 for a complete breakdown of respondents by college). For example, 30.7% of the respondents were from the College of Humanities, Arts, and Sciences. The college, a recent merger of the former College of Humanities and Fine Arts and the College of Natural Sciences, consists of a vast array of majors, ranging from theater and music to computer science and biology. Over half of the respondents (53.7%) came from the College of Education (27.9%) and the College of Social and Behavioral Sciences (25.8%). The remainder of students was reported as being in the College of Business Administration (15.7%). Therefore, reporting based upon college classification alone was not sufficiently descriptive for the present study. The bulk of the respondents (96.9%) indicated that they had declared a major at UNI. An examination of the system records, however, showed that only 49.2% had a recorded major within the system. The information regarding major choice in the provided major code for these respondents can be inspected, but it is important to be aware that this accounts for less than half of the students who had responded to the present

Table 4.2

Background Characteristics of Respondents by Transfer Type

Variable	Community college transfer		University transfer	
	n	%	*n*	%
Transfer type	319	87.6	45	12.4
Age				
18 to 20	32	10.2	9	20.0
21 to 24	244	77.7	32	71.1
25 to 29	19	6.1	2	4.4
30 to 39	15	4.8	0	0
40 to 54	4	1.3	2	4.4
Gender				
Male	116	36.9	17	37.8
Female	198	63.1	28	62.2
Race/ethnicity				
White	286	92.0	44	97.8
African American/Black	2	0.6	0	0
Asian	3	1.0	0	0
Hispanic	10	3.2	1	2.2
Two or more races	5	1.6	0	0
No response/unknown	5	1.6	0	0
Residency				
Iowa resident	306	97.5	45	100.0
Out-of-state student	8	2.8	0	0
College				
Business Administration	45	15.7	13	33.3
Education	80	27.9	13	33.3
Humanities, Arts and Sciences	88	30.7	16	41.0
Social and Behavioral Sciences	74	25.8	4	10.3
Classification				
Sophomore	15	4.8	3	6.7
Junior	87	27.7	13	28.9
Senior	206	65.6	26	57.8
Graduate	6	1.9	3	6.7
Transfer type				
2-year public	311	99.0	0	0
2-year private	3	1.0	0	0
4-year	0	0	45	100
Has associate's degree				
Yes	209	66.6	3	6.7
No	105	33.4	42	93.3
Mother's education level				
High school or less	93	30	7	15.6
Some college	49	15.8	11	24.4
Associate's degree	74	23.9	11	24.4
Bachelor's degree	68	21.9	12	26.7
Graduate school	26	8.4	4	8.9

Table 4.2 (continued)

	Community college transfer		University transfer	
Variable	*n*	%	*n*	%
Father's education level				
High school or less	114	37.6	12	27.3
Some college	55	18.2	8	18.2
Associate's degree	45	14.9	10	22.7
Bachelor's degree	62	20.5	5	11.4
Graduate school	27	8.9	9	20.5
Housing type				
Residence hall or other university housing	87	27.8	7	15.9
Fraternity or sorority house	2	0.6	0	0
Private apartment or room (within walking distance)	102	32.6	21	47.7
House, apartment, etc. (not walking distance from campus)	103	32.9	11	25.0
With parents or relatives	19	6.1	5	11.4
Highest degree planned at UNI				
Bachelor's (B.A. or B.S.)	264	85.2	36	80.0
Master's (M.A. or M.S.)	40	12.9	9	20.0
Doctorate (Ph.D. or Ed.D.)	5	1.6	0	0
Other	1	0.3	0	0
Highest degree planned at any institution				
Bachelor's (B.A. or B.S.)	157	50.2	14	31.8
Master's (M.A. or M.S.)	115	36.7	21	47.7
Doctorate (Ph.D. or Ed.D.)	23	7.3	6	13.6
Medical (MD, DDS, DO or DVM)	3	1.0	2	4.5
Law (JD or LLB)	10	3.2	1	2.3
Other	5	1.6	0	0

study. A brief look at major information (see Table 4.3) indicates that the largest portion of

respondents (17.6%) were Elementary Education majors. UNI was founded as a state

teaching school, with a rich tradition in education and a large College of Education (22.3% of

all students at UNI; UNI, 2010b), so this finding was not surprising. Several majors within

the College of Social and Behavioral Sciences were represented (Social Work, 4.1%;

Psychology, 3.4%; Criminology, 3.4%; History, 3.1%; Political Science, 1.6%; and

Anthropology, 1.3%). In addition, a few majors within the College of Business were found

on the list of majors (Accounting, 2.5%; Management Information Systems, 0.9%; and Real

Estate, 0.6%). Eight students (2.5%) were listed as Mathematics majors, and this major

appeared to be the only major within the STEM (Science, Technology, Engineering, and

Mathematics) area that was represented in this sample of transfer students.

Table 4.3

Academic Majors of Respondents

Major	n	%	Major	n	%
Elementary Education	56	17.6	Computer Science	3	0.9
Social Work	13	4.1	General Studies	2	0.6
Psychology	11	3.4	Real Estate	2	0.6
Criminology	11	3.4	Communicative Disorders	2	0.6
History	10	3.1	Business Teaching	1	0.3
Accounting	8	2.5	Health Education	1	0.3
English	8	2.5	Physical Education	1	0.3
Mathematics	8	2.5	Philosophy	1	0.3
Political Science	5	1.6	TESOL/Spanish	1	0.3
Anthropology	4	1.3	Spanish	1	0.3
Management Information Systems	3	0.9	Biotechnology	1	0.3
Early Childhood Education	3	0.9	Sociology	1	0.3
Art	3	0.9	Missing	159	49.8

Community College Versus University Experiences

Respondents were asked to answer a set of questions that pertained to both their

community college experiences and their university experiences. They were requested to

indicate the amount of time they spent/had spent studying in a typical week. They were also

asked to respond to two questions regarding the amount of time they had spent working

while they were attending their community college and the amount of time they spent

working while attending the university. Not surprisingly, students spent a larger proportion

of time getting ready for class at the university than they had at the community college. Over

half of all students (53.5%) indicated that they had spent between 1 and 5 hours preparing for class at the community college. In contrast, just 10.6% said they spent that same amount of time preparing for their classes at the university. On the opposite end of the spectrum, 15.8% of the respondents said that they studied more than 20 hours per week at the university, as compared to only 1.6% of students who had studied that much while they were at the community college. See Table 4.4 for a complete description of time spent studying at the community college and at the university.

Respondents also were asked to list the amount of time they spent/had spent working during the week while they were at their community college and while they were attending the university. Given the amount of time that students said they had spent studying at the community college, it is not unexpected that they had spent a much greater amount of time working for pay while they were at the community college. Slightly less than half of the respondents (42.3%) worked 20 or more hours per week while at the community college. Close to one fourth of the respondents (24.8%) had worked between 21 and 30 hours per week, and another 17.5% of students said they had worked 40 or more hours per week while they attended their community college.

Student work habits changed substantially when they enrolled at the university, with almost a complete reversal from their work situation while they were attending community college. A similar percentage of students indicated that they worked between 16 and 20 hours per week (19.7% at the community college versus 17.1% at the university). However, over three-fourths of the respondents (77.1%) spent 20 or fewer hours per week working for pay, and no students were working full time (40 or more hours per week) while they were

attending the university. Whether this is a direct reflection of the time spent studying and

preparing for class remains to be determined. In all likelihood, however, the two are related.

Table 4.4

*Comparison of Community College and University Experiences: Study Habits and
Employment*

Variable	Community college		University	
	n	%	*n*	%
About how many hours a week did you usually spend studying or preparing for your classes at the community college/the university?				
1 to 5 hours	168	53.5	33	10.6
6 to 10 hours	101	32.2	89	28.7
11 to 15 hours	30	9.6	76	24.5
16 to 20 hours	10	3.2	63	20.3
More than 20 hours	5	1.6	49	15.8
About how many hours a week did you usually spend working on a job for pay?				
None, I didn't have a job.	35	11.1	60	19.4
1 to 5 hours	11	3.5	54	17.4
6 to 10 hours	20	6.4	61	19.7
11 to 15 hours	53	16.9	64	20.6
16 to 20 hours	62	19.7	53	17.1
21 to 30 hours	78	24.8	18	5.8
More than 30 hours	55	17.5	0	0.0

Respondents were presented with a variety of course learning experiences and asked

to indicate how often they engaged in each of the behaviors at the community college and at

the university. The behaviors ranged from engagement in classroom discussions to out-of-

class interactions with faculty and other students. Respondents consistently reported

participating in these behaviors at a higher rate at the university than at the community

college. The only area in which they reported engaging in a behavior less often at the

university than at the community college was in their interactions with faculty on campus.

Students were slightly less likely to approach a faculty member outside of class at the

university than when they were at the community college (see Table 4.5).

Table 4.5

Comparison of Community College and University Course Learning Experiences and Experiences with Faculty

How often did you do each of the following? (answered on a scale ranging from 1 (*never*) to 4 (*very often*))	Community college			University			Paired samples *t* test		
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	*df*	*p*
Took detailed notes in class.	310	3.22	0.80	307	3.62	0.59	-8.70	298	.000
Participated in class discussions	310	3.02	0.84	306	3.22	0.80	-4.96	297	.000
Tried to see how different facts and ideas fit together.	310	3.02	0.82	307	3.34	0.67	-7.29	298	.000
Thought about practical applications of the material.	310	3.05	0.77	304	3.43	0.66	-8.45	295	.000
Worked on a paper or project where I had to integrate ideas from various sources.	310	3.06	0.80	307	3.50	0.63	-8.74	298	.000
Tried to explain the material to another student or friend.	308	2.99	0.84	305	3.25	0.77	-5.27	294	.000
Visited faculty and sought their advice on class projects such as writing assignments and research papers.	309	2.36	0.94	309	2.72	0.88	-6.17	299	.000
Felt comfortable approaching faculty outside of class.	310	3.02	0.87	307	2.96	0.92	0.62	298	.534
Asked my instructor for information related to a course I was taking (grades, make-up work, assignments, etc.)	309	2.85	0.86	307	2.87	0.84	-0.60	298	.550
Visited informally and briefly with an instructor before or after class.	307	2.55	0.98	308	2.55	0.95	-0.51	296	.609
Discussed my career plans and ambitions with a faculty member.	309	2.27	1.03	309	2.43	1.02	-2.77	299	.006
Asked my instructor for comments and criticisms about my work.	310	2.41	1.00	306	2.56	0.95	-2.98	297	.003

Reasons for Attending Community College

Students were asked a set of questions designed to gain an understanding of their reasons for starting their educational pursuits at a 2-year community college. They were presented with a list of seven potential reasons and asked to rank these reasons by their importance. As seen in Figure 4.1, the main motivation for students to attend a community college was cost of attendance. Almost half of the students (40.8%) listed "lower cost/tuition than a 4-year institution" as their most important reason for choosing to begin their schooling at a community college. An additional 22.1% said this was their second most important reason. Proximity to family and friends was chosen as a first or second choice by 29.4% of the respondents. Financial aid and scholarships were another important reason to attend the community college with 27.9% of students listing this as an important reason. Another 27.7% of respondents said that uncertainty about their areas of study or future career field impacted their decision to attend a 2-year college. See Figure 4.1 for a complete depiction of reasons.
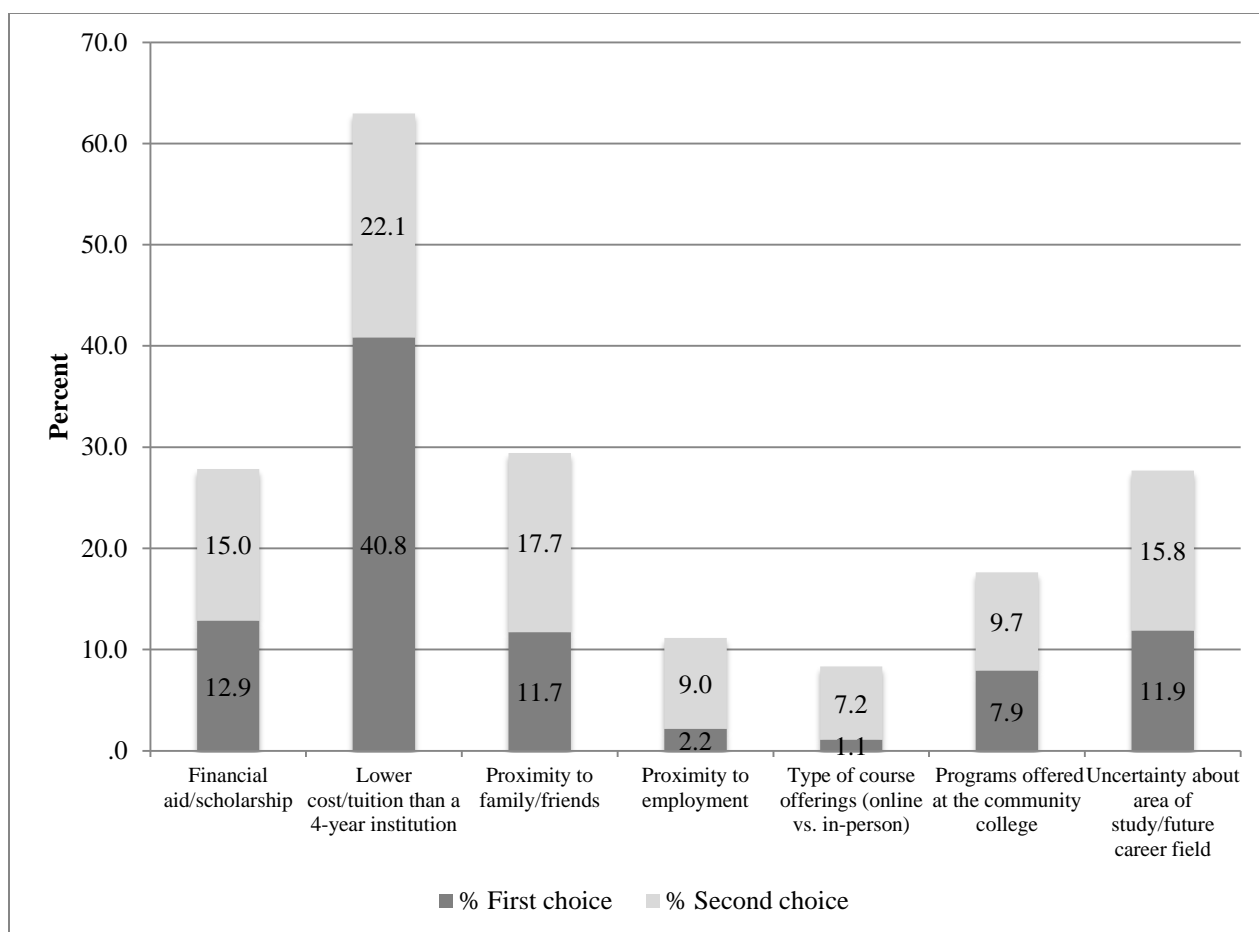
Figure 4.1. Reasons for attending the community college

Reasons for Transfer

Respondents were also asked to indicate why they decided to transfer to UNI after their time at the community college. They were first asked to indicate the most important factor in their decision to attend the university. The majority of students (71.3%) stated that their most important reason for transfer was to obtain a bachelor's degree. An additional 17.4% said they were transferring to UNI to gain the necessary skills to enter a new job field or occupation. Ten percent were attending the university in an effort to achieve goals related

to graduate and/or professional education after their graduation from UNI. The respondents were then presented with a list of reasons for attending the university and asked to individually rank each reason that impacted their decision. Reasons were ranked by the percentage of students choosing the reason as very important or important. As seen in Table 4.6, academic reputation played a significant role in their decision to attend the university. A vast majority of students (89.6%) stated this was important or very important in their decision making. Cost of attendance (82.7%), career/job attainment of graduates (81.0%), size of the university (80.1%), and the availability of affordable tuition (79.2%) were other important reasons.

Exploratory Factor Analysis

In preparation for the regression analysis, an exploratory factor analysis with varimax rotation was conducted to determine which constructs from the original L-TSQ still held and whether any new constructs could be created from the new items that were added to the questionnaire. An extensive descriptive analysis was performed prior to the exploratory factor analysis to investigate the distribution of each variable before conducting the factor analysis. Three variables were recoded to allow an accurate comparison of scale scores (questions 36.9, 36.10, and 39.1 were reverse coded). The results of the factor analysis provided an initial look at the emergence of the new constructs created for the purposes of this study in addition to supporting the constructs that were originally proposed by Laanan (Lanaan, 2004; Lanaan et al., 2010) in his original instrument.

Table 4.6

Most Important Reasons Impacting Decision to Attend UNI

Reasons for attending UNI	Very important %	Important %	Overall importance %
UNI has a very good academic reputation	39.0	50.6	89.6
Cost of UNI.	40.5	42.2	82.7
UNI's graduates get good jobs.	37.9	43.1	81.0
Size of UNI.	40.2	39.9	80.1
UNI has affordable tuition.	42.2	37.0	79.2
Convenience and location.	30.8	35.7	66.5
I was offered financial assistance.	27.2	35.9	63.1
UNI has a very good reputation for its social activities.	11.7	35.7	47.4
UNI's ranking in national magazines.	14.1	32.5	46.6
A friend suggested attending.	14.4	32.0	46.4
UNI's graduates gain admission to top graduate/professional schools.	14.3	30.3	44.6
Parents recommended that I attend UNI.	14.1	22.2	36.3
Academic counselor(s) at my previous college advised me.	9.2	27.0	36.2
My brother(s)/sister(s) attended UNI.	7.8	10.1	17.9
A UNI representative recruited me.	3.0	10.6	13.6

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was used to examine the suitability of variables within the factor analysis. According to Tabachnick and Fidell (2007), values of .6 and above are required for a good factor analysis. Values below .5 imply that factor analysis may not be appropriate. As a value approaches 1.0, it can be inferred that correlations between variables are small (Tabachnick & Fidell, 2007, p. 614). Therefore, all items with loadings above .6 were chosen to be included in the constructs that were formed during this analysis. Constructs with alpha reliability scores above .70 (Litwin, 1995) were used to create the models for the present study. After all dimension reduction techniques had

been employed, a total of 26 factors emerged from the analysis. See Table 4.7 for a complete description of the constructs and the items that made up each of the constructs, along with factor loadings and alpha reliabilities.

Six new constructs emerged that were specifically chosen in an attempt to measure and operationalize the concept of transfer student capital in light of new research in the field of study surrounding this theory. As summarized in Chapter 1, transfer student capital refers to the process by which community college students acquire knowledge and skills necessary to navigate through the transfer process (Laanan et al., 2010). Laanan (2004) first proposed four constructs to measure transfer student capital: (a) academic counseling experiences, (b) perceptions of the transfer process, (c) experiences with faculty at the community college, and (d) learning and study skills acquired at the community college. For the present study, the six constructs were derived in an attempt add to the extensive work already done by Laanan (1998, 2004) regarding the concept of transfer student capital.

From the exploratory factor analysis, transfer student capital was defined by the following composite variables, all answered on a scale ranging from 1 (*disagree strongly*) to 4 (*agree strongly*): (a) academic counseling experiences (α = .937), (b) staff validation at the community college (α = .944), (c) faculty validation at the community college (α = .909), (d) faculty mentoring at the community college (α = .885), (e) faculty interaction at the community college (α = .852), and (f) financial influence at the community college (α = .739). The remainder of the constructs that were derived in the exploratory factor analysis assessed either community college experiences or university experiences.

Table 4.7

Exploratory Factor Loadings and Reliability Analysis

Variables (alpha coefficients in parentheses)	Factor loading
Background	
Reasons for transfer (α = .829)	
Cost of UNI.	.818
UNI has affordable tuition.	.782
Community college experiences	
Experiences with general courses (α = .881)	
The courses required extensive reading and writing.	.823
Overall, the courses were intellectually challenging.	.803
The courses demanded intensive writing assignments and projects.	.795
The courses prepared me for the academic standards at UNI.	.724
The courses prepared me for my major at UNI.	.703
The courses developed my critical and analytical thinking.	.625
Course learning (α = .863)	
Thought about practical applications of the material.	.818
Tried to see how different facts and ideas fit together.	.809
Participated in class discussion.	.715
Took detailed notes in class.	.714
Worked on a paper or project where I had to integrate ideas from various sources.	.670
Tried to explain the material to another student or friend.	.631
Experiences with faculty at the community college (α = .899)	
Visited informally and briefly with an instructor before or after class.	.888
Asked my instructor for information related to a course I was taking (grades, make-up work, assignments, etc.).	.762
Felt comfortable approaching faculty outside of class.	.761
Discussed my career plans and ambitions with a faculty member.	.741
Visited faculty and sought their advice on class projects such as writing assignments and research papers.	.735
Asked my instructor for comments and criticisms about my work.	.733
Perceptions of transfer process: visits (α = .804)	
I visited the admissions office at UNI.	.868
I spoke to academic counselors at UNI about transferring and major requirements.	.807
I visited the UNI campus to learn where offices and departments were located.	.748
Perceptions of transfer process: knowledge (α = .738)	
I knew what to expect at UNI in terms of academics.	.822
I researched various aspects of UNI to get a better understanding of the environment and academic expectations.	.788
Learning and study skills (α = .910)	
Test taking skills.	.801
Writing skills.	.798
Reading skills.	.788
Research skills.	.787
Problem solving skills.	.786
Note taking skills.	.757

Table 4.7 (continued)

Variables (alpha coefficients in parentheses)	Factor loading
Learning and study skills (continued)	
Time management.	.723
Speaking and oral presentation skills.	.682
Transfer student capital	
Academic counseling experiences (α = .937)	
I discussed my plans for transferring to a four-year college or university with an academic advisor/counselor.	.869
I consulted with academic advisors/counselors regarding transfer.	.836
I met with academic advisors/counselors on a regular basis.	.788
Academic advisors/counselors identified courses needed to meet the general education/major requirements of a four-year college or university I was interested in attending.	.778
I talked with an academic advisor/counselor about courses to take, requirements, education plans.	.757
Information received from academic advisors/counselors was helpful in the transfer process.	.756
Staff validation at the community college[a] (α = .944)	
The staff members personally cared about me.	.817
The staff members respected my opinion even if it differed from their own.	.810
The staff members genuinely cared about whether or not the students they served succeeded at the institution.	.802
The staff members valued the contribution that I (or other students) made to the institution.	.788
The staff members showed an active interest in my education goals and pursuits.	.772
I had a staff member that I could trust to support me when I needed help navigating the various aspects of my transfer preparation.	.706
Faculty validation at the community college[a] (α = .909)	
My course instructors allowed the expression of differing viewpoints in their courses.	.826
My course instructors valued the contribution that I (or other students) made to their course.	.773
My course instructors respected my opinion even if it differed from their own.	.734
My course instructors showed an active interest in my education goals and pursuits.	.718
My course instructors personally cared about me.	.703
My course instructors genuinely cared about whether or not the students in their classes succeeded at the institution.	.649
Faculty mentoring relationship at the community college[a] (α = .885)	
Cared about whether or not you succeeded at the institution.	.864
Provided you with valuable information related to how to succeed academically.	.821
Had regular contact with you.	.813
Faculty interaction at the community college (α = .852)	
At least one faculty/staff member at my previous institution encouraged me to participate in institutionally sponsored/related activities.	.750
I had the opportunity to collaborate with at least one faculty/staff member on activities outside of class at my previous institution.	.707
I had the opportunity to collaborate with at least one faculty/staff member on activities related to my coursework at my previous institution.	.698
Financial influence[a] (α = .739)	
The amount of financial aid that I received was a contributing factor in my decision to attend UNI.	.721
I sought out the advice of financial aid office representatives at UNI prior to my transfer here.	.706

Table 4.7 (continued)

Variables (alpha coefficients in parentheses)	Factor loading
Financial influence (continued)	
Prior to transferring to UNI, I made sure I knew about the financial aid available to me as a transfer student.	.687
Once at UNI, I had access to scholarship funds to assist me in paying for my college education.While at my previous institution, I researched the availability of scholarship funds available specifically for transfer students at UNI.	.679 .675
The amount of financial aid that I received at UNI was adequate.	.621
University experiences	
Course learning at the university (α = .822)	
Tried to see how different facts and ideas fit together.	.809
Thought about practical applications of the material.	.782
Participated in class discussions.	.730
Tried to explain the material to another student or friend.	.673
Experiences with faculty at the university (α = .915)	
Visited informally and briefly with an instructor before or after class.	.843
Discussed my career plans and ambitions with a faculty member.	.828
Asked my instructor for comments and criticisms about my work.	.826
Asked my instructor for information related to a course I was taking (grades, make-up work, assignments, etc.).	.768
Visited faculty and sought their advice on class projects such as writing assignments and research papers.	.749
Felt comfortable approaching faculty outside of class.	.722
Stigma as a transfer student (α = .890)	
There is a stigma at UNI among students for having started at a community college.	.900
Because I am a "community college transfer," most students tend to underestimate my abilities.	.877
Because I am a "community college transfer," most faculty tend to underestimate my abilities.	.841
Social support at the university[a] (α = .878)	
I have a lot of friends at UNI.	.861
I am invited to social gatherings outside of class.	.818
I feel a sense of belonging within the university.	.740
I have a lot in common with the other students in my classes.	.686
It is difficult making friends at UNI.[b]	.661
I have a close friend or classmate whom I can turn to if I need support.	.649
I often eat lunch with other classmates.	.612
I am involved in on-campus events and activities.	.611
Perceptions of the university: overall satisfaction (α = .902)	
I would recommend to other transfer students to come to UNI.	.830
If I could start over again, I still would go to UNI.	.779
UNI is an intellectually stimulating and often exciting place to be.	.751
I feel the courses I have taken at UNI have been interesting and worthwhile.	.731
UNI faculty tend to be accessible to students.	.709
Student services are responsive to student needs.	.690
UNI faculty are easy to approach.	.680
Professors are strongly interested in the academic development of undergraduates.	.601

Table 4.7 (continued)

Variables (alpha coefficients in parentheses)	Factor loading
Adjustment process: social (α = .789)	
Adjusting to the social environment at UNI has been easy.	.812
It is easy to make friends at UNI.	.761
I am meeting as many people and making as many friends as I would like at UNI.	.745
Student satisfaction at the university: institutional attributes[a] (α = .783)	
Satisfaction: leadership opportunities.	.744
Satisfaction: class size.	.715
Satisfaction: ethnic/racial diversity of the faculty.	.694
Satisfaction: opportunities for community service.	.692
Satisfaction: interaction with other students.	.685
Coping style: avoidance[a] (α = .886)	
When faced with a problem: I refuse to believe that it happened.	.932
When faced with a problem: I say to myself "this isn't real."	.914
When faced with a problem: I act as though it hasn't happened.	.824
Coping style: social[a] (α = .882)	
When faced with a problem: I talk to someone about how I feel.	.936
When faced with a problem: I discuss my feelings with someone.	.934
When faced with a problem: I let my feelings out.	.723
Coping style: emotional[a] (α = .818)	
I get upset and let my emotions out.	.894
I feel a lot of emotional distress and I find myself expressing these feelings.	.857
Motivation and self-efficacy[a] (α = .771)	
I have declared a major at UNI.	.833
I plan to graduate from UNI.	.791
I have a strong desire to be successful in college.	.707
I have the skills and ability necessary for success in college.	.695
Dependent constructs	
Coping style: active[a] (α = .897)	
When faced with a problem: I try to come up with a strategy about what to do.	.899
When faced with a problem: I make a plan of action.	.889
When faced with a problem: I think about how I might best handle the problem.	.844
When faced with a problem: I think hard about what steps to take to resolve the problem.	.838
Student satisfaction at the university: academic experience and advising[a] (α = .830)	
Satisfaction: academic advising.	.866
Satisfaction: career counseling and advising.	.804
Satisfaction: overall quality of instruction.	.696
Satisfaction: amount of contact with faculty.	.657

[a]New construct. [b]Items were reverse coded.

Seven factors were created to assess the community college experience, all except the last

answered on a 4-point scale ranging from 1 (*disagree strongly*) to 4 (*agree strongly*): (a)

experiences with general courses (α = .881), (b) course learning (α = .881), (c) experiences

with faculty (α = .899), (d) perceptions of the transfer process: visits (α = .804), (e)

perceptions of the transfer process: knowledge (α = .738), (f) learning and study skills (α =

.910), and (g) reasons for transfer (α = .738), answered on a 4-point scale ranging from 1 (*not*

important) to 4 (*very important*).

An additional 12 factors reflected student experiences at the university. Ten of these

constructs were independent variables, all but the first and last answered on a 4-point scale

ranging from 1 (*disagree strongly*) to 4 (*agree strongly*): (a) course learning at the university

(α = .822), answered on a 4-point scale ranging from 1 (*never*) to 4 (*very often*); (b)

experiences with faculty at the university (α = .915); c) transfer stigma at the university (α =

.890); (d) social support at the university (α = .878); (e) perceptions of the university: overall

satisfaction (α = .902); (f) motivation and self-efficacy (α = .771); (g) adjustment process:

social (α = .789); (h) coping style: avoidance (α = .897); (i) coping style: social (α = .882); (j)

coping style: emotional (α = .818); and (k) student satisfaction at the university: institutional

attributes (α = .783), answered on a 4-point scale ranging from 1 (*very dissatisfied*) to 4 (*very*

satisfied).

In addition to student GPA, two derived constructs were used as dependent variables

in the present study: (a) student satisfaction at the university: academic experience and

advising (α = .830), answered on a 4-point scale ranging from 1 (*very dissatisfied*) to 4 (*very*

satisfied), and (b) coping style: active (α = .897), answered on a 4-point scale ranging from 1

(*disagree strongly*) to 4 = (*agree strongly*). A CFA was then conducted to determine if these constructs should be included in the multiple regression models.

Confirmatory Factor Analysis

Using SPSS AMOS 19, a CFA was conducted to determine model fit. In order to conduct the CFA, missing values were first replaced with series means when necessary. Of the 26 factors formed from the initial exploratory factor analysis, 24 held in the confirmatory factor analysis (coping style: emotional and coping style: avoidance were not supported in the CFA). In addition, three factors (coping style: social, faculty validation at the community college, and perceptions of the university: overall satisfaction) were reduced by one item each. As shown in Table 4.8, the model fit values within AMOS were examined. The CMIN/DF (or χ^2/df) was below the maximum threshold of 5.0 in each of the models. The *p* value was significant in all models, however, indicating poor fit of the factor model. It is difficult to get perfect model fit with a larger sample size, such as the sample in the present study (*Confirmatory Factor Analysis*, n.d.).

Therefore, it was concluded that the model fit was acceptable given the size of the present sample. The factors that remained subsequent to the confirmatory factor analysis were the factors that were loaded into the regression model to determine the predictive capability of the independent variables on the student success measures. Within these constructs, 22 were independent constructs and 2 were dependent constructs. Table 4.9 shows a comparison of the remaining constructs with the original L-TSQ composite variables.

Table 4.8

Goodness-of-Fit Indicators for Proposed Constructs

	χ^2	*df*	χ^2/df	χ^2 diff	GFI	RMSEA
Model 1a: four factors[a]	163.6[***]	48	3.41		.926	.087
Model 1a: two factors[b]	34.2[**]	13	2.63	129.4	.971	.072
Model 1b	390.8[**]	213	1.84		.905	.051
Model 2	1319.2[***]	774	1.70		.834	.047
Model 3	424.3[***]	178	2.38		.887	.066
Model 4	153.5[***]	80	1.92		.943	.054

As seen in Table 4.9, almost all of the original 16 L-TSQ constructs were supported in the present study. All but two (motivations for transfer and academic adjustment) had strong factor loadings ($> .60$) and alpha reliabilities ($> .70$). This indicated that the remaining 14 constructs could be used in the multivariate analyses that followed. In addition to the original L-TSQ constructs, nine new constructs were formed. These constructs also were used to guide the hierarchical regression analysis.

Dependent Variables

Three dependent variables were chosen for the present study: total UNI GPA, student satisfaction with the academic experience at the university, and student ability to actively cope with problems. The latter two were constructs created in the factor analysis. The construct assessing student satisfaction with the academic experience at the university was formed by the following items: (a) satisfaction with the overall quality of instruction, (b) satisfaction with academic advising, (c) satisfaction with career counseling and advising, and (d) satisfaction with the amount of contact with faculty. All four of these items were answered on a scale ranging from 1 (*very dissatisfied*) to 4 (*very satisfied*). The construct

Table 4.9

Comparison of L-TSQ Constructs

L-TSQ (Laanan et al., 2010) constructs		L-TSQ constructs that held in present study		New constructs formed (Moser, 2012)	
Construct	α	Construct	α	Construct	α
Reason for transfer	.81	Reasons for transfer	.83	Staff validation at the community college	.94
Experiences with general courses	.86	Experiences with general courses at the community college	.88	Faculty validation at the community college	.89
Course learning	.84	Course learning	.86	Faculty mentoring relationship at the community college	.89
Academic counseling experiences	.93	Academic counseling experiences	.94	Financial influence	.74
Perceptions of transfer process	.77	Perceptions of transfer process: visits	.80	Coping style: active	.90
		Perceptions of transfer process: knowledge	.74	Coping style: social	.88
Experiences with faculty	.91	Experiences with faculty at the community college	.90	Motivation and self-efficacy	.77
Learning and study skills	.90	Learning and study skills	.91	Social support at the university	.88
Course learning	.82	Course learning at the university	.82	Faculty interaction at the community college	.85
Experiences with faculty	.91	Experiences with faculty at the university	.92		
Satisfaction of university environment	.86	Student satisfaction at the university: academic experience and advising[a]	.83		
		Student satisfaction at the university: institutional attributes[a]	.78		
Stigma as a transfer student	.87	Stigma as a transfer student	.89		
General perceptions of the university	.83	Perceptions of the university: overall satisfaction	.90		
General perceptions of faculty	.82				
Social adjustment	.76	Adjustment process: social[a]	.79		
Motivations for transfer	.67				
Academic adjustment	.63				

[a]Dependent variable.

measuring coping ability of the student comprised four questions assessing the behaviors in

which students engage when faced with a problem and was measured with the following

items: (a) I think about how I might best handle the problem, (b) I make a plan of action, (c) I

try to come up with a strategy about what to do, and (d) I think hard about what steps to take

to resolve the problem. These items were answered on a scale ranging from 1 (*disagree*

strongly) to 4 (*agree strongly*). Figures 4.2, 4.3, and 4.4 illustrate the conceptual models of

the present study, with the various dependent variables illustrated in each figure.

Multiple Regression Analysis

Prior to the multiple regression analysis, an extensive descriptive analysis was again

performed to make certain that the variables to be included in the model were appropriate

and suitable for the analysis. In addition, the independent variables were compared with one

another to examine the collinearity of the variables. Although it was expected that the

independent variables would be slightly correlated with one another, it was important to

confirm that the independent variables were not extremely highly correlated with one another

(see Appendix G). After examination of the correlation matrix, it was found most variables

were not related, correlating around $r = .40$. Two different pairs of independent variables

were highly correlated. Although Tabachnick and Fidell (2007) indicated that most of the

issues associated with multicollinearity occur when variables are highly correlated (.90 or

above), and they suggested caution when including any variables that are correlated at .70 or

higher. Faculty validation and staff validation were correlated at a slightly higher level ($r = $

.71). This is expected, as the concept is related and occasionally students fail to fully

Background	CC Experience	Transfer capital	UNI Experience	Dependent variable
• Mother education • Father education • AA degree • Parental income • Age • Gender • Race/Ethnicity	• Experiences with general courses	• Financial • Academic counseling • Faculty validation • Mentoring relationship • Faculty interaction • Experiences with faculty • Motivation • Learning and study skills	• Course learning • Experiences with Faculty • Stigma • UNI perceptions	• UNI GPA

Figure 4.2. Conceptual model for student success as measured by GPA

Background	CC Experience	Transfer capital	UNI Experience	Dependent variable
• Mother education • Father education • AA degree • Parental income • Age • Gender • Race/Ethnicity	• Experiences with general courses	• Financial • Academic counseling • Faculty validation • Mentoring relationship • Faculty interaction • Experiences with faculty • Learning and study skills • Motivation	• Course learning • Experiences with faculty • Stigma • UNI GPA	• Satisfaction: Academics and advising

Figure 4.3. Conceptual model for student success as measured by student satisfaction

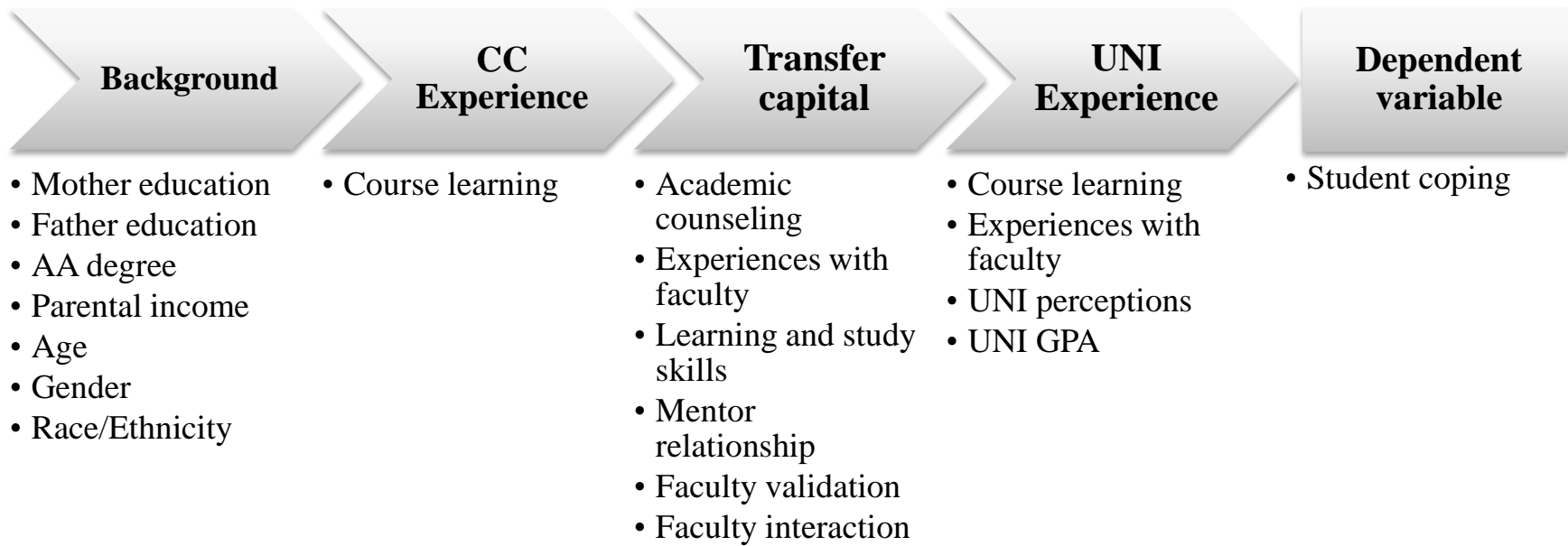| Background	CC Experience	Transfer capital	UNI Experience	Dependent variable
• Mother education • Father education • AA degree • Parental income • Age • Gender • Race/Ethnicity	• Course learning	• Academic counseling • Experiences with faculty • Learning and study skills • Mentor relationship • Faculty validation • Faculty interaction	• Course learning • Experiences with faculty • UNI perceptions • UNI GPA	• Student coping

Figure 4.4. Conceptual model for the student success as measured by student coping

appreciate the difference between a faculty and staff member. In addition, social adjustment

and social support at the university were correlated at $r = .75$. Therefore, only one item from

each respective pair was included in the regression models.

 After the initial exploration of the variables, three hierarchical multiple regression

analyses were conducted to determine the predictors of student success at the university. The

conceptual framework for each model was the same for each analysis; however the

independent variables within each model varied slightly based upon the dependent variable.

The order of the independent variables in these models was dictated by the theoretical

framework from Astin's (1999) I–E–O model. Using Laanan et al. (2010) as a guide, their

conceptual model was adapted based on the information gathered in the present study.

 The first model examined the relationship between the independent variables and

student GPA at the university. Variables were entered into four blocks of a hierarchical

regression model. The first block of the regression analysis consisted of select background

characteristics of the students, including associate's degree attainment, parental educational

attainment, age, gender, race/ethnicity and parental income. Block two of the analysis

measured experiences with general courses at the community college. The third block

consisted of the constructs designed to measure the impact of transfer student capital. This

block included the following constructs: financial fluency, academic counseling experience,

faculty validation, mentoring relationship, interaction with faculty at the community college,

experiences with faculty at the community college, motivation and self-efficacy, and learning

and study skills. The fourth and final block of the regression included four constructs related

to experiences at the university: course learning, experiences with faculty, negative stigma toward transfer students, and perceptions of the university.

When examining the relationship between the independent variables and GPA, the first block of the analysis revealed that gender predicted success as measured by student GPA (β = .377, $p < .01$). A community college experience was entered in block two, gender remained significant (β = .331, $p < .001$). Women performed better than men at the university, as measured by GPA. When the transfer student capital constructs were entered into the third block, GPA was still predicted by gender (β = .358, $p < .001$), however paternal educational attainment (β = .251, $p < .05$) also became a significant predictor. In addition, the transfer capital constructs of faculty interaction at the community college (β = .313, $p <$ .05), experiences with faculty at the community college ($\beta = -.392$, $p < .01$), and student motivation and self-efficacy (β = .279, $p < .01$) played a significant role in student success, as measured by GPA.

Once the remaining variables were entered into the fourth and final block of the regression, all of the previously observed relationships remained; however no new associations were added. Gender (β = .301, $p < .01$) and paternal educational attainment (β = .266, $p < .05$) continued to be strong predictors of student success as measured by university GPA. Faculty interaction at the community college (β = .294, $p < .05$), experiences with faculty ($\beta = -.468$, $p < .01$), and student motivation and self-efficacy (β = .271, $p < .05$) continued to play a significant role in student achievement in block four of the analysis. The adjusted R^2 for this analysis indicated that 32.3% of the variance in student GPA was predicted by this model. See Table 4.10 for a complete presentation of the regression results.

Table 4.10

Hierarchical Multiple Regression Analysis: Student Success as Measured by Total UNI GPA

Predictor	Block 1 β	Block 2 β	Block 3 β	Block 4 β
Block 1: Background				
Has associate's degree	.004	.010	-.047	-.031
Parental income	.097	.066	.036	.030
Mother educational attainment	−.012	.003	−.043	−.027
Father educational attainment	.196	.214	.251*	.266*
Age	.073	.077	.051	.056**
Gender	.377**	.331**	.358**	.301**
Race/Ethnicity	.135	.150	.082	.124
Block 2: Community college experiences				
Experiences with general courses		.196	.142	.185
Block 3: Transfer capital				
Financial fluency			.081	.082
Academic counseling experience			−.019	−.046
Faculty validation			−.015	.045
Mentoring relationship			−.034	.012
Faculty interaction			.313*	.294*
Experiences with faculty			−.392**	−.468**
Motivation and self-efficacy			.279**	.271*
Learning and study skills			.246	.257
Block 4: University experiences				
Course learning				.007
Experiences with faculty				.235
Stigma				−.076
General perceptions about the university				−.148
R^2	.207	.242	.461	.490
Adjusted R^2	.132	.159	.329	.323
F	2.761	2.918	3.481	2.934
ΔR^2		.035	.219	.029
ΔF		3.394	3.306	.863

The second regression model examined the relationship between the independent variables and student success as measured by students' ability to cope with problems they may face. Variables again were entered into four blocks of a hierarchical regression model. The first block of the regression analysis consisted of student background characteristics, including associate's degree attainment, age, gender, race/ethnicity, parental educational attainment, and parental income. Block two of the analysis examined community college experiences that were measured by course learning at the community college. The third block consisted of the constructs designed to measure the impact of transfer student capital. This block included six constructs: academic counseling experience, faculty validation, mentoring relationship, interaction with faculty at the community college, experiences with faculty at the community college, and learning and study skills. The last block of the regression included three constructs related to experiences at the university (course learning, experiences with faculty, and perceptions of the university) and university GPA.

When investigating the relationship between the independent variables and coping, the first block of the analysis revealed that associate's degree attainment was a predictor of student coping ($\beta = -.228$, $p < .05$). Students who obtained an associate's degree were less able to cope with problems that they faced at the university. As the community college experiences were entered in block two, associate's degree attainment continued to have a significant impact on coping ($\beta = -.235$, $p < .05$). In addition, course learning experiences at the community college had a significant impact on ability to cope ($\beta = .264$, $p < .05$). The more engaged students were in their classroom experience the more likely they were to report a strong ability to cope with problems. When the transfer student capital constructs were entered into the third block, coping was still explained by associate's degree attainment ($\beta = $

–.272, $p < .05$) and course learning at the community college ($\beta = .408$, $p < .01$).

Additionally, the presence of a mentoring relationship between the student and a faculty or

staff member at the community college ($\beta = .303$, $p < .05$) played a significant role in student

success as measured by student coping. Students reporting having had a mentor at the

community college were better able to cope at the university.

Once the remaining constructs were entered into the fourth block of the regression,

some of the previously observed relationships remained, and several new associations were

added. Associate's degree attainment ($\beta = –.227$, $p < .05$) continued to be a strong negative

predictor of student coping ability. Course learning at the community college, however, did

not have an impact on student coping once university experiences were entered into the

model ($\beta = .191$). The presence of a mentoring relationship at the community college ($\beta =

.316$, $p < .05$) continued to play a significant part in student ability to cope in block four of

the analysis. When university experiences were entered into the equation, experiences with

faculty at the university was found to significantly predict student coping ($\beta = .315$, $p < .05$).

When students felt that they could interact with faculty at the university, discuss important

milestones and career plans and converse over classroom assignments and projects, they had

an increased ability to cope with their problems. The adjusted R^2 for this analysis indicated

that 27.4% of the variance in student ability to cope with problems was predicted by this

model. See Table 4.11 for a complete presentation of the regression results.

The final regression model examined the relationship between the independent

variables and student success as measured by student satisfaction with the academic and

advising experience at the university. Variables again were entered into four blocks of a

Table 4.11

Hierarchical Multiple Regression Analysis: Student Success as Measured by Student Ability to Cope with Problems

Predictor	Block 1 β	Block 2 β	Block 3 β	Block 4 β
Block 1: Background				
Has associate's degree	−.228[*]	−.235[*]	−.272[*]	−.227[*]
Parental income	−.014	.018	.058	.047
Mother educational attainment	−.004	−.020	−.117	−.019
Father educational attainment	−.161	−.124	−.125	−.087
Age	−.093	−.118	−.127	−.113
Gender	.044	.030	−.020	.046
Race/Ethnicity	−.015	.037	.057	.066
Block 2: Community college experiences				
Course learning		.264[*]	.408[**]	.191
Block 3: Transfer capital				
Academic counseling experience			−.021	−.067
Faculty validation			−.265	−.171
Mentoring relationship			.303[*]	.316[*]
Faculty interaction			.156	.155
Experiences with faculty			−.148	−.316
Learning and study skills			−.036	.173
Block 4: University experiences				
Course learning				.237
Faculty interaction				.315[*]
General perceptions about the university				.048
University GPA				−.228
R^2	.088	.152	.260	.433
Adjusted R^2	.003	.060	.108	.274
F	1.032	1.660	1.709	2.718
ΔR^2		.064	.108	.173
ΔF		5.611	1.657	4.885

hierarchical regression model. The first block of the regression analysis consisted of the same student background characteristics as the previous two models: associate's degree attainment, age, gender, race/ethnicity, parental educational attainment, and parental income. Block two of the analysis measured community college experiences, which again were measured by experiences with general courses at the community college. The third block consisted of eight constructs designed to measure the impact of transfer student capital. This block included the following constructs: academic counseling experience, faculty validation, mentoring relationship, interaction with faculty at the community college, experiences with faculty at the community college, financial fluency, motivation and self-efficacy, and learning and study skills. The fourth block of the regression included three constructs related to experiences at the university (course learning, experiences with faculty, and perceptions of stigma at the university) and university GPA.

When examining the impact of the independent variables on student satisfaction (see Table 4.12), the first block of the analysis revealed that student background characteristics did not predict student satisfaction at the university. As the community college experiences were entered in block two, the community college experience construct did not exert a significant influence on the dependent variable. Once the transfer student capital constructs were entered into the third block, financial fluency (i.e., whether or not a student was aware of financial aid opportunities for transfer students at the university and whether or not a student sought out opportunities to learn about financial assistance available to them) played a significant role in student success, as measured by student satisfaction ($\beta = .442$, $p < .01$). Students were more satisfied with their experiences at the university when they had a good system in place for handling the financial aspects of attending college.

Upon the addition of the university experiences into the fourth block of the regression, some of the previously observed relationships remained and one new association was added. Experiences with general courses at the community college became a significant predictor of student satisfaction ($\beta = .428$, $p < .05$). Financial fluency ($\beta = .310$, $p < .05$) continued to significantly affect satisfaction in block four of the analysis. With university experiences entered into the model, experiences with faculty at the university was found to significantly predict student satisfaction ($\beta = .551$, $p < .01$). Students who felt comfortable engaging faculty at the university had an increased level of satisfaction with their experiences at the university. The adjusted R^2 for this analysis indicated that 20.0% of the variance in student ability to cope with problems was predicted by this model. See Table 4.12 for a complete presentation of the regression results.

Transfer stigma was not found to be widespread on the UNI campus. It was hypothesized in research question 4 that negative stigma regarding transfer students at the 4-year university would negatively impact the adaption to and success of transfer students at the 4-year transfer institution. An examination of the perceived stigma on campus revealed that two-thirds (66.8%) of respondents disagreed or strongly disagreed with the statement "there is a stigma at UNI among students for having started at a community college" (see Table 4.13). In addition, a majority of the students (59.1%) disagreed that students underestimate the abilities of community college transfer students. Over two-thirds of the

Table 4.12

Hierarchical Multiple Regression Analysis: Student Success as Measured by Satisfaction:
Academics and Advising

Predictor	Block 1 β	Block 2 β	Block 3 β	Block 4 β
Block 1: Background				
Has associate's degree	−.043	−.044	−.076	−.006
Parental income	.124	.096	.031	.040
Mother educational attainment	−.125	−.116	−.224	−.110
Father educational attainment	.047	.065	.254	.252
Age	.154	.162	.083	.060
Gender	−.112	−.164	−.190	−.190
Race/Ethnicity	.123	.148	.090	.139
Block 2: Community college experiences				
Experiences with general courses		.224	.328	.428[*]
Block 3: Transfer capital				
Financial fluency			.442[**]	.310[*]
Academic counseling experience			−.029	−.096
Experiences with faculty			−.106	−.237
Faculty validation			.015	.131
Mentoring relationship			.133	.113
Faculty interactions			.361	.318
Motivation and self-efficacy			−.051	−.109
Learning and study skills			−.273	−.196
Block 4: University experiences				
Course learning				−.055
Faculty interaction				.551[*]
Stigma				−.153
University GPA				−.086
R^2	.052	.098	.263	.432
Adjusted R^2	−.055	−.020	.041	.200
F	.488	.830	1.185	1.861
ΔR^2		.046	.165	.168
ΔF		3.111	1.486	3.627

students (69.0%) also disagreed that faculty underestimate the abilities of community college

transfer students. The results from the hierarchical multiple regression analysis showed that

stigma was not significantly associated with student success as measured by GPA ($\beta = -.052$)

nor did it predict the satisfaction of the student ($\beta = -.064$).

Table 4.13

Transfer Stigma on Campus

Stigmas	Disagree strongly		Disagree somewhat		Agree somewhat		Agree strongly	
	n	%	*n*	%	*n*	%	*n*	%
There is a stigma at UNI among students for having started at a community college.	109	35.7	95	31.1	68	22.3	33	10.8
Because I am a "community college transfer," most students tend to underestimate my abilities.	90	29.7	89	29.4	77	25.4	47	15.5
Because I am a "community college transfer," most faculty tend to underestimate my abilities.	103	34.0	106	35.0	63	20.8	31	10.2

Summary

In Chapter 4, results of the descriptive and multivariate statistical procedures that

were conducted in the present study were presented. An examination of the data in relation

to the research questions and hypotheses was conducted. Research questions 2 through 8

were answered in the multiple regression analyses that were conducted; research question 1

was analyzed with a more descriptive look at the data and is explained in detail in chapter 5.

Research question 2 asked which factors (student background characteristics, community

college factors, and UNI characteristics) were the best predictors of transfer student success

at UNI (in terms of GPA, coping, and student satisfaction). The results of the regression

analyses indicate that these characteristics vary based on the dependent variables. Five

factors emerged in the relationship involving the prediction of student success at the university, as measured by university GPA. Father educational attainment and experiences with general courses at the community college were significant predictors of student GPA. Transfer student capital (as measured by interaction with faculty at the community college, experiences with faculty at the community college, and motivation and self-efficacy) also showed a significant relationship with student GPA.

When measuring success using student ability to cope with problems at the university, a different relationship was found to exist between the factors that best predict transfer student success at the university. Associate's degree attainment was found to be a strong negative predictor of student coping ability. Students who completed their associate's degree were less able to cope when they got to the university. The presence of a mentoring relationship at the community college had a significant positive impact on student ability to cope with problems. Students who reported that they had a caring relationship with a faculty or staff mentor at their community college were significantly more likely to be able to cope with their problems than were students who did not have a faculty or staff mentor. This finding also helped to answer research question 5, which specifically asked whether a mentoring relationship impacts student success. Lastly, experiences with faculty at the university were found to significantly predict student coping. If students indicated that they felt comfortable approaching faculty and discussing their goals and career plans with them they were better able to cope with their problems.

Finally, student success was measured from the perspective of student satisfaction with academic experiences and advising experiences at the university. Experiences with general courses at the community college were a significant predictor of student satisfaction.

The extent to which community college courses were intellectually challenging and demanding predicted student satisfaction at the university. In addition, financial fluency had a significant impact on satisfaction. Students who had researched the availability of scholarships and other forms of financial aid were more satisfied with their university experience. Moreover, experiences with faculty at the university were found to significantly predict student satisfaction. When students perceived that they could approach university faculty to discuss various aspects of their academic and career development, they had a higher level of satisfaction with their experiences at the university.

Research question 8 considered whether transfer student capital had an impact on the success of community college transfer students at their transfer institutions. It was hypothesized that accumulation of transfer student capital while at the community college would impact the success rates of community college transfer students, as measured by university GPA, academic coping skills, and student satisfaction. That is, it was expected that students with greater transfer capital would demonstrate higher rates of success than would students lacking this capital. In the present study, when looking specifically at GPA, this hypothesis was supported. Students with higher levels of transfer student capital (defined by the constructs of interaction with faculty at the community college, experiences with faculty at the community college, motivation, and self-efficacy) were significantly more likely to perform better, as measured by GPA at the university. When examining success from the perspective of student ability to cope with problems, one aspect of transfer student capital, the presence of a meaningful mentoring relationship, was a significant predictor of student coping ability. Therefore, this hypothesis was also supported when using coping as a dependent variable. Finally, when student satisfaction was used to assess successful

adaptation at the university, student financial fluency, a construct conceptualized as transfer student capital in the present study, significantly predicted satisfaction with the academic and advising experience at the university. This finding also supported research question 3, which asked whether student success was influenced by student financial fluency. The emergence of these factors in the predictive models for the three dependent variables in the present study indicates the importance of transfer student capital and the role this capital can play in facilitating transfer student success at the university.

When asked whether or not they had a mentor on their community college campus, 97 students (30.4%) stated that they had had a faculty or staff mentor when they attended their previous institution. The presence of a meaningful mentoring relationship was a significant predictor of student coping ability. This finding supports the hypothesis for research question 5, which stated that student success will be positively impacted by a faculty/staff/student mentoring relationship.

Student success was not influenced by faculty validation in the present study. Possible reasons for this finding are discussed in Chapter 5. As previously stated, faculty and staff validation were highly correlated ($r = .71$). Therefore, for the purposes of this analysis, only faculty validation was included in the regression models. Faculty validation was not significantly associated with student success as measured by GPA ($\beta = .045$). In addition, it failed to predict student satisfaction at the university ($\beta = .131$), nor did it predict coping ability ($\beta = -.171$). The implications of these results are presented in Chapter 5.

CHAPTER 5. DISCUSSION OF RESULTS, IMPLICATIONS FOR RESEARCH, POLICY, AND PRACTICE, AND CONCLUSION

This chapter begins with a review of the purpose and the rationale for the present study. The chapter then revisits the study's research questions, discussing interpretation and implications of the results, particularly focusing on the concept of transfer student. Then, a summary of the major results is presented, followed by implications for policy and practice. Recommendations for future research conclude this chapter.

Purpose and Significance of the Study

The purpose of the present study was to examine the factors that have the greatest influence on community college transfer student success at the 4-year university. To accomplish this, the study reexamined the Laanan-Transfer Students' Questionnaire (L-TSQ), a survey designed to provide new ways of studying transfer students at 4-year institutions (Laanan, 1998, 2004). An extensive literature review was conducted and the instrument was refined, with items added to the questionnaire in consideration of new research in the field. The revised instrument was then used to test the influence of student background characteristics, community college experiences and university experiences on transfer student transition and success at the 4-year institution. Finally, this study measured several factors that contribute to the accumulation of transfer student capital, a construct defined by Laanan in 2004 (Pappano, 2006).

The development and refinement of the L-TSQ addressed the need for a questionnaire, with a strong theoretical framework, measuring the impact of various factors on transfer student success. The L-TSQ was created in an effort to better understand the time

of transition for transfer students with a particular focus on the social and psychological

implications for the transfer student (Laanan, 1998, 2004). While academic indicators are

often used as measures of success in higher education, transfer students are complex by the

very nature of their experiences (as detailed in Chapter 2 of this study). This calls for a better

understanding of the experiences that impact transfer student success at the 4-year institution.

With the addition of several factors designed to measure the psychological and affective

outcomes of transition, rather than a singular focus on academic success, a more thorough

understanding of the transfer transition process was achieved. In this manner, it was possible

to define student success apart from the more traditional measures that colleges and

universities have used in the past (such as student persistence and retention).

This study also answered the call for future work examining the complexity of

transfer student transition and success. Laanan et al. (2010) underscored the need for the

examination of various aspects that influence the development of transfer student capital in

future studies. More specifically, these authors stated that it would be beneficial to measure

student knowledge of transfer policy and their understanding of the available financial aid to

transfer that could help them build transfer student capital and ultimately achieve a

successful transition to the 4-year college or university. The present study added items that

were designed to explicitly address these appeals in an effort to better measure and

understand the factors that play the largest role in transfer student transition and success.

Discussion of Results

A discussion of the results is presented below. The information is delineated by each

specific research question when possible. A few of the research questions, however,

combined a variety of variables within the study. In this case, the research questions will be discussed in conjunction with one another.

Descriptive Analysis of Sample

An investigation of the variation between community college transfer students and 4-year institution transfer students found that community college transfer students were mostly similar to their 4-year transfer counterparts. The two groups of students were comparable with respect to gender, race/ethnicity, age, and other background characteristics, with no statistical differences between these groups. When looking specifically at the community college students, female transfer students were represented at a rate that was slightly higher than in the overall university population (63.1% vs. 58.5%), but no statistically significant difference existed. Given that women are typically more eager to assist in survey research projects, this is not unexpected. A higher percentage of racial/ethnic minority students came from the community college than from the 4-year college or university. Most of the community college respondents were white (92.0% compared to 93% of the overall university population), however, a higher percentage of community college transfer students were from a racial/ethnic minority group than the respondents from 4-year institutions (6.4% vs. 2.2%). As community colleges have typically been an important channel for access for underrepresented groups to higher education (Cohen & Brawer, 2008), this result supports this claim. It also points to the importance of understanding the needs of the various groups within the student body and basing programming on these needs. As L. Thomas (2002) found, students are more likely to be retained if the institution has tools in place to assist students with varying backgrounds in their transition to the university.

The majority of the community college transfer students (77.7%) fell within the traditional 21 to 24 age category at the university. There are several potential explanations for this finding. First of all, it could be that younger students have less responsibilities outside of class (work related, family related, etc.) than do older students and are therefore more likely to complete a survey of this length. It could be, however, that the profile of community college transfer students to the university is changing and that more of these students are now falling within the traditional age bracket. This finding supports the work of Wassmer, Moore, and Shulock (2004) that indicated that, more recently, community colleges sending students to 4-year colleges and universities have student populations of traditional age. This finding could have implications for institutional professionals as they base much of their programming from a model that assumes transfer students to be older with more varied needs and expectations than a student from a the traditional age category. It will be important to carefully monitor these trends in age as programs are implanted to assist students in transition to the university.

A large number of transfer students (72.2%) indicated that they did not reside on campus. This finding has direct implications for those campus services seeking to involve and engage students with campus life. Barnett (2010) suggested that because many transfer students live off campus and cannot engage in the traditional sense with the campus community, the focus of faculty and staff at the university should shift to improving engagement within the classroom itself as this is where the transfer student will spend the bulk of his or her time when on campus. Institutional efforts aimed at transfer students should keep in mind this change in the understanding of engagement when addressing the

needs of transfer students. It could also be beneficial to develop some type of off-campus student programming or mentoring to ensure the needs of these students are being addressed.

A substantial percentage of the community college transfer students arrived at UNI with an AA degree (66.6%). Literature has shown that students who have an AA degree prior to transfer are more likely to be successful and graduate at the university where they transfer (Adelman, 2006). Carlan and Byxbe (2000) found that students with an associate's degree had a higher GPA upon transfer to a 4-year institution. However, the present study found that AA degree attainment was negatively correlated with student success, as measured by GPA. It is possible that the length of time spent at the community college needed to complete the AA degree has a negative effect on student success at the university. The large number of respondents with an AA degree in present study must be considered in the interpretation of this finding.

Degree aspirations can also be used as a potential indicator of success, especially given that 2-year college students typically have varying degree aspirations than their peers at 4-year intuitions, with these aspirations even differing among 2-year students from public and private institutions (Laanan, 2003). In the present study, however, community college student degree aspirations did not differ significantly from their 4-year transfer peers. The majority of 2-year transfers intended to complete a bachelor's degree at UNI (85.2% compared to 80.0% of 4-year transfer students). Furthermore, over one-third of community college transfer students planned on completing a Master's degree at an institution in the future (36.7% compared to 47.7% of 4-year transfer students). This finding could support the notion that the profile of community college transfer students is changing. It is possible

that this group may not differ from more traditional students as substantially as once observed.

While no significant differences were found to exist among the demographic characteristics of the two groups, significant differences were observed within the academic adjustment of students to the expectations and rigor at the university. Community college transfer students were significantly more likely to experience transfer shock, or a dip in grades in their first semester at the university than were their 4-year transfer peers. In addition, 4-year transfers had a significantly higher GPA once at UNI than did the community college transfers. This finding supports the work of Hill (1965) and Townsend and Wilson (2006). These researchers found that transfer students have a more difficult time acclimatizing themselves to the culture of the institution, leading to less engagement and poorer academic outcome (Townsend & Wilson, 2006). A thorough understanding of the characteristics of these students and an appreciation of their unique needs will allow institutional officials to create transitional programming that will improve their chances for success at the university.

It was not possible to link community college GPA to respondents in the present study. At the time of administration of the questionnaire, the online survey tool did not allow for the collection of this information. This has since been remedied, however as the PI did not have access to the survey responses when they were linked to student identifying information it was not possible to go back to obtain this information about respondents. Given the strong link between associate's degree attainment and university GPA, it is expected that community college GPA would also have had a strong influence on student

success at the university. It will be important for future studies to confirm this hypothesis to examine the impact of community college GPA on student success.

The reader will recall that a coding issue within the student information system at the university resulted in the inclusion of a small number of 4-year college/university transfer students in the present study. While these students were recognized and their responses compared to the community college students, it illustrates a bigger issue within the institution itself. As was evidenced in this study, community college transfer students do not have as smooth an initial transition as do their peers from 4-year institutions. If the university is not able to identify these students in a systematic manner at the start of their education, they are also unable to specifically target these students within the well-established initiatives on campus designed to assist students with their transition to the university. It is imperative that this coding issue is sorted out and students appropriately identified within the context of their transfer sending institution.

Community College Versus University Experiences

The retrospective look at student habits at the community college, and the comparison of these behaviors to similar practices at the university provided good insight into the progression of the behaviors of community college transfer students at the university. An examination of employment patterns at the community college and the university showed that students worked substantially more when they were at the community college (42.3% worked more than 20 hours per week) than when they were enrolled at the university (22.9% worked more than 20 hours per week). This finding can be viewed in direct relation to the time it took students to prepare for classes at both institutions. Students spent a larger

proportion of time getting ready for class at the university than they did at the community college. Over half of all students (53.5%) indicated that they spent between one and five hours preparing for class at the community college, compared to 10.6% who said they spent that same amount of time preparing for their classes at the university. On the reverse end of the continuum, 36.1% of students studied 16 or more hours per week at the university, compared to only 4.8% of students studying that same amount at the community college.

Once at the university, students were also engaged in advanced academic behaviors (such as participating in class discussions, explaining course material to a classmate, and integrating ideas from various sources on a paper or project) at a higher rate than when they were at the community college. The only area where students reported engaging in a behavior less often at the university than at the community college was in their interactions with faculty at the university. Students were slightly less likely to work with a faculty member outside of class at the university than when they were at the community college. This finding has direct implications for faculty members seeking to engage students within the classroom setting. Going back to Barnett's (2010) work on faculty validation in the classroom and the importance of this validation to transfer student success, if students feel that their interactions with faculty members are authentic and that their experiences and contributions are accepted and important, they are more likely to succeed than students not experiencing this confirmation.   It would benefit faculty members at the university to understand the reluctance of some transfer students in interacting with faculty within their classes and to seek to engage these students in meaningful ways in the classroom environment.

Reasons for Transfer

Students transfer to the university for a range of different reasons. The majority of students (71.3%) indicated that their main reason for transfer was the desire to complete a bachelor's degree. An additional 17.4% wanted to gain the necessary skills to enter a specific job field or occupation. Appealing to these motives within recruitment and yield events will help to solidify a student's choice to attend the university. Reputation played a significant role in their decision to attend the university as well. The majority of respondents (89.6%) stated the academic reputation of the university was important or very important in their decision making to attend the university. This finding is in parallel to the goals in the UNI strategic plan to position the university as the premier undergraduate institution in the state of Iowa. If the profile of the institution continues to rise to meet this goal, it can be expected that student choice to attend the institution will be affirmed and satisfaction with the choice of institution supported. Institutional marketing efforts will also benefit by focusing on this aspect of the university in their recruitment and marketing materials. Cost of attendance (82.7%), career/job attainment of graduates (81.0%), size of the university (80.1%) and the availability of affordable tuition (79.2%) were other important reasons mentioned by students in the present study. It will be important for decision makers at the institution to be aware of this information as they move through the changes within the planning and decision making of the university at present. Special attention should be paid to the availability of financial aid and scholarships to transfer students, in addition effectively publicizing this information in the appropriate channels.

Transfer Stigma

Another factor potentially impacting transfer student transition is negative stigma. It was hypothesized that negative stigma towards transfer students at the university would have a negative effect on transfer student success, as measured by GPA, satisfaction and coping skills. The present results, however, revealed that stigma on campus was not as much of an issue as originally hypothesized. To fully understand this result, it is necessary conceptualize stigma relative to the university setting. Stigma was included in the original L-TSQ (Laanan, 1998) to examine the experiences of transfer students at the University of California Los Angeles (UCLA). UCLA is a highly selective institution, with very high admission standards, and it was hypothesized that community college students would feel stigmatized upon transfer to that university. Contrast this with UNI, an institution that is less selective than UCLA, where over one-third of the student body transferred to the university from another institution. Therefore, it is not surprising that close to three-fourths of respondents (66.8%) disagreed or strongly disagreed with the statement "there is a stigma at UNI among students for having started at a community college." Moreover, over half of the respondents (59.1%) disagreed that university students underestimate the abilities of community college transfer students. A large portion of students felt that faculty appreciated their academic abilities, with 69% disagreeing that faculty underestimate the abilities of community college transfer students. In addition, the results from the hierarchical multiple regression analysis did not reveal any significant relationships between stigma and student success at the university. Therefore, the hypothesis that stigma towards transfer students at the university

would have a negative effect on transfer student success was not supported in the present study.

Much of the rationale for the inclusion of stigma in the present study stemmed from the perception of negative opinion of community college transfer students on the part of faculty. It was revealed during a university self-study that some faculty in certain departments were participating in active research to determine whether students taking their major core classes at a community college performed as well as students taking the courses at UNI in an effort to discourage transfer into their departments (UNI, 2009). It is reassuring to find that students do not feel the effects related to this perception within certain faculty groups at the university. It will be important for future efforts at the university to focus on addressing these issues to ensure that transfer students continue to feel welcome at the university.

Transfer Student Success

The bulk of the research questions specifically examined the role of student background characteristics, community college experiences and university experiences on student success at the transfer institution. More precisely, this study sought to determine which factors were significantly associated with successful transition from the community college to the 4-year university, and student success at the 4-year institution. A large component of the focus of the present study was the relationship between transfer student capital with these factors. The next section examines the role of transfer student capital on student success, looking at the construct as a whole. The construct is then broken into its

various components to examine their individual influence on community college student success at the university.

Transfer Student Capital

One of the main questions this study sought to answer was whether or not the concept of transfer student capital could be operationalized. Transfer student capital refers to the process through which community college students acquire knowledge and skills necessary to navigate through the transfer process (Laanan et al., 2010). It was hypothesized that, through this study, the concept of transfer student capital could be further explained and explored. In an effort to better operationalize this construct, several variables were examined to determine the effects of transfer student capital on community college student success and their transition to the university. In this way, it was possible to determine which factors best described transfer student capital in this study and which factors needed to be reexamined in additional institutional settings. Laanan et al. (2010) initially tested this theory, defining transfer student capital using four constructs: a) academic counseling experiences; b) perceptions of transfer process; c) experiences with faculty at the community college; and d) learning and study skills acquired at the community college.

The present study further refined this construct, testing it in an additional setting to examine the generalizability of the construct to other institutions of higher education. Based on the results of the exploratory and confirmatory factor analyses, and given the outcome of the multiple regression analyses, transfer student capital was operationalized using a total of eight composite variables in the present study: a) academic counseling experiences; b)

learning and study skills at the community college; c) experiences with faculty at the community college; d) faculty interaction at the community college; e) faculty validation at the community college; f) faculty mentoring at the community college; g) financial knowledge at the community college; and h) motivation and self-efficacy.

Three of these constructs (academic counseling experiences, learning and study skills and experiences with faculty at the community college) were constructs suggested by Laanan (2004) to initially define transfer student capital. These constructs also held in the analyses in the present study and were included in the definition of transfer student capital. The remaining five were new constructs that emerged in the present study. All eight of these constructs were entered into the regression model to determine the extent of the effect of transfer student capital on student success at the university. It was hypothesized that transfer student capital would impact the success of community college transfer students as measured by university GPA, student satisfaction, and student coping at UNI, with students with greater transfer student capital demonstrating higher rates of success than students lacking transfer student capital. This hypothesis was confirmed and is explained in the paragraphs to follow.

The influence of transfer student capital on student success was examined within the context of the complete student experience. Consequently, a hierarchical multiple regression analysis was conducted to determine the impact of transfer student capital on student success. The order of the independent variables in these models was dictated by the theoretical framework from Astin's I-E-O model (Astin, 1999), detailed extensively in previous chapters. The first block of the model was comprised of specific student background

characteristics. The second block consisted of variables designed to assess the effect of the community college experience. The third block was made up of the transfer student capital construct. Finally, the fourth block entered the university experiences into the regression equation. Each of the models differed slightly based on the dependent variable being measured. The composition of the variables within each block is detailed within the examination of each dependent variable below.

GPA. The importance of transfer student capital on student achievement (as measured by GPA) is evidenced in the results. Three facets of transfer student capital were found to be significant predictors of student GPA at the university. Faculty interaction at the community college, student motivation and self-efficacy, and experiences with faculty at the community college significantly predicted student GPA. This indicates that the student and faculty relationship at the community college is central to student achievement at the university. When students collaborate with faculty, both on activities outside of class and on activities related to their coursework, student achievement (as measured by GPA) increases. Conversely, experiences with faculty at the community college had a strong negative impact on student success at the university, as measured by GPA. Surprisingly, student achievement increased as the rating of amicability of faculty decreased and the presence of meaningful discussion with faculty decreased. One potential reason for this finding could be that students who receive a high GPA at the university are self-directed and highly motivated to achieve without seeking assistance and guidance from their professors. This finding, however, merits further examination. Student motivation and self-efficacy were also important predictors of student success at the university. Positive relationships with faculty

at the community college enhance and build student self-efficacy, creating a support network to assist students in creating strategies to succeed academically. The accumulation of this capital while students are at the community college has a significant impact on their success once they transfer to the university.

The results of the study revealed that several factors significantly predicted student success as measured by GPA at the university in addition to transfer student capital. Paternal educational attainment, age and gender were strong predictors of student success as measured by student GPA. As paternal education level increases, GPA also increases. Knowledge of parental educational attainment at the onset of registration will allow institutional efforts aimed at improving the success of these groups of students to have the most impact. Student GPA is also predicted by gender. In addition, women tend to perform better than men once they arrive at the university. Finally, GPA increases with age, with older students performing better than younger students in this sample. This will be important within university planning efforts as university staff target specific groups for outreach and educational programming within the various divisions. It is important to note that university experiences did not have a significant effect on GPA at the university. There are various explanations for this result. It is possible that student interactions with university advisors prior to transfer to the university had a strong impact on students, diminishing the impact of other experiences upon their arrival at the institution. It will be important for future researchers to examine the impact of university experiences on student satisfaction to determine if this finding is universal or unique to this particular institution.

Student coping skills. Student success was also examined using student ability to cope with problems at the university. Variables were again entered into four blocks of a hierarchical regression model. Whether or not a student had attained an associate's degree prior to transferring to the university was a strong negative predictor of student coping ability. Students who completed their AA degree were less able to cope with their problems at the university than students who had not finished their 2-year degree prior to transfer. Students who had completed this milestone in their academic career had spent more time at the community college than students who did not obtain their AA degree, potentially limiting their development of good coping skills as they arrived at the university.

The presence of a mentoring relationship at the community college, one construct within transfer student capital, also played a significant role in student ability to cope. If a student had a faculty or staff mentor at the community college they were better able to cope with issues once they transitioned to the university. It is conceivable that this is a reflection of the transference of the capital from mentor to student and it would benefit future researchers to examine this in greater detail. This finding again illustrates the importance of developing relationships between faculty and students at the community college. Faculty relationships are undoubtedly important given that interaction with faculty at the university was found to significantly predict student coping as well. Students who felt comfortable interacting with faculty at the university had an increased ability to cope with their problems. It is essential that students feel comfortable approaching faculty members to discuss various aspects of their development, including course-related content and career plans and ambitions. Perhaps when students interact with faculty they obtain certain benefits similar to

that of a mentoring relationship without the formal title of mentor, providing the student with additional skills to better cope with the stresses and pressures of college life.

Experiences with faculty at the university were another significant predictor of student ability to cope with problems at the university. When students visited with their instructors before and after class, discussed career plans with a faculty member, and asked their instructors for information and comments related to coursework they were more able to cope with their problems at the university. This illustrates the importance of developing strong and positive faculty/student relationships on campus. With the strong influence of a mentoring relationship at the community college on student coping ability, one can conceive that these students have already created patterns of communicating with faculty members at the community college. The carryover of these behaviors to their interactions with faculty at the university is an important factor in stud

Student satisfaction. One aspect of transfer student capital was significantly related to student satisfaction with their academic experience at the university. The financial literacy of the student had a direct impact on their satisfaction level. If students were aware of the financial aid available to them at transfer and if they researched the availability of scholarships for transfer students and other types of aid, they were more likely to be satisfied with their university experience than the student who did not seek this financial support. This is conceivably due to the nature of the community college transfer student. Looking back at Chapter 4, student motivation for beginning the academic career at the community college was most heavily influenced by financial considerations and cost. If the community college student has done extensive research into the financial assistance available to them

prior to their transfer they are more likely to be satisfied with their experience once they come to the university.

Community college and university factors were also examined to determine the impact of these experiences on student satisfaction with their academic experiences at the university. Experiences with the general courses at the community college were a significant predictor of student satisfaction with academics and advising at the university. Creating a rigorous academic environment within the community college classroom is imperative. Classes that are challenging and that require students to develop and use analytical and critical thinking skills will provide the students with significant advantages when they transfer to the university. If the academic offerings at community college do not encourage the development of critical thinking and advanced academic behaviors the student will be significantly less likely to succeed at the university. Courses that encourage class participation, interaction among peers and the integration of subject matter and ideas across sources and materials will be strongly beneficial to the student. Attention should focus on ensuring that courses are challenging and demanding, with some attention to intensive writing assignments that enhance the analytical thinking skills of community college students.

Experiences with faculty at the university also played a large role in the satisfaction at the university. This finding again stresses the importance of developing strong relationships between faculty and students and building an institutional environment that encourages students to approach and interact with faculty at the university. University programming can encourage faculty/student interaction with professional development opportunities for faculty

explaining the importance of these interactions and success strategy programs for transfer students stressing the importance of establishing bonds with faculty members early in their careers at the university.   Perception of faculty accessibility at the university is crucial. When students perceived that faculty and staff on campus were not accessible, they were more likely to show low satisfaction with their experiences at the university. This finding is not surprising, given that a faculty member who is seen as remote or impersonal will discourage students from interacting with him or her both inside and outside of the classroom.

Financial Variables

Laanan et al. (2010) discussed the importance of financial literacy in their study, indicating that future researchers should focus on the impact of student knowledge of financial aid and scholarships available to transfer students. The present study examined the financial fluency of students to determine how knowledge of financial aid would impact student transition and success. The present study specifically sought to determine if student success, as measured by GPA, coping ability, and student satisfaction, was influenced by financial variables. Students begin their educational endeavors at the community college for a variety of reasons, cost being one of those reasons. Almost half (40.8%) of the students in the present study indicated that they chose to begin their schooling at the community college because of lower cost/tuition than a 4-year institution. The availability of financial aid and scholarships was also another important reason to attend the community college with 27.9% of students stating that this was an important reason. Obviously a clear understanding of the aid and scholarships available to students is important, given that financing their education is

weighing so heavily in their college choice decisions. In addition, financial fluency was a significant predictor of student satisfaction at the university. Student affairs professionals at community colleges should provide programming related to the financial aspects of college and provide resources for students prior to their transfer to the university.

Mentoring Relationship

The present study also examined the influence of a mentoring relationship in community college student success. More specifically, the present research considered if students involved in a mentoring relationship (with a faculty and/or staff member) at the community college performed better at the university (GPA, academic adjustment and coping) than students who have not been in a mentoring relationship. As Smith (2011) stated, the main goal of an academic mentoring relationship is to provide students with the support necessary to successfully navigate the educational pipeline. A quality faculty/student mentoring relationship was postulated to have a direct relationship to transfer student success at their transfer institution. A smaller proportion of students indicated that they had a faculty or staff mentor than was expected (30.4%); however, the present study found that students who had been involved in a mentoring relationship at the community college were significantly better able to cope with their problems once they enrolled at the university than students who did not experience a mentoring relationship. Given that this relationship emerged as a significant predictor of success in community college transfer students it would benefit community colleges to consider initiatives that help foster this type of relationship between students, faculty and staff. Creating an on-campus support system for students increases their opportunity for success at the institution (Smith, 2011). The development of

this type of programming at the community college could be expected to improve the success of transfer students.

Faculty and Staff Validation

Finally, the presence or absence of validation by faculty within the classroom and by staff members on campus was studied to see if students experiencing this validation did better in their transition to the university and in their overall success at the 4-year institution. Faculty validation was defined as the presence and the quality of interactions between professors and students in the classroom setting at the community college. Staff validation can be explained in a similar manner as the presence and the quality of interactions between staff members and students at the community college (Barnett, 2010). It was hypothesized that students who felt that their ideas and feelings were validated by a faculty or staff member at their community college would have greater success at the university (measured by university GPA, student satisfaction, and student coping at UNI) than students who did not have validating experiences at their 2-year college. An initial examination of the faculty and staff validation constructs revealed that the two were highly correlated ($r=.71$). Therefore, it was concluded that only one of these constructs should be included in the regression models. Given the previous work highlighting faculty validation (Barnett, 2010), faculty validation was chosen for inclusion in the present study.

While faculty validation was not a significant predictor of student success, the strong impact of other factors related to faculty interactions suggest that further research in this area would be beneficial. It is evident that student experiences with faculty at the community

college and their interactions with faculty at the university play a large role in their success at the institution. In addition, the perception that faculty and staff on campus were not accessible or personable was directly related to poor academic performance. Why validating experiences within these settings did not predict student success remains to be seen. It is possible that the hypothesis related to this construct was not phrased in as precise a manner as needed to truly explore the relationship between faculty validation and student success. It is also plausible that the use of different variables to measure student success would have revealed more robust associations between faculty validation and student success. It will be important for future studies to examine this construct further, potentially in different settings to test whether the relationship originally found in Barnett (2010) can be further substantiated.

Summary of Results

This quantitative study examined the impact of various factors that have the greatest influence on community college transfer student success at the 4-year university. Paternal educational attainment, age, and gender were all significant predictors of student GPA. The results also indicated that transfer student capital played an important role in community college student success at the university. Students with higher levels of transfer student capital (determined by interaction with faculty at the community college, experiences with faculty at the community college, motivation and self-efficacy) were significantly more likely to perform better as measured by GPA at the university. In addition, mentoring (a component of transfer student capital) was a significant predictor of student ability to actively cope with their problems. Finally, students with greater transfer student capital, as

measured by experiences with general courses at the community college, financial fluency

and faculty interaction at the community college, had greater levels of satisfaction with

academics and advising at the university. Student relationships with faculty were key factors

in their success at the university. Faculty interaction and experiences with faculty at the

community college, a mentoring experience with a faculty member, and experiences with

faculty at the university all significantly predicted student success. Important implications of

these results and recommendations for future research are discussed in the following section.

Implications for Practice and Policy

The results of this study have practical implications for institutional leaders at

community colleges and 4-year colleges and universities as well as student affairs

professionals at both types of institutions. In addition, the results directly impact faculty and

staff working with students who plan to transfer or who have transferred to the institution

they work at. First of all, the present study expands the work of Laanan et al. (2010) by

further conceptualizing the theory of transfer student capital. With the support of the

addition of five constructs to transfer student capital through the exploratory factor analysis,

confirmatory factor analysis, and multiple regression analyses, these constructs are evidenced

to be important components of community college student success. The support of the

original transfer student capital constructs, plus the significant results of the new constructs

allow for the operationalization of transfer student capital. A new conceptual model emerged

from the analysis of the results of the present study (see Figure 5.1). This new conceptual

model (the Moser Transfer Student Capital construct; M-TSC) considered various theoretical

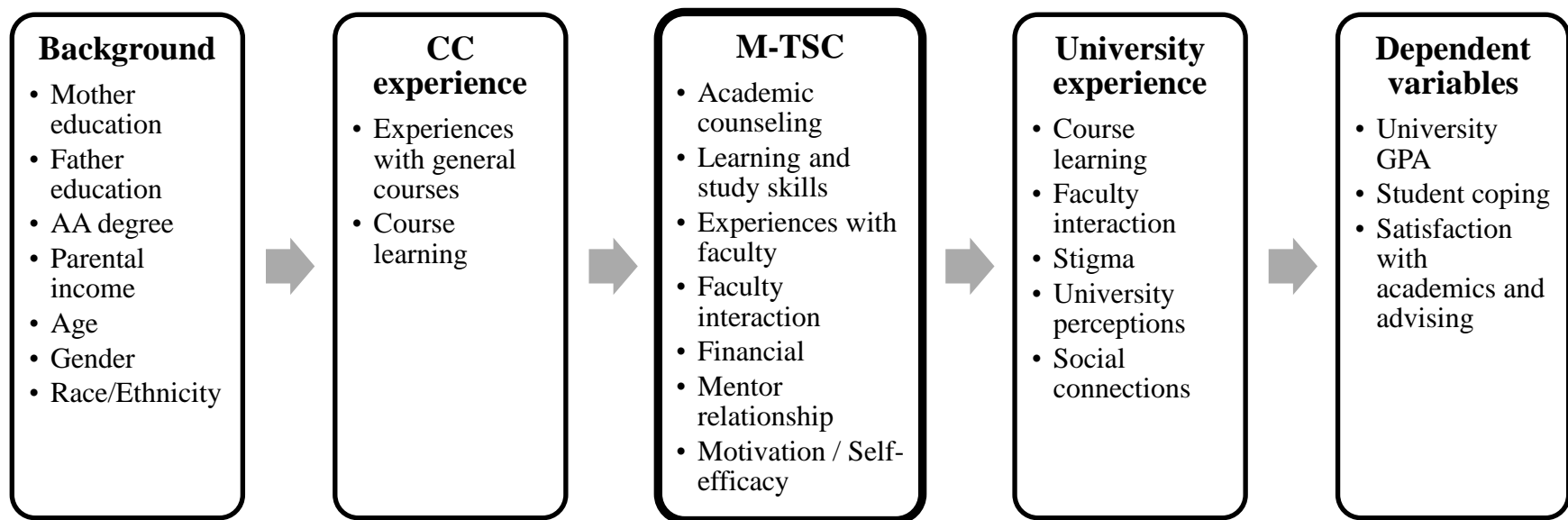concepts and models in its development. With the inclusion of several new constructs to the

Background		CC experience		M-TSC		University experience		Dependent variables

Background
- Mother education
- Father education
- AA degree
- Parental income
- Age
- Gender
- Race/Ethnicity

CC experience
- Experiences with general courses
- Course learning

M-TSC
- Academic counseling
- Learning and study skills
- Experiences with faculty
- Faculty interaction
- Financial
- Mentor relationship
- Motivation / Self-efficacy

University experience
- Course learning
- Faculty interaction
- Stigma
- University perceptions
- Social connections

Dependent variables
- University GPA
- Student coping
- Satisfaction with academics and advising

Figure 5.1. The Moser transfer student capital construct

original transfer student capital model, and their significance in the success of community college transfer students in the present study, the relevance of this model is illustrated. Future research is important using the updated Moser transfer student capital construct to determine if these constructs hold in various educational settings and environments across the country.

Practice

The results of the study validate the importance of transfer student capital on student success at the university. Institutional leaders at the community college should consider ways in which to facilitate the accumulation of this capital at the community college. In addition, these institutions could benefit from offering professional development opportunities for faculty at their institutions to discuss the important role that faculty members play in facilitating student success once at the transfer institution. These programs could potentially center on developing course rigor, outcomes assessment, encouragement of interactions and conversations between faculty and staff, and enhancing student financial knowledge. In addition, a formal faculty/student mentoring program could be established, with potential incentives for faculty participation.

Classroom experiences at the community college are also important predictors of student success at the university. Careful attention should be given to the assessment of student learning gains. Students who have experienced rigorous courses at the community college, with opportunity for reflection, critical thinking, and the use of analytical skills are found to perform better once they arrive at the university than students who have not had this type of classroom experience. In addition, it is essential to create classrooms and courses

that facilitate in-class collaboration, engagement and interaction between students at the community college. Students who are comfortable discussing the implications of their coursework with other students do better at the university than students who lack this experience.

Finally, while transfer stigma was not revealed to be a significant predictor of student success in the present study, it is still important to remember the impact that this stigma can have on new community college transfer students. To encourage their engagement on campus and their interaction with faculty and students within their classes it is important to make these students feel welcome and accepted on campus. It is also important to consider their reasons for choosing to enroll at a community college prior to enrolling at the university. Many of these students indicated that their primary reason for starting at the 2-year college was based on financial realities. It will be critical for institutional officials at the university to consider this as they create financial awards and scholarships for new transfer students.

Policy

Several implications for institutional policy also emerged from the present study. These results directly address the important role that faculty members play in student success and achievement. The vast majority of significant contributions in the present study involve the interaction between students and faculty members. Much of this relationship is originated at the community college. Community college leaders would benefit by examining the existing initiatives they have in place to encourage faculty and student

interaction. It would also be advantageous to consider programming to foster this type of relationship building across the community college setting.

University administrators, faculty and staff can also gain valuable information from this research. While much of the transfer student capital that a student accumulates occurs at the community college, it will be critical to access students as they arrive at the institution. It might be helpful to consider information sessions during orientation that remind community college transfer students of the services available (student services, financial services, etc.), in addition to enlightening them on the expectations of students at the university. Additionally, considering the strong influence of community college course learning and experiences with general courses at the community college, it will benefit universities to consider the academic preparation of their transfer students. This could necessitate the implementation of cooperative programs between universities and community colleges that encourage collaboration among faculty at both institutions. University officials should also be sure to collaborate with their community college counterparts to ensure that the rigor in the community college preparatory courses is adequately preparing students to succeed at the university. Students should also be informed of the impact that mentoring relationships have on student success and be strongly encouraged to forge mentoring relationships with faculty and staff while they are at the community college.

Recommendations for Future Research

Given the changing nature of the college student of today (Pascarella & Terenzini, 1998), it is critical to strive to create new ways of understanding the needs of these students and ways to measure their outcomes and success at colleges and universities across the

nation. The present study re-conceptualized an innovative model that examines transfer student success from a contemporary approach, relying on various socio-emotional and cognitive factors to predict student outcomes instead of using typical measures of success such as retention and graduate rates. It is imperative to consider the academic achievement and attainment of all of our students, be it native students or transfer students to the university. The results of this study provide a framework for the reexamination of the programs and offerings on campuses that are currently in place to promote the success of transfer students. Future researchers would benefit by examining transfer student capital within the context of their own university settings to determine the generalizability of the theory across institution types. The original work for this research and follow up research were conducted at large research intensive universities. The present study was conducted at a mid-sized comprehensive university. Therefore, transfer student capital has already been conceptualized across several institutions and types. However, given that the measurement of student success is such a complex process, especially when transfer students are added to the scenario, verification of this work in different settings is vital. It is also important for future researchers to consider replicating this study using a longitudinal design. The cross-sectional nature of the present study provided some limitations that would be enhanced in a longitudinal design. A pre/post model would also be appropriate for consideration. While this type of design is more difficult to conduct, it would be very interesting to determine whether the findings of the present study are replicated using this type of design.

The influence of faculty and staff validation remains to be seen. Given the size and the general homogeneity of the present study, it is important for future work to further test

this concept to determine the effect that faculty validation has on student success. It is important to examine this construct within the transfer student population, as their experiences of engagement in the classroom might not be what the more traditional student is experiencing. The emergence of the strong connection between faculty interactions and experiences with faculty at both the community college and university suggest that these types of interactions are crucial. Research designed to obtain a better understanding of this phenomenon is needed to truly comprehend the impact of validation on student success.

Conclusions

The purpose of this study was to reexamine the Laanan-Transfer Students' Questionnaire (L-TSQ), a survey designed to provide new ways of studying transfer students at 4-year institutions (Laanan, 1998, 2004). The addition of five new constructs to the questionnaire, in consideration of new research in the field, helped to further clarify transfer student capital as a theory and a construct, which will support the measurement of this paradigm in future studies. The results produced several new theoretical and methodological contributions related to transfer student adjustment and success at the 4-year university, including a new model measure transfer student capital.

Students with higher levels of transfer student capital were significantly more likely to perform better academically, to cope better with stress at the university, and to be more satisfied with their academic experience at the university. The importance of quality faculty/student relationships, both at the community college and at the university, was underscored. Student interactions with faculty played a significant role in their success at the university. These relationships are essential to building the skills that community college

students need to succeed at the university. Finally, course rigor at the community college is vital to promoting transfer student success at the 4-year institution. Recommendations for future research indicate the need for more exploration of faculty and staff validation. In addition, the transfer student capital theory should be reexamined in a variety of different settings to ensure the generalizability of the construct to various types of students and institutions across the country.

Transfer students are a large component of the university community. Understanding the challenges to successful transfer transition is critical in creating an institutional environment that fosters the success of all students, regardless of school of origin. To repeat Laanan et al. (2010), this study serves to provide a foundation adding to the understanding of the factors that most impact transfer student success. Hopefully the present study can be a catalyst for continued dialogue surrounding the unique needs of community college transfer students to the university. Through this enhanced understanding of the factors that most impact transfer students should stem increased efforts on the part of community colleges and 4-year universities alike to serve the needs of this important subgroup of their student population.

APPENDIX A: ORIGINAL L-TSQ

Default Question Block

Iowa State University
Transfer Student Survey

Thank you for your willingness to complete this survey.

Please answer the following questions based on your experience as a transfer student at Iowa State University. All information you provide will be kept completely confidential and will be used in summary to assist ISU administrators, faculty members, and student affairs professionals in developing resources and programs that will benefit transfer students. Your name will not be associated with your responses in any part of the reporting process.

- The survey is divided into six short sections.
- Scroll through each section to answer the questions.

If you submit your completed survey by April 22, 2009, you will be entered into a drawing to win one of thirty (30) ISU bookstore gift certificates worth $25.

If you have any difficulty with this survey, please contact Carlos Lopez by email: clopez@iastate.edu or by telephone: 515-294-0598.

Background Information

First, please complete the following background questions.

Current place of residence (during academic year).

- ○ Residence hall or other university housing
- ○ Fraternity or sorority house
- ○ Private apartment or room within walking distance of the university
- ○ House,apartment, etc. (not walking distance from campus)
- ○ with parents or relatives

What is the highest academic degree that you intend to obtain at any college?

- ○ Bachelor (BA or BS)
- ○ Master (MA or MS)

○ Doctorate (Ph.D. or Ed.D.)

○ Medical (MD, DDS, DO, or DVM)

○ Law (JD or LLB)

○ Other

[   ]

At Iowa State University?

○ Bachelor (BA or BS)

○ Master (MA or MS)

○ Doctorate (Ph.D. or Ed.D.)

○ Other

[   ]

What is the highest level of education completed by your parents?

	Elementary school or less	Some High School	High School graduate	Some college	Associate's degree from two year	Bachelor's degree	Some graduate school	Graduate degree	Don't know
Mother	○	○	○	○	○	○	○	○	○
Father	○	○	○	○	○	○	○	○	○

What is your best estimate of your parents' total household income last year?

☐ If you are independent check here

☐ Less than $20,000

☐ $20,000-$39,999

☐ $40,000-$59,999

☐ $60,000-$79,999

☐ $80,000 or more

Gender

○ Female

○ Male

What is your age?

[▾]

What is your ethnic background? (you may select more than one answer)

☐ African American or Black

☐ Asian American/Pacific Islander

☐ Hispanic or Latino/a

☐ Native American or Alaskan Native

☐ White (non-Hispanic)

☐ Other

[_____]

Community College Experiences

The purpose of this section is to obtain information about your community college experiences prior to your transfer to ISU.

About how many hours a week did you usually spend on the community college campus, not counting time attending classes?

○ None

○ 1 to 3 hours

○ 4 to 6 hours

○ 7 to 9 hours

○ 10 to 12 hours

○ more than 12 hours

About how many hours a week did you usually spend studying or preparing for your classes?

○ 1 to 5 hours

○ 6 to 10 hours

○ 11 to 15 hours

○ 16 to 20 hours

○ more than 20 hours

During your time at the community college, about how many hours a week did you usually spend working on a job for pay?

○ None, I didn't have a job

○ 1-10 hours

○ 11-15 hours

○ 16-20 hours

○ 21-30 hours

○ more than 30 hours

What type of degree, diploma or certificate did you receive? If multiple, please list each in 'Other'.

○ None

○ AA (Associate of Arts)

○ AS (Associate of Science)

○ AGS (Associate of General Studies)

○ AAA (Associate of Applied Arts)

○ AAS (Associate of Applied Science)

○ Diploma

○ Certificate

○ Other

[_____]

General Courses

The following questions addresses various aspects of your community college experience. For each item below, please indicate the extent to which you disagree or agree with the statement.

	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
The courses developed my critical and analytical thinking.	○	○	○	○
The courses demanded intensive writing assignments and projects.	○	○	○	○
Overall, the courses were intellectually challenging.	○	○	○	○
The courses prepared me for the academic standards at	○	○	○	○

ISU.				
The courses prepared me for my major at ISU.	○	○	○	○
The courses required extensive reading and writing.	○	○	○	○

Academic Advising/Counseling Services

The following items address your use of academic advising/counseling services at your community college. Please indicate the extent to which you disagree or agree with each statement

	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
I consulted with academic advisors/counselors regarding transfer.	○	○	○	○
Information received from academic advisors/counselors was helpful in the transfer process.	○	○	○	○
I met with academic advisors/counselors on a regular basis.	○	○	○	○
I talked with an advisor/counselor about courses to take, requirements, education plans.	○	○	○	○
I discussed my plans for transferring to a four-year college or university with an academic advisor/counselor.	○	○	○	○
Advisors/counselors identified courses needed to meet the general education/major requirements of a four-year college or university I was interested in attending.	○	○	○	○

Transfer Process

These items pertain to your perceptions about the "transfer process" while you were enrolled at the community college. Please indicate the extent to which you disagree or agree with each statement.

	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
I researched various aspects of ISU to get a better understanding of the environment and academic expectations.	○	○	○	○

I knew what to expect at ISU in terms of academics.	○	○	○	○
I visited the ISU campus to learn where offices and departments were located.	○	○	○	○
I spoke to academic counselors at ISU about transferring and major requirements.	○	○	○	○
I visited the admission office at ISU.	○	○	○	○
I spoke to former community college transfers students to gain insight about their adjustment experiences.	○	○	○	○

College Activities at Your Community College

Course Learning
In your experience at your community college, about how often did you do each of the following?

	Never	Occasionally	Often	Very Often
Took detailed notes in class.	○	○	○	○
Participated in class discussions.	○	○	○	○
Tried to see how different facts and ideas fit together.	○	○	○	○
Thought about practical applications of the material.	○	○	○	○
Worked on a paper or project where I had to integrate ideas from various sources.	○	○	○	○
Tried to explain the material to another student or friend.	○	○	○	○

Experience with Faculty

How often did you do each of the following at your community college?

	Never	Occasionally	Often	Very Often
Visited faculty and sought their advice on class projects such as writing assignments and research papers.	○	○	○	○
Felt comfortable approaching faculty outside class.	○	○	○	○

Asked my instructor for information related to a course I was taking (grades, make-up work, assignments, etc.)	○	○	○	○
Visited informally and briefly with an instructor after class.	○	○	○	○
Discuss my career plans and ambitions with a faculty member.	○	○	○	○
Asked my instructor for comments and criticisms about my work.	○	○	○	○

Learning and Study Skills

To what extent do you agree or disagree that your academic experiences at your community college gave you the skills you needed to prepare you for the standards and academic rigor at ISU?

	Disagree Strongly	Disagree Somewhat	Neutral	Agree Somewhat	Agree Strongly
Computer skills	○	○	○	○	○
Mathematical skills	○	○	○	○	○
Note taking skills	○	○	○	○	○
Problem solving skills	○	○	○	○	○
Reading skills	○	○	○	○	○
Research skills	○	○	○	○	○
Speaking and oral presentation skills	○	○	○	○	○
Test taking skills	○	○	○	○	○
Time management skills	○	○	○	○	○
Writing skills	○	○	○	○	○

ISU Experiences

The purpose of this section is to obtain information about your current experiences at Iowa State University.

About how many hours a week do you usually spend working on a job for pay?

○ None, I don't have a job

○ 1 to 10 hours

○ 11 to 15 hours

○ 16 to 20 hours

○ 21 to 30 hours

○ more than 30 hours

What is the most important reason for attending ISU?

○ To obtain a bachelor's degree

○ To gain skills necessary to enter a new job or occupation

○ To pursue graduate or professional school

○ To satisfy a personal interest (cultural, social)

Listed below are some reasons that might have influenced your decision to attend ISU. How important was each reason in your decision to come here?

	Not important	Somewhat Important	Important	Very Important
ISU has a very good academic reputation.	○	○	○	○
ISU has a very good reputation for its social activities.	○	○	○	○
I was offered financial assistance.	○	○	○	○
ISU has affordable tuition.	○	○	○	○
Academic counselor(s) at my previous college advised me.	○	○	○	○
A friend suggested attending.	○	○	○	○
A ISU representative recruited me.	○	○	○	○
ISU's graduates gain admission to top graduate/professional schools.	○	○	○	○
ISU's graduates get good jobs.	○	○	○	○
ISU's ranking in national magazines.	○	○	○	○
Parents recommended that I attend ISU.	○	○	○	○
My brother(s)/sister(s) attended ISU.	○	○	○	○
Convenience and location.	○	○	○	○
Size of ISU.	○	○	○	○

| Cost of ISU. | ○ | ○ | ○ | ○ |

Did you attend a ISU-sponsored Transfer Student Orientation?

○ Yes

○ No

If you answered yes to the question above, how helpful was the orientation program in facilitating your transition to ISU?

○ Very unhelpful

○ Somewhat unhelpful

○ Somewhat helpful

○ Very helpful

College Activities at ISU

Course Learning

During the past year at ISU, about how often did you do each of the following?

	Never	Occasionally	Often	Very Often
Took detailed notes in class.	○	○	○	○
Participated in class discussions.	○	○	○	○
Tried to see how different facts and ideas fit together.	○	○	○	○
Thought about practical applications of the material.	○	○	○	○
Worked on a paper or project where I had to integrate ideas from various sources.	○	○	○	○
Tried explain the material to another student or friend.	○	○	○	○

Experience with Faculty

During the past year at ISU, about how often did you do each of the following?

	Never	Occasionally	Often	Very Often

Visited faculty and sought their advice on class projects such as writing assignments and research papers.	○	○	○	○
Felt comfortable approaching faculty outside class.	○	○	○	○
Asked my instructor for information related to a course I was taking (grades, make-up work, assignments,etc.)	○	○	○	○
Visited informally and briefly with an instructor after class.	○	○	○	○
Discussed my career plans and ambitions with a faculty member.	○	○	○	○
Asked my instructor for comments and criticisms about my work.	○	○	○	○

General Perceptions of ISU

The following are statements about your general perceptions, adjustment process, and opinion of you overall satisfaction at ISU. Please indicate the extent to which you agree or disagree.

	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
ISU faculty are easy to approach.	○	○	○	○
ISU faculty tend to be accessible to students.	○	○	○	○
It was difficult learning the "red tape" when I started.	○	○	○	○
Because I am a "community college transfer," most students tend to underestimate my abilities.	○	○	○	○
Because I am a "community college transfer," most faculty tend to underestimate my abilities.	○	○	○	○
There is a stigma at ISU among students for having started at a community college.	○	○	○	○
Generally, students are more concerned about "getting the grade" instead of learning the material.	○	○	○	○
Many students feel like they do not "fit in" on this campus.	○	○	○	○
	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly

Professors are strongly interested in the academic development of undergraduates.	○	○	○	○
Most students are treated like a "number."	○	○	○	○
Student services are responsive to student needs.	○	○	○	○
If students expect to benefit from what ISU has to offer, they have to take the initiative.	○	○	○	○
I feel the courses I have taken at ISU have been interesting and worthwhile.	○	○	○	○
ISU is an intellectually stimulating and often exciting place to be.	○	○	○	○
I would recommend to other transfer students to come to ISU.	○	○	○	○
If I could start over again, I still would go to ISU.	○	○	○	○

Adjustment Process

Please indicate the extent to which you agree or disagree with the following statements.

	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
Adjusting to the academic standards or expectations at ISU has been easy.	○	○	○	○
Adjusting to the social environment at ISU has been easy.	○	○	○	○
I often feel (felt) overwhelmed by the size of the student body.	○	○	○	○
Upon transferring I felt alienated at ISU.	○	○	○	○
I am very involved with social activities at ISU.	○	○	○	○
I am meeting as many people and making as many friends as I would like at ISU.	○	○	○	○
The large classes intimidate me.	○	○	○	○
	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
It is easy to find my way around campus.	○	○	○	○
My level of stress increased when I started ISU.	○	○	○	○
I experienced a dip in grades				

(GPA) during my first semester at ISU.	○	○	○	○
It is easy to make friends at ISU.	○	○	○	○
I feel comfortable spending time with friends that I made at the community college I attended.	○	○	○	○
I feel more comfortable making friends with transfer students than non-transfers.	○	○	○	○
There is a sense of competition between/among students at ISU that is not found in community colleges.	○	○	○	○

College Satisfaction

Please rate your satisfaction with each of the aspects of campus life listed below.

	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied	Not Applicable
Sense of belonging at ISU.	○	○	○	○	○
Decision to transfer to ISU.	○	○	○	○	○
Overall quality of instruction.	○	○	○	○	○
Sense of community on campus.	○	○	○	○	○
Academic advising.	○	○	○	○	○
Career counseling and advising.	○	○	○	○	○
Student housing.	○	○	○	○	○
Courses in your major field.	○	○	○	○	○
Financial aid services.	○	○	○	○	○
Amount of contact with faculty.	○	○	○	○	○
Opportunities for community service.	○	○	○	○	○
Job placement services for students.	○	○	○	○	○
Class Size.	○	○	○	○	○
Interaction with other students.	○	○	○	○	○
Ethnic/racial diversity of the faculty.	○	○	○	○	○
Leadership opportunities.	○	○	○	○	○
Overall college experience.	○	○	○	○	○

Conclusion
Comments

What factors helped you adjust to ISU? Please explain what factors contributed to your successful transfer (or unsuccessful transfer) to ISU. Feel free to include factors at both your community college and ISU.

What might the community college have done to enhance your success or ease the transition to ISU?

If you could give some advice to community college students who will be transferring to ISU, what would that advice be?

What have we NOT asked that you would like us to know about your experiences at the community college or ISU?

Focus Group Participation

We would like to solicit your participation in a focus group to obtain in-depth information about your overall educational experiences. The focus group will last 1.5 hours. If you are interested in participating in a focus group, please provide the following information.

First Name	
Last Name	
Best number to call	
E-Mail	

If you participate in the focus group, please be advised that you responses will remain "CONFIDENTIAL." Findings will be reported in the aggregate and no personal identifiable information will be associated with your responses.

If you have any questions about the survey, please contact Carlos Lopez by email: clopez@iastate.edu or by telephone: 515-294-0598.

Thank you

Thank you very much for taking the time to complete this Transfer Student Survey. The Iowa State University administration greatly appreciates your contributions toward improving the university academic environment.

Frankie Santos Laanan, Ph.D.
Associate Professor, Educational Leadership and Policy Studies.
laanan@iastate.edu

IOWA STATE UNIVERSITY

APPENDIX B: PROPOSED ADDITIONS TO THE L-TSQ

The next set of questions inquires about your experiences at your previous institution (community college). Please rate how strongly you agree or disagree with the following statements (1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4=agree; 5=strongly agree):

For your reference, **faculty member** refers to an educator working at a college or university. In this case, please think about instructional faculty with whom you interacted with during your academic/classroom experiences at the community college.

Mentoring is defined as a relationship between an experienced person and a less experienced person, in this case between a faculty member and a student. The mentee seeks the advice and guidance of the mentor to assist in the navigation of the collegiate experience.

Mentoring

1. Did you have a faculty or staff member as a mentor at your community college? (if no, skip to next section)

To what extent do you agree or disagree that your faculty/staff mentor (1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4=agree; 5=strongly agree):

2. Had regular contact with you.
3. Cared about whether or not you succeeded at the institution.
4. Provided you with valuable information related to how to succeed academically.
5. Helped you create connections with other faculty/staff members at your community college.
6. Helped you create connections with other faculty/staff members at your current/transfer institution.
7. Helped you explore the purpose of obtaining a 4-year degree.
8. Helped you explore your reasons for pursuing a 4-year degree.

To what extent do you agree or disagree with the following statements (1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4=agree; 5=strongly agree):

9. At least one faculty/staff member at my previous institution encouraged me to participate in institutionally sponsored/related activities (academic and/or extracurricular).
10. I had the opportunity to collaborate with at least one faculty/staff on activities related to my coursework at my previous institution.

11. I had the opportunity to collaborate with at least one faculty/staff on activities outside of class at my previous institution.

Faculty Validation

To what extent do you agree or disagree with the following statements (1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4=agree; 5=strongly agree):

1. My course instructors genuinely cared about whether or not the students in their classes succeeded at the institution.
2. My course instructors allowed the expression of differing viewpoints in their courses.
3. My course instructors respected my opinion even if it differed from their own.
4. My course instructors valued the contribution that I (or other students) made to their course.
5. My course instructors showed an active interest in my educational goals and pursuits.
6. My course instructors personally cared about me.
7. I had a faculty member that I could trust to support me when I needed help navigating the various aspects of my transfer preparation.

For your reference, **a staff member** refers to anyone who works on campus that you may have had contact with OUTSIDE of the classroom. This could include an academic advisor, an admissions counselor, a financial aid representative, etc.

Staff Validation

To what extent do you agree or disagree with the following statements (1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4=agree; 5=strongly agree):

1. The staff members genuinely cared about whether or not the students they served were succeeded at the institution.
2. The staff members respected my opinion even if it differed from their own.
3. The staff members valued the contribution that I (or other students) made to the institution.
4. The staff members showed an active interest in my educational goals and pursuits.
5. The staff members personally cared about me.
6. I had a staff member that I could trust to support me when I needed help navigating the various aspects of my transfer preparation.

Transfer capital

Please rate how strongly you agree or disagree with the following statements (1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4=agree; 5=strongly agree):

1. I sought out access to academic advisors at UNI prior to transfer to assist me in planning for transfer to UNI.
2. I made sure I understood the advice provided by my academic advisors regarding the transfer process.
3. The information that I received from the academic advisors at UNI was consistent with the information that I received from my advisor at my previous institution.
4. I made sure that I thoroughly understood what was required of me prior to transferring to the university.

To what degree: (1=slight; 3=moderate; 5=strong)

5. I was able to use the information that I obtained from the academic advisors at UNI to inform/influence my plan of study at my community college. I used the campus and student resources at UNI prior to beginning classes at UNI to help aid in my transition to the university.
6. I utilized the information provided on the degree audit information provided by UNI at the end of each semester to aid me in achieving my goals at my previous institution.
7. Did you attend transfer orientation at UNI? (1=yes; 0=no)
8. I made sure that I obtained information at UNI transfer orientation that would prepare me for meeting the expectations of life at UNI.

Financial mediators

Please rate how strongly you agree or disagree with the following statements (1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4=agree; 5=strongly agree):

1. Prior to transferring to UNI, I made sure I was aware of the financial aid available to me as a transfer student.
2. The amount of financial aid that I received was a contributing factor in my decision to attend UNI.
3. While at my transfer institution, I researched the availability of scholarship funds available specifically for transfer students at UNI.

4. Once at UNI, I had access to scholarship funds to assist me in paying for my college education.
5. The amount of financial aid that I received at UNI was adequate/what I expected to receive.
6. I sought out the advice of financial aid office representatives at UNI prior to my transfer there.

Motivation

Please rate how strongly you agree or disagree with the following statements (1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4=agree; 5=strongly agree):

1. I anticipate that I will re-enroll at UNI next year.
2. I have declared a major at UNI.
3. I plan to graduate from UNI.
4. I have a strong desire to be successful in college.
5. I have the skills and ability necessary for success in college.
6. Please rank the following reasons why you chose to begin your education at a community college (rank 1 to 8):
   a. Financial aid/scholarship
   b. Lower cost/tuition than 4-year institution
   c. Proximity to family/friends
   d. Proximity to employment
   e. Type of course offerings (online vs. in-person)
   f. Programs offered at the community college
   g. Uncertainty about area of study/future career field
   h. Other (please specify)
7. How many hours per week do you spend preparing for class at UNI?
   a. 0
   b. 1 to 5
   c. 6 to 10
   d. 11 to 15
   e. 16 to 20
   f. 21 to 25
   g. 26 to 30
   h. More than 30

Coping/Resilience

Please rate how strongly you agree or disagree with the following statements (1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4=agree; 5=strongly agree):

When faced with a problem or difficult situation at school, typically:

1. I think about how I might best handle the problem
2. I make a plan of action
3. I try to come up with a strategy about what to do
4. I think hard about what steps to take to resolve the problem
5. I try to get emotional support from friends and family
6. I discuss my feelings with someone
7. I talk to someone about how I feel
8. I act as though it hasn't happened
9. I refuse to believe that it happened
10. I say to myself "this isn't real"
11. I pretend that it hasn't really happened
12. I let my feelings out
13. I feel a lot of emotional distress and I find myself expressing these feelings
14. I get upset and let my emotions out
15. I skip class
16. I reduce the amount of effort I put in to solving the problem
17. I give up trying to reach my goal

Social support (family and friends)

1. It is difficult making friends at UNI.
2. I have a lot in common with the other students in my classes.
3. I feel a sense of belonging within the university.
4. I have a close friend or classmate whom I can turn to if I need support.
5. I have a lot of friends at UNI.
6. If I have to miss class, I have someone who will share their notes with me.
7. I often eat lunch with other classmates.
8. I am invited to social gatherings outside of class.
9. I am involved in on-campus events and activities.

APPENDIX C: SURVEY INSTRUMENT WITH ADDITIONS

Transfer Student Experience at UNI

Please answer the following questions based on your experiences as a transfer student at the University of Northern Iowa (UNI). All information you provide will be kept completely confidential and will be used in summary to better understand, define and prioritize goals and objectives as they relate to the transfer process at UNI. Your input is vitally important.

Page 1

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1) You are invited to participate in a research project designed to gain a better understanding of the factors that impact transfer students at UNI. The purpose of this survey is to understand the various factors that have the greatest impact on transfer students and their success at UNI. While there are no direct benefits to taking this survey, your input will be used to help determine how UNI can best meet your needs. This minimal risk survey will take approximately 15 minutes to complete. Information obtained during this study which could identify you will be kept strictly confidential. Your participation is completely voluntary and you may stop taking the survey during any time with no penalty by closing your web browser. In addition, you may skip any question you do not feel completely comfortable answering. If you have questions about the study or desire information in the future regarding your participation or the study you may contact Kristin Moser at kristin.moser@uni.edu or Frankie Santos Laanan at laanan@iastate.edu. If you have questions about the rights of research subjects or research-related injury, please contact the IRB administrator at (515) 294-4566 or IRB@iastate.edu, or the IRB Director at (515) 294-3115, Office of Responsible Research, Iowa State University, Ames, IA 50011.

I am fully aware of the nature and extent of my participation in this project as stated above. I hereby voluntarily agree to participate in this project. I acknowledge that I have read this consent statement. I am 18 years of age or older. *(Check only one.)*

___ Yes, I agree
___ No, I do not wish to participate

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2) First, please complete the following background questions.

Place of residence (during academic year). *(Check only one.)*

___ Residence hall or other university housing
___ Fraternity or sorority house
___ Private apartment or room within walking distance of the university
___ House, apartment, etc. (not walking distance from campus)
___ With parents or relatives

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3) What is the highest academic degree that you intend to obtain at any college? *(Check only one.)*

___ Bachelor's (B.A. or B.S.)
___ Master's (M.A. or M.S.)
___ Doctorate (Ph.D. or Ed.D.)
___ Medical (MD, DDS, DO or DVM)
___ Law (JD or LLB)
___ Other: _____

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4) What is the highest academic degree that you intend to obtain at UNI? *(Check only one.)*

___ Bachelor's (B.A. or B.S.)
___ Master's (M.A. or M.S.)
___ Doctorate (Ph.D. or Ed.D.)
___ Medical (MD, DDS, DO or DVM)
___ Law (JD or LLB)
___ Other: _____

5) What is the highest level of education completed by your parents?

	Elementary school or less	Some high school	High school graduate	Some college	Associates degree from two-year college	Bachelor's degree	Some graduate school	Graduate degree	Don't know
Mother	1	2	3	4	5	6	7	8	9
Father	1	2	3	4	5	6	7	8	9

6) What is your best estimate of your parents' total household income last year? *(Check only one.)*

___ If you are independent check here
___ Less than $20,000
___ $20,000 to $39,999
___ $40,000 to $59,999
___ $60,000 to $79,999
___ $80,000 or more

7) Community College Experiences

The purpose of this section is to obtain information about your community college experiences prior to your transfer to UNI.

About how many hours a week did you usually spend on the community college campus, not counting time attending classes? *(Check only one.)*

___ None
___ 1 to 3 hours
___ 4 to 6 hours
___ 7 to 9 hours
___ 10 to 12 hours
___ more than 12 hours

8) About how many hours a week did you usually spend studying or preparing for your classes at the community college? *(Check only one.)*

___ 1 to 5 hours
___ 6 to 10 hours
___ 11 to 15 hours
___ 16 to 20 hours
___ more than 20 hours

9) During your time at the community college, about how many hours a week did you usually spend working on a job for pay? *(Check only one.)*

___ None, I didn't have a job
___ 1 to 5 hours
___ 6 to 10 hours
___ 11 to 15 hours
___ 16 to 20 hours
___ 21 to 30 hours
___ more than 30 hours

10) General Courses (at your Community College)

The following questions address the various aspects of your community college experience. For each item below, please indicate the extent to which you disagree or agree with the statement.

	Disagree strongly	Disagree somewhat	Agree somewhat	Agree strongly
The courses developed my critical and analytical thinking.	1	2	3	4
The courses demanded intensive writing assignments and projects.	1	2	3	4
Overall, the courses were intellectually challenging.	1	2	3	4
The courses prepared me for the academic standards at UNI.	1	2	3	4
The courses prepared me for my major at UNI.	1	2	3	4
The courses required extensive reading and writing.	1	2	3	4

11) Academic Advising/Counseling Services (at your community college)

The following items address your use of academic advising/counseling services at your community college. Please indicate the extent to which you disagree or agree with each statement.

	Disagree strongly	Disagree somewhat	Agree somewhat	Agree strongly
I consulted with academic advisors/counselors regarding transfer.	1	2	3	4
Information received from academic advisors/counselors was helpful in the transfer process.	1	2	3	4

	Strongly disagree	Disagree	Agree	Strongly agree
I met with academic advisors/counselors on a regular basis.	1	2	3	4
I talked with an academic advisor/counselor about courses to take, requirements, education plans.	1	2	3	4
I discussed my plans for transferring to a four-year college or university with an academic advisor/counselor.	1	2	3	4
Academic advisors/counselors identified courses needed to meet the general education/major requirements of a four-year college or university I was interested in attending.	1	2	3	4

12) Mentoring at the Community College

The next set of questions inquires about your experiences at your previous institution (community college). Please rate how strongly you agree or disagree with the following statements.

For your reference, faculty member refers to an educator working at a college or university. In this case, please think about instructional faculty with whom you interacted with during your academic/classroom experiences at the community college.

Mentoring is defined as a relationship between an experienced person and a less experienced person, in this case between a faculty member and a student. The mentee seeks the advice and guidance of the mentor to assist in the navigation of the collegiate experience.

Did you have a faculty or staff member as a mentor at your community college? If no, skip to question 15. *(Check only one.)*

___ Yes
___ No

13) To what extent do you agree or disagree that your faculty/staff mentor:

	Strongly disagree	Disagree	Agree	Strongly agree
Had regular contact with you.	1	2	3	4
Cared about whether or not you succeeded at the institution.	1	2	3	4
Provided you with valuable information related to how to succeed academically.	1	2	3	4
Helped you create connections with other faculty/staff members at your community college.	1	2	3	4
Helped you create connections with other faculty/staff members at UNI.	1	2	3	4

	Strongly disagree		Disagree	Agree	Strongly agree
Helped you explore the purpose of obtaining a 4-year degree.	1		2	3	4
Helped you explore your reasons for pursuing a 4-year degree.	1		2	3	4

14) To what extent do you agree or disagree with the following statements.

	Strongly disagree	Disagree	Agree	Strongly agree
At least one faculty/staff member at my previous institution encouraged me to participate in institutionally sponsored/related activities (academic and/or extracurricular).	1	2	3	4
I had the opportunity to collaborate with at least one faculty/staff member on activities related to my coursework at my previous institution.	1	2	3	4
I had the opportunity to collaborate with at least one faculty/staff member on activities outside of class at my previous institution.	1	2	3	4

15) Faculty Validation at your Community College

To what extent do you agree or disagree with the following statements?

	Strongly disagree	Disagree	Agree	Strongly agree
My course instructors genuinely cared about whether or not the students in their classes succeeded at the institution.	1	2	3	4
My course instructors allowed the expression of differing viewpoints in their courses.	1	2	3	4
My course instructors respected my opinion even if it differed from their own.	1	2	3	4
My course instructors valued the contribution that I (or other students) made to their course.	1	2	3	4
My course instructors showed an active interest in my educational goals and pursuits.	1	2	3	4
My course instructors personally cared about me.	1	2	3	4
I had a faculty member that I could trust to support me when I needed help navigating the various aspects of my transfer preparation.	1	2	3	4

16) Staff Validation at your Community College

For your reference, a staff member refers to anyone who works on campus that you may have had contact with OUTSIDE of the classroom. This could include an academic advisor, an admissions counselor, a financial aid representative, etc.

To what extent do you agree or disagree with the following statements?

	Strongly disagree	Disagree	Agree	Strongly agree
The staff members genuinely cared about whether or not the students they served succeeded at the institution.	1	2	3	4
The staff members respected my opinion even if it differed from their own.	1	2	3	4
The staff members valued the contribution that I (or other students) made to the institution.	1	2	3	4
The staff members showed an active interest in my educational goals and pursuits.	1	2	3	4
The staff members personally cared about me.	1	2	3	4
I had a staff member that I could trust to support me when I needed help navigating the various aspects of my transfer preparation.	1	2	3	4

17) Transfer Process

These items pertain to your perceptions about the "transfer process" while you were enrolled at the community college. Please indicate the extent to which you disagree or agree with each statement.

	Disagree strongly	Disagree somewhat	Agree somewhat	Agree strongly
I researched various aspects of UNI to get a better understanding of the environment and academic expectations.	1	2	3	4
I knew what to expect at UNI in terms of academics.	1	2	3	4
I visited the UNI campus to learn where offices and departments were located.	1	2	3	4
I spoke to academic counselors at UNI about transferring and major requirements.	1	2	3	4

I visited the admissions office at UNI.	1	2	3	4

I spoke to former community college transfer students to gain insight about their adjustment experiences.	1	2	3	4

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18) College Activities at Your Community College: Course Learning

In your experience at your community college, how often did you do each of the following?

	Never	Occasionally	Often	Very often
Took detailed notes in class.	1	2	3	4
Participated in class discussions.	1	2	3	4
Tried to see how different facts and ideas fit together.	1	2	3	4
Thought about practical applications of the material.	1	2	3	4
Worked on a paper or project where I had to integrate ideas from various sources.	1	2	3	4
Tried to explain the material to another student or friend.	1	2	3	4

19) Experiences with Faculty

How often did you do each of the following at your community college?

	Never	Occasionally	Often	Very often
Visited faculty and sought their advice on class projects such as writing assignments and research papers.	1	2	3	4
Felt comfortable approaching faculty outside of class.	1	2	3	4
Asked my instructor for information related to a course I was taking (grades, make-up work, assignments, etc.).	1	2	3	4

Visited informally and briefly with an instructor before or after class.	1	2	3	4
Discussed my career plans and ambitions with a faculty member.	1	2	3	4
Asked my instructor for comments and criticisms about my work.	1	2	3	4

20) Learning and Study Skills

To what extent do you agree or disagree that your academic experiences at your community college gave you the skills you needed to prepare you for the standards and academic rigor at UNI?

	Disagree strongly	Disagree somewhat	Neutral	Agree somewhat	Agree Strongly
Computer skills	1	2	3	4	5
Mathematical skills	1	2	3	4	5
Note taking skills	1	2	3	4	5
Problem solving skills	1	2	3	4	5
Reading skills	1	2	3	4	5
Research skills	1	2	3	4	5
Speaking and oral presentation skills	1	2	3	4	5
Test taking skills	1	2	3	4	5
Time management skills	1	2	3	4	5
Writing skills	1	2	3	4	5

21) Transfer Capital

Please rate how strongly you agree or disagree with the following statements.

	Strongly disagree	Disagree	Agree	Strongly agree
I sought out access to academic advisors at UNI prior to transfer to assist me in planning for transfer to UNI.	1	2	3	4
I made sure I understood the advice provided by my academic advisors regarding the transfer process.	1	2	3	4
The information that I received from the academic advisors at UNI was consistent with the information that I received from my advisor at my previous institution.	1	2	3	4
I made sure that I was aware of what was required of me prior to transferring to the university.	1	2	3	4

22) Financial Mediators

Please rate how strongly you agree or disagree with the following statements.

	Strongly disagree	Disagree	Agree	Strongly agree
Prior to transferring to UNI, I made sure I knew about the financial aid available to me as a transfer student.	1	2	3	4
The amount of financial aid that I received was a contributing factor in my decision to attend UNI.	1	2	3	4
While at my previous institution, I researched the availability of scholarship funds available specifically for transfer students at UNI.	1	2	3	4
Once at UNI, I had access to scholarship funds to assist me in paying for my college education.	1	2	3	4
The amount of financial aid that I received at UNI was adequate.	1	2	3	4
I sought out the advice of financial aid office representatives at UNI prior to my transfer here.	1	2	3	4

23) Motivation

Please rate how strongly you agree or disagree with the following statements.

	Strongly disagree	Disagree	Agree	Strongly agree
I anticipate that I will re-enroll at UNI next year.	1	2	3	4
I have declared a major at UNI.	1	2	3	4
I plan to graduate from UNI.	1	2	3	4
I have a strong desire to be successful in college.	1	2	3	4
I have the skills and ability necessary for success in college.	1	2	3	4

24) To what degree:

	1 (Slight)	2	3 (Moderate)	4	5 (Strong)
Were you satisfied with the academic advising provided to you by UNI staff while you were enrolled at your previous college?	1	2	3	4	5
Did you use the campus and student resources at UNI prior to beginning classes at UNI to assist in your transition to the university?	1	2	3	4	5
Did you utilize the information provided on the degree audit by UNI at the end of each semester to aid you in achieving your goals at your previous institution?	1	2	3	4	5

25) Did you attend transfer orientation at UNI? *(Check only one.)*

___ Yes
___ No (Skip to Question 29)

26) To what degree:

	Not at all satisfied	Slightly satisfied	Satisfied	Extremely satisfied
Did transfer orientation prepare you for meeting the expectations of life at UNI?	1	2	3	4
Were you satisfied with the academic advising you received at transfer orientation?	1	2	3	4

27) If you attended transfer orientation, how helpful was the orientation program in facilitating your transition to UNI? *(Check only one.)*

___ Very unhelpful
___ Somewhat unhelpful
___ Somewhat helpful
___ Very helpful

28) Please rank the following reasons why you chose to begin your education at a community college (rank 1 to 8) with one being the most important reason, two the next most important, and so on. *(Circle the ranking for each item. Please use each ranking only once.)*

Financial aid/scholarship	1	2	3	4	5	6	7	8
Lower cost/tuition than 4-year institution	1	2	3	4	5	6	7	8
Proximity to family/friends	1	2	3	4	5	6	7	8
Proximity to employment	1	2	3	4	5	6	7	8
Type of course offerings (online vs. in-person)	1	2	3	4	5	6	7	8
Programs offered at the community college	1	2	3	4	5	6	7	8
Uncertainty about area of study/future career field	1	2	3	4	5	6	7	8
Other (please specify below)	1	2	3	4	5	6	7	8

29) Please specify for other in question 29 above, if applicable.

_____

Page 4

30) UNI Experiences

The purpose of this section is to obtain information about your current experiences at the University of Northern Iowa (UNI).

About how many hours a week do you spend working on a job for pay? *(Check only one.)*

___ None, I don't have a job.
___ 1 to 10 hours
___ 11 to 15 hours
___ 16 to 20 hours
___ 21 to 30 hours
___ more than 30 hours

31) What is the most important reason for attending UNI? *(Check only one.)*

___ To obtain a bachelor's degree
___ To gain skills necessary to enter a new job or occupation
___ To pursue graduate or professional school
___ To satisfy a personal interest (cultural, social)

32) Listed below are some reasons that might have influenced your decision to attend UNI. How important was each reason in your decision to come here?

	Not important	Somewhat important	Important	Very important
UNI has a very good academic reputation.	1	2	3	4
UNI has a very good reputation for its social activities.	1	2	3	4
I was offered financial assistance.	1	2	3	4
UNI has affordable tuition.	1	2	3	4
Academic counselor(s) at my previous college advised me.	1	2	3	4
A friend suggested attending.	1	2	3	4
A UNI representative recruited me.	1	2	3	4
UNI's graduates gain admission to top graduate/professional schools.	1	2	3	4
UNI's graduates get good jobs.	1	2	3	4
UNI's ranking in national magazines.	1	2	3	4
Parents recommended that I attend UNI.	1	2	3	4
My brother(s)/sister(s) attended UNI.	1	2	3	4
Convenience and location.	1	2	3	4
Size of UNI.	1	2	3	4
Cost of UNI.	1	2	3	4

33) College Activities at UNI (Course Learning)

During the past year at UNI, about how often did you do each of the following?

	Never	Occasionally	Often	Very often
Took detailed notes in class.	1	2	3	4
Participated in class discussions.	1	2	3	4
Tried to see how different facts and ideas fit together.	1	2	3	4
Thought about practical applications of the material.	1	2	3	4
Worked on a paper or project where I had to integrate ideas from various sources.	1	2	3	4
Tried to explain the material to another student or friend.	1	2	3	4

34) Experience with Faculty

During the past year at UNI, about how often did you do each of the following?

	Never	Occasionally	Often	Very often
Visited faculty and sought their advice on class projects such as writing assignments and research papers.	1	2	3	4
Felt comfortable approaching faculty outside of class.	1	2	3	4
Asked my instructor for information related to a course I was taking (grades, make-up work, assignments, etc.).	1	2	3	4
Visited informally and briefly with an instructor before or after class.	1	2	3	4
Discussed my career plans and ambitions with a faculty member.	1	2	3	4
Asked my instructor for comments and criticisms about my work.	1	2	3	4

35) General Perceptions of UNI

The following are statements about your general perceptions, adjustment process, and opinion of your overall satisfaction at UNI. Please indicate the extent to which you agree or disagree.

	Disagree strongly	Disagree somewhat	Agree somewhat	Agree strongly
UNI faculty are easy to approach.	1	2	3	4
UNI faculty tend to be accessible to students.	1	2	3	4
It was difficult learning the "red tape" when I started.	1	2	3	4
Because I am a "community college transfer," most students tend to underestimate my abilities.	1	2	3	4
Because I am a "community college transfer," most faculty tend to underestimate my abilities.	1	2	3	4
There is a stigma at UNI among students for having started at a community college.	1	2	3	4
Generally, students are more concerned about "getting the grade" instead of learning the material.	1	2	3	4
Many students feel like they do not "fit in" on this campus.	1	2	3	4
Professors are strongly interested in the academic development of undergraduates.	1	2	3	4
Most students are treated like a "number."	1	2	3	4
Student services are responsive to student needs.	1	2	3	4
If students expect to benefit from what UNI has to offer, they have to take the initiative.	1	2	3	4
I feel the courses I have taken at UNI have been interesting and worthwhile.	1	2	3	4
UNI is an intellectually stimulating and often exciting place to be.	1	2	3	4
I would recommend to other transfer students to come to UNI.	1	2	3	4

	Disagree strongly	Disagree somewhat	Agree somewhat	Agree strongly
If I could start over again, I still would go to UNI.	1	2	3	4

36) Adjustment Process

Please indicate the extent to which you agree or disagree with the following statements.

	Disagree strongly	Disagree somewhat	Agree somewhat	Agree strongly
Adjusting to the academic standards or expectations at UNI has been easy.	1	2	3	4
Adjusting to the social environment at UNI has been easy.	1	2	3	4
I often feel overwhelmed by the size of the student body.	1	2	3	4
Upon transferring I felt alienated at UNI.	1	2	3	4
I am very involved with social activities at UNI.	1	2	3	4
I am meeting as many people and making as many friends as I would like at UNI.	1	2	3	4
The large classes intimidate me.	1	2	3	4
It is easy to find my way around campus.	1	2	3	4
My level of stress increased when I started UNI.	1	2	3	4
I experienced a dip in my grades (GPA) during my first semester at UNI.	1	2	3	4
It is easy to make friends at UNI.	1	2	3	4
I feel comfortable spending time with friends that I made at the community college I attended.	1	2	3	4
I feel more comfortable making friends with transfer students than non-transfers.	1	2	3	4
There is a sense of competition between/among students at UNI that is not found in community colleges.	1	2	3	4

37) College Satisfaction

Please rate your satisfaction with each of the aspects of campus life listed below.

	Very dissatisfied	Dissatisfied	Satisfied	Very satisfied	Not applicable
Sense of belonging at UNI.	1	2	3	4	5
Decision to transfer to UNI.	1	2	3	4	5
Overall quality of instruction.	1	2	3	4	5
Sense of community on campus.	1	2	3	4	5
Academic advising.	1	2	3	4	5
Career counseling and advising.	1	2	3	4	5
Student housing.	1	2	3	4	5
Courses in your major field.	1	2	3	4	5
Financial aid services.	1	2	3	4	5
Amount of contact with faculty.	1	2	3	4	5
Opportunities for community service.	1	2	3	4	5
Job placement services for students.	1	2	3	4	5
Class size.	1	2	3	4	5
Interaction with other students.	1	2	3	4	5
Ethnic/racial diversity of the faculty.	1	2	3	4	5
Leadership opportunities.	1	2	3	4	5
Overall college experience.	1	2	3	4	5

38) Please rate how strongly you agree or disagree with the following statements.

When faced with a problem or difficult situation at school, typically:

	Strongly disagree	Disagree	Agree	Strongly agree
I think about how I might best handle the problem.	1	2	3	4
I make a plan of action.	1	2	3	4
I try to come up with a strategy about what to do.	1	2	3	4
I think hard about what steps to take to resolve the problem.	1	2	3	4
I try to get emotional support from friends and family.	1	2	3	4
I discuss my feelings with someone.	1	2	3	4
I talk to someone about how I feel.	1	2	3	4
I act as though it hasn't happened.	1	2	3	4
I refuse to believe that it happened.	1	2	3	4
I say to myself "this isn't real."	1	2	3	4
I let my feelings out.	1	2	3	4
I feel a lot of emotional distress and I find myself expressing these feelings.	1	2	3	4
I get upset and let my emotions out.	1	2	3	4
I skip class.	1	2	3	4
I reduce the amount of effort I put into solving the problem.	1	2	3	4
I give up trying to reach my goal.	1	2	3	4

39) Please rate how strongly you agree or disagree with the following statements.

	Strongly disagree	Disagree	Agree	Strongly agree
It is difficult making friends at UNI.	1	2	3	4
I have a lot in common with the other students in my classes.	1	2	3	4
I feel a sense of belonging within the university.	1	2	3	4
I have a close friend or classmate whom I can turn to if I need support.	1	2	3	4
I have a lot of friends at UNI.	1	2	3	4
If I have to miss class, I have someone who will share their notes with me.	1	2	3	4
I often eat lunch with other classmates.	1	2	3	4
I am invited to social gatherings outside of class.	1	2	3	4
I am involved in on-campus events and activities.	1	2	3	4

40) How many hours per week do you spend preparing for class at UNI? *(Check only one.)*

___ 0
___ 1 to 5
___ 6 to 10
___ 11 to 15
___ 16 to 20
___ 21 to 25
___ 26 to 30
___ More than 30

41) What factors helped you adjust to UNI? Please explain what factors contributed to your successful transfer (or unsuccessful trasnfer) to UNI. Feel free to include factors at both your community college and UNI.

_____

_____

42) What might the community college have done to enhance your success or ease the transition to UNI?

_____

43) If you could give some advice to community college students who will be transferring to UNI, what would that advice be?

_____

_____

44) What have we NOT asked that you would like us to know about your experiences at the community college or UNI?

_____

_____

APPENDIX D: CODING MANUAL

The L-TSQ Instrument with Moser additions

Q#	Question description	Value	Response description
		Background Information	
1	Current place of residence (during academic year)	1	Residence hall or other university housing
		2	Fraternity or sorority house
		3	Private apartment or room within walking distance of the university
		4	House, apartment, etc. (not walking distance from campus)
		5	With parents or relatives
2	What is the highest academic degree that you intend to obtain at any college?	1	Bachelors (B.A. or B.S.)
		2	Masters (M.A. or M.S.)
		3	Doctorate (Ph.D. or Ed.D.)
		4	Medical (MD, DDS, DO or DVM)
		5	Law (JD or LLB)
		6	Other (please specify)
3	At the University of Northern Iowa (UNI)?	1	Bachelors (B.A. or B.S.)
		2	Masters (M.A. or M.S.)
		3	Doctorate (Ph.D. or Ed.D.)
		4	Other (please specify)
4	What is the highest level of education completed by your parents (mother)?	1	Elementary school or less
		2	Some high school
		3	High school graduate
		4	Some college
		5	Associates degree from two year college
		6	Bachelor's degree
		7	Some graduate school
		8	Graduate degree
		9	Don't know
5	What is the highest level of education completed by your parents (father)?	1	Elementary school or less
		2	Some high school
		3	High school graduate
		4	Some college

		5	Associates degree from two year college
		6	Bachelor's degree
		7	Some graduate school
		8	Graduate degree
		9	Don't know
6	What is your best estimate of your parents' total household income last year?	1	If you are independent check here
		2	Less than $20,000
		3	$20,000 to $39,999
		4	$40,000 to $59,999
		5	$60,000 to $79,999
		6	$80,000 or more
7	Gender	1	Male
		2	Female
		3	Other
8	What is your age?		
9	What is your racial/ethnic background?	1	White (non-Hispanic)
		2	African American/Black
		3	American Indian/Alaskan Native
		4	Asian
		5	Hispanic or Latino/a
		6	Non-resident alien
		7	Native Hawaiian/Pacific Islander
		8	Two or more
		9	No response

Community College Experiences

The purpose of this section is to obtain information about your community college experiences prior to your transfer to UNI.

10	About how many hours a week did you usually spend on the community college campus, not counting time attending classes?	1	None
		2	1 to 3 hours
		3	4 to 6 hours
		4	7 to 9 hours
		5	10 to 12 hours
		6	more than 12 hours
11	About how many hours a week did you usually spend studying or preparing for your classes?	1	1 to 5 hours

		2	6 to 10 hours
		3	11 to 15 hours
		4	16 to 20 hours
		5	more than 20 hours
12	During your time at the community college, about how many hours a week did you usually spend working on a job for pay?	1	None, I didn't have a job
		2	1 to 10 hours
		3	11 to 15 hours
		4	16 to 20 hours
		5	21 to 30 hours
		6	more than 30 hours
13	What type of degree, diploma or certificate did you receive? If multiple, please list each in "Other."	1	None
		2	AA (Associate of Arts)
		3	AS (Associate of Science)
		4	AGS (Associate of General Studies)
		5	AAA (Associate of Applied Arts)
		6	AAS (Associate of Applied Science)
		7	Diploma
		8	Certificate
		9	Other (please specify)

General Courses (at the Community College)

The following questions address the various aspects of your community college experience. For each item below, please indicate the extent to which you disagree or agree with the statement.

14	The courses developed my critical and analytical thinking.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
15	The courses demanded intensive writing assignments and projects.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
16	Overall, the courses were intellectually challenging.	1	Disagree strongly
		2	Disagree somewhat

		3	Agree somewhat
		4	Agree strongly
17	The courses prepared me for the academic standards at UNI.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
18	The courses prepared me for my major at UNI.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
19	The courses required extensive reading and writing.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly

Academic Advising/Counseling Services (at the CC)

The following items address your use of academic advising/counseling services at your community college. Please indicate the extent to which you disagree or agree with each statement.

20	I consulted with academic advisors/counselors regarding transfer.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
21	Information received from academic advisors/counselors was helpful in the transfer process.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
22	I met with academic advisors/counselors on a regular basis.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
23	I talked with an academic advisor/counselor about courses to take, requirements, education plans.	1	Disagree strongly

			2	Disagree somewhat
			3	Agree somewhat
			4	Agree strongly
24	I discussed my plans for transferring to a four-year college or university with an academic advisor/counselor.		1	Disagree strongly
			2	Disagree somewhat
			3	Agree somewhat
			4	Agree strongly
25	Academic advisors/counselors identified courses needed to meet the general education/major requirements of a four-year college or university I was interested in attending.		1	Disagree strongly
			2	Disagree somewhat
			3	Agree somewhat
			4	Agree strongly

Transfer Process

These items pertain to your perceptions about the "transfer process" while you were enrolled at the community college. Please indicate the extent to which you disagree or agree with each statement.

26	I researched various aspects of UNI to get a better understanding of the environment and academic expectations.		1	Disagree strongly
			2	Disagree somewhat
			3	Agree somewhat
			4	Agree strongly
27	I knew what to expect at UNI in terms of academics.		1	Disagree strongly
			2	Disagree somewhat
			3	Agree somewhat
			4	Agree strongly
28	I visited the UNI campus to learn where offices and departments were located.		1	Disagree strongly
			2	Disagree somewhat
			3	Agree somewhat
			4	Agree strongly
29	I spoke to academic counselors at UNI about transferring and major requirements.		1	Disagree strongly
			2	Disagree somewhat

		3	Agree somewhat
		4	Agree strongly
30	I visited the admissions office at UNI.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
31	I spoke to former community college transfer students to gain insight about their adjustment experiences.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly

College Activities at Your Community College

Course Learning

In your experience at your community college, about how often did you do each of the following?

32	Took detailed notes in class.	1	Never
		2	Occasionally
		3	Often
		4	Very often
33	Participated in class discussions.	1	Never
		2	Occasionally
		3	Often
		4	Very often
34	Tried to see how different facts and ideas fit together.	1	Never
		2	Occasionally
		3	Often
		4	Very often
35	Thought about practical applications of the material.	1	Never
		2	Occasionally
		3	Often
		4	Very often
36	Worked on a paper or project where I had to integrate ideas from various sources.	1	Never
		2	Occasionally
		3	Often

			4	Very often
37	Tried to explain the material to another student or friend.		1	Never
			2	Occasionally
			3	Often
			4	Very often

Experiences with Faculty

How often did you do each of the following at your community college?

			1	Never
38	Visited faculty and sought their advice on class projects such as writing assignments and research papers.		1	Never
			2	Occasionally
			3	Often
			4	Very often
39	Felt comfortable approaching faculty outside of class.		1	Never
			2	Occasionally
			3	Often
			4	Very often
40	Asked my instructor for information related to a course I was taking (grades, make-up work, assignments, etc.)		1	Never
			2	Occasionally
			3	Often
			4	Very often
41	Visited informally and briefly with an instructor (before) after class.		1	Never
			2	Occasionally
			3	Often
			4	Very often
42	Discussed my career plans and ambitions with a faculty member.		1	Never
			2	Occasionally
			3	Often
			4	Very often
43	Asked my instructor for comments and criticisms about my work.		1	Never
			2	Occasionally
			3	Often
			4	Very often

Learning and Study Skills

To what extent do you agree or disagree that your academic experiences at your community college gave you the skills you needed to prepare you for the standards and academic rigor at UNI?

44	Computer skills	1	Disagree strongly
		2	Disagree somewhat
		3	Neutral
		4	Agree somewhat
		5	Agree strongly
45	Mathematical skills	1	Disagree strongly
		2	Disagree somewhat
		3	Neutral
		4	Agree somewhat
		5	Agree strongly
46	Note taking skills	1	Disagree strongly
		2	Disagree somewhat
		3	Neutral
		4	Agree somewhat
		5	Agree strongly
47	Problem solving skills	1	Disagree strongly
		2	Disagree somewhat
		3	Neutral
		4	Agree somewhat
		5	Agree strongly
48	Reading skills	1	Disagree strongly
		2	Disagree somewhat
		3	Neutral
		4	Agree somewhat
		5	Agree strongly
49	Research skills	1	Disagree strongly
		2	Disagree somewhat
		3	Neutral
		4	Agree somewhat
		5	Agree strongly
50	Speaking and oral presentation skills	1	Disagree strongly
		2	Disagree somewhat
		3	Neutral
		4	Agree somewhat
		5	Agree strongly
51	Test taking skills	1	Disagree strongly

		2	Disagree somewhat
		3	Neutral
		4	Agree somewhat
		5	Agree strongly
52	Time management skills	1	Disagree strongly
		2	Disagree somewhat
		3	Neutral
		4	Agree somewhat
		5	Agree strongly
53	Writing skills	1	Disagree strongly
		2	Disagree somewhat
		3	Neutral
		4	Agree somewhat
		5	Agree strongly

UNI Experiences

The purpose of this section is to obtain information about your current experiences at the University of Northern Iowa.

54	About how many hours a week do you spend working on a job for pay?	1	None, I didn't have a job
		2	1 to 10 hours
		3	11 to 15 hours
		4	16 to 20 hours
		5	21 to 30 hours
		6	more than 30 hours
55	What is the most important reason for attending UNI?	1	To obtain a bachelor's degree
		2	To gain skills necessary to enter a new job or occupation
		3	To pursue graduate or professional school
		4	To satisfy a personal interest (cultural, social)

Listed below are some reasons that might have influenced your decision to attend UNI. How important was each reason in your decision to come here?

56	UNI has a very good academic reputation.	1	Not important
		2	Somewhat important
		3	Important
		4	Very important

57	UNI has a very good reputation for its social activities.	1	Not important
		2	Somewhat important
		3	Important
		4	Very important
58	I was offered financial assistance.	1	Not important
		2	Somewhat important
		3	Important
		4	Very important
59	UNI has affordable tuition.	1	Not important
		2	Somewhat important
		3	Important
		4	Very important
60	Academic counselor(s) at my previous college advised me.	1	Not important
		2	Somewhat important
		3	Important
		4	Very important
61	A friend suggested attending.	1	Not important
		2	Somewhat important
		3	Important
		4	Very important
62	A UNI representative recruited me.	1	Not important
		2	Somewhat important
		3	Important
		4	Very important
63	UNI's graduates gain admission to top graduate/professional schools.	1	Not important
		2	Somewhat important
		3	Important
		4	Very important
64	UNI's graduates get good jobs.	1	Not important
		2	Somewhat important
		3	Important
		4	Very important
65	UNI's ranking in national magazines.	1	Not important
		2	Somewhat important
		3	Important

		4	Very important
66	Parents recommended that I attend UNI.	1	Not important
		2	Somewhat important
		3	Important
		4	Very important
67	My brother(s)/sister(s) attended UNI.	1	Not important
		2	Somewhat important
		3	Important
		4	Very important
68	Convenience and location.	1	Not important
		2	Somewhat important
		3	Important
		4	Very important
69	Size of UNI.	1	Not important
		2	Somewhat important
		3	Important
		4	Very important
70	Cost of UNI.	1	Not important
		2	Somewhat important
		3	Important
		4	Very important
71	Did you attend a UNI-sponsored Transfer Student Orientation?	1	Yes
		2	No
72	If you answered yes to the question above, how helpful was the orientation program in facilitating your transition to UNI?	1	Very unhelpful
		2	Somewhat unhelpful
		3	Somewhat helpful
		4	Very helpful

College activities at UNI
Course Learning
During the past year at UNI, about how often did you do each of the following?

73	Took detailed notes in class.	1	Never
		2	Occasionally
		3	Often
		4	Very often
74	Participated in class discussions.	1	Never

		2	Occasionally
		3	Often
		4	Very often
75	Tried to see how different facts and ideas fit together.	1	Never
		2	Occasionally
		3	Often
		4	Very often
76	Thought about practical applications of the material.	1	Never
		2	Occasionally
		3	Often
		4	Very often
77	Worked on a paper or project where I had to integrate ideas from various sources.	1	Never
		2	Occasionally
		3	Often
		4	Very often
78	Tried to explain the material to another student or friend.	1	Never
		2	Occasionally
		3	Often
		4	Very often

Experience with Faculty

During the past (year) at UNI, about how often did you do each of the following?

79	Visited faculty and sought their advice on class projects such as writing assignments and research papers.	1	Never
		2	Occasionally
		3	Often
		4	Very often
80	Felt comfortable approaching faculty outside of class.	1	Never
		2	Occasionally
		3	Often
		4	Very often
81	Felt comfortable approaching faculty outside of class.	1	Never
		2	Occasionally
		3	Often

		4	Very often
82	Visited informally and briefly with an instructor (before) after class.	1	Never
		2	Occasionally
		3	Often
		4	Very often
83	Discussed my career plans and ambitions with a faculty member.	1	Never
		2	Occasionally
		3	Often
		4	Very often
84	Asked my instructor for comments and criticisms about my work.	1	Never
		2	Occasionally
		3	Often
		4	Very often

General Perceptions of UNI

The following are statements about your general perceptions, adjustment process, and opinion of your overall satisfaction at UNI. Please indicate the extent to which you agree or disagree.

85	UNI faculty are easy to approach	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
86	UNI faculty tend to be accessible to students	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
87	It was difficult learning the "red tape" when I started.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
88	Because I am a "community college transfer," most students tend to underestimate my abilities.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat

		4	Agree strongly
89	Because I am a "community college transfer," most faculty tend to underestimate my abilities.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
90	There is a stigma at UNI among students for having started at a community college.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
91	Generally, students are more concerned about "getting the grade" instead of learning the material.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
92	Many students feel like they do not "fit in" on this campus.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
93	Professors are strongly interested in the academic development of undergraduates.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
94	Most students are treated like a "number."	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
95	Student services are responsive to student needs.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly

96	If students expect to benefit from what UNI has to offer, they have to take the initiative.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
97	I feel the courses I have taken at UNI have been interesting and worthwhile.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
98	UNI is an intellectually stimulating and often exciting place to be.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
99	I would recommend to other transfer students to come to UNI.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
100	If I could start over again, I still would go to UNI.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly

Adjustment process

Please indicate the extent to which you agree or disagree with the following statements.

101	Adjusting to the academic standards or expectations at UNI has been easy.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
102	Adjusting to the social environment at UNI has been easy.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
103	I often feel (felt) overwhelmed by the size of the student body.	1	Disagree strongly
		2	Disagree somewhat

		3	Agree somewhat
		4	Agree strongly
104	Upon transferring I felt alienated at UNI.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
105	I am very involved with social activities at UNI.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
106	I am meeting as many people and making as many friends as I would like at UNI.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
107	The large classes intimidate me.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
108	It is easy to find my way around campus.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
109	My level of stress increased when I started at UNI.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
110	I experienced a dip in grades (GPA) during my first semester at UNI.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
111	It is easy to make friends at UNI.	1	Disagree strongly

		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
112	I feel comfortable spending time with friends that I made at the community college I attended.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
113	I feel more comfortable making friends with transfer students than non-transfers.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly
114	There is a sense of competition between/among students at UNI that is not found in community colleges.	1	Disagree strongly
		2	Disagree somewhat
		3	Agree somewhat
		4	Agree strongly

College Satisfaction

Please rate your satisfaction with each of the aspects of campus life listed below.

115	Sense of belonging at UNI.	1	Very dissatisfied
		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable
116	Decision to transfer to UNI.	1	Very dissatisfied
		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable
117	Overall quality of instruction.	1	Very dissatisfied
		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable
118	Sense of community on campus.	1	Very dissatisfied

		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable
119	Academic advising.	1	Very dissatisfied
		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable
120	Career counseling and advising.	1	Very dissatisfied
		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable
121	Student housing.	1	Very dissatisfied
		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable
122	Courses in your major field.	1	Very dissatisfied
		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable
123	Financial aid services.	1	Very dissatisfied
		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable
124	Amount of contact with faculty.	1	Very dissatisfied
		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable
125	Opportunities for community service.	1	Very dissatisfied
		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable

126	Job placement services for students.	1	Very dissatisfied
		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable
127	Class size.	1	Very dissatisfied
		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable
128	Interaction with other students.	1	Very dissatisfied
		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable
129	Ethnic/racial diversity of the faculty.	1	Very dissatisfied
		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable
130	Leadership opportunities.	1	Very dissatisfied
		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable
131	Overall college experience.	1	Very dissatisfied
		2	Dissatisfied
		3	Satisfied
		4	Very satisfied
		5	Not applicable

Conclusion

Open ended comments

132 What factors helped you adjust to UNI? Please explain what factors contributed to your successful transfer (or unsuccessful transfer) to UNI. Feel free to include factors at both your community college and UNI?

133 What might the community college have done to enhance your success or ease the transition to UNI?

134   If you could give some advice to community college students who will be transferring to UNI, what would that advice be?

135   What have we NOT asked that you would like us to know about your experiences at the community college or UNI?

Thank you very much for taking the time to complete this Transfer Student Survey.

Demographic data collected from the student information system after survey administration.

D1	Classification	2	Sophomore
		3	Junior
		4	Senior
		5	Graduate
D2	Gender	1	Male
		2	Female
D3	Major college	1	CBA
		2	COE
		3	CHAS
		4	CSBS
D4	UNI GPA		
D5	Total cumulative GPA		
D6	Transfer accepted hours		
D7	Major code	1	General Studies
		2	Management Information Systems
		3	Business Teaching
		4	Accounting
		5	Real Estate
		6	Early Childhood Education
		7	Elementary Education
		8	Psychology
		9	Health Education
		10	Physical Education
		11	Social Work
		12	Communicative Disorders
		13	Art
		14	English
		15	Philosophy
		16	TESOL/Spanish
		17	Spanish
		18	Mathematics
		19	Computer Science
		20	Biotechnology
		21	Political Science

			22	History
			23	Sociology
			24	Criminology
			25	Anthropology
D8	Degree objective			
D9	Teaching major		0	No
			1	Yes
D10	Residence code		1	Iowa Resident
			2	Out of state students
D11	Has Minor		0	No
			1	Yes
D12	Race/Ethnicity code		1	White
			2	African American/Black
			3	American Indian/Alaskan Native
			4	Asian
			5	Hispanic
			6	International
			7	Native Hawaiian/Pacific Islander
			8	Two or more
			9	No response
D13	UNI earned hours			
D14	Birthdate/Age			
D15	Marital status		1	Single
			2	Married
			3	Single with dependent children
			4	Married with dependent children
D16	Local zip code			
D17	Home zip code			
D18	Semester load hours			

APPENDIX E: INSTITUTIONAL REVIEW BOARD APPROVAL

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Date:	5/12/2011	
To:	Kristin Moser	**CC:** Dr. Frankie Santos Laanan
	1809 Oakland Ave	N225A Lagomarcino
	Cedar Falls, IA 50613	
From:	Office for Responsible Research	
Title:	An Examination of Factors that Affect Transfer Student Success: The Laanan-TSQ Revisited	
IRB Num:	11-162	

Submission Type:	New	**Exemption Date:**	5/11/2011

The project referenced above has undergone review by the Institutional Review Board (IRB) and has been declared exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b). The IRB determination of exemption means that:

- **You do not need to submit an application for annual continuing review.**

- **You must carry out the research as proposed in the IRB application,** including obtaining and documenting informed consent if you have stated in your application that you will do so or if required by the IRB.

- **Any modification of this research should be submitted to the IRB on a Continuing Review and/or Modification form, prior to making <u>any</u> changes,** to determine if the project still meets the federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.

Please be sure to **use only the approved study materials** in your research, including the **recruitment materials and informed consent documents** that have the IRB approval stamp.

Please note that you must submit all research involving human participants for review by the IRB. **Only the IRB may make the determination of exemption,** even if you conduct a study in the future that is exactly like this study.

ISU Modification Approval Letter

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Date: 5/27/2011

To: Kristin Moser
1809 Oakland Ave
Cedar Falls, IA 50613

CC: Dr. Frankie Santos Laanan
N225A Lagomarcino

From: Office for Responsible Research

Title: An Examination of Factors that Effect Transfer Student Success: The Laanan-TSQ Revisited

IRB Num: 11-162

Submission Type: Modification   **Exemption Date:** 5/27/2011

The project referenced above has undergone review by the Institutional Review Board (IRB) and has been declared exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b). The IRB determination of exemption means that:

- **You do not need to submit an application for annual continuing review.**

- **You must carry out the research as proposed in the IRB application,** including obtaining and documenting informed consent if you have stated in your application that you will do so or if required by the IRB.

- **Any modification of this research should be submitted to the IRB on a Continuing Review and/or Modification form, prior to making <u>any</u> changes,** to determine if the project still meets the federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.

Please be sure to **use only the approved study materials** in your research, including the **recruitment materials and informed consent documents that have the IRB approval stamp**.

Please note that you must submit all research involving human participants for review by the IRB. **Only the IRB may make the determination of exemption**, even if you conduct a study in the future that is exactly like this study.

UNI Approval Letter

Subject: Re: ISU IRB
From: Anita Gordon anita.gordon@uni.edu
Date: Tue, 22 Feb 2011 18:34:12 -0600
To: Kristin Moser <kristin.moser@uni.edu>

Hi, Kristin -

You can attach this email to your ISU IRB application as documentation that you have our permission to conduct research at UNI, contingent on our receiving a copy of your ISU application and approval letter before you begin. If you need anything further, please let me know.

Thanks -

Anita

Anita M. Gordon, MSW
Director of Research Services
University of Northern Iowa
213 East Bartlett Hall
Cedar Falls, IA   50614-0394
Phone: 319-273-6148
Fax: 319-273-2634

ISU Approval of Modifications to Survey

On 10/7/2011 7:29 AM, Committee, IRB [ORA] wrote:

Hi Kristin,

If you are not changing the topic or content of the survey questions, it is okay for you to proceed without review of an IRB modification form. If, however, you plan to make more changes that might change the topic or content of the questions, you would need to submit a modification form.

Good luck with your research!

Roxanne
IRB Administrator
Office for Responsible Research
Iowa State University
1138 Pearson Hall
Ames, IA 50011
515-294-4215
515-294-4267 fax

From: Kristin Moser
Sent: Friday, September 30, 2011 9:12 AM
To: Committee, IRB [ORA]
Subject: Re: IRB ID 11-162 - Approved Materials (Moser)

Thanks for your reply Roxanne.

Aside from the adjustment in the scale that I mentioned previously, I made a few minor edits to one section of my instrument. The change was necessary to reflect a focus on student initiated activity versus the activity provided by the institution. The content of the questions remains exactly the same, however, instead of saying (for example) that the advisors made sure the student understood the transfer requirements, the questions now comes from the perspective of the students and reads I (the student) made sure I understood the transfer requirements. Given that the content of the questions were not altered, and only the perception was changed, am I okay to move forward or do I need to submit an addendum? Thanks in advance for your advice.

Kristin

APPENDIX F: INSTITUTIONAL REVIEW BOARD SUPPORTING MATERIALS

Survey Invitation Text

(sent by e-mail)

Dear UNI Transfer student,

I am writing to invite you to participate in a survey related to your experiences as a transfer student to UNI. This research study consists of a brief web survey that asks about the academic and social experiences of transfer students both at their community college and at UNI. This web-based questionnaire provides you with an opportunity to share your opinions and experiences about your experience as a transfer student at the University of Northern Iowa. The main goal is to understand how UNI and Iowa community colleges are meeting the needs of transfer students. This project is being conducted in collaboration with researchers at Iowa State University in an effort to improve the transfer process for all students in the state of Iowa.

As a recent transfer student to UNI, you have been selected to participate in this study. I know that this is a busy time of year, but please take about fifteen minutes to answer the questions on this web survey. We ask that you fill out the form to the best of your ability and be aware that you have the option to stop taking the survey at any time with no penalty. To thank you for your time and input, if you submit your completed survey by October 30, 2011, you will be entered into a drawing to win **one of thirty (30) gift certificates worth $25.**

Your participation in this study is voluntary, and your willingness to participate will have no effect on your status at UNI. Your responses will remain completely confidential and secured, with your name never associated with the answers you provide. Also, to further ensure confidentiality, the data collected from the research study will be stored on a secure server, only assessable via a password protected computer. There are no foreseeable risks at this time from participating in this study.

Please click on the link (insert link to My UNIverse here) and select the Transfer Students' Questionnaire on your announcements section.

When you click the above link, you will be taken to MyUNIverse where you will need to use your UNI CatID to log in to access the survey. Your participation is voluntary and you may skip any questions you do not want to answer.

Confidentiality

The data given to the principal investigator of the study will be stripped of all individually identifiable information. The researcher will have no way of knowing which records belong to which student, nor will she know which students have completed the survey and which students have not. Your responses will only be publically reported as group data (e.g. "15% of transfer students at UNI indicated…"). Your email address will not be stored with your responses; it will only be used to notify winners of the gift certificate drawing.

Questions or Problems

This survey has been granted approval by the Institutional Review Board. You are encouraged to ask questions at any time during the study.

- For further information on the study, send a message to kristin.moser@uni.edu or call Kristin Moser at 273-3050.
- If you have questions about the rights of research subjects or research-related injury, please contact the IRB administrator at IRB@iastate.edu or call (515) 294-4566, or Director, Office of Research Assurances at (515) 294-3115.

Thank you in advance for your time and input and for supporting our efforts to improve the quality of undergraduate education for transfer students at UNI.

Sincerely,

Kristin Moser
Principal Investigator

Reminder Text 1 and 2

Dear UNI Transfer student,

I am writing to remind you to participate in a survey related to your experiences as a transfer student to UNI. This web-based questionnaire provides you with an opportunity to share your opinions and experiences about your experience as a transfer student at the University of Northern Iowa.

We ask that you fill out the form to the best of your ability and be aware that you have the option to stop taking the survey at any time with no penalty. We thank you in advance for your time and input. Please click on the link (insert link to My UNIverse here) and select the Transfer Students' Questionnaire on your announcements section.

If you submit your completed survey by October 30, 2011, you will be entered into a drawing to win **one of thirty (30) gift certificates worth $25.**

Your participation in this study is voluntary, and your willingness to participate will have no effect on your status at UNI. Your responses will remain completely confidential and secured, with your name never associated with the answers you provide. Also, to further ensure confidentiality, the data collected from the research study will be stored on a secure server, only assessable via a password protected computer. There are no foreseeable risks at this time from participating in this study.

Confidentiality

The data given to the principal investigator of the study will be stripped of all individually identifiable information. The researcher will have no way of knowing which records belong to which student, nor will she know which students have completed the survey and which students have not. Your responses will only be publically reported as group data (e.g. "15% of transfer students at UNI indicated…"). Your email address will not be stored with your responses; it will only be used to notify winners of the gift certificate drawing.

Questions or Problems

This survey has been granted approval by the Institutional Review Board. You are encouraged to ask questions at any time during the study.

- For further information on the study, send a message to kristin.moser@uni.edu or call Kristin Moser at 273-3050.
- If you have questions about the rights of research subjects or research-related injury, please contact the IRB administrator at IRB@iastate.edu or call (515) 294-4566, or Director, Office of Research Assurances at (515) 294-3115.

Thank you in advance for your time and input and for supporting our efforts to improve the quality of undergraduate education for transfer students at UNI.

Sincerely,

Kristin Moser
Principal Investigator

MyUNIverse, MyUNIverse News and MyUNIweekend Announcements

ATTENTION TRANSFER STUDENTS! You have the opportunity to share your opinions and experiences about your experiences as a transfer student at UNI. Follow this link (insert link to My UNIverse here) and select the Transfer Students' Questionnaire on your announcements section. The survey takes about 15 minutes to complete and is strictly confidential. All responses will be aggregated and no individually identifying information will be disclosed. If you have any questions, send a message to kristin.moser@uni.edu or call Kristin Moser at 273-3050.

Electronic Informed Consent

(Paragraph presented on first page of on-line survey)

Transfer Student Survey

You are invited to participate in a research project designed to gain a better understanding of the factors that impact transfer students at UNI. The purpose of this survey is to understand the various factors that have the greatest impact on transfer students and their success at UNI. While there are no direct benefits to taking this survey, your input will be used to help determine how UNI can best meet your needs. This minimal risk survey will take approximately 15 minutes to complete. Information obtained during this study which could identify you will be kept strictly confidential. Your participation is completely voluntary and you may stop taking the survey during any time with no penalty by closing your web browser. In addition, you may skip any question you do not feel completely comfortable answering. If you have questions about the study or desire information in the future regarding your participation or the study you may contact Kristin Moser at kristin.moser@uni.edu or Frankie Santos Laanan at laanan@iastate.edu. If you have questions about the rights of research subjects or research-related injury, please contact the IRB administrator at (515) 294-4566 or IRB@iastate.edu, or the IRB Director at (515) 294-3115, Office of Responsible Research, Iowa State University, Ames, IA 50011.

I am fully aware of the nature and extent of my participation in this project as stated above. I hereby voluntarily agree to participate in this project. I acknowledge that I have read this consent statement. I am 18 years of age or older.

☐ Yes, I agree

☐ No, I do not wish to participate

APPENDIX G: CORRELATION MATRIX

			1	2	3	4	5
1	Transfer Cum GPA	Pearson Correlation	1	.176**	0.001	0.096	.158**
		Sig. (2-tailed)		0.002	0.98	0.095	0.006
		N	311	311	306	304	297
2	Has AA degree	Pearson Correlation	.176**	1	-.155**	-0.101	.179**
		Sig. (2-tailed)	0.002		0.006	0.076	0.002
		N	311	319	313	312	305
3	What is the highest level of education completed by your father?	Pearson Correlation	0.001	-.155**	1	.203**	-0.006
		Sig. (2-tailed)	0.98	0.006		0	0.921
		N	306	313	313	307	300
4	What is your best estimate of your parents' total household income last year?	Pearson Correlation	0.096	-0.101	.203**	1	-0.04
		Sig. (2-tailed)	0.095	0.076	0		0.488
		N	304	312	307	312	300
5	CC_Experiences_faculty	Pearson Correlation	.158**	.179**	-0.006	-0.04	1
		Sig. (2-tailed)	0.006	0.002	0.921	0.488	
		N	297	305	300	300	305
6	CC_Course_learning	Pearson Correlation	.147*	0.101	0.036	-.139*	.602**
		Sig. (2-tailed)	0.011	0.078	0.533	0.016	0
		N	300	308	303	303	303
7	CC_experiences_gen_courses	Pearson Correlation	.122*	.120*	0.032	-0.049	.385**
		Sig. (2-tailed)	0.034	0.036	0.583	0.397	0
		N	301	309	304	303	301

			1	2	3	4	5
		Sig. (2-tailed)	0.361	0.492	0.002	0	0
		N	298	306	301	302	298
9	Advising_counseling	Pearson Correlation	0.06	.233**	-0.011	0.002	.454**
		Sig. (2-tailed)	0.303	0	0.845	0.979	0
		N	295	303	298	298	295
10	Faculty_validationR	Pearson Correlation	.205**	.235**	0.026	-0.034	.535**
		Sig. (2-tailed)	0	0	0.656	0.565	0
		N	291	298	293	293	289
11	Mentor_care_contact	Pearson Correlation	.193*	.238**	0.006	0.042	.473**
		Sig. (2-tailed)	0.039	0.01	0.952	0.659	0
		N	115	117	114	113	114
12	CC_Faculty_interaction	Pearson Correlation	.317**	.313**	-0.116	0.124	.575**
		Sig. (2-tailed)	0	0	0.201	0.169	0
		N	126	128	124	124	123
13	UNI_perceptions_accessible_personalR	Pearson Correlation	-0.046	-.132*	0.008	-0.083	.119*
		Sig. (2-tailed)	0.437	0.022	0.886	0.154	0.043
		N	293	301	295	295	289
14	UNI_Faculty_interacted_discussed	Pearson Correlation	-0.049	-0.087	-0.01	-0.03	.356**
		Sig. (2-tailed)	0.406	0.132	0.86	0.606	0
		N	294	302	296	297	290
15	UNI_course_learning	Pearson Correlation	0.033	-0.02	0.083	-0.093	.372**
		Sig. (2-tailed)	0.577	0.723	0.156	0.11	0
		N	295	302	296	296	290
16	UNI_perceptions_stigma	Pearson Correlation	0.012	.150**	-0.015	-0.09	.181**
		Sig. (2-tailed)	0.835	0.009	0.801	0.122	0.002
		N	294	302	296	297	294
17	MotivationR	Pearson Correlation	.201**	0.009	-0.058	0.004	.189**
		Sig. (2-tailed)	0	0.87	0.317	0.945	0.001
		N	301	309	304	304	301
18	Satisfaction_academic_and_advising	Pearson Correlation	-0.039	-0.015	-0.046	-0.017	0.101
		Sig. (2-tailed)	0.524	0.8	0.454	0.786	0.103
		N	266	273	267	269	262

		6	7	8	9	10	11
1	Transfer Cum GPA	.147*	.122*	0.053	0.06	.205**	.193*
		0.011	0.034	0.361	0.303	0	0.039
		300	301	298	295	291	115
2	Has AA degree	0.101	.120*	0.039	.233**	.235**	.238**
		0.078	0.036	0.492	0	0	0.01
		308	309	306	303	298	117
3	What is the highest level of education completed by your father?	0.036	0.032	-.182**	-0.011	0.026	0.006
		0.533	0.583	0.002	0.845	0.656	0.952
		303	304	301	298	293	114
4	What is your best estimate of your parents' total household income last year?	-.139*	-0.049	-.286**	0.002	-0.034	0.042
		0.016	0.397	0	0.979	0.565	0.659
		303	303	302	298	293	113
5	CC_Experiences_faculty	.602**	.385**	.236**	.454**	.535**	.473**
		0	0	0	0	0	0
		303	301	298	295	289	114
6	CC_Course_learning	1	.447**	.268**	.239**	.509**	.328**
			0	0	0	0	0
		308	303	300	297	292	113
7	CC_experiences_gen_courses	.447**	1	0.09	.350**	.498**	.319**
		0		0.121	0	0	0
		303	309	297	298	293	117
8	Financial_mediators	.268**	0.09	1	.177**	.183**	-0.03
		0	0.121		0.002	0.002	0.752
		300	297	306	292	286	111
9	Advising_counseling	.239**	.350**	.177**	1	.331**	.262**
		0	0	0.002		0	0.005
		297	298	292	303	288	116
10	Faculty_validationR	.509**	.498**	.183**	.331**	1	.448**
		0	0	0.002	0		0
		292	293	286	288	298	105
11	Mentor_care_contact	.328**	.319**	-0.03	.262**	.448**	1
		0	0	0.752	0.005	0	
		113	117	111	116	105	117
12	CC_Faculty_interaction	.332**	.237**	-0.055	.314**	.411**	.503**
		0	0.008	0.549	0	0	0
		122	125	121	126	114	115
13	UNI_perceptions_accessible_personalR	.125*	0.105	.208**	0.062	0.048	.203*
		6	7	8	9	10	11

#	Variable						
		0.032		0.074	0	0.295	0.42	0.034
		292		293	290	288	282	110
14	UNI_Faculty_interacted_discussed	.235**		.119*	.187**	.138*	0.095	-0.037
		0		0.041	0.001	0.019	0.111	0.707
		293		292	291	287	281	108
15	UNI_course_learning	.546**		.194**	.197**	.139*	.171**	0.04
		0		0.001	0.001	0.018	0.004	0.678
		292		292	290	288	282	108
16	UNI_perceptions_stigma	.137*		0.054	0.021	0.103	0.095	-0.128
		0.018		0.356	0.727	0.078	0.108	0.179
		296		296	291	293	286	111
17	MotivationR	.256**		.163**	0.061	.164**	.167**	.299**
		0		0.005	0.292	0.005	0.004	0.001
		303		300	303	295	289	112
18	Satisfaction_academic_and_advising	0.082		0.081	.272**	0.108	0.097	0.079
		0.183		0.188	0	0.081	0.123	0.45
		264		264	263	260	254	94

#	Variable	12	13	14	15	16	17	18
1	Transfer Cum GPA	.317**	-0.046	-0.049	0.033	0.012	.201**	-0.039
		0	0.437	0.406	0.577	0.835	0	0.524
		126	293	294	295	294	301	266
2	Has AA degree	.313**	-.132*	-0.087	-0.02	.150**	0.009	-0.015
		0	0.022	0.132	0.723	0.009	0.87	0.8
		128	301	302	302	302	309	273
3	What is the highest level of education completed by your father?	-0.116	0.008	-0.01	0.083	-0.015	-0.058	-0.046
		0.201	0.886	0.86	0.156	0.801	0.317	0.454
		124	295	296	296	296	304	267
4	What is your best estimate of your parents' total household income last year?	0.124	-0.083	-0.03	-0.093	-0.09	0.004	-0.017
		0.169	0.154	0.606	0.11	0.122	0.945	0.786
		124	295	297	296	297	304	269
5	CC_Experiences_faculty	.575**	.119*	.356**	.372**	.181**	.189**	0.101
		0	0.043	0	0	0.002	0.001	0.103
		123	289	290	290	294	301	262
6	CC_Course_learning	.332**	.125*	.235**	.546**	.137*	.256**	0.082
		12	13	14	15	16	17	18
		0	0.032	0	0	0.018	0	0.183

			122	292	293	292	296	303	264

#	Variable							
7	CC_experiences_gen_courses	.237**	0.105	.119*	.194**	0.054	.163**	0.081
		0.008	0.074	0.041	0.001	0.356	0.005	0.188
		125	293	292	292	296	300	264
8	Financial_mediators	-0.055	.208**	.187**	.197**	0.021	0.061	.272**
		0.549	0	0.001	0.001	0.727	0.292	0
		121	290	291	290	291	303	263
9	Advising_counseling	.314**	0.062	.138*	.139*	0.103	.164**	0.108
		0	0.295	0.019	0.018	0.078	0.005	0.081
		126	288	287	288	293	295	260
10	Faculty_validationR	.411**	0.048	0.095	.171**	0.095	.167**	0.097
		0	0.42	0.111	0.004	0.108	0.004	0.123
		114	282	281	282	286	289	254
11	Mentor_care_contact	.503**	.203*	-0.037	0.04	-0.128	.299**	0.079
		0	0.034	0.707	0.678	0.179	0.001	0.45
		115	110	108	108	111	112	94
12	CC_Faculty_interaction	1	0.126	0.089	0.177	0.013	.280**	0.1
			0.174	0.335	0.053	0.885	0.002	0.314
		128	119	119	120	121	122	104
13	UNI_perceptions_accessible_personalR	0.126	1	.498**	.368**	-.297**	.314**	.668**
		0.174		0	0	0	0	0
		119	301	294	294	295	294	266
14	UNI_Faculty_interacted_discussed	0.089	.498**	1	.496**	0.044	.265**	.427**
		0.335	0		0	0.448	0	0
		119	294	302	295	295	295	267
15	UNI_course_learning	0.177	.368**	.496**	1	-0.06	.250**	.241**
		0.053	0	0		0.307	0	0
		120	294	295	302	295	293	265
16	UNI_perceptions_stigma	0.013	-.297**	0.044	-0.06	1	-0.021	-.216**
		0.885	0	0.448	0.307		0.719	0
		121	295	295	295	302	294	267
17	MotivationR	.280**	.314**	.265**	.250**	-0.021	1	.182**
		0.002	0	0	0	0.719		0.003
		122	294	295	293	294	309	265
18	Satisfaction_academic_and_advising	0.1	.668**	.427**	.241**	-.216**	.182**	1
		0.314	0	0	0	0	0.003	
		104	266	267	265	267	265	273

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

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

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