Generational Differences in Transfer Student Capital among Community College Students

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GENERATIONAL DIFFERENCES IN TRANSFER STUDENT CAPITAL AMONG COMMUNITY COLLEGE STUDENTS

DISSERTATION

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Education in the College of Education at the University of Kentucky

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“Transfer student capital” refers to the learned ability of a student to successfully navigate the process of transferring from a community college to a four-year school. Transfer student capital is accumulated by gathering information about potential destination schools and programs, gaining an understanding of requisite academic skills, campus engagement, and weighing personal concerns surrounding eventual transfer. The more transfer student capital an individual accumulates, the more likely they are to be academically successful and persist to graduation.

This quantitative study examines whether a student’s age cohort may affect the transfer process from community college to a four-year school. The study examines whether age plays a role in the accumulation of transfer student capital and explores the utility of developing targeted intervention and support for transfer students based on their generation.

A survey instrument administered to all degree-seeking students in the Kentucky Community and Technical College System asked questions about intent to transfer to a four-year school, methods of collecting information about transfer destinations, usage of transfer-related campus services, and concerns about the transfer process. Demographic characteristics were collected as well. Approximately 5,000 valid responses resulted from this administration.

Results suggest that age cohort does have an effect on a student’s intent to transfer – a student’s reported intent tends to decrease with each subsequent cohort. However, this decrease was shown to be an indirect effect. Participating in actions through which transfer student capital is accumulated had a more proximal effect on reported intent to transfer. Students in older age cohorts were shown to access fewer services and exhibit behaviors through which a student accumulates transfer student capital while in community college, which, in turn, decreases their level of transfer intent.
Additionally, many of the demographic characteristics associated with “at-risk” students: first generation status, racial/ethnic background, family structure, etc. were shown to be statistically non-significant on a student’s intent to transfer in comparison to the accumulation of transfer student capital. This result suggests that the benefits of wraparound support programs stem from the proximity of transfer student capital-building activities to a student, rather than the characteristics of the particular group being served.

KEYWORDS: College Choice, Community College Education, Education Policy, Higher Education, Nontraditional Students, Transfer Students.

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April 22, 2015
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Dedicated to
Dr. Margaret Lewis
Acknowledgements

I feel very grateful for all the support I’ve received as I’ve cobbled this project together. Thanks to a wonderful collection of folks I’ve been fortunate enough to have around me, I was able to overcome some initial barriers, find my focus, and reach this point in my personal and professional development. I would like to take a moment to recognize the many individuals who have helped me along the way.

I must start with my wonderful family. Thanks to John and Jean Rosenberg, Annie Rosenberg-Sattich and her husband Steve, and the rest of the extended Rosenberg/Voelker crew. You’ve been so supportive during my somewhat peripatetic professional career, and I would not be here without your love and support. (Not to mention the occasional nudges from Gerta, Christine, Rudy, Walter, David, and Deborah.)

Thanks to my many professional mentors – Dr. Margaret Lewis, who started me down this path; Dr. Doug Woodard, who showed me how to navigate this professional world through success and failure; Greg Strouse, who took on the task of making me take the positive from frustration; Dr. Dave Hellmich, who served as a catalyst for this dissertation topic and demonstrated that unique approaches can be just as effective as traditional ones; Dr. Ed Hughes, for giving me the opportunity to chase this degree; and to countless others from Albion College, the University of Richmond, the University of Kentucky, The University of Cincinnati, and Gateway Community & Technical College who have touched my life. Thanks to all.

Thanks to my chair, Dr. Jane Jensen, for keeping my spirits and energy up – and to the whole EPE cohort, a group of folks from around the state who came together to push through this process. Many thanks to the members of my committee: Drs. Ben
Worth, Ben Withers, Ken Tyler, and Derek Lane for your suggestions and direction.

Thanks to Steve Popple for helping me set up my survey and collect my data, and thanks to Dr. Jay Box for giving me the go-ahead to make it happen.

Thanks to my friends from across the alley and across the world for their encouragement, for their tunes, and for their laughter. Here’s to the *gods and the Sooper Sekrits. Here’s to my peeps from Duke University (one for the thumb!) and the University of Arizona. Here’s to The Naked Vine™ and The Man Who Cooks.

Thanks to Jessie Louise, who taught me about love; to Charlie, who taught me about taking deep breaths; to Jessie One, who taught me to loosen up; and to Mooch, who taught me about just being me.

And, finally, thanks and much love to The Sweet Partner in Crime, Pam Wilcox – my stabilizer, coach, editor, guide, tower of strength, and best friend. Ribbit.

On with the show…
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Chapter 1 -- INTRODUCTION

In September 2011, President Michael McCall of the Kentucky Community & Technical College System (KCTCS) presented his “Business Plan for Transforming KCTCS” to the KCTCS Board of Regents. This plan drew heavily upon KCTCS’ “2010-2016 Business Plan for Transforming Kentucky: One Student, One Job at a Time” in which McCall laid out seven “Transformation Topics” upon which the KCTCS System Office and its 16 community colleges spread across the state should focus in their planning processes. One of McCall’s “transformation strategies” was Transfer. From his published remarks: “KCTCS is committed to providing entering students with a clear pathway to transfer to any Kentucky institution of higher learning and reinforce the educational and financial benefits of remaining at a KCTCS college through the attainment of an associate degree before transferring to a university because research shows that KCTCS transfer students perform at a level equal to or better than the native university students” (McCall, 2010, p. 43).

While there is nothing uncommon about a leader laying out generalities in a strategic vision, transfer students in community colleges, including those in Kentucky, are hardly a monolithic lot. The open-access nature of the community college creates a multigenerational mishmash of humanity studied much less frequently than their peer populations at four-year colleges and universities. While large swaths of research exist about traditional-aged students deciding upon a baccalaureate institution upon reaching the end of their high school years, many questions exist regarding how community college students with “transfer intent” actively move through the process of selecting and eventually transferring to a four year school. This choice process generally includes
deciding on a baccalaureate major, collecting information about various programs at four-year schools and the process to enter them, weighing the pros and cons of various programs, and eventually choosing a transfer destination. The preponderance of the existing research is retrospective in nature – focusing on the experiences of transfer students of various sorts who have already made a successful transition to a four-year school, rather than capturing information about students who are in the midst of the process (e.g. Ellis, 2013; Kisker, Wagoner, & Cohen, 2013; Lester, Brown Leonard, & Mathias, 2013; Marling, 2013; Miller, 2013; Wang, 2009).

Even less information exists on whether the multigenerational nature of the community college population has an effect on these particular choice processes. Again, most research on institutional choice focuses on the “traditional” 18-22 year old student. Any student over the age of 25 is usually labeled “nontraditional.” This delineation raises a clear question -- does a 20-year old potential transfer student think about these choices processes differently than a 35 year old? Similarly, are barriers to academic success such as academic preparedness, schedule flexibility, familiar responsibility, social engagement, etc. conceptualized differently in the minds of a 25-year old “nontraditional” student versus a 45-year old “nontraditional” student?

Understanding student needs and structuring best practices related to the process of transferring between a community college and a four-year school is critical to the recruitment and retention of adult students who wish to eventually earn a baccalaureate degree. The policy implications span all types of institutions. Community colleges attempt to provide support services, including services related to transfer, to their student populations, but the model for these services tends to be based on services provided to
students at four year schools – institutions whose populations tend to look quite different from a demographic and socioeconomic status standpoint and whose needs can be quite different than those students at community colleges (Bailey & Alfonso, 2005; Pusser, 2007).

With the finite resources often allocated to these sorts of support services and the constant need for program evaluation to maintain funding (Grubb, 2006) – it is imperative that colleges are intentional about how they design and offer these services to their student population. For instance, at the University of Kentucky, the flagship public four-year institution in the state of Kentucky, tuition revenue provides a greater percentage of total operating revenue than does the state budget appropriation – 13.2% vs. 11.8% (Capilouto, 2013, p. 1). This difference is even starker at the state’s two year schools. For KCTCS, tuition and fees make up 26% of the total budget, while state appropriations are 21% of the total (McCall, 2013, p. A4). These institutions, both two-year and four-years, should focus on assisting transfer students in their efforts to persist and succeed – not only for the good of the students, but for the tuition revenue so crucial to the continued survival of the institutions in their current forms.

Demographic shifts in the traditional-aged student population have led to an overall decline in first-time enrollments, especially at four-year schools. For four-year schools wishing to maintain the size of their current student bodies, “just counting on high school students is simply a losing proposition” (Handel, 2014). In a time when state budgets are increasingly constrained and public allocations to higher education continue to erode (Sutton, 2014), baccalaureate-granting institutions are constantly in search of
new ways to build enrollment, and the heterogeneous population of community college
transfer students will need to figure heavily into that mix.

Since this broad range of transfer students will be arriving on four-year campuses
in increasing numbers, four-year schools who wish to retain these students and maintain
their overall enrollments will need a better understanding of who these students are, what
they want, and what they’re concerned about as they arrive so the institutions themselves
might be able to provide more effective services for these students. Karp, O'Gara, and
Hughes (2008) indicate that students “with pre-existing social and cultural resources”
generally are the ones who take advantages of these services, and community college
students obviously lack those particular resources when they arrive on their new
campuses. A greater understanding of the changing and varying needs and desires of
transfer students will also prove useful to four-year institutions partnered with these
community colleges as they recruit and enroll students from across the population
spectrum. Improved recruitment and retention strategies are clear benefits.

The decision-based aspects of the transfer student experience and the retention
supports offered by two- and four-year institutions feed into the overall concept which
Laanan (2007) terms transfer student capital. A student accumulates transfer student
capital through a synthesis of services and information accessible to them, academic skill
building, accessing academic advising and counseling, developing accurate perceptions
of the transfer process, increasing cognitive development through learning, and
experiencing positive interactions with faculty and staff.

Students who are able to accumulate larger amounts of transfer student capital
through their experiences, according to Laanan et al, are better able to resist “transfer
shock” – the term coined by Hills (1965) that refers to the expected drop in grade point average for a transfer student in the semester immediately following the move from the two-year to four-year college. Institutions can assist students in the accumulation of this transfer student capital by providing appropriate services, guidance, and support to students both as they move through the transfer process and after their arrival at the four-year school.

The purpose of this study is to examine whether or not a student’s age cohort -- in effect, the student’s “generation” -- plays a role in how students accumulate transfer student capital and ultimately express their intent to transfer. The study will explore how students gather information and weigh concerns to make their eventual choice of a destination college – and how these decision factors, in turn, help or hinder a student’s intent to transfer from a community college to a four-year institution to pursue a bachelor’s degree.

To examine these transfer student-related issues, this study will focus on the students of KCTCS, with its diverse student body of nearly 90,000 students enrolled across the state of Kentucky in a variety of urban and rural settings. From studying this multilayered population, data-driven policy recommendations emerge for provision of services, yielding an increase in student success and persistence, leading to successful transfer and eventual baccalaureate degree attainment.

To gain insight into how the various cohorts of this transfer population accumulate transfer student capital and increase their level of transfer intent, a study was performed based on a large-scale survey of degree-seeking students in the KCTCS system. The research questions guiding this study focus first on the student’s self-
reported level of transfer intent, and then ask about specific aspects of the transfer process which involve the accumulation of transfer student capital. The research questions are as follows:

1. Do student age cohorts have an effect on intent to transfer from a community college to a four year school?
2. Do student age cohorts have an effect on students’ planning timeline and the factors important to their eventual choice of a transfer destination?
3. Do students in different age cohorts collect information differently in the process of choosing a transfer institution?
4. Do students of different cohorts access transfer-related services on their home campuses differently? Do the services they use align with their stated preferences for gaining information about the transfer process?
5. Do concerns about the transfer process differ among students of differing ages? If so, how do these concerns differ?

Statistical analyses were performed on these generated data to determine whether identifiable patterns and themes exist among the various student groups. While student age cohort is the primary target for examination, additional data will be generated on student gender, race, and family structure. While these categories may not be, initially, the primary study variables, a rich repository of data exists for further analysis.

This study also opens the door to broader-ranging research beyond the state of Kentucky, since the focus on successful transfer is national in scope. This study should be replicable in most two-year public institutional settings, whether at an individual college or in the context of a larger statewide system. While engaging students about transfer
early in their academic career is a well-known best practice (Miller, 2013), having this information about the heterogeneity of these “nontraditional” transfer-bound students – which are making up a larger and larger portion of the incoming transfer student body (Snyder & Dillow, 2013) -- will help put that conversation in a context the students can understand, apply, and embrace.

KCTCS offers a rich opportunity for this sort of examination. There are a number of reasons that this environment provides such an opportunity:

1) Statewide legislation. In Kentucky’s 2010 legislative session, the state’s governing body unanimously passed House Bill 160, officially known as “An act relating to the establishment of common undergraduate college course credits for transfer and the awarding of degrees” – more commonly known across the Commonwealth as “The Transfer Bill.” The measure legally guaranteed the articulation of common academic credit from the Kentucky Community and Technical College system to any of the state’s public four-year universities. As part of this bill, Kentucky’s Council on Postsecondary Education was mandated to oversee the development and maintenance of these transfer pathways and alignment of statewide program articulations. This piece of legislation was an attempt to create broader cooperation among the community colleges and the public four-year schools in an attempt to increase the number of baccalaureate degree-holding citizens in the Commonwealth. If the logic behind the bill is sound, there should be a concomitant increase in the number of students both interested in and successfully transferring from a KCTCS school to four-year schools. This
increased number of transfer students will not be limited to “traditional” students, obviously.

2) The system’s own efforts. President McCall, who retired as KCTCS’ first president in January 2015, specifically made increasing the number of successful transfer a priority, expending considerable resources on system wide self-studies, additional staff, and renewed focus on transfer messaging as part of the overall system “Transformation Initiative” strategy. McCall instructed the 16 colleges to “develop a holistic/integrated approach to transfer by developing coherent structures and integrated processes in the design and delivery of instructional and student services utilizing the Foundations of Excellence Transfer Focus” (McCall, 2010, p. 40). McCall’s comments can be seen through the lens of this research as a call to increase the opportunities for institutions to provide opportunities for students across the system to more efficiently accumulate transfer student capital. Since students may avail themselves of these opportunities differently based on their relative ages, this research may help determine whether or not a targeting of supports and interventions toward a student’s generation would be an efficient use of system and institutional resources.

3) The nature of the student population of KCTCS itself. KCTCS students are spread across a number of environments: urban and rural, multicultural and relatively homogenous, and, as previously discussed, multigenerational. A broad-ranging examination of students interested in transfer would undoubtedly yield interesting data. Policy recommendations stemming from
these data could help the individual institutions better shape their services for these students, assist the system in reaching its declared transfer benchmarks, and help the state raise its overall level of educational attainment.
Chapter 2 – LITERATURE REVIEW

Again, this study aims to understand generational differences in transfer intent as a function of the accumulation of transfer student capital. As noted, student bodies at many community colleges are quite heterogeneous, including in the range of student ages one finds on campus. Since these students differ from a developmental perspective, it should follow that there will be differing needs and attitudes among individuals at different stages in their lives, and this difference naturally would apply itself to many aspects of the student experience. Students at different life stages experience the world differently. Students of different ages may require different forms of assistance in the process of accumulating transfer student capital to pass successfully through the transfer process and avoid “transfer shock.”

To place this study’s thesis in theoretical context, this review will begin with an overview of the concept of transfer student capital and the various aspects of students’ academic and social experiences which are associated with the accumulation of this capital.

Following, this review will then look at potential differences in the experiences of students in differing age cohorts through the lens of college student development theories, looking more deeply into the characteristics and performance of students considered “nontraditional,” and how their experiences in the higher education environment shape their approach to their educational experience.

Following, this review explores general research about transfer students and the transition between institutions, looking more closely at the characteristics and
performance of students considered “nontraditional,” and how these students move through the transfer process, accumulating.

Finally, this review will examine how institutions currently provide assistance to these populations, in essence assisting these students with the accumulation of transfer student capital. It is the intersection of the literature and theory on demographics, institutional assistance, and transfer student capital which establishes a framework for the quantitative survey distributed to the degree-seeking students in KCTCS. The analysis of the survey data then explores potential age cohort-related differences in the accumulation of transfer student capital.

“Transfer Student Capital”

The concept of transfer student capital stemmed from the research into the phenomenon of “transfer shock” by Laanan (2001). In 1965, Hills coined the term “transfer shock” to describe the aggregate drop in GPA and initial increase in attrition experienced by a majority of community college (or “junior college” in Hills’ parlance) students when they move from the environment of a two-year school to a baccalaureate-granting institution.

Once students survive transfer shock and adjust to their new institution, according to Hills, they tend to find their way at their new institution reasonably well. Institutions often try to find ways to assist students in working through the adjustments of the “shock” period to help them gain a solid academic footing.

Laanan found three major themes in the literature on the adjustments a successful student makes during the transition to a four year school. These three themes were psychological adjustment, adjustment to a new educational environment, and adjustments
to a different campus climate. Psychological adjustment was defined as “a function of student attributes, psychological and sociocultural stresses, and the strategies students use to cope with these stresses” (p. 10). Higher levels of psychological stress were reported among racial and ethnic transfer populations. Educational environment referred to the structural environment at the new institution, which includes interactions with faculty and staff. Campus climate is a broad-ranging term which involves everything from the racial and ethnic composition of the student body, selectivity of the college and its programs, institutional size and campus activity. Laanan’s concluding statement, that “[h]aving an awareness of the expectations of the four-year school will facilitate a transfer student’s successful transition and ultimate success in the completion of a bachelor’s degree,” (p.11) is interesting in that it is written in the passive voice – which can be seen to imply that the community college and the four-year school have a cooperative duty to help students become aware of these differences so their graduates are successful post-transfer. These investigations into how both two and four-year schools can assist students in ameliorating transfer shock led to the creation of Laanan’s concept of “transfer student capital” (Laanan, Starobin, & Eggleston, 2011). Laanan’s hypothesis was that the more transfer student capital a student accumulates, the more likely they are to resist transfer shock and successfully transition.

**Theoretical Foundations of Transfer Student Capital**

Laanan’s notion of transfer student capital in an educational setting rests on a three-part theoretical foundation. First, the concept of transfer student capital draws on the model of student learning and cognitive development forwarded by Pascarella (1985). Laanan based the predictive model for transfer student success on Pascarella’s notion that
students’ learning and cognitive development are at least somewhat a function of the direct and indirect effects of precollege traits, structural characteristics of an educational institution, institutional environment, interaction with what Pascarella termed “agents of socialization” (i.e. faculty and staff), and the quality of student effort (i.e. improved learning skills).

Second, the concept draws on the notion of “human capital” forwarded by Becker (1993) and Sweetland (1996). Becker describes “human capital,” in contrast with other forms of tangible capital, thusly:

“Schooling, a computer training course, expenditures on medical care, and lectures on the virtues of punctuality and honesty are also capital. That is because they raise earnings, improve health, or add to a person’s good habits over much of his lifetime. Therefore, economists regard expenditures on education, training, medical care, and so on as investments in human capital. They are called human capital because people cannot be separated from their knowledge, skills, health, or values in the way they can be separated from their financial and physical assets” (Becker, 2008).

Third, the concept relates to a predictive model of retention which demonstrates that the academic success of students at the community college level increases a student’s likelihood to transfer to a four-year school; thus retaining them in higher education. This model, developed by Hagedorn et al. (2004; 2006; 2008) through transcript analysis of a number of urban community college student populations, illustrated the importance of students setting transfer-related academic goals; providing appropriate academic support services; and creating the availability for timely, accurate advising and counseling to best prepare a student for overall success. For instance, Hagedorn, Moon, and Cypers (2006) found that many community college students do not understand the relationship between courses – such as the need to complete prerequisite remedial coursework before taking
transfer credit-bearing courses; or that transfer is not automatic after two years, even though community colleges are referred to as “two-year” schools\(^1\). According to Hagedorn, in order to boost student retention, a student’s institution should provide appropriate information and counseling in a manner where students feel accepted and welcomed.

**Application of Transfer Student Capital**

Laanan applied those concepts to the elements that help a transfer student succeed in his or her academic journey. As such, Laanan suggests the components of transfer student capital include a student’s synthesis of services and information accessible to them, training on academic skill building, accessing academic advising and counseling, developing accurate perceptions of the transfer process, increasing cognitive development through learning, and experiencing positive interactions with faculty and staff.

Laanan makes the case that the more transfer student capital a student has, the more likely they are to resist transfer shock. A transfer student would “exchange” the accumulated knowledge and experience from these various factors in the context of the academic expectations and social culture to become a more effective student at his or new institution and to recognize the human capital benefits of a successfully completed academic journey\(^2\).

---

\(^1\) Hagedorn found that the mean “time to transfer” for the population in her 2006 study was 9½ *semesters* – which certainly calls into question the “two-year” moniker.

\(^2\) This frame obviously is open to sociocultural critique – since it easily be inferred that the purpose of gaining an education is to increase one’s own value in the marketplace and, ultimately, make more money. The debate between college education-as-market commodity vs. academic pursuit for personal betterment, changes in cultural status, and overall betterment of society through an educated populace is a very real one. It is also outside the scope of this study.
Since transfer student capital can be accumulated -- although, like human capital, it is intangible and thus is difficult to precisely quantify on an absolute scale -- the relative level of accumulation among students should be measurable. Laanan developed the Laanan Transfer Student Questionnaire (L-TSQ), a 133-item, four-section instrument which asks students about their background characteristics, experiences at the community college, and experiences at their new institution (Laanan, 1998, 2004). Laanan’s data analysis indicated that increased levels of transfer student capital yielded an improvement in academic performance and adjustment and an increased resistance to transfer shock by these students once they moved to the four-year institution. Thus, if an institution can provide a student appropriate levels of challenge and support through both curricular and co-curricular efforts, the students should increase their overall level of transfer student capital if they choose to take advantage of these services, thus improving the odds of resisting “transfer shock” once they move through the transfer process (Laanan et al., 2011).

While Laanan’s research focused on community college students and examined their experiences at the community college, his data were generated after a student successfully underwent the transition to a four-year school -- thus, after the student had already accumulated his or her supply of transfer student capital. Considering Hagedorn’s research, where a link was established between community college academic achievement, usage of services, and eventual transfer, an inference can be made pre-transfer that a student performing actions and following processes through which he or she would accumulate transfer student capital would also be more likely to follow through on his or her strategy to move from community college to four-year school. This
increased focus on the completion of the transfer process should parallel a student’s increased accumulation of transfer student capital, which would be reflected in an increase in a student’s reported level of intent to transfer before they begin the process of moving from institution to institution. An increase in student’s reported intent to transfer should indicate an increase in the overall accumulation of transfer student capital.

**Transfer Shock and Institutional Support**

Hills’ concept of transfer shock – or, more accurately, institutional assistance made available to students to help them avoid falling victim to Hills’ concept – has yielded some research into the transitions students face as they move between the associate and baccalaureate degree worlds.

A major determining factor in whether students make a successful transition to a four-year institution is whether they have developed the skill and ability to perform academic tasks at a level appropriate for baccalaureate study. All the studies mentioned above indicate that many of these students face at least some degree of academic adjustment once they reach their transfer destination.

Grites (2013) enumerated a number of challenges faced by transfer students as they transition from a two-year school to a four-year school. He suggested that institutions have a responsibility to let students know what they should expect when they arrive at a new institution – campus geography; the alphabet soup of acronyms denoting various academic programs, institutional offices, campus organizations, et al; new policies, procedures, and expectations; scheduling procedures, etc. Townsend & Wilson (2006) referred to assistance from the institution in managing these sorts of challenges as a “hand hold for a little bit” – focusing on special orientations for transfer students;
transfer interest groups; academic advising and information about credit transfer made available before the student arrives on campus; and co-curricular education regarding what a transfer student should expect from their new institution, all of which are activities which lead to an accumulation in transfer student capital.

While much of this research on transfer focuses on the receiving four-year school and the student’s experience once they arrive on their new campus, there are best practices identified at the community college level that also can contribute to transfer success. Miller (2013) examined a cohort of transfer-bound students in Texas via surveys and qualitative interviews. The research determined some of the major institutional aspects and drivers of increased rates of transfer and eventual baccalaureate completion include structured academic pathways illustrating how a student can earn a bachelor’s degree; development of a “student-centered” institutional culture; and the cultivation of culturally sensitive leadership.

Additionally, Miller enumerated a number of barriers at four year schools to successful completion of transfer students’ academic programs. These included a lack of on-campus engagement by these students, financial aid issues, and integration between the two-year and four-year curricula. Miller suggested that collaborative programming, data-driven rather than anecdotal decision making processes, and faculty engagement in designing transfer-based curricula can alleviate some of these barriers, thus reducing the level of transfer shock.

These sorts of suggestions are echoed in a review of previous research by Rhine, Milligan, and Nelson (2000). They suggest transfer shock can be lessened by identifying students who wish to transfer early in their academic careers, providing orientations that
offer practical information about navigating the academic bureaucracy, providing a support network, mentoring, and professional advising services to help students understand what they’re going to face when they arrive at their new campus home.

Along those lines, Orozco, Alvarez, and Gutkin (2010) performed a qualitative study of student experiences within the California community college system. They focused largely on institutional connection with students through advising and counseling relationships. They found that one of the major elements in common across various ethnic groups was the importance of the relationships these students had with members of the college faculty or staff, both in terms of course completion but also in terms of understanding how the bureaucracy of the system worked as the students passed through the process. Again, the importance of and the necessity for institutional services and interventions becomes clear, especially when targeted to a subpopulation’s particular needs.

For this study, the subpopulations examined through the lens of transfer student capital accumulation will be age cohort-related. Thus, it is necessary to look more closely at the differences between student “generations” and how both the experiences of these students and their methods of accumulating transfer student capital may differ.

**Differences in Generations of Students**

The idea of generational differences is nearly as old as society itself. In contemporary parlance, generational labels like “Baby Boomers,” “Generation X,” and “Millennial” refer to particular swaths of individuals born during a certain period of time.

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3 One can easily picture an old Roman shaking his fist and bellowing “Aliquam gramina mea!” at children playing noisily in front of his house.
Each of these groups is considered to have particular characteristics, motivations, and reactions to challenge. Demographic and sociological research on generational difference is not new, but its emergence in common parlance is often discussed in terms of the work of Howe and Strauss (1992). They posit that there are generational cycles or “turnings” in a society about every 20 years. While many valid criticisms of Howe & Strauss’ work exist – for one, it focuses largely on middle class American whites – their work is used as a popular framework for both academic research and institutional service delivery, especially at four-year schools.

Their last book (Strauss is now deceased), *Millennials Go to College* (Howe & Strauss, 2007), was written largely as a policy guide for college administrators. Therein, they suggest colleges should respond to the differing needs of this generation of students by, for instance, keeping resources available 24/7, making pedagogical changes to better align with their learning preferences, providing outlets for students who are feeling burned out, and pitching the idea of how college fits into “life plans” toward a career instead of simply providing the opportunity to earn a degree. An implication exists that these students somehow have different needs by the very nature of being in a certain age group at a certain point in history. It is not illogical to posit that students of other generations existing at a particular point in history would also have different needs, concerns, and preferences.

**Student Generations and Age Cohorts**

We can attempt to provide a definition of the four broad generational groupings into which today’s students would fall. Millennials, already mentioned, are generally seen as those born after 1980 – thus they can range in age up to age 35. “Generation X” refers
to individuals born from 1965-1980, reaching 50 years old. The “Baby Boomers” were born from 1946-1964, reaching students from 50-68. Finally, a few of the “Silent Generation” may be found on campuses, born 1945 or earlier (Pew Research, 2014, p. 9).

That said, looking strictly at generations is likely an overly broad unit of measure to draw accurate conclusions. Simply looking at students who are “Millennials” has one equating an 18 year-old’s view of the world and his or her situation to that of someone who has been able to buy beer legally in the United States for over a decade. Examining generations in terms of shorter internal cohorts could be a better approach. Ryder (1965) describes a cohort as “an aggregate of individuals” which has “a distinctive composition and character reflecting the circumstances of its unique origination and history” (p.835). This definition seems to more accurately portray what Howe & Strauss were reaching for in their discussion of provision of services for Millennial students. They were, in essence, speaking of the contemporary age cohort within the Millennial generation which currently comprises the bulk of traditional-aged college students.

In consideration of how best to examine potential differences between these different age cohorts of students from an operational perspective, there is one clearly pre-existing group – the “traditional” 18-24 year students. To examine how best to examine the nontraditional student population, breakdowns of students by age from some of the major national repositories of student data were examined. The reports of the National Center for Education Statistics (NCES) use several different cohorts up to the age of 25, and then report cohort data in increasing five-year increments (Snyder, 2014). The Integrated Postsecondary Education Data System (IPEDS), on the other hand, examines cohorts of under 25, 25-40, and 40+ (Ginder, Kelly-Reid, & Mann, 2014).
The age range which currently encompasses the remainder of Millennial Generation beyond age 25 is roughly 10 years. As Ryder (1965) pointed out, the very term “cohort” comes from the Latin for a military unit comprising “one tenth of a legion” (“Cohort,” 2015), and has become a widely accepted standard for examination in fields such as psychological lifespan research (Erikson, 1980, et al); best practices in healthcare service delivery (Berkowitz & Schewe, 2011); and market research (Markert, 2004). The outcomes examined in these areas parallel how colleges provide services to students to assist them with the process of transfer: they attempt to understand the student experience, determine the best way to communicate with students, and provide the most effective types of service. Thus, for the purposes of this study, the current “traditional” students are examined as one segment of the population, followed by breaking the “nontraditional” population into standard ten-year cohorts, which would be in line with the standard in these and other fields of inquiry.

While the idea of “generations” and the labels associated with them such as Millennial and Generation X may make for an interesting comparative discussion at a certain point in time, focusing more closely on defined age cohorts allows distance between the research and the popular assumptions made about students in a certain age group⁴. Escaping “generational labels” allows replication of this research at any point in the future which, then, would connect with the applicability of age-related observations rooted in student development theory.

⁴ For example, the somewhat contradictory idea expressed by many professionals in higher education that students never check their email, yet these same students are constantly communicating electronically via smartphones and social media.
**Age Cohort and College Student Development Theory**

Much commonly cited student development theory focuses on the idea of developmental stages of one sort or another, which fits neatly into the idea of these sorts of cohort effects. A great deal of psychosocial student development theory literature draws a large piece of its underpinnings to the work of Erikson (1968) and his theoretical stages of lifespan development. The different challenges faced by students as they move through developmental stages are often reflected in the resources colleges make available. In the Eriksonian model, most traditional-aged college students fall into the “identity vs. role diffusion” stage – seeing themselves as determining where they fit in to the adult world both in their vocation and in their relationships with others. Higher education is often seen by the traditional-aged student as a means to an end – a goal to be achieved to get to the next portion of their lives. Thus, in response, most institutions offer much more ready access to “career services” to help students find jobs after graduation, in lieu of assistance for students in processing internal and external changes at a student’s particular life stage.

Erikson’s stage theory led to a broad expansion of psychosocial examination of college-age individuals. Theorists such as Marcia (2009), who expanded Erikson’s notions of identity development for students in their late teens and early twenties; Josselson (1987), who looked at the differences in development at this stage between men and women; and Sanford (1966) who famously coined the notion of institutional “challenge and support” to assist an individual (and, in this context, a student) through the various developmental challenges they face at this point in their lives. This form of
challenge and support, again, is often focused on the perception of students as those in a younger age cohort.

Highly famous among Erikson’s followers in the college student development literature is Arthur Chickering, whose “seven vectors of identity development” are one of the more widely-cited and discussed psychological constructs in that field. These vectors neatly identify stages that a young person moves through in college as he or she develops an individual identity. Just as importantly, Chickering emphasized that an educational environment has a strong influence on students as they move through these stages (Chickering & Reisser, 1993).

Chickering’s vectors, initially modeled on traditional-aged heterosexual males, have been critiqued and expanded to include other populations, including female students (Greeley & Tinsley, 1988; Straub & Rodgers, 1986), students of color (Hughes, 1987; Jordan-Cox, 1987), and LGBT students (D’Augelli, 1994; Evans, Broido, & Wall, 2004). This notion of an educational environment having a positive developmental effect meshes nicely with the idea that institutions can have an effect on how students engage in the transfer process and accumulate transfer student capital.

Nearly all of the aforementioned developmental explorations, however, focus almost exclusively on traditional-aged college students, usually at four-year schools. While that research supports the logic behind student support initiatives for transfer students, much of that research asks whether community college transfer students who successfully transfer do as well as their peers who began their academic careers at a four year school. The general implication is that a researcher looking at these peer groups would find that the students are roughly similar from a demographic perspective. The
primary difference between these peer groups is simply seen as the institutional location at which they began their particular studies and does not consider differences in life experiences based on age cohort. The focus of much of the literature is on what is termed “traditional-aged” students, usually defined as a student in the 18-24 age range. Students 25 years of age and over are termed “nontraditional” students (Kim, 2002).

The logical extension of stage-based theories would be that students who have more life experience, whether or not they’ve attended college in the past, would be dealing with different sorts of life goals and developmental challenges as their younger peers in the classroom. Instead, the goals for adult students can often be tied to family commitments and financial survival (Chaves, 2006), the pursuit of education for personal fulfillment, and/or the reevaluation of job and family satisfaction (Gianakos, 1996). These adult students have very different needs and, thus, require different sorts of interventions and supports to resist transfer shock and successfully transition. Their accumulation of transfer capital logically should happen in different ways. For instance, a workshop on ideal test taking strategies directed at 18 year-old students living in residents halls would not be as helpful to a mother of two living at home, studying with children underfoot.

Along those lines, a study by Strage (2008) surveyed over 1,100 students at a four-year school about their descriptions of “ideal” courses and instructors. There were marked differences between student preferences in these areas that were strongly delineated by chronological age. “Older students more frequently described their "ideal" professor as someone who was organized (F = 6.590, p = .001), and flexible (F = 5.856, p = .003). They were also more likely to describe their ‘ideal’ course as one that was well
organized (F = 4.702, p = .009). In contrast, ‘traditional age’ students were more likely to describe the ideal professor as funny (F = 4.112, p = .017) and enthusiastic (F = 4.067, p = .017). They were more likely to describe their ‘ideal’ course as one that was engaging (F = 5.211, p = .006) and fun (F = 11.206, p = .000), and one where the instructor employed active instructional strategies (F = 9.139, p = .000)” (Strage, 2008, p. 228). The effect of age delineation was much stronger than the one drawn between whether a student came from a “college-going community” or if they were the first generation of their family to attend college.

As well, the role played by age is illustrated by Kempner and Taylor (1993), who found that community college students do not simply fall into transfer or vocational programs by socioeconomic status. The working assumption was that a higher SES student would pursue a bachelor’s degree more often, while a lower SES student would lean toward technical degrees and credentials. They determined that a student's age is also a powerful correlational factor when examining into which programs students are likely to enroll and in the choices they make as a student regarding future academic pursuit, and thus institutional interventions which enhance such students’ opportunities to accumulate transfer student capital might broaden the educational options they might consider.

Some limited studies, such as Monroe’s (2006) qualitative examination of the attrition of adult post-transfer students, attempted to illustrate the importance of various factors such as experiences in previous institutions, personal issues, institutional fit, academic integration, and communication by the institution in the eventual academic persistence of an adult transfer student. Examining these sorts of factors pre-transfer might provide insight into best practices in designing interventions to assist this
heterogeneous population in resisting transfer shock and reducing the overall level of attrition.

Speaking directly to the academic performance of adult transfer students, Carlan (2001) looked specifically at the academic performance of transfer students over the age of 25 and found no significant differences in GPA or degree attainment between these students and their younger peers, except among students with majors in fields traditionally considered highly academically competitive – namely STEM\textsuperscript{5} disciplines and business. Any negative stereotypes surrounding the abilities of adult students to succeed after transfer are, in Carlan’s words, “without merit” (p.169). This notion is supported by earlier research from Whisnant (1992), who found that not only do adult students generally perform better academically than their “traditional aged” peers, but that they often bring with them the personality traits – maturity, pragmatism, focus on academics, and higher levels of motivation that tend to improve student performance.

**Nontraditional Student Performance and Academic Self-Efficacy**

One of Whisnant’s more interesting findings is that adult students, despite having what should be built-in advantages to academic success, generally do not believe that they are as “academically prepared” to be in the classroom as their younger peers. This finding dovetails neatly into Bandura’s (1977) construct of self-efficacy. Self-efficacy stems from the larger social-cognitive realm of psychological development, which focuses on the notion that individuals’ development is a proactive, introspective process, rather than being simply a behavioristic reaction to external stimuli (Pajares, 2002). Individuals’ beliefs about themselves are important to the development in their exercise

\textsuperscript{5} Science, Technology, Engineering, and Math.
of control over their thoughts, feelings, and actions. In short, “What people think, believe, and feel affects how they behave” (Bandura, 1986, p. 25).

Self-efficacy, then, is the notion that a person’s individual judgment of whether or not they are capable of performing specific tasks to generate desired outcomes has a direct effect on that individual’s motivation, behavior, and degree of accomplishment. Bandura (1997) stated that a person’s behavior can be better predicted by how capable they believe they are at completing a task than by the level of performance their actual inherent ability would suggest. Individuals gravitate to activities in which they feel competent and confident. When they feel this confidence, which indicates higher levels of self-efficacy, they will tend to expend more effort, persist when faced with difficulties, demonstrate flexibility in the face of adversity, and exhibit lower levels of anxiety when facing challenging tasks (Pajares, 2002).

Individuals build self-efficacy through four major paths: *mastery experiences* (successfully and repeatedly demonstrating skills to accomplish a particular task), *vicarious experiences* (judging one’s ability to be successful at a task by observing others’ successes and failures and considering one’s comparative level of skill), *social persuasion* (being convinced by a person seen as competent that one can actually accomplish a task, such as in a coaching context), and *physiological states* (the physical reaction, such as a stress reaction, to attempting to complete a task). How an individual interprets the information they received via these paths informs the relative increase or decrease in self-efficacy surrounding a particular task or set of tasks (Bandura, 1986, pp. 399-401).
From Bandura’s work comes the concept of academic self-efficacy. Academic self-efficacy posits that a student’s beliefs influence their academic choices and career decisions, motivational level, ability to incorporate effective learning strategies such as effective goal-setting and self-monitoring, and overall academic achievement (Bassi, Steca, & Fave, 2014). Students who have higher levels of academic self-efficacy participate more readily in academic endeavors, work harder, persist longer when encountering difficulties on tasks, and generally achieve greater degrees of academic success (Pajares & Schunk, 2001).

Gore (2006) examined self-efficacy in relation to positive outcomes among college students and found that assessing students’ self-efficacy could be used to identify students who could “benefit from academic-related interventions such as tutoring, supplemental instruction, advising, and study skills workshops” (p.112). Further, he indicated that programs such as first-year experience and “introduction to college” courses which focus on self-regulation, study skills, campus engagement, and mentoring can provide “a safe environment through which academic success behaviors can be modeled and practiced” (p.112), thus bolstering a college student’s academic self-efficacy. Increased academic self-efficacy in college students has been positively correlated with persistence in academic tasks, decrease in academic stress, and perseverance at overcoming potential instructional and institutional barriers (Thomas et al., 2009).

The sorts of processes and activities which bolster academic self-efficacy -- taking advantage of available services and information, academic skill building, time management and goal setting, academic advising and counseling, gaining realistic
perceptions of the transfer process, cognitive development through learning, and interactions with faculty and staff -- neatly parallel the sorts of activities through which a student accumulates transfer student capital.

**Student Age Cohorts and the Process of Institutional Choice**

One of the major pieces of transfer assistance and provision of transfer student capital which a two-year school can provide is supporting students in making an informed choice of a baccalaureate granting institution and in aiding a student in making a smooth transition to that institution.

Most literature on students’ college choice focuses, not surprisingly, on students going to college directly from high school and, specifically, how these students select a baccalaureate-granting college or university to attend. Contemporary literature frequently cites the work of Hossler (1987) as a basic model of how “typical” college-bound students approach the experience of selecting a college. The review of college choice literature performed by Cabrera and La Nasa (2000) used an update of Hossler’s model by Hossler, Braxton, and Coopersmith (1989) as a framework.

**Institutional Choice among Traditional Students**

The Hossler model is a three-stage framework that, for some students, begins as early as seventh grade (Cabrera & La Nasa, 2000, p. 5). While students may move through the process in a relatively linear fashion, there are interactions between various factors within each stage. The first stage of the process is the “Predispositional” stage, which is typically between 7th and 9th grade – a period where students are developing “occupational and educational aspirations” (p.6) which may include the necessity of postsecondary education. In other words, students are beginning to answer the “What do I
want to do when I grow up?” question. During this stage, parental involvement becomes one of the key factors for determining whether or not a student will attend a postsecondary school – both for motivational and financial reasons.

The second stage is the “Active Search” stage, when students begin to examine their various college options, usually strongly affected by parental involvement. Students in this active search stage (which is usually the 10th-12th grade years) are collecting information from various schools, talking with their friends, and perhaps making campus visits. During this time, students are “accumulating and assimilating the information necessary to develop the student’s short list of institutions” (Cabrera & La Nasa, 2000, p. 9). This “short list” is largely dependent on how thorough and sophisticated the search is, and socioeconomic status plays a considerable role in the level of sophistication of the search itself. The more affluent a student, the more sources of information they tend to consider when creating their list of potentials (McDonough, 1997).

Finally, students enter the “Choice” stage, in which they trim their list down based on a number of factors – cost, academic preparation for college, admission criteria, educational expectations, and – to a degree – socioeconomic status of the family. Parental encouragement and previous family experience with college also play a role (Cabrera & La Nasa, 2000). Students who successfully navigate this process eventually decide on an institution and enroll.

**Institutional Choice among Community College Transfer Students**

The model for a community college transfer student often looks considerably different. There is research on why students in general choose to attend community college rather than a four year school (Somers et al., 2006), or why certain demographic
groups tend to choose community colleges to begin an academic career, such as Hispanic students (Kurlaender, 2006; Perez & McDonough, 2008), African-American students (St John, Paulsen, & Carter, 2005), or adult students (Broekemier, 2002).

Much of this research applies elements of the Hossler model to students in a traditional-aged cohort in community colleges. Monroe and Richtig (2002) found that students at community colleges who are considering transfer to a four-year school look at many of the same factors (location, cost, academic programs, services, and time-to-degree) as students coming directly from high school. Institutional location and program availability were the most important factors for these students. Also, while these students were found to move through many of the same processes outlined in the Hossler model, the timeframe was found to be compressed, so flexibility in admissions and easy access to information became key in helping students come to that decision.

Returning to Lang’s (2009) study of students in Ontario colleges, Lang found that preference for attending a two-year as opposed to a four-year school had a stronger correlation to socioeconomic status and parental academic background than on the students’ high school performance or test scores. Students who chose to attend community colleges, when surveyed, listed “access to a specific program that they believed to be relevant to their career aspirations” (p.363) as the major driving factor behind their choice of a particular institution. That finding, in and of itself, comes as no surprise. Community college is generally marketed as a gateway to improved economic opportunity. Many of these students begin their collegiate experience with an end career goal already in mind, rather than having a general goal of a degree and using the time while in college as a time to explore options.
Significantly less research exists on the process by which a student chooses a school to attend after their time at a community college is complete, and much of that research is somewhat dated. For instance, Moore and Hartsell (1974) surveyed around 1,000 students from Florida junior colleges who had expressed an interest in transferring to a four-year institution. They asked the students to rank order a set of ten common factors as to their relative importance in deciding on a transfer destination. They found “desirable curriculum” was the most important self-reported reason for transfer, followed by desirable location, living expenses, and ease of transfer (The least important factor for this sample was “recruitment activities.”). Furthermore, Moore and Hartsell broke down the rankings by age, gender, marital status, GPA, and military service and found very little difference in the rank orders.

**Institutional Choice among Adult Students**

Adult students also have a different selection story. Bers and Smith (1987) examined adult students who returned to community college regarding their choice process. They claimed their most surprising finding was that “students did not engage in discrete stages of predisposition, search, and choice” (p.43). Instead, the process for these students seemed to center more on the notion that they had decided to return to school, so they needed to find a relatively low-cost alternative that was convenient to their location and their life routines at the time. Rather than collecting information about multiple schools, adult students tended to lock onto a single alternative that they believe would be sufficient for their needs and pursue that to the exclusion of other institutions, even if some of those other institutions might provide a better personal fit in terms of the characteristics they desire in a transfer institution.
Returning to Moore and Hartsell’s work, their particular study might suggest on its face that the “traditional vs. nontraditional” differences don’t really matter. However, in their research report, the age categories listed were simply “Under 25” and “25 and above” with no number of respondents provided, so firm conclusions about the older age cohort would be difficult to draw. Along those lines, Kim (2002) contends that the definition of “nontraditional” as “25 and over” is overly broad to effectively understand the thought processes of this segment of this student populations. She examines the notion of “nontraditional” in conjunction with other background factors such as financial independence, work status, first generation college student status, etc. Kim finds some distinct differences between age-delimited segments in terms of the way that these students view their academic experience, the sort of assistance they prefer, and their various life concerns, which are intertwined other background characteristics such as those mentioned above. Thus, the traditionally drawn dichotomy of “traditional” versus “nontraditional” students may not be sufficient or appropriate, especially in contexts found in many community colleges where the majority of students may fall into the “nontraditional” category.

The idea of segmenting this group into smaller chunks when studying institutional choice and student concern seems a potentially valid extension. Rather than simply looking at the numeric value of a student’s age in performing analyses, especially since individuals move through their life courses at different rates, it may be more practical to look at a student’s age cohort, segmenting the adult population into various age categories, as well as to complement those sort of examinations with observations of
other demographic variables in order to better understand the dynamics of the student experience and, in this case, the accumulation of transfer student capital.

**Institutional Support for the Transfer Process**

As we have discussed, institutions can address concerns and assist students with the navigation of the process of successful transfer through academic skill building interventions, assistance with overcoming personal and academic barriers, and provision of information on possible transfer destinations. Institutions have the opportunity to help students accelerate their accumulation of transfer student capital, thus improving their chances of eventual success, through various methods of engagement and intentional interaction.

Handel (2013) emphasizes “the need for a robust and efficient transfer process will become ever more important” because, among other reasons, “transfer is seen as a pathway to a four-year degree by millions of students, highlighting again the value of time and investment in the improvement of this academic gateway.” Handel goes on to cite a number of surveys dating to the 1920’s which indicates that community college student interest in transfer to a four-year school has wavered very little over practically a century. As an illustration, this piece of Moore and Hartsell’s introduction could easily have been written in 2014 as 1974:

“With the decline in enrollment experienced by many four-year institutions and the burgeoning number of community college students, more and more senior institutions are looking toward the community college as a source of students. However, there is little data to indicate that the universities are aware of the factors which influence community college students to discriminate among institutions” (p.50).
Institutional support of the transfer process figures strongly into increasing the rate of transfer between two year and four-year schools, especially if the institutions are mindful of the particular needs of their particular population.

Lang’s (2009) examination of students in Ontario colleges (which have a similar “two-tier” two-year/four-year structure as American colleges) into why students choose to begin their education at a community college, illustrate that the “being here for a specific purpose” mindset of this community college population relates directly to the reported lack of interest in transfer. Students ranking their reasons for attending a community college listed “possibility of transfer to a four year school” sixth out on a ten-item scale (program access was #1 – his article did not provide the full data from the survey in this particular article). He indicated that, among students who did express some interest in eventually transferring, merely announcing the opportunity for transfer and articulation between two- and four year schools did not seem to move the meter of this population’s interest in moving on to a baccalaureate-granting institution, despite the economic benefits in doing so. In short, simply providing the opportunity for transfer to a four-year school is not the same as actively engaging with students to generate interest in transfer, which contributes to transfer student capital.

Lang did indicate that there is often an implicit or explicit assumption by students that classes taken at a community college may not transfer even though “2+2” articulation agreements may be in place. He did find that community colleges that formed partnerships to address transfer-related issues had higher reports of students entering the initial institution with intent to move on to a baccalaureate degree. As Lang says in his policy recommendations, “It might make more practical as well as theoretical sense to
think in terms of broader forms of inter-institutional cooperation. Thus an alternative, at least from the student point of view, might be [an administrative] regime that creates conditions—structural, regulatory, and financial—that encourage individual institutions to collaborate in the planning and delivery of programs that can be usefully articulated” (p.367-368). That sort of articulation includes making sure students are properly aware and prepared for their next step in the academic journey.

Since program choice seems to be, at least according to several of the studies, a much more powerful factor in the choice of an institution for these students than do the actual characteristics of the transfer institution itself, then it follows that two- and four-year institutions should jointly assure that students have as much information about articulating programs as possible. Helm and Cohen (2001) forcefully state that community colleges must “build relationships with universities by developing relationships with their presidents and by supporting faculty relationships and providing incentives for faculty members to work together on grants and other programs of mutual interest” (p.100).

One of the most common sorts of cross-institutional partnerships is the “transfer pathway” – an articulation agreement that includes an easy-to-use course guide that encompasses most if not all general education requirements, a guarantee of admission and junior standing on completion of the associate’s degree, and full applicability of credit (Kisker, Wagoner, & Cohen, 2012). Institutions of higher educations are creating these sorts of programs more and more often, especially on a statewide basis, as a method to increase the efficiency of transfer and eventual degree completion – as well as making
community colleges a more appealing choice for a student to begin their academic career with the intent of eventual transfer.

Some studies of intervention programs focusing on these sorts of issues for transfer students exist, but they are typically segmented by gender (Austin, 2007) or by ethnicity (Bensimon & Dowd, 2009) rather than by age. One of the common threads running through the discussion of these sorts of intervention programs is the absence of what Bensimon & Dowd deem “transfer agents” in the experience of students who had less success navigating a transfer path. These “transfer agents” are, in their words, “instructors and counselors who were remembered by our respondents as having reached out and making them feel important and valued” (p.652). The suggestions arising from these qualitative studies indicate that institutions which provide intentional assistance to these subpopulations in the form of giving students an identifiable individual or group of individuals on campus early in the student’s career “for academic and supportive counseling enhances the students’ access to the university services when issues later emerge” (Austin, 2007, p. 287). It might follow that adult students, particularly certain groups of adult students, would also benefit from such an arrangement. Also, a clear implication exists that institutions can help their recruitment and retention numbers by mindfully targeting interventions at this population before they transfer.

As discussed above, interventions and support for student populations tend to be modeled on a paradigm conceived for traditional-aged college students, but even those sorts of interventions are often enacted with a “follow the leader” approach, seen in many types of organizations, both educational and otherwise (Laugen & Boer, 2007; Paauwe & Boselie, 2005). A particular program or intervention might be seen as successful at one
institution. That intervention is then publicized as a “best practice,” and other institutions follow suit, hoping that they might enjoy similar successes. In performing this act of institutional isomorphism, the “following” institutions may not be making decisions based on the context of their own particular institutional population’s needs or wants.

**Institutional Support and the Nontraditional Student**

Despite the recent demographic increase of students over the age of 25 in U.S. colleges (Snyder & Dillow, 2013), much higher education literature generally treats these students as a subpopulation on campus akin to minority students, students with disabilities, international students, etc. Nontraditional students, like these other subpopulations, often have targeted intervention programs to assist them in making their transition. Many institutions presuppose these groups of students will require extra assistance to overcome barriers assumed not to exist for “traditional” students. Some four-year schools have special “Adult Student Services Offices” to provide assistance for nontraditional students (Rice, 2003). In examining services offered by these types of offices at various four-year schools (including her own), Rice suggests that students need assistance with “financial planning and budgeting, child-care and elder-care resources, counseling services, addiction and recovery services, study skills development (including skills studying with children), time-management resources, stress management, parenting support, support groups, domestic violence information, homeless resources, employment options for student and spouse, and many, many more” (p.54).

This broad range of interventions is necessary for this population, according to Rice, because these students are often balancing multiple roles in addition to their responsibilities as a student. As Fairchild (2003) indicates, many notions of traditional
retention and student success theories, such as the student development and social integration theories of Tinto (1987) and Astin (1984), run contrary to the actual experiences of many of the students in this age group because they are at different developmental life stages. As Rice says, “Rather than being a life-encompassing, identity-building experience, such as the one we hope to provide for traditional-aged students, higher education for adults is one activity among many in which adults can participate to meet other specific needs, such as learning a new job-related skill or preparing for a new career altogether” (p.12). Since dealing with life issues outside of the classroom is a pathway to accumulate transfer student capital, as well, interventions to help students address those concerns can be seen as a way to make the accumulation process more efficient.

**Nontraditional Students and Transitional Support**

Directly related to this notion of difference in needs is the educational application of Nancy Schlossberg’s Transition Theory (Evans, Forney, & Guido-DiBrito, 1998), a cognitive lifespan development theory. Schlossberg’s Transition theory focuses on life events or “non-events” (such as expecting to get into a certain program or not getting a certain job) and how individuals deal with these particular challenges. The role of “perceptions” in transitions is a major focus for Schlossberg – meaning that a transition exists only if an individual defines it as such.

Schlossberg looks at types of transitions (anticipated/unanticipated/nonevent); context (the personal relationship to the transition); and impact (the degree to which a transition affects an individual’s daily life). Impact, both positive and negative, creates stress. In terms of transfer students, they are dealing with what is required to navigate an
institutional transition successfully – i.e., acceptance to another school, moving through the transfer process, registration, etc. Many nontraditional community college students simply move through this process with no solid plan for this transition, thus making potentially hasty decisions when faced with time pressure. This sort of rush greatly increases their stress level and makes the process that more difficult (Monroe, 2006).

Schlossberg integrates her theory with the counseling model of Cormier and Hackney (1999) in identifying actions that can be taken to support individuals. There are five stages to this model: relationship building, assessment, goal setting, intervention, and termination/follow-up. This general framework provides a guide for designing effective services to assist individuals going through transitions or, in this case, transfer.

Schlossberg looks at the three stages of transition: “moving in,” “moving through,” and “moving out.” An individual’s work through the process of a transition can be viewed through the lens of the “4 S’s” of influential factors: situation (precipitating factors, degree of control, role changes as a result, duration, previous experiences, concurrent stresses, etc.); self (personal and demographic characteristics and psychological resources such as optimism and self-efficacy, the latter of which is discussed below); support (intimate relationships, family, friends, and community); and strategies (plans to make changes and overcome obstacles – both in dealing with the situation itself and in personal coping). In considering Schlossberg’s model in terms of a student making a transfer between institutions – all of the “4 S’s” apply. While the “self” issue is largely personal, the other three – situation, support, and strategies – relate directly to transfer support services and information commonly available at both a sending and receiving academic institution.
The work of Keith (2007) feeds directly into this notion of transitional support for adult students. Keith performed a study with adult students at a Midwestern four-year university and found that they respond well to connections with faculty and staff, but the benefits to the students were more striking if the institution structured these sorts of connections with an awareness of the sorts of day-to-day challenges that these students face. Some of the stigma attached to the “lesser than” notions of academic readiness and performance attached to community college students by many individuals may have more to do with the negotiation of the multiple roles required of these students, especially students considered “nontraditional,” than by a lack of academic preparation.

**Student Use of Institutional Support Services**

Keith (2007) investigated the use of campus support services by nontraditional students (defined as all students ages 25-63 in the sample). Keith worked from the previously discussed assumption that adult students face certain “barriers” to success in higher education, and that colleges can develop services and initiatives to help students overcome those barriers. One might surmise that adult students would take advantage of these services and initiatives at an increased rate. Keith found that simply being a “nontraditional” student did not affect a student’s use of resources. Students, regardless of age, accessed these services based on immediate need and life circumstances. However, among the 38-year age spread of his sample, she found that a student’s chronological age *in and of itself* played a statistically significant role in their access of services. Specifically, Keith determined there was an inversely proportional relationship between students’ chronological ages and their use of services.
Ortiz (1995) also looked at various community college student subpopulations -- underrepresented students, transfer-bound students, nontraditional students, and vocational education students -- through the lens of a number of commonly-cited student development theories to offer suggestions for how best to provide services to each of these subpopulations during their time at a two-year school. Ortiz says that it may not necessarily be academic support that these students need when returning to college, but rather, as Rice mentions in the previous section, support groups, consistent motivation from instructors, inspiration through seeing other's successes, and child care services and referrals (p.67). These sorts of interventions were seen to imply that nontraditional students do not necessarily have cognitive or behavioral deficiencies when it comes to academic preparation, but their higher level of concern with “real world” issues can become a barrier to their overall academic success.

This negative construction of academic identity is examined somewhat broadly in the work of Kasworm (2010). Kasworm found that adult students are engaged less strongly than their younger peers because they view the institutional structure as not necessarily accepting of their presence. Overall, the implication is that adult students need more assistance with the transition to college (or, in this context, between institutions) and in seeing themselves as a legitimate part of the campus community, so that they might take advantage of the opportunities available to them while they are on campus.

In a similar vein, Richardson and King (1998) argue the idea of adult student as an inferior student does not hold water in terms of the challenges that these students face. As they say, “In fact, adult students generally exhibit approaches to learning that are more
desirable than those of younger students in the sense that they are more compatible with
the avowed aims and objectives of institutions of higher education. There is also no
evidence that adult students are subject to age-related deficits in the intellectual capacities
needed for studying in higher education” (p.81).

Services provided by an institution have an identifiably positive impact on a
student’s ultimate success and an inference can be drawn from Keith that differences in
age have an effect on the usage of these services. Thus, if older students are accessing
services at a lower rate than traditional-aged students, they are not taking advantage of as
many opportunities to build their supply of transfer student capital.

Transfer Student Performance and Institutional Support

A study by Melguizo, Kienzl, and Alfonso (2011) illustrated that once community
college students, specifically students who have earned an associate degree at a
community college, make a successful transition to a four-year school from a community
college, they do, indeed, perform just as well or better than their peers who begin their
studies at that particular four-year institution – similar to the Dr. McCall’s observation in
the introduction. Glass and Harrington (2002) followed a cohort consisting of a mixture
of native and transfer students at a large state university. They found by the end of the
sophomore year, student performance between transfer and “native” students was
extremely similar, and the transfer students as a whole had higher grade point averages at
the time of graduation than did the native students.

Head (1990) took a slightly different tack – following a cohort of students from
one particular community college in Virginia and tracing their performance at several of
the other state four-year schools. His findings were similar: the students from that
community college ended up performing as well or slightly better than the “all student average” at six of the eight public four-year schools. Further, those who transferred after earning more than 50 credit hours – which means they either had completed an associate’s degree or were very close to it – performed slightly better than the students with fewer than 50 credits.

Townsend, Carr, and Scholes (2003) looked at two cohorts of students within a particular teacher education program at the University of Missouri-Columbia. They found little difference in the overall academic performance between the native students and the transfer students. Further, they found no significant differences in academic performance between students transferring from a community college to those transferring from another four-year school. A study of students transferring between Kentucky community colleges and four-year schools by Best and Gehring (1993) found similar data for students who transferred after earning an associate degree, although students who transferred prior to earning their associates did not fare quite as well.

The Present Study: Cohorts, Transfer Student Capital, and the Kentucky Context

Once again, the study aims to understand generational differences in transfer intent as a function of the accumulation of transfer student capital. The literature reviewed previously provides a framework within which to explore these types of generational differences. The review began with an examination of the concept of transfer student capital, which indicated that institutional interventions can be efficacious in assisting students in the accumulation of said capital, which should be reflected in a reported increase in transfer intent. The review then examined the idea of differences in student age cohorts, first from the notion of “traditional” vs. “nontraditional” students and
whether that dichotomy is appropriate for this sort of examination. Student development theory, specifically stage-based developmental theories, was used to illustrate differences both in life and campus experience for students in differing age cohorts, especially when involving processes of building academic self-efficacy, managing life transitions and addressing concerns, and moving through the process of selecting a destination for baccalaureate study. All these processes involve the accumulation of transfer student capital. Finally, since institutional interventions provide the opportunity for students to take advantage of services and build proficiencies which may lead to the accumulation of transfer student capital – institutional provision of these services to different age cohorts generational differences in access of these services were examined.

As institutions take steps to assist students with those transfer strategies, it may prove helpful to examine whether age cohort differences exist and are relevant in examining student preferences for receiving information about the transfer process; gathering information from transfer destinations; and expressing levels of concern about certain factors of the transfer process. Integrating the various literatures discussed above, it follows that well-designed interventions help students increase their overall level of transfer student capital and improve the odds of success in a baccalaureate setting through the accumulation of transfer student capital. Thus, if age cohort is a factor in this accumulation, institutions may need to explore how they tailor supportive interventions to students of these various cohorts.

Returning to the KCTCS-specific context introduced earlier, since student transfer is one of the benchmarks KCTCS is using to measure the success of their various “Transformations,” the system (as would any institution hoping to increase student levels
of transfer intent) will need to make sure that its students are receiving the information and support they need to accumulate transfer student capital – that is, to make informed decisions about future academic destinations, to find the best institutional fit, and to resist transfer shock when they arrive at their new college or university.

According to the 2012-13 KCTCS Fact Book, the average age of a KCTCS student is 28.3 years old. Looking at the school-by-school breakdown, only one of the 16 KCTCS colleges (Bluegrass Community and Technical College) has a majority of students in the 18-24 age range. The other 15 schools have a plurality, if not an outright majority, of students considered “nontraditional.” According to the Fact Book’s listing of enrollment data by age, the breakpoints for the various age groups follow the standard four-year “traditional vs. nontraditional” age breakdowns. The groups used are “under 18” (generally high school students who are “dual enrolled” at local community colleges – a small but not unsubstantial population), “18-24,” and “25+.” To return to Kim’s (2002) examination of nontraditional students above, such a delineation may not be particularly useful in understanding the needs of the adult student population, nor be very helpful in determining appropriate levels of assistance.

In carrying out this research on this population of students, the hope is to determine whether institutions at large should augment their current services to students of all age cohorts, and whether or not they are efficiently addressing students’ transfer-related issues to allow for more efficient accumulation of transfer student capital. To attempt to make these sorts of policy recommendations, the following research questions will be used as a focus:
1. Do student age cohorts have an effect on intent to transfer from a community college to a four year school?

2. Do student age cohorts have an effect on students’ planning timeline and the factors important to their eventual choice of a transfer destination?

3. Do students in different age cohorts collect information differently in the process of choosing a transfer institution?

4. Do students of different cohorts access transfer-related services on their home campuses differently? Do the services they use align with their stated preferences for gaining information about the transfer process?

5. Do concerns about the transfer process differ among students of differing ages? If so, how do these concerns differ?

A quantitative research process, outlined in the next section, will be employed to provide an examination of these questions.

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Chapter 3 -- METHODOLOGY

Since student transfer is one of the benchmarks KCTCS is using to measure the success of their various “Transformations,” the system will need to make sure that its students are receiving the information and support they need to make informed decisions and find the best institutional fit at their next academic destinations. In making policy recommendations to enact those plans, the study will examine whether there are generational differences in student preferences for receiving information about the transfer process; gathering information from transfer destinations; and ascertaining the level of student concern – both in general and towards specific academic and co-curricular factors -- about the transfer process. In doing so, the study will attempt to determine whether or not there are age-cohort differences in the accumulation of transfer student capital. To study these differences, descriptive data about KCTCS’ degree seeking students is required.

Some basic data such as academic program participation and general demography are available from KCTCS System Office of Research and Policy Management or from a specific KCTCS institution’s Institutional Research office. However, specific information about student intent to transfer, sources of transfer information used and preferred, satisfaction with institutional resources, factors influencing choice of a transfer institution, and student levels of concern will require the use of a survey instrument. A pilot administration of such an instrument was performed at one of the 16 KCTCS institutions. The final instrument is included as Appendix A.

Following the pilot, approval was pursued from both the KCTCS Human Subjects Review Board (HSRB) and the University of Kentucky Nonmedical Institutional Review
Board (IRB). KCTCS HRB approval was granted in June 2014 (see Appendix B). UK IRB approval followed in October 2014 (see Appendix C). A minor modification to the research protocol related to the incentive structure for the survey was approved by the UK IRB on November 12, 2014 (see Appendix D).

An invitation to take the survey was sent via email to all degree-seeking students in the KCTCS system in mid-November 2014. The survey itself was housed in Class Climate, a system used for administering course evaluations which can also be used as a survey tool. Data generated by the survey were imported into the SPSS statistical software package for analysis.

Population

The Kentucky Council on Postsecondary Education defines a potential transfer student as “currently pursuing an associate degree or applied associate degree at a KCTCS college” (Kentucky Council on Postsecondary Education, 2015). KCTCS institutions offer credentials at three different levels: certificates, diplomas, and associate’s degrees.

Certificate programs are designed “to provide marketable, entry-level skills. Certificates qualify students to take external licensure, vendor-based, or skill standards examinations in the field” (KCTCS, 2013, p. 71). Certificates generally are comprised of less than fifteen credit hours, so that they may be completed in rapid fashion for purposes such as job training and advancement. Diploma programs are built “to prepare students for technical employment within a one- to two-year period (36-60 credit hours)… Diploma programs provide preparation for a specific occupation, credit toward an associate degree, and continued training opportunities for certificate program
graduates” (KCTCS, 2013, p. 71). Diploma programs, however, lack the general education requirements necessary for the awarding of a degree. Neither certificates nor diplomas are designed to prepare students for transfer, so they were not considered in this study.

Therefore, students enrolled in associate degree programs were the focus. In KCTCS, the different associate degree programs are associate of arts (AA), associate of science (AS), and associate of applied science (AAS). The AA and AS degrees are specifically designed to encompass all general education requirements for transfer to a four-year school and to allow a student to select applicable classes towards an eventual bachelor’s degree. The AAS is an associate’s degree in a particular career field – such as criminal justice, electrical engineering technology, education, medical assisting, etc.

While AAS credentials are most often used as a job-related credential, many students choose to continue with their education towards a bachelor’s degree. As there are baccalaureate transfer programs designed to accept all three of these associate degree credentials, students enrolled in any of these degree programs can consider a potential transfer, and thus are potential participants in the research.

Students can declare themselves “Undecided” and be associate-degree seeking. These students were included in the analysis. KCTCS also offers an Associate in Fine Arts (AFA) program on two of the campuses. This program is very small (28 students total in 2013-14 across the entire system), and those students were included with the AA students in the analysis.

Additionally, KCTCS President Mike McCall stated in his opening address to the KCTCS 2nd Annual Transfer Summit, “All of our students in all of our degree programs
are potential transfer students – not just the AA and AS students. We have to be inclusive in designing pathways for our AAS students, as well” (McCall, 2014).

To generate an accurate snapshot of this degree seeking population, a census of all degree-seeking students is an appropriate data generation technique. The structure of the instrument lends itself to easy administration to a large number of potential participants. The survey was accessed via a link contained within an email. Since this is an online survey, it is just as efficient, if not more so, to simply disseminate the survey to all degree-seeking students, rather than developing a sampling structure to attempt to garner appropriate numbers of responses in certain targeted age groups.

The 16 schools of the KCTCS system are spread across a number of environments – urban vs. rural; higher vs. lower number of nontraditional students; widely varying racial, ethnic, and socioeconomic compositions; etc. An online census allowed an easier examination of these data in aggregate across the system. While this does not address response bias for the questionnaire, it obviously eliminates sampling bias.

The data generated from such a large-scale administration allows for a dataset that lends itself to study from a number of different angles. While student age cohort is the focus of this particular research, other demographic and descriptive information were generated both to serve as control variables for eventual analysis, as well as to provide the basis for examination of other potential effects at individual institutions and across the KCTCS system. These sort of examinations may lead to new institution-specific evaluations to appropriately inform best practices and effect positive change.
Survey Instrument

The instrument is comprised of five sections. The first section is a welcome which briefly explains the purpose of the survey, addressed confidentiality, and invited students to participate honestly.

The second section of the instrument is academic background. Students were asked which type of degree they were pursuing, whether or not the students have attended college in the past, and how many credit hours they’ve earned thus far in their college career.

The third section begins by inquiring about a student’s transfer intent. The relative level of transfer intent within a cohort, as discussed, is used as a virtual proxy for the overall accumulation of transfer student capital. The instrument then asks when and/or if the student began the process of considering a transfer to a four-year college or university. If a student selected responses for these two items indicating no transfer intent and that they have no plans to transfer, respectively, that student’s case was removed from the overall analysis.

Students were asked whether they would consider completing a bachelor’s degree entirely online. Students were then asked to rate the importance of a variety of factors on choosing an eventual transfer destination. They are then asked what methods that they’ve already used to research potential transfer destinations, as well as to indicate the single preferred method for this research. The process of researching a potential baccalaureate institution is one that causes the accumulation of transfer student capital.

Next, the students are asked how often they’ve used a series of ten transfer-related resources available to them at their current institution and to rate the usefulness of these
resources if they were used. Access of services is also a major proxy for the accumulation of transfer student capital.

In addition to their usage rates of these services, students were asked how useful they found each of these services, as well as how they perceived the institutional quality of advising about transfer requirements, availability of advising, assistance with the transfer process, and providing transfer documents and pathways. While these items were not included in this particular analysis, these data could be used for future analyses as well as to provide information for the individual institutions on how their services are perceived by their students.

Finally, students are asked to consider their potential post-transfer experience and to rate their level of concern with a number of different items. These items were drawn from common concerns listed in the works of Kim (2002) and Keith (2007). The section concludes with a pair of open-ended response boxes, the first asks what three things the college could do to make the transfer process easier; the second asks what the respondent feels is the best way to communicate transfer-related information to students. These data will be explored qualitatively at a later time.

The fourth section of the instrument is the demographic section, where students are asked about their gender, age, employment, family structure and relationship status, first-generation student status, and race & ethnicity. These demographic variables will be used as control variables for the regression analysis to follow which will use transfer intent as the independent variable.

The fifth and final section is the “opt in” section – where students were able to enter contact information if they wish to be included in a drawing as a potential incentive.
The instrument was designed to be completed in 10-15 minutes, based on the guidelines outlined by Berry (2009).

**Measures of Key Variables**

**Intent to Transfer.** The intent to transfer is one of the key variables in the study. If a student is actively accumulating transfer student capital, it can be inferred that they intend to move from a community college to a four-year school. The more active a student is in undertaking these processes, the reported level of intent to transfer should logically increase. This level of intent is measured by a survey item asking how likely the respondent is to transfer to a four year college or university after completing their time in the community college. A participating student is asked to rate how likely they believe they are to transfer on a 10-point Likert scale (1=”Absolutely will not transfer,” 10=”Absolutely will transfer”). Respondents are also asked when or if they started considering transfer to a four-year college or university, and whether they had begun examining specific schools.

**Institutional Choice Factors.** First, respondents are asked whether or not they would be willing to complete a degree entirely online. This item was included because more and more institutions are turning to online degree options to boost enrollment (Allen & Seaman, 2010). Moving from a community college into an online degree program is a transfer, just as moving from a community college to a brick-and-mortar institution would be. The respondents are then asked about the importance of a number of factors in choosing a four-year college or university. Students were offered a 10 point Likert scale (1=”Not at all important,” 10=”A main reason”) on each of 12 different factors. The list of factors was based on the Moore and Hartsell (1974) inventory, and
was slightly modified to include online courses and peers attending the institution currently.

**Collecting Transfer Information.** Respondents were then asked about the methods that they’d used to research transfer destination colleges and asked to choose their single preferred method. The preferred method responses were coded as nominal variables for the purposes of the analysis.

**Access of Services.** Respondents were then asked how often they use certain resources on campus. The ten-item resource list is adapted from the revised Laanan Transfer Student Questionnaire (Moser, 2012) to reflect services offered by KCTCS and the local institutions. For each resource, students could answer: Never, 1 or 2 times, once a semester, once a month, or more than once a month. The responses were respectively assigned a value from 1-5.

To estimate the mean usage of campus services, each response category was converted into a numerical value from 1-5. If a respondent did not give a value for at least six of the categories, that case was dropped from the analysis. Having a mean usage scale derived from responses of at least half the items should provide a valid score for comparison (Osborne & Overbay, 2012).

Respondents also self-reported how useful they found each of those services at their home campuses. While these data are not part of this analysis, they may be revisited in future studies. Additionally, students were asked to rate the perceived quality of transfer advising services specifically. These were done on four-point Likert scale (1=”not useful at all,” 4=”Outstanding”) with an N/A option. Again, while these data are not part of this particular analysis, they may prove useful in later studies.
Concerns about Transfer. With the final data question, respondents were asked about their level of concern with the variables outlined above. These were rated on a 10 point Likert scale with 1=”Not concerned at all” and 10=”Extremely concerned.”

As with the usage of services, to estimate an overall level of concern for a respondent, a mean score is generated from the nine individual measures. If there were no response for five or more of these items in a particular response, that case was not included in the analysis. A respondent’s overall level of concern was estimated by finding the mean of all nine concern values. If a student did not response to at least five of the items, the overall mean was not calculated, as with the earlier scales.

Data Generation

The KCTCS student database was queried to generate a list of all student emails at KCTCS enrolled in any one of the four associate degree programs. Individual student numbers, Social Security numbers, and other identifying information were not collected to preserve confidentiality as much as possible.

The instrument was emailed to the students on the generated list in mid-November with a link to the survey, along with a brief welcome message in accordance with appropriate approved research protocols explaining the purpose of the survey, informing the student that the survey responses are confidential, and that their participation is voluntary.

Students then followed the link in the email on the web browser of their choice, which allowed the student to complete and submit the survey. Personalized links were generated by the system for each potential respondent for the purpose of sending follow-up emails. These links were auto-generated by Class Climate and were not available to
the researcher. Completed surveys were stored electronically on a secure server. At the end of the survey period, secure links to the generated data were provided for access and analysis. All the personalized links were disconnected from the individual responses and deleted.

To attempt to maximize participation in this online survey, a three-prong contact approach was used. First, follow-up emails were sent to nonparticipants at four to five day intervals following the initial invitation. Four to five days after the initial dissemination of the instrument, a second email message will be sent by the Office of Knowledge Management, again requesting participation. A third and final email message requesting student participation will be sent in another four to five days.

Second, a request was made to the individuals on the KCTCS Statewide Transfer Peer Team. This team is comprised of the faculty and staff from the 16 KCTCS institutions who deal most intimately with issues regarding transfer. Since the data from this instrument will be of use to all of them, the team voted as a group to assist with creating interest and encouraging participation on their particular campuses.

Third, monies were used to provide incentives for the students to complete the survey. The amounts of the incentives were included in the invitation and follow-up emails. To enter the drawing for the incentives, students agreed to provide their contact information. This voluntarily-provided information was stored in a separate data file from the overall response set to preserve confidentiality, as approved by both review boards.

**Characteristics of Response Set**

Survey invitations were sent to the 59,457 registered degree-seeking students in KCTCS’ Fall 2014 semester. 4,924 responses were received for an overall response rate
of 8.28%. This response rate should be considered adequate, given the criteria outlined by Nulty (2008). As mentioned above, respondents who indicated “Absolutely will not transfer” for the likelihood to transfer item and “I will not be transferring to a four-year school” under the “When did you start considering transfer to a four year school” item were culled from the response set, leaving n=4439.

Demographically, the mean age of a respondent was 28.6. Looking at the traditional/nontraditional breakdown, 47.1% of the respondents were under the age of 25. This is slightly less than the overall system total, in which 55.3% of the students are under 25. The age cohorts of the response set broke down as shown in Table 3-1:

<table>
<thead>
<tr>
<th>Age Cohort</th>
<th>N (responses)</th>
<th>Population</th>
<th>%</th>
<th>Population</th>
<th>%</th>
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<td>32919</td>
<td>47.1</td>
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<td>25-34</td>
<td>1209</td>
<td>14937</td>
<td>27.6</td>
<td>25.1</td>
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<td>7393</td>
<td>15.7</td>
<td>12.4</td>
<td></td>
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<tr>
<td>45-54</td>
<td>341</td>
<td>3277</td>
<td>7.8</td>
<td>5.5</td>
<td></td>
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<td>55+</td>
<td>81</td>
<td>990</td>
<td>1.9</td>
<td>1.6</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

The response set is slightly over-representative of students ages 25 and over. This overrepresentation should improve the analysis of the various “nontraditional” age cohorts while still having a large enough set of under-25 respondents to draw effective conclusions.

The response set leaned female. 78.6% of the responses (n=3418) identified as female. The overall KCTCS numbers also show a female skew in the degree-seeking population. 62.8% of the KCTCS degree-seeking population is female.

From an ethnicity perspective, 96.9% (n=4136) identified as non-Hispanic. Racially, the respondents identified as 88.1% white (n=3910), 9.7% black (n=431), 2.8%
Native American (n=126), 1.8% Asian (n=81), and .5% Middle Eastern (n=21). This compares favorably to the system totals, which are 96.7% non-Hispanic and 81.1% white.

For relationship status, 48.2% of the respondents indicated that they were single, never married (n=2121). 53.5% (n=2355) indicated that they had at least one child at home.

Of the responses, 67.1% (n=2942) indicated that they had attended college previously to enrolling at their current home institutions, although 49.1% (n=1993) indicated that they had earned 30 or fewer credits thus far in their academic career. 46.8% of the respondents said that they were working 21 or more hours per week (n=3362). 72.7% of the respondents (n=3200) indicated that they were not the first person in their family to attend college.

Of the responses, 3,984 identified themselves as associate degree seeking (90.1%) and 438 said that they were undecided but degree-seeking (9.9%). This compares to the overall system numbers\(^6\) of 55,077 associate degree seekers (92.5%) and 4,439 (7.5%) undecided.

Overall, the response set (n=4422) indicated 2508 (56.7%) in AA/AS programs, 1476 (33.4%) in AAS programs, and 438 (9.9%) degree-seeking, but undecided. Looking at the demographic breakdown of the response set as traditional vs. nontraditional, a greater percentage of nontraditional students are in the AA/AS majors, although the disparity is not huge, as indicated in Table 3-2. There may be an assumption that students in the younger age cohorts would lean more heavily towards AA/AS programs, while the

\(^6\) System data in this section is from the KCTCS Office of Research and Policy Analysis (Wolf, 2015).
older age cohorts would be more heavily enrolled in AAS programs, partly because of the emphasis in job-retraining programs for adult students. The majority of nontraditional students are enrolled in AA/AS programs – implying that they do intend to transfer, at least according to their program choice.

Table 3-2: Credentials Pursued: Traditional vs. Nontraditional Students

<table>
<thead>
<tr>
<th>Age Cohort</th>
<th>Total</th>
<th>AA/AS</th>
<th>AAS</th>
<th>UNDEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;25</td>
<td>2054</td>
<td>1234</td>
<td>584</td>
<td>236</td>
</tr>
<tr>
<td>% of total</td>
<td></td>
<td>60.1%</td>
<td>28.4%</td>
<td>11.5%</td>
</tr>
<tr>
<td>25+</td>
<td>2310</td>
<td>1243</td>
<td>878</td>
<td>189</td>
</tr>
<tr>
<td>% of total</td>
<td></td>
<td>53.8%</td>
<td>38.0%</td>
<td>8.2%</td>
</tr>
<tr>
<td>Total</td>
<td>4364</td>
<td>2477</td>
<td>1462</td>
<td>425</td>
</tr>
<tr>
<td>% of total</td>
<td></td>
<td>56.8%</td>
<td>33.5%</td>
<td>9.7%</td>
</tr>
</tbody>
</table>

In Table 3-3, these data are broken down by age cohort, and the same observation holds – the majority of nontraditional students are in the traditional transfer programs:

Table 3-3: Credentials pursued across age cohorts

<table>
<thead>
<tr>
<th>Age Cohort</th>
<th>Total</th>
<th>AA/AS</th>
<th>AAS</th>
<th>UNDEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;25</td>
<td>2054</td>
<td>1234</td>
<td>584</td>
<td>236</td>
</tr>
<tr>
<td>% of total</td>
<td></td>
<td>60.1%</td>
<td>28.4%</td>
<td>11.5%</td>
</tr>
<tr>
<td>25-34</td>
<td>1206</td>
<td>630</td>
<td>477</td>
<td>99</td>
</tr>
<tr>
<td>% of total</td>
<td></td>
<td>52.2%</td>
<td>39.6%</td>
<td>8.2%</td>
</tr>
<tr>
<td>35-44</td>
<td>684</td>
<td>390</td>
<td>246</td>
<td>48</td>
</tr>
<tr>
<td>% of total</td>
<td></td>
<td>57.0%</td>
<td>36.0%</td>
<td>7.0%</td>
</tr>
<tr>
<td>45-54</td>
<td>339</td>
<td>177</td>
<td>128</td>
<td>34</td>
</tr>
<tr>
<td>% of total</td>
<td></td>
<td>52.2%</td>
<td>37.8%</td>
<td>10.0%</td>
</tr>
<tr>
<td>55+</td>
<td>81</td>
<td>46</td>
<td>27</td>
<td>8</td>
</tr>
<tr>
<td>% of total</td>
<td></td>
<td>56.8%</td>
<td>33.3%</td>
<td>9.9%</td>
</tr>
<tr>
<td>Count</td>
<td>4364</td>
<td>2477</td>
<td>1462</td>
<td>425</td>
</tr>
<tr>
<td>% of total</td>
<td></td>
<td>56.8%</td>
<td>33.5%</td>
<td>9.7%</td>
</tr>
</tbody>
</table>
Ethical Considerations

Since this research is largely quantitative, not very intrusive, and does not require any sort of human subjects experimental protocol, most potential ethical issues in generating my data were more related to the process of the research itself than the actual administration of the potential survey instrument. There are still considerations for undertaking this project. To examine these ethical implications, the structure suggested by Creswell (2009, pp. 88-92) was used for identifying potential issues.

Ethical Issues in the Research Problem

The research problem/question centers on the age of the participants in the study and also collects other demographic data such as race & ethnicity, family structure, urban vs. rural location, etc. These data are descriptive and will be used largely in an aggregate form, so asking these questions in and of themselves should not pose much of an ethical risk.

Ethical Issues in the Purpose and Questions

While the research question itself should not cause problems from an ethical standpoint, care was taken in the wording of the instrument so as not to unintentionally cause harm or discomfort among the subjects. For instance, one of the major portions of the instrument asks about a student’s post-transfer concerns. These concerns are based in potentially anxiety-producing situations, such as changing location, not having enough money, lack of social “fit,” and others. While asking about these sorts of issues should not be in and of itself problematic, there are ways to phrase questions – for instance, calling the issues “worries” instead of “concerns” – that could prompt a negative reaction for an individual. Similarly, questions about family structure – including domestic
partnership status and number of children – were crafted in a manner that is gender-responsible and honors the spectrum of various types of relationships, be they extended family, LGBTQ, etc.

**Ethical Issues in Data Generation**

In the survey design, an informed consent statement is provided on the first screen of the survey, informing a potential participant with the purpose of the survey, a promise of confidentiality and protection of personal data, desired outcomes of the survey, and an indication that completion of the survey was not required (although a student would not be eligible for an incentive if they did not complete the survey). A student agreed to participate by clicking on an “I agree to participate” button, which served as the student’s agreement for consent purposes.

**Ethical Issues in Data Analysis and Interpretation**

Since this research was performed in conjunction with Institutional Research staff, systems to maintain confidentiality are already in place. The data generated are considered joint property of the researcher and KCTCS. KCTCS agreed to take the appropriate steps to provide data security. Following the conclusion of this research project, this dataset would be available through the normal research protocols, if others wish to query it. These data would fall under KCTCS guardianship for purposes of security and are maintained according to internal KCTCS System Office policy.

**Ethical Issues in Writing and Disseminating the Research**

Since the outcome of the study is ultimately to make policy recommendations based on the data generated, discussion of the findings should be evenhanded – not slanted to meet the needs of any particular population. Unbiased language is obvious a
must in this sort of approach. There are no considerations about ranking authorship, as this is a single-researcher study, but acknowledgements of assistance will be necessary. In disseminating results, the ethics of the implications of any policy recommendations should be reported in a manner considered appropriate.

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Chapter 4 -- RESULTS

This study explored potential differences in how students of differing ages approach the process of becoming a successful transfer student and whether these students have differing levels of transfer intent, which can be interpreted as a reflection of differing levels of transfer student capital. More specifically, it examined whether age cohort was related to the institutional choice process, concerns about the transfer process, and access of transfer-related services on their campuses – all of which are mechanisms for the accumulation of transfer student capital. The initial hypothesis was that, potentially, there should be age cohort-related differences, since the multigenerational nature of the community college population includes students at widely varying levels of personal development, life situation, and academic experience.

Examining the results of this study, some significant differences exist in the reported intent to transfer across various age cohorts. The differences in intent to transfer across age cohorts may be attributed at least somewhat to how actively a student approaches the process of building his or her level respective level of transfer student capital since, when controlling for demographic characteristics such as age, gender, race/ethnicity, family structure, etc. – characteristics which should affect personal development, life situation, and academic experience – age cohort continues to have a significant effect on a student’s reported intent to transfer. To provide a framework for examining this analysis, the original research questions provide additional context.
Do student age cohorts have an effect on intent to transfer from a community college to a four year school?

A student’s intent to transfer is a key variable, since high values indicate that a student sees him or herself with a concrete goal of moving from a community college to a four-year school. A student who believes strongly that they will transfer should be more focused on achieving that goal of successful matriculation (and eventual graduation) post-transfer.

As reported in the previous chapter, the mean value of reported likelihood to transfer in the response set was 7.86 on the 10 point scale (SD=2.606). Looking at the responses in more detail, there are differences in mean intent to transfer among both traditional vs. nontraditional and across the various age cohorts. For example, Table 4.1 shows the mean transfer intent for traditional (Age <25) students versus the nontraditional category:

<table>
<thead>
<tr>
<th>Age Cohort</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;25</td>
<td>2045</td>
<td>8.15</td>
<td>2.495</td>
</tr>
<tr>
<td>25+</td>
<td>2290</td>
<td>7.60</td>
<td>2.675</td>
</tr>
<tr>
<td>Total</td>
<td>4335</td>
<td>7.86</td>
<td>2.606</td>
</tr>
</tbody>
</table>

Table 4.2 compares mean transfer intent across the five age cohorts developed for the purposes of further unpacking the “nontraditional” category. As the results indicate, a student’s intent to transfer appears to decrease as a student gets older. A one-way ANOVA indicates a statistically significant difference at p<.05 both among traditional vs. nontraditional [F (1, 4333) =49.51, p=.000] and across age cohorts [F (4, 4330) =16.90, p=.000]. However, a Levene test indicated an inequality in variances across the groups being compared (p=.000 for both comparisons). While the large sample size likely
renders that non-homogeneity less problematic due to the Central Limit Theorem (Field, 2013), a supplemental cross-tabular analysis was performed, examining the intent across the different age cohorts, which is presented in Table 4.3:

<table>
<thead>
<tr>
<th>Age Cohort</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;25</td>
<td>2045</td>
<td>8.15</td>
<td>2.495</td>
</tr>
<tr>
<td>25-34</td>
<td>1192</td>
<td>7.76</td>
<td>2.645</td>
</tr>
<tr>
<td>35-44</td>
<td>682</td>
<td>7.59</td>
<td>2.644</td>
</tr>
<tr>
<td>45-54</td>
<td>337</td>
<td>7.26</td>
<td>2.784</td>
</tr>
<tr>
<td>54+</td>
<td>79</td>
<td>6.80</td>
<td>2.681</td>
</tr>
<tr>
<td>Total</td>
<td>4335</td>
<td>7.86</td>
<td>2.606</td>
</tr>
</tbody>
</table>

The cross-tabular analysis yielded a statistically significant chi-square, $X^2 (36, N=4335) = 113.207, p<.05$. This result supports the idea that intent to transfer differs significantly across the five cohorts. More specifically, a higher percentage of respondents under the age of 25 report stronger intent to transfer in comparison to other cohorts. For instance, 53.8% of the under-25 cohort indicated the highest level of intent to transfer (a “10” response), whereas that percentage fell to 47.1%, 41.9%, 36.5%, and 26.6% in the higher age cohorts (25-34, 35-44, 45-54, 55+, respectively).

These results from one-way ANOVA (with associated F-tests) and crosstabs (with associated chi-square tests) are consistent with bivariate correlation analysis showing a positive correlation between membership in the under 25 cohort and intent to transfer, but a negative correlation between membership in any other cohort and intent to transfer. However, not all coefficients were significant. For the under 25 cohort, Spearman’s rho (4335) = .112, p=.000. Values for the other cohorts are: Spearman’s rho (4335) = -.023, p=.136 for the 25-34 cohort; Spearman’s rho (4335) = -.052, p=.001 for the 35-44 cohort;
Spearman’s rho (4335) = -.070, p=.000 for the 45-54 cohort; and Spearman’s rho (4335) = -.060, p=.000 for the 55+ cohort. This supports the idea that differences exist in intent to transfer across groups within the larger “nontraditional” category and that simply examining the differences using the “traditional vs. nontraditional” dichotomy would mask some of this heterogeneity.

These results from one-way ANOVA (with associated F-tests) and crosstabs (with associated chi-square tests) are consistent with bivariate correlation analysis showing a positive correlation between membership in the under 25 cohort and intent to transfer, but a negative correlation between membership in any other cohort and intent to transfer. However, not all coefficients were significant. For the under 25 cohort, Spearman’s rho (4335) = .112, p=.000. Values for the other cohorts are: Spearman’s rho (4335) = -.023, p=.136 for the 25-34 cohort; Spearman’s rho (4335) = -.052, p=.001 for the 35-44 cohort; Spearman’s rho (4335) = -.070, p=.000 for the 45-54 cohort; and Spearman’s rho (4335) = -.060, p=.000 for the 55+ cohort. This supports the idea that differences exist in intent to transfer across groups within the larger “nontraditional” category and that simply examining the differences using the “traditional vs. nontraditional” dichotomy would mask some of this heterogeneity.
<table>
<thead>
<tr>
<th>Age Cohort</th>
<th>Reported Value of Intent to Transfer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>&lt;25</td>
<td>n</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0.8%</td>
</tr>
<tr>
<td>25-34</td>
<td>n</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0.4%</td>
</tr>
<tr>
<td>35-44</td>
<td>n</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0.6%</td>
</tr>
<tr>
<td>45-54</td>
<td>n</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0.9%</td>
</tr>
<tr>
<td>55+</td>
<td>n</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Total</td>
<td>n</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0.6%</td>
</tr>
</tbody>
</table>
Do student age cohorts have an effect on students’ planning timelines and the factors important to their eventual choice of a transfer destination?

The analysis illustrates that students in older age cohorts start the transfer planning process at a later time than do traditional age students. The majority of nontraditional students do not begin the process of researching potential transfer destinations until they have already matriculated. A strong majority of traditional students, in contrast, have already started considering transfer before they set foot on the community college campus, indicating that they already have a concept of themselves as a “transfer student.”

Looking at these data across cohorts as opposed to the traditional/nontraditional dichotomy, the percentage of students who already have started exploring transfer options declines sharply in the 25-34 cohort in comparison to the traditional-aged students. This decline continues gradually with each subsequent cohort.

Starting the search process. Since planning for transfer is an important aspect to accumulating transfer student capital, respondents were asked when (or if) they started considering transfer to a four-year college or university. Response choices are:

- Before I started at my current college.
- During my first semester at my current college.
- After my first semester at my current college, but during my first year.
- After my first year at my current college.
- I will not be transferring to a four-year college or university.

The frequency distribution below (Table 4-4) indicates that half of the respondents said that they came to the institution with the plan of moving on to a four-year school:
Table 4-4: Starting time for transfer exploration

<table>
<thead>
<tr>
<th>Reported start of exploration</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before starting at current college</td>
<td>2193</td>
<td>50.0</td>
</tr>
<tr>
<td>During First Semester</td>
<td>581</td>
<td>13.2</td>
</tr>
<tr>
<td>During First Year</td>
<td>295</td>
<td>6.7</td>
</tr>
<tr>
<td>After First Year</td>
<td>809</td>
<td>18.4</td>
</tr>
<tr>
<td>No plan to transfer</td>
<td>512</td>
<td>11.7</td>
</tr>
<tr>
<td>Total</td>
<td>4390</td>
<td>100.0</td>
</tr>
</tbody>
</table>

There is a clear difference, however, between when traditional and nontraditional students begin their search process. As indicated in Table 4.5 below, nontraditional students tend to begin their searches for a transfer destination later. The majority of nontraditional students do not begin their college search until they have already been on campus, and a plurality do not start that search until after their first semester.

Table 4-5: Starting time for transfer exploration -- traditional vs. nontraditional

<table>
<thead>
<tr>
<th>Reported start of exploration</th>
<th>&lt;25</th>
<th>%</th>
<th>25+</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before starting at current college</td>
<td>1277</td>
<td>62.5%</td>
<td>886</td>
<td>38.7%</td>
</tr>
<tr>
<td>During First Semester</td>
<td>247</td>
<td>12.1%</td>
<td>325</td>
<td>14.2%</td>
</tr>
<tr>
<td>During First Year</td>
<td>108</td>
<td>5.3%</td>
<td>183</td>
<td>8.0%</td>
</tr>
<tr>
<td>After First Year</td>
<td>222</td>
<td>10.9%</td>
<td>582</td>
<td>25.4%</td>
</tr>
<tr>
<td>No plan to transfer</td>
<td>190</td>
<td>9.3%</td>
<td>315</td>
<td>13.7%</td>
</tr>
<tr>
<td>Total</td>
<td>2044</td>
<td>100%</td>
<td>2291</td>
<td>100%</td>
</tr>
</tbody>
</table>

Examining these data by age cohort, as shown in Table 4-6 below, the numbers follow the same general pattern as with the reported intent to transfer. The older student cohorts average starting time for beginning a search trends later. Students in all four nontraditional cohorts follow a somewhat different search pattern. All four cohorts report that more respondents began their college search after they had been enrolled for at least a year than starting the process during their first year. Only 10.9% of the traditional age students wait until after a year of enrollment. These differences are statistically
significant, as demonstrated both by ANOVA \(F (4, 4330) = 65.019, \ p=.000\) and by a Spearman’s rho \(4335 = .243, \ p<.05\).

<table>
<thead>
<tr>
<th>Age Cohort</th>
<th>&lt;25</th>
<th>25-34</th>
<th>35-44</th>
<th>45-54</th>
<th>55+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before starting</td>
<td>1277</td>
<td>504</td>
<td>248</td>
<td>114</td>
<td>20</td>
<td>2163</td>
</tr>
<tr>
<td>Cohort %</td>
<td>62.5%</td>
<td>42.1%</td>
<td>36.6%</td>
<td>33.8%</td>
<td>25.0%</td>
<td>49.9%</td>
</tr>
<tr>
<td>During first semester</td>
<td>247</td>
<td>170</td>
<td>97</td>
<td>50</td>
<td>8</td>
<td>572</td>
</tr>
<tr>
<td>Cohort %</td>
<td>12.1%</td>
<td>14.2%</td>
<td>14.3%</td>
<td>14.8%</td>
<td>10.0%</td>
<td>13.2%</td>
</tr>
<tr>
<td>During first year</td>
<td>108</td>
<td>89</td>
<td>61</td>
<td>24</td>
<td>9</td>
<td>291</td>
</tr>
<tr>
<td>Cohort %</td>
<td>5.3%</td>
<td>7.4%</td>
<td>9.0%</td>
<td>7.1%</td>
<td>11.3%</td>
<td>6.7%</td>
</tr>
<tr>
<td>After first year</td>
<td>222</td>
<td>275</td>
<td>183</td>
<td>97</td>
<td>27</td>
<td>804</td>
</tr>
<tr>
<td>Cohort %</td>
<td>10.9%</td>
<td>23.0%</td>
<td>27.0%</td>
<td>28.8%</td>
<td>33.8%</td>
<td>18.5%</td>
</tr>
<tr>
<td>No transfer plan</td>
<td>190</td>
<td>158</td>
<td>89</td>
<td>52</td>
<td>16</td>
<td>505</td>
</tr>
<tr>
<td>Cohort %</td>
<td>9.3%</td>
<td>13.2%</td>
<td>13.1%</td>
<td>15.4%</td>
<td>20.0%</td>
<td>11.6%</td>
</tr>
<tr>
<td>Total</td>
<td>2044</td>
<td>1196</td>
<td>678</td>
<td>337</td>
<td>80</td>
<td>4335</td>
</tr>
<tr>
<td>% within Cohort</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

**Researching specific colleges.** Moving past the start of the process of searching for a transfer destination, the students were asked whether they had begun considering specific transfer destinations. There were statistically significant differences between whether a student was currently considering a specific transfer school between traditional and nontraditional students, although there were no significant differences among the nontraditional cohorts only.

These findings are consistent with what Monroe (2006) indicated – that nontraditional students often approach their academic processes without a consistent plan; choosing instead to make quick decisions when they become immediately necessary, rather than mapping out long term strategies.
Homing in on specific colleges is an important part of the transfer process, since that can provide focus for a student as they look at applications, deadlines, transfer equivalencies and the like at a potential transfer destination. As well, this also can encourage students to begin making contacts with representatives – recruiters, advisors, professors, etc. – at four-year schools to start making connections and receiving direct contact from the potential destination. Gathering this information is another source of transfer student capital. In these data, 69.7% of the respondents (n=2557) sample-wide reported that they had begun to narrow their choice of transfer destination.

However, looking across the age cohorts, 74.5% of the traditional-aged students reported researching specific colleges, while 65.3% of the nontraditional students did. This difference is a statistically significant one with Spearman’s rho (3667) = -.101, p<.05.

Looking across the five age cohorts yielded even greater detail about these age differences. The 25-34, 35-44, and 45-54 cohorts had very similar percentages reporting that they had started narrowing their choices – 66.5%, 66.6%, and 62.3%, respectively. Only the 55+ cohort reported a minority (47.1%) of respondents had begun researching specific colleges. Again, this difference is statistically significant with Spearman’s rho (3671) = -.106, p<.05.

In short, traditional-aged students more often envision themselves not only transferring – but as a student at a specific school, or perhaps at a potential specific few. That said, the majority of nontraditional cohort students – albeit a lower percentage – also engage in this sort of planning. In contrast, a minority of the 55+ cohort plan in this manner.
Factors related to institutional choice. A significantly higher number of the nontraditional student cohorts indicated that they would be willing to pursue a degree entirely online. Almost two-thirds of nontraditional students said that they would consider that sort of academic delivery system, in contrast to traditional-age students, where almost 60% of the students state they would not consider such a program.

Looking at the institutional factors which might play into institutional choice, the rank order of these factors remained largely consistent both between traditional/nontraditional students, and among the broken-down nontraditional cohorts. There were small but significant differences in the importance of factors in both analysis, with traditional students indicating fewer items as highly important to them. The most important factors for all groups, with the exception of the 55+ cohort were availability of desired major, availability of financial aid & scholarships, and overall cost. The 55+ cohort indicated that desired major was the most important factor, followed by flexibility of scheduling, and cost. Financial aid & scholarship availability fell from second to fifth, behind distance from home, in this oldest cohort.

A factor analysis indicated that campus life, extracurricular activities, class size, and knowing students currently attending the school – pieces of the student experience that involve social environments and characteristics – had a high level of collinearity across the respondents. Combining these factors into a “Social Aspect” factor and re-running the analysis indicated that this new scale would have been last in the overall rank order across all cohorts. Thus, transfer students, regardless of age, appear to be driven much more by pragmatic considerations about their eventual transfer destination than they are with social or environmental factors.
As the online mode of educational delivery becomes a more widely available open for many majors and is seen increasingly by many four-year schools as a way to expand access to baccalaureate degrees for potential transfers\textsuperscript{7} (Allen & Seaman, 2010), respondents were asked about whether or not they would be willing to complete a bachelor’s degree entirely online.

Almost half of the respondents (46.8%, n=1799) sample-wide indicated that they would consider pursuing a degree entirely online. However, as shown in Table 4-7, there was a difference between the responses of the traditional vs. nontraditional students, and this difference was statistically significant by ANOVA [\(F(1, 3790) = 253.889, p=.000\)]. This ANOVA supports the significant correlation between traditional/nontraditional cohort and whether a student would consider an online-only program with Spearman’s rho (3792) = .251, p<.05.

<table>
<thead>
<tr>
<th>Age Cohort</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;25</td>
<td>1775</td>
</tr>
<tr>
<td>25+</td>
<td>2017</td>
</tr>
</tbody>
</table>

Looking across the age cohorts, nontraditional students are generally more amenable to completing degrees online. In the traditional student cohort, 40.1% of the respondents would complete an entirely online bachelor’s degree. This figure increases to 60.6% in the 25-34 cohort, 71.3% in the 35-44 cohort, and 71.7% in the 45-54 cohort, before dropping off to 54.5% in the 55+ cohort, as shown in Table 4-8. Again, these differences are statistically significant (Spearman’s rho (3792) = .255, p<.05).

\textsuperscript{7} As shown in Table 4-9 below, availability of a student’s desired major is the most important factor in the eventual choice of a transfer destination, and online availability of a major that might not be available at a local brick-and-mortar campus expands the potential for transfer.
Table 4-8: Willingness to complete a degree online -- age cohorts

<table>
<thead>
<tr>
<th>Age Cohort</th>
<th>&lt;25</th>
<th>25-34</th>
<th>35-44</th>
<th>45-54</th>
<th>55+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would not consider</td>
<td>1085</td>
<td>411</td>
<td>169</td>
<td>80</td>
<td>30</td>
</tr>
<tr>
<td>% within Cohort</td>
<td>59.9%</td>
<td>39.4%</td>
<td>28.7%</td>
<td>28.3%</td>
<td>45.5%</td>
</tr>
<tr>
<td>Would consider</td>
<td>727</td>
<td>632</td>
<td>419</td>
<td>203</td>
<td>36</td>
</tr>
<tr>
<td>% within Cohort</td>
<td>40.1%</td>
<td>60.6%</td>
<td>71.3%</td>
<td>71.7%</td>
<td>54.5%</td>
</tr>
<tr>
<td>Total</td>
<td>1812</td>
<td>1043</td>
<td>588</td>
<td>283</td>
<td>66</td>
</tr>
<tr>
<td>% within Cohort</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The students were then asked about the factors that were important to them in selecting an eventual transfer destination. The factors queried were:

- Distance from home
- Availability of desired major
- Cost of attendance
- Variety of class times/flexible scheduling
- Safety
- Class size
- Campus Life
- Extracurricular Activities
- Scholarship/Financial Aid availability
- Know students currently attending
- Academic reputation
- Online course availability

Examining the factors for the entire response set related to institutional choice, the most important factors to the respondents were availability of major, scholarship availability, cost, and variety of class times. The least important were knowing people already attending and extracurricular activities, as indicated in Table 4-9.
Table 4-9: Importance of Factors for Transfer Destination

<table>
<thead>
<tr>
<th>Factor</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of desired major</td>
<td>4058</td>
<td>9.16</td>
<td>1.666</td>
</tr>
<tr>
<td>Scholarship/Financial Aid availability</td>
<td>4042</td>
<td>8.98</td>
<td>1.961</td>
</tr>
<tr>
<td>Cost</td>
<td>4050</td>
<td>8.62</td>
<td>2.097</td>
</tr>
<tr>
<td>Variety of class times/flexible scheduling</td>
<td>4049</td>
<td>8.35</td>
<td>2.146</td>
</tr>
<tr>
<td>Distance from home</td>
<td>4060</td>
<td>7.88</td>
<td>2.693</td>
</tr>
<tr>
<td>Academic reputation</td>
<td>4042</td>
<td>7.79</td>
<td>2.499</td>
</tr>
<tr>
<td>Safety</td>
<td>4048</td>
<td>7.36</td>
<td>2.744</td>
</tr>
<tr>
<td>Online courses</td>
<td>4030</td>
<td>6.67</td>
<td>3.248</td>
</tr>
<tr>
<td>Class Size</td>
<td>4052</td>
<td>6.31</td>
<td>2.993</td>
</tr>
<tr>
<td>School/Campus Life</td>
<td>4050</td>
<td>5.22</td>
<td>3.247</td>
</tr>
<tr>
<td>Extracurricular Activities</td>
<td>4043</td>
<td>4.03</td>
<td>2.990</td>
</tr>
<tr>
<td>Know people attending</td>
<td>4048</td>
<td>3.81</td>
<td>3.088</td>
</tr>
</tbody>
</table>

Comparing the means for these college-choice factors across traditional vs. nontraditional, there were some small, though significant differences between the two broad categories as reflected in Table 4-10. In general, traditional students tended to list fewer items as highly important. The rank order of these items were basically the same across the two broader age categories, except that the nontraditional students were much more interested in the availability of online classes, which mirrors the results of the question about whether a student would consider completing a degree entirely online.
Table 4-10: Comparison of means of institutional factors—traditional vs. nontraditional

<table>
<thead>
<tr>
<th>Factor</th>
<th>&lt;25 Mean</th>
<th>&lt;25 sd</th>
<th>25+ Mean</th>
<th>25+ sd</th>
<th>F</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desired Major</td>
<td>9.15</td>
<td>1.674</td>
<td>9.18</td>
<td>1.635</td>
<td>.321</td>
<td>.521</td>
</tr>
<tr>
<td>Fin. Aid/Scholarship Avail.</td>
<td>8.97</td>
<td>1.880</td>
<td>8.99</td>
<td>2.013</td>
<td>.045</td>
<td>.831</td>
</tr>
<tr>
<td>Cost of Attendance</td>
<td>8.55</td>
<td>2.134</td>
<td>8.70</td>
<td>2.045</td>
<td>4.824</td>
<td>.028</td>
</tr>
<tr>
<td>Flexibility of Scheduling</td>
<td>8.02</td>
<td>2.233</td>
<td>8.64</td>
<td>2.012</td>
<td>84.623</td>
<td>.000</td>
</tr>
<tr>
<td>Academic Reputation</td>
<td>7.55</td>
<td>2.559</td>
<td>8.00</td>
<td>2.418</td>
<td>32.582</td>
<td>.000</td>
</tr>
<tr>
<td>Distance from home</td>
<td>7.52</td>
<td>2.740</td>
<td>8.23</td>
<td>2.582</td>
<td>70.872</td>
<td>.000</td>
</tr>
<tr>
<td>Campus Safety</td>
<td>7.51</td>
<td>2.613</td>
<td>7.23</td>
<td>2.847</td>
<td>10.494</td>
<td>.001</td>
</tr>
<tr>
<td>Class Size</td>
<td>6.39</td>
<td>2.906</td>
<td>6.24</td>
<td>3.064</td>
<td>2.517</td>
<td>.113</td>
</tr>
<tr>
<td>Campus Life</td>
<td>6.09</td>
<td>3.064</td>
<td>4.42</td>
<td>3.194</td>
<td>283.872</td>
<td>.000</td>
</tr>
<tr>
<td>Availability of Online Courses</td>
<td>5.83</td>
<td>3.239</td>
<td>7.44</td>
<td>3.055</td>
<td>261.888</td>
<td>.000</td>
</tr>
<tr>
<td>Know Students Attending</td>
<td>4.67</td>
<td>3.198</td>
<td>3.00</td>
<td>2.744</td>
<td>313.481</td>
<td>.000</td>
</tr>
<tr>
<td>Extracurricular Activities</td>
<td>4.61</td>
<td>3.031</td>
<td>3.47</td>
<td>2.836</td>
<td>151.552</td>
<td>.000</td>
</tr>
</tbody>
</table>

df=1, 4004

There were similar findings when looking at means regarding college-choice factors across cohorts, shown in Table 4-11. There remained small but significant differences in several of the variables, as with the previous analysis. The importance of the availability of financial aid variable became significant, although the variation is very small. Overall cost of attendance went from being non-significant to slightly significant. The availability of online classes was consistently more important as a student goes into older age cohorts. The rank orders were similar, with some fluctuation in the 55+ cohort.
Table 4-11: Comparison of means of institutional factors -- across cohorts

<table>
<thead>
<tr>
<th>Factor</th>
<th>&lt;25 Mean</th>
<th>&lt;25 SD</th>
<th>25-34 Mean</th>
<th>25-34 SD</th>
<th>35-44 Mean</th>
<th>35-44 SD</th>
<th>45-54 Mean</th>
<th>45-54 SD</th>
<th>55+ Mean</th>
<th>55+ SD</th>
<th>F</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fin. Aid/ Schol. Avail.</td>
<td>8.97</td>
<td>1.880</td>
<td>9.09</td>
<td>1.900</td>
<td>9.05</td>
<td>1.915</td>
<td>8.67</td>
<td>2.297</td>
<td>8.23</td>
<td>2.880</td>
<td>5.606</td>
<td>.000</td>
</tr>
<tr>
<td>Cost of Attendance</td>
<td>8.55</td>
<td>2.134</td>
<td>8.68</td>
<td>2.058</td>
<td>8.74</td>
<td>1.996</td>
<td>8.68</td>
<td>2.093</td>
<td>8.75</td>
<td>2.082</td>
<td>1.298</td>
<td>.268</td>
</tr>
<tr>
<td>Flexibility of Scheduling</td>
<td>8.02</td>
<td>2.233</td>
<td>8.60</td>
<td>2.040</td>
<td>8.71</td>
<td>1.968</td>
<td>8.60</td>
<td>2.079</td>
<td>8.97</td>
<td>1.630</td>
<td>21.903</td>
<td>.000</td>
</tr>
<tr>
<td>Academic Reputation</td>
<td>7.55</td>
<td>2.559</td>
<td>7.87</td>
<td>2.460</td>
<td>8.16</td>
<td>2.315</td>
<td>8.14</td>
<td>2.433</td>
<td>7.97</td>
<td>2.514</td>
<td>9.733</td>
<td>.000</td>
</tr>
<tr>
<td>Distance from home</td>
<td>7.52</td>
<td>2.740</td>
<td>8.24</td>
<td>2.538</td>
<td>8.25</td>
<td>2.584</td>
<td>8.10</td>
<td>2.778</td>
<td>8.41</td>
<td>2.412</td>
<td>17.969</td>
<td>.000</td>
</tr>
<tr>
<td>Campus Safety</td>
<td>7.51</td>
<td>2.613</td>
<td>7.29</td>
<td>2.790</td>
<td>7.15</td>
<td>2.873</td>
<td>7.09</td>
<td>2.980</td>
<td>7.51</td>
<td>2.927</td>
<td>3.263</td>
<td>.011</td>
</tr>
<tr>
<td>Campus Life</td>
<td>6.09</td>
<td>3.064</td>
<td>4.67</td>
<td>3.219</td>
<td>4.03</td>
<td>3.096</td>
<td>4.23</td>
<td>3.222</td>
<td>4.64</td>
<td>3.203</td>
<td>75.835</td>
<td>.000</td>
</tr>
<tr>
<td>Online Course Availability</td>
<td>5.83</td>
<td>3.239</td>
<td>7.13</td>
<td>3.158</td>
<td>7.81</td>
<td>2.840</td>
<td>7.90</td>
<td>2.861</td>
<td>7.21</td>
<td>3.455</td>
<td>72.434</td>
<td>.000</td>
</tr>
<tr>
<td>Know Students Attending</td>
<td>4.67</td>
<td>3.198</td>
<td>3.01</td>
<td>2.753</td>
<td>2.93</td>
<td>2.705</td>
<td>3.01</td>
<td>2.788</td>
<td>3.44</td>
<td>2.766</td>
<td>78.836</td>
<td>.000</td>
</tr>
<tr>
<td>Extracurricular Activities</td>
<td>4.61</td>
<td>3.031</td>
<td>3.58</td>
<td>2.873</td>
<td>3.32</td>
<td>2.788</td>
<td>3.27</td>
<td>2.772</td>
<td>3.93</td>
<td>2.871</td>
<td>39.500</td>
<td>.000</td>
</tr>
</tbody>
</table>

df=4, 4001
Again, because of the cohort delineation, the analysis fails the Levene test because of unequal variances (p=.000). Crosstabular analyses were performed, and because of the large number of values, the results would be too clumsy to report in full here. However, it is notable that the results of the chi-square analyses associated with this cross-tabular analysis were almost identical to the results from the ANOVA column in Table 4-10, with the exception of the campus safety variable, which was non-significant with $X^2(36, N=3995) = 48.34, p=.081$.

Some of these variables related to institutional choices potentially could overlap in their measures, so a principal component analysis was performed on the nine choice variables. In determining that a factor analysis would be appropriate, the KMO measure of sampling adequacy was .793, indicating a valid sample. The principal component analysis was performed with Varimax rotation. The analysis yielded two potential factors, indicated in Table 4-12:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Component 1</th>
<th>Component 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus Life</td>
<td>.844</td>
<td></td>
</tr>
<tr>
<td>Extracurricular Activities</td>
<td>.798</td>
<td></td>
</tr>
<tr>
<td>Know People Attending</td>
<td>.721</td>
<td></td>
</tr>
<tr>
<td>Class Size</td>
<td>.611</td>
<td>.322</td>
</tr>
<tr>
<td>Flexibility of Scheduling</td>
<td>.736</td>
<td></td>
</tr>
<tr>
<td>Cost of Attendance</td>
<td>.646</td>
<td></td>
</tr>
<tr>
<td>Financial Aid Availability</td>
<td>.590</td>
<td></td>
</tr>
<tr>
<td>Availability of Online Courses</td>
<td>.543</td>
<td></td>
</tr>
<tr>
<td>Distance From Home</td>
<td>.519</td>
<td></td>
</tr>
<tr>
<td>Availability of Desired Major</td>
<td>.519</td>
<td></td>
</tr>
<tr>
<td>Campus Safety</td>
<td>.489</td>
<td>.502</td>
</tr>
<tr>
<td>Academic Reputation</td>
<td>.352</td>
<td>.407</td>
</tr>
</tbody>
</table>
A reliability analysis was performed on the two factors. In the first factor, since
the safety and campus reputation loadings were below 0.5, they were dropped from the
analysis. In the second factor, the components above 0.5 were included, with the
exception of safety, as it loaded almost equally on both factors. A robust connection was
found between the four variables in the first factor (α=.760). These four variables –
campus life, extracurricular activities, class size, and knowing students currently
attending the school – all relate to the social aspects of the campus experience. This high
level of reliability suggests that a mean of these four variables could be used to generate a
“Social Aspects” scale for further analysis (Gliem & Gliem, 2003).

The other factor indicated a possible connection between the variables (α=.641),
and included measures that thematically indicated either logistical issues (distance from
home, desired major, availability of online courses, flexibility of scheduling) or price
(cost of attendance, availability of financial aid/scholarships). Ultimately, Cronbach’s
alpha was not deemed high enough to warrant the creation of a separate factor. Also,
looking at the reliabilities of the two sets of variables independently further decreased the
reliability coefficient (α=.526 for logistical-themed measures, α=.593 for financial-
themed measures) so scales were not created for those.

An analysis of the Social Aspects scale yielded an overall mean for the response
set of 4.84 (SD=2.35). The mean was 5.44 for students under 25, and 4.28 for students 25
and over. An ANOVA indicated a statistically significant different between the two
groups [F (1, 4007) = 261.085, p=.000]. Comparing means across the age cohorts, as
illustrated in Table 4-14, there were also statistically significant differences in ANOVA
[F(4,4004) = 67.51, p=.000]. The mean drops off sharply after a respondent goes from the
traditional cohorts into the nontraditional cohorts, and that mean remains relatively stable until reaching the 55+ cohort, where it rises significantly, even though that cohort is quite small in comparison.

However, replacing the various factors (campus life, extracurricular activities, knowing people already attending, and class size) from the above factor analysis with the Social Aspect scale for all five cohorts, this new scale would rank last in importance for all students in choosing an eventual transfer destination.

Table 4-13: Means of Social Factor across cohorts

<table>
<thead>
<tr>
<th>Age Cohort</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;25</td>
<td>1917</td>
<td>5.44</td>
<td>2.272</td>
</tr>
<tr>
<td>25-34</td>
<td>1102</td>
<td>4.34</td>
<td>2.257</td>
</tr>
<tr>
<td>35-44</td>
<td>620</td>
<td>4.15</td>
<td>2.252</td>
</tr>
<tr>
<td>45-54</td>
<td>299</td>
<td>4.21</td>
<td>2.342</td>
</tr>
<tr>
<td>55+</td>
<td>71</td>
<td>4.80</td>
<td>2.238</td>
</tr>
<tr>
<td>Total</td>
<td>4009</td>
<td>4.84</td>
<td>2.343</td>
</tr>
</tbody>
</table>

To summarize results from this initial section of the analysis, it appears that younger students come to community college much more often having already begun the search for an eventual transfer destination, or they start this search process earlier in general than students in the older age cohorts. There appear to be small but significant differences in the level of importance between the cohorts in the various factors that these respondents indicated were important in the choice of a transfer destination, but in general, they tended to roughly agree on the order of important in these factors, with the exception of the availability of online courses. Older age cohorts are more likely to be willing to complete a bachelor’s degree entirely online. Both these observations would
seem to follow the life realities of students who are in the nontraditional student age cohorts.

Do students in different age cohorts collect information differently in the process of choosing a transfer institution?

Collecting information about transfer destinations is a method of accumulating transfer student capital. It follows that the more a student knows about their future school, the more easily they will be able to begin the process of eventual matriculation – as well as feeling somewhat more familiar with their new surroundings.

Examining the methods which students use to research transfer information, there were very few differences in the rank order of methods that traditional and nontraditional students use. However, looking at the results both between traditional/nontraditional and across the cohorts, it is clear that students take advantage of fewer sources of information about transfer destinations as they age. This finding is consistent with the findings of Bers and Smith (1987), who found that older students do not generally follow the same patterns of institutional choice as traditional aged students. Nontraditional students tended to quickly find what they feel is a single option that suits their needs, and focus on that option to the exclusion of others.

When asked to indicate preferred methods of searching for transfer information, there were very few statistically significant differences between the various cohorts. All cohorts indicated that college websites were overwhelmingly the research method of choice. However, the 55+ cohort did express higher levels of preference for one-on-one interactions such as college recruiters, faculty, and staff in comparison to other cohorts; rather than less personal methods such as websites and college fairs. This finding
supports Austin’s (2007) qualitative observations about the intentionality of service provision to adult students.

In the survey, these methods for gathering information were queried:

- College websites
- Online surveys
- Instructors/professors
- Other schools’ instructors & professors
- College fairs
- College staff
- Recruiters from other schools
- Friends/classmates
- Other

The “Other” category also provided the option of an open ended response for respondents to elaborate. First, students were asked to indicate all of the above methods that they had used to research transfer information. As reflected in Table 4-14, a large percentage of respondents indicated that they did their transfer research on the websites of the colleges to which they were interested in transferring. Over half relied on information from their friends, followed by their professors.

When asked to limit their choices to their single preferred method, the responses changed somewhat, as indicated in Table 4-15. While college websites remained the most popular method, it was the preferred method for a much smaller segment. Getting information from friends dropped to the fifth most preferred method, after college fairs,
professors, and recruiters from potential transfer colleges. Very few students preferred to use online surveys (such as Collegefish\textsuperscript{8}) to learn about a transfer college.

Table 4-14: Methods used to research transfer destinations

<table>
<thead>
<tr>
<th>Method</th>
<th>N</th>
<th># mentions</th>
<th>% mention</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Websites</td>
<td>4438</td>
<td>3248</td>
<td>73.2%</td>
</tr>
<tr>
<td>Friends</td>
<td>4438</td>
<td>2223</td>
<td>50.1%</td>
</tr>
<tr>
<td>Professors</td>
<td>4438</td>
<td>1500</td>
<td>33.8%</td>
</tr>
<tr>
<td>College Fairs</td>
<td>4438</td>
<td>1273</td>
<td>28.7%</td>
</tr>
<tr>
<td>College recruiters</td>
<td>4438</td>
<td>852</td>
<td>19.2%</td>
</tr>
<tr>
<td>College Staff</td>
<td>4438</td>
<td>788</td>
<td>17.8%</td>
</tr>
<tr>
<td>Professors at four-year schools</td>
<td>4438</td>
<td>596</td>
<td>13.4%</td>
</tr>
<tr>
<td>Online Surveys</td>
<td>4438</td>
<td>398</td>
<td>9.0%</td>
</tr>
<tr>
<td>Other method</td>
<td>4438</td>
<td>297</td>
<td>6.7%</td>
</tr>
</tbody>
</table>

Table 4-15: Preferred method of researching transfer information

<table>
<thead>
<tr>
<th>Method</th>
<th>Frequency</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Websites</td>
<td>1656</td>
<td>41.3</td>
</tr>
<tr>
<td>College Fairs</td>
<td>615</td>
<td>15.3</td>
</tr>
<tr>
<td>Professors</td>
<td>471</td>
<td>11.8</td>
</tr>
<tr>
<td>College recruiters</td>
<td>393</td>
<td>9.8</td>
</tr>
<tr>
<td>Friends</td>
<td>387</td>
<td>9.7</td>
</tr>
<tr>
<td>College Staff</td>
<td>203</td>
<td>5.1</td>
</tr>
<tr>
<td>Professors at four-year schools</td>
<td>123</td>
<td>3.1</td>
</tr>
<tr>
<td>Other method</td>
<td>88</td>
<td>2.2</td>
</tr>
<tr>
<td>Online Surveys</td>
<td>71</td>
<td>1.8</td>
</tr>
<tr>
<td>Total</td>
<td>4007</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing</td>
<td>431</td>
<td></td>
</tr>
</tbody>
</table>

Examining these selections by age category shows similar patterns of researching transfer information between the traditional and nontraditional students. Overall, however, the nontraditional students did not indicate that they were using as many

\textsuperscript{8} Collegefish is a transfer institution and transfer scholarship search engine operated by the Phi Theta Kappa National Honor Society. All KCTCS students received access to Collegefish in 2012.
services in general, indicated by the general decrease in percentage of students who mention each particular method to research transfer information (See Table 4-16).

ANOVA indicated that only two methods of obtaining transfer information were not significantly different across traditional and nontraditional cohorts: using college staff and “other.” Again, the data typically fail the Levene test for homogeneity of variance for all variables except the use of friends to research transfer information ($p=.065$), so crosstabular analysis was performed. Chi-square tests indicate the differences in means were statistically significant at $p<.05$ for all variables except “Staff” and “Other method,” just as in the ANOVA.

Similar results emerged in a similar analysis by the five age cohorts, pictured in Table 4-17. Once again, the data fail the Levene test for homogeneity of variance, and a crosstabular analysis was performed to verify the results. Just as in the ANOVA of traditional vs. nontraditional groups, except for Staff ($p=.138$) and Other ($p=.092$), small but significant differences were found among age cohorts in all remaining variables.

Table 4-16: Methods used -- traditional vs. nontraditional

<table>
<thead>
<tr>
<th>Method</th>
<th>Count &lt;25</th>
<th>%</th>
<th>Count 25+</th>
<th>%</th>
<th>ANOVA F</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Websites</td>
<td>1621</td>
<td>78.7</td>
<td>1586</td>
<td>68.5</td>
<td>58.676</td>
<td>.000</td>
</tr>
<tr>
<td>Friends</td>
<td>1199</td>
<td>58.2</td>
<td>1001</td>
<td>43.2</td>
<td>100.010</td>
<td>.000</td>
</tr>
<tr>
<td>College Fairs</td>
<td>797</td>
<td>38.7</td>
<td>458</td>
<td>19.8</td>
<td>199.199</td>
<td>.000</td>
</tr>
<tr>
<td>Professors</td>
<td>746</td>
<td>36.2</td>
<td>740</td>
<td>31.9</td>
<td>8.835</td>
<td>.003</td>
</tr>
<tr>
<td>College Recruiters</td>
<td>485</td>
<td>23.5</td>
<td>362</td>
<td>15.6</td>
<td>44.143</td>
<td>.000</td>
</tr>
<tr>
<td>College Staff</td>
<td>381</td>
<td>18.5</td>
<td>398</td>
<td>17.2</td>
<td>1.277</td>
<td>.258</td>
</tr>
<tr>
<td>Professors at four-year schools</td>
<td>337</td>
<td>16.4</td>
<td>249</td>
<td>10.7</td>
<td>29.741</td>
<td>.000</td>
</tr>
<tr>
<td>Online Surveys</td>
<td>206</td>
<td>10.0</td>
<td>189</td>
<td>8.2</td>
<td>4.492</td>
<td>.034</td>
</tr>
<tr>
<td>Other Method</td>
<td>126</td>
<td>6.1</td>
<td>166</td>
<td>7.2</td>
<td>1.935</td>
<td>.164</td>
</tr>
</tbody>
</table>

$df=1, 4376$
Table 4-17: Methods used -- by age cohort

<table>
<thead>
<tr>
<th>Method</th>
<th>&lt;25</th>
<th>25-34</th>
<th>35-44</th>
<th>45-54</th>
<th>55+</th>
<th>ANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Count</td>
<td>%</td>
<td>Count</td>
<td>%</td>
<td>Count</td>
<td>%</td>
</tr>
<tr>
<td>College Websites</td>
<td>1621</td>
<td>78.7%</td>
<td>871</td>
<td>72.0%</td>
<td>470</td>
<td>68.5%</td>
</tr>
<tr>
<td>Friends</td>
<td>1199</td>
<td>58.2%</td>
<td>538</td>
<td>44.5%</td>
<td>305</td>
<td>44.5%</td>
</tr>
<tr>
<td>College fairs</td>
<td>797</td>
<td>38.7%</td>
<td>252</td>
<td>20.8%</td>
<td>131</td>
<td>19.1%</td>
</tr>
<tr>
<td>Professors</td>
<td>746</td>
<td>36.2%</td>
<td>405</td>
<td>33.5%</td>
<td>206</td>
<td>30.0%</td>
</tr>
<tr>
<td>College recruiters</td>
<td>485</td>
<td>23.5%</td>
<td>193</td>
<td>16.0%</td>
<td>113</td>
<td>16.5%</td>
</tr>
<tr>
<td>Staff</td>
<td>381</td>
<td>18.5%</td>
<td>223</td>
<td>18.4%</td>
<td>106</td>
<td>15.5%</td>
</tr>
<tr>
<td>Professors at four-year schools</td>
<td>337</td>
<td>16.4%</td>
<td>126</td>
<td>10.4%</td>
<td>83</td>
<td>12.1%</td>
</tr>
<tr>
<td>Online Surveys</td>
<td>206</td>
<td>10.0%</td>
<td>112</td>
<td>9.3%</td>
<td>52</td>
<td>7.6%</td>
</tr>
<tr>
<td>Other method</td>
<td>126</td>
<td>6.1%</td>
<td>80</td>
<td>6.6%</td>
<td>44</td>
<td>6.4%</td>
</tr>
</tbody>
</table>

df=4, 4373
Exploring the reported preferred method of researching transfer information, there were few significant differences between traditional and nontraditional students. The only significant differences at the .05 level produced by ANOVA were preferring college fairs (preferred slightly more often by traditional students) and college staff (preferred slightly more often by nontraditional students), as shown in Table 4-18.

However, the low F values of the ANOVA indicate that while significant differences exist between these groups, the actual differences are very small. Indeed, correlation analysis indicates that the Spearman’s rho (3955) = -.048, p<.05 for preference for college fairs; and the Spearman’s rho (3955) = .034, p<.05 between cohort and preference for college staff.

<table>
<thead>
<tr>
<th></th>
<th>&lt;25</th>
<th></th>
<th>25+</th>
<th></th>
<th>ANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Count</td>
<td>% prefer</td>
<td>Count</td>
<td>% prefer</td>
<td>F</td>
</tr>
<tr>
<td>Prefer Websites</td>
<td>768</td>
<td>40.6%</td>
<td>867</td>
<td>42.0%</td>
<td>.766</td>
</tr>
<tr>
<td>Prefer College Fairs</td>
<td>324</td>
<td>17.1%</td>
<td>282</td>
<td>13.7%</td>
<td>9.219</td>
</tr>
<tr>
<td>Prefer Professors</td>
<td>214</td>
<td>11.3%</td>
<td>250</td>
<td>12.1%</td>
<td>.594</td>
</tr>
<tr>
<td>Prefer Friends</td>
<td>195</td>
<td>10.3%</td>
<td>189</td>
<td>9.2%</td>
<td>1.514</td>
</tr>
<tr>
<td>Prefer Recruiters</td>
<td>189</td>
<td>10.0%</td>
<td>199</td>
<td>9.6%</td>
<td>.143</td>
</tr>
<tr>
<td>Prefer Staff</td>
<td>81</td>
<td>4.3%</td>
<td>119</td>
<td>5.8%</td>
<td>4.503</td>
</tr>
<tr>
<td>Prefer External Profs</td>
<td>52</td>
<td>2.7%</td>
<td>70</td>
<td>3.4%</td>
<td>1.352</td>
</tr>
<tr>
<td>Prefer Other Method</td>
<td>38</td>
<td>2.0%</td>
<td>50</td>
<td>2.4%</td>
<td>.769</td>
</tr>
<tr>
<td>Prefer Online Surveys</td>
<td>30</td>
<td>1.6%</td>
<td>39</td>
<td>1.9%</td>
<td>.526</td>
</tr>
</tbody>
</table>

$df=1, 3954$

Similarly, there were only a few statistically significant differences at the p<.05 level when the preferences were explored across the five cohorts, shown in Table 4-19. The only statistically significant differences were among preferring website use, college fairs, and external professors. The association between preference for website use and
cohort was non-significant with Spearman’s rho (3955) = -.002, p=.460; association of preference for external professors with cohort had a weak, positive correlation with Spearman’s rho (3955) = .044, p<.05; and association of preference for college fairs with cohort had a weak, negative correlation Spearman’s rho (3955) = -.048, p<.05.

Overall, these data suggest that students make use of fewer resources in their search for a transfer destination as they proceed through the older age cohorts and/or that they access services at a lower rate than students in younger age cohorts. However, student age does not appear to play a major role in the choice of method that a student uses to research potential transfer destinations. That said, it is somewhat notable that the 55+ cohort had higher levels of preference for one-on-one interactions such as college recruiters, faculty, and staff; rather than less personal methods such as websites and college fairs.
<table>
<thead>
<tr>
<th>Method</th>
<th>&lt;25 Count</th>
<th>&lt;25 % prefer</th>
<th>25-34 Count</th>
<th>25-34 % prefer</th>
<th>35-44 Count</th>
<th>35-44 % prefer</th>
<th>45-54 Count</th>
<th>45-54 % prefer</th>
<th>55+ Count</th>
<th>55+ % prefer</th>
<th>ANOVA</th>
<th>df=4, 3951</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefer Websites</td>
<td>768</td>
<td>40.6%</td>
<td>477</td>
<td>43.9%</td>
<td>261</td>
<td>42.4%</td>
<td>107</td>
<td>36.4%</td>
<td>22</td>
<td>31.4%</td>
<td>2.379</td>
<td>.050</td>
</tr>
<tr>
<td>Prefer College Fairs</td>
<td>324</td>
<td>17.1%</td>
<td>152</td>
<td>14.0%</td>
<td>82</td>
<td>13.3%</td>
<td>42</td>
<td>14.3%</td>
<td>6</td>
<td>8.6%</td>
<td>2.712</td>
<td>.028</td>
</tr>
<tr>
<td>Prefer Professors</td>
<td>214</td>
<td>11.3%</td>
<td>117</td>
<td>10.8%</td>
<td>84</td>
<td>13.7%</td>
<td>37</td>
<td>12.6%</td>
<td>12</td>
<td>17.1%</td>
<td>1.418</td>
<td>.225</td>
</tr>
<tr>
<td>Prefer Friends</td>
<td>195</td>
<td>10.3%</td>
<td>96</td>
<td>8.8%</td>
<td>59</td>
<td>9.6%</td>
<td>27</td>
<td>9.2%</td>
<td>7</td>
<td>10.0%</td>
<td>.457</td>
<td>.767</td>
</tr>
<tr>
<td>Prefer Recruiters</td>
<td>189</td>
<td>10.0%</td>
<td>106</td>
<td>9.8%</td>
<td>57</td>
<td>9.3%</td>
<td>26</td>
<td>8.8%</td>
<td>10</td>
<td>14.3%</td>
<td>.543</td>
<td>.704</td>
</tr>
<tr>
<td>Prefer Staff</td>
<td>81</td>
<td>4.3%</td>
<td>65</td>
<td>6.0%</td>
<td>30</td>
<td>4.9%</td>
<td>18</td>
<td>6.1%</td>
<td>6</td>
<td>8.6%</td>
<td>1.712</td>
<td>.144</td>
</tr>
<tr>
<td>Prefer External Professors</td>
<td>52</td>
<td>2.7%</td>
<td>21</td>
<td>1.9%</td>
<td>24</td>
<td>3.9%</td>
<td>20</td>
<td>6.8%</td>
<td>5</td>
<td>7.1%</td>
<td>6.118</td>
<td>.000</td>
</tr>
<tr>
<td>Prefer Other</td>
<td>38</td>
<td>2.0%</td>
<td>24</td>
<td>2.2%</td>
<td>12</td>
<td>2.0%</td>
<td>13</td>
<td>4.4%</td>
<td>1</td>
<td>1.4%</td>
<td>1.837</td>
<td>.119</td>
</tr>
<tr>
<td>Prefer Online Surveys</td>
<td>30</td>
<td>1.6%</td>
<td>28</td>
<td>2.6%</td>
<td>6</td>
<td>1.0%</td>
<td>4</td>
<td>1.4%</td>
<td>1</td>
<td>1.4%</td>
<td>1.775</td>
<td>.131</td>
</tr>
</tbody>
</table>
Do students of different cohorts access transfer-related services on their home campuses differently? Do the services they use align with their stated preferences for gaining information about the transfer process?

Another aspect of transfer student capital is taking advantage of campus resources to gather information, understand course equivalencies, plan class schedules and build academic skills to prepare for an eventual transfer. As with the methods used to research transfer destinations, the rank order of usage of the different transfer resources available to these students did not significantly change among cohorts. A factor analysis indicated a strong connection between using home college and external college websites, so those variables were combined into an Online Research factor – which was the most-used resource across all of the cohorts. Academic advisors were the next most often accessed, followed by professors. These results do align with the students’ stated preferences for researching information about the transfer process.

That said, the usage rate of transfer-related services declined significantly as students entered the older age cohorts. This mirrors Keith’s (2007) findings that there exists an inversely proportional relationship between students’ chronological ages and their use of transfer-related services. Not accessing these services decreases a student’s overall level of transfer student capital, thus reducing a student’s intent to transfer and potentially negatively affecting academic performance post-transfer.

Students were asked how often they used certain resources available on their campuses. The resources queried were:

- Academic Advisor
- Instructor/Professor
Students indicated how often they used each of these resources, and those results are indicated in Table 4-20. The most popular resources used were websites at the four year school, websites at the home college, and a student’s academic advisor. Over half the respondents did not access their campus transfer center, the Student Support Services office, course equivalency guides, transfer pathway guides, advisors at four-year schools, or Collegefish.

These usage categories were assigned values from 1-5 and means were taken to estimate overall use of a service by the respondents. The mean usage rates for each of those items is illustrated in Table 4-21. The overall mean for use of transfer-related services was 1.86 (SD=.668). Home college website, four year websites, and academic advisors were the only items where the mean usage rate was over 2.0, indicating that those were used at least once per semester, on average, sample-wide. The use of professors for that information was very close to that threshold.

---

9 Student Support Services, one of the federally funded TRIO programs, provides wraparound support services for minority, first-generation, and low SES students.
<table>
<thead>
<tr>
<th>Service</th>
<th>Count</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Advisor</td>
<td>1179</td>
<td>26.6%</td>
</tr>
<tr>
<td>Instructor/Professor</td>
<td>2034</td>
<td>45.8%</td>
</tr>
<tr>
<td>Transfer Center</td>
<td>2930</td>
<td>66.0%</td>
</tr>
<tr>
<td>Home College Website</td>
<td>942</td>
<td>21.2%</td>
</tr>
<tr>
<td>Student Support Services (TRIO)</td>
<td>3122</td>
<td>70.3%</td>
</tr>
<tr>
<td>Course Equiv. Guides</td>
<td>2392</td>
<td>53.9%</td>
</tr>
<tr>
<td>Transfer pathway guides</td>
<td>2909</td>
<td>65.5%</td>
</tr>
<tr>
<td>Four year websites</td>
<td>841</td>
<td>18.9%</td>
</tr>
<tr>
<td>Four year advising offices</td>
<td>2650</td>
<td>59.7%</td>
</tr>
<tr>
<td>Collegefish</td>
<td>3486</td>
<td>78.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service</th>
<th>Count</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Advisor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructor/Professor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfer Center</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home College Website</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Support Services (TRIO)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Equiv. Guides</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfer pathway guides</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four year websites</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four year advising offices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collegefish</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4-21: Mean usage rates of transfer services

<table>
<thead>
<tr>
<th>Service</th>
<th>mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home College Website</td>
<td>2.70</td>
<td>1.448</td>
</tr>
<tr>
<td>Four-Year Websites</td>
<td>2.66</td>
<td>1.371</td>
</tr>
<tr>
<td>Academic Advisors</td>
<td>2.28</td>
<td>1.100</td>
</tr>
<tr>
<td>Instructor/Professor</td>
<td>1.98</td>
<td>1.275</td>
</tr>
<tr>
<td>Course Equivalency Guides</td>
<td>1.79</td>
<td>1.179</td>
</tr>
<tr>
<td>Four-Year Advising Offices</td>
<td>1.57</td>
<td>.975</td>
</tr>
<tr>
<td>Transfer Pathway Guides</td>
<td>1.51</td>
<td>.994</td>
</tr>
<tr>
<td>Student Support Services (TRIO)</td>
<td>1.46</td>
<td>1.027</td>
</tr>
<tr>
<td>Transfer Center</td>
<td>1.44</td>
<td>.845</td>
</tr>
<tr>
<td>Collegefish</td>
<td>1.23</td>
<td>.698</td>
</tr>
</tbody>
</table>
While these data do indicate relative usage rates, the data are skewed heavily towards one end of the scale. To give a clearer picture of whether these services were being accessed, some data transformations were performed. First, the variables were recoded into a nominal scale. If a respondent indicated that they had not used a service at all, the variable was given a value of zero. If a respondent indicated any usage of the service, the variable was given a value of one.

A principal component analysis was then performed on the ten service choice variables with the new codes. In determining that a factor analysis would be appropriate, the KMO measure of sampling adequacy was .783 indicating a valid sample. The principal component analysis was performed with Varimax rotation. The analysis yielded three potential factors, shown in Table 4-22:

<table>
<thead>
<tr>
<th>Transfer Service</th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer Pathway Guides</td>
<td>.770</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Equivalency Guides</td>
<td>.700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfer Center</td>
<td>.594</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four-Year Advising Office</td>
<td>.527</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Support Services (TRIO)</td>
<td>.491</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collegefish</td>
<td>.472</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four-year Websites</td>
<td></td>
<td>.874</td>
<td></td>
</tr>
<tr>
<td>Home College Website</td>
<td></td>
<td></td>
<td>.845</td>
</tr>
<tr>
<td>Instructors/Professors</td>
<td></td>
<td></td>
<td>.805</td>
</tr>
<tr>
<td>Academic Advisors</td>
<td></td>
<td></td>
<td>.744</td>
</tr>
</tbody>
</table>

Reliability analyses indicated a connection among the six variables loading in the first factor (α=.699), but removing the two variables with loadings of <.5 decreased the Cronbach’s α value to .676. Looking solely at the two variables with the highest loading factors further decreased the value (α=.638). Thus, the first factor was not considered for
variable consolidation. The second factor, which was comprised of the two variables related to the access of websites – either at the home institution or the four-year institution – had a strong connection ($\alpha=.745$). These two variables could be consolidated for the purpose of determining usage. The third factor, which related to getting transfer information from either academic advisors or professors, did not have a strong connection ($\alpha=.539$). Thus, the website variables were condensed into a new Online Research variable. The new variable was coded zero if the respondent indicated that they had not used either method, or a one if they’d used either or both. New mean usage rates were calculated for the nine variables (see Table 4.23), which were consistent with the initial rank order:

Table 4-23: Mean service usage rates with recoded variables

<table>
<thead>
<tr>
<th>Service</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Research</td>
<td>3936</td>
<td>.848</td>
<td>.359</td>
</tr>
<tr>
<td>Academic Advisor</td>
<td>4053</td>
<td>.709</td>
<td>.454</td>
</tr>
<tr>
<td>Instructor/Professor</td>
<td>4023</td>
<td>.494</td>
<td>.500</td>
</tr>
<tr>
<td>Course Equivalency Guides</td>
<td>4003</td>
<td>.402</td>
<td>.490</td>
</tr>
<tr>
<td>Four-Year Advising Offices</td>
<td>3995</td>
<td>.337</td>
<td>.473</td>
</tr>
<tr>
<td>Transfer Center</td>
<td>4023</td>
<td>.272</td>
<td>.445</td>
</tr>
<tr>
<td>Transfer Pathway Guides</td>
<td>3972</td>
<td>.268</td>
<td>.443</td>
</tr>
<tr>
<td>Student Support Services (TRIO)</td>
<td>3971</td>
<td>.214</td>
<td>.410</td>
</tr>
<tr>
<td>Collegefish</td>
<td>4002</td>
<td>.129</td>
<td>.335</td>
</tr>
<tr>
<td><strong>New Usage Mean</strong></td>
<td>4066</td>
<td>.409</td>
<td>.254</td>
</tr>
</tbody>
</table>

This transformation gives a clearer picture to which services are used most often at all. Website usage and academic advisors continued to be the most widely used services to access transfer information across the entire response set.
These overall usage statistics between the traditional and nontraditional cohorts were examined via ANOVA, shown in Table 4-24. Consistent with findings in the previous question, students over the age of 25 tended to access services at a significantly lower rate than the younger students did. Of the services, the only one with a significant different in usage between these groups where the older student cohorts displayed an increase in the use of a service is the access of the Student Support Services program. Again, a test for homogeneity of variance indicated that only four of these factors pass the Levene test: professors (p = .221), course equivalency guides (p = .552), Collegefish (p = .333), and the overall mean (p = .185). However, crosstabular analysis indicated that the same differences revealed in ANOVA as significant also had significant chi-square statistics.

Table 4-24: Transfer Service Usage -- Traditional vs. Nontraditional

<table>
<thead>
<tr>
<th>Transfer Service</th>
<th>Age Cohort &lt;25</th>
<th>Age Cohort 25+</th>
<th>ANOVA</th>
<th>F</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Research</td>
<td>.8735</td>
<td>.33254</td>
<td>.8250</td>
<td>.38007</td>
<td>17.810</td>
</tr>
<tr>
<td>Academic Advisor</td>
<td>.7509</td>
<td>.43260</td>
<td>.6684</td>
<td>.47089</td>
<td>33.089</td>
</tr>
<tr>
<td>Professor/Instructor</td>
<td>.5079</td>
<td>.50007</td>
<td>.4814</td>
<td>.49978</td>
<td>2.777</td>
</tr>
<tr>
<td>Course Equivalency Guides</td>
<td>.3979</td>
<td>.48959</td>
<td>.4025</td>
<td>.49052</td>
<td>.088</td>
</tr>
<tr>
<td>Four-year advising offices</td>
<td>.3664</td>
<td>.48196</td>
<td>.3065</td>
<td>.46115</td>
<td>15.925</td>
</tr>
<tr>
<td>Transfer Center</td>
<td>.2960</td>
<td>.45663</td>
<td>.2458</td>
<td>.43065</td>
<td>12.735</td>
</tr>
<tr>
<td>Transfer Pathway Guides</td>
<td>.2901</td>
<td>.45391</td>
<td>.2443</td>
<td>.42976</td>
<td>10.531</td>
</tr>
<tr>
<td>Student Support Services (TRIO)</td>
<td>.1966</td>
<td>.39751</td>
<td>.2253</td>
<td>.41788</td>
<td>4.844</td>
</tr>
<tr>
<td>Collegefish</td>
<td>.1239</td>
<td>.32953</td>
<td>.1290</td>
<td>.33528</td>
<td>.234</td>
</tr>
</tbody>
</table>

df=1, 3998
These data were then examined in a similar fashion across the various cohorts, as shown in Table 4-25. There are several categories where there are significant differences in usage rate between the various age cohorts but, in general, the rank order of the various services were almost identical within each categories. The exception is the use of Student Support Services, which showed significantly increased use as the respondents moved into older age categories.

Returning to the research question, these data suggest that students over the age of 25 tend to use most transfer-related services slightly less often than their younger counterparts. This aligns with the earlier finding that older students tend to perform less research and use fewer research sources in making their decisions on a transfer destination. The reported use of services does seem to align with the stated preferences for researching transfer information. Students across all cohorts tend to favor online options when examining transfer options, whether at the two-year school or the four-year school.
### Table 4-25: Transfer Services Used -- across age cohorts

<table>
<thead>
<tr>
<th>Transfer Service</th>
<th>&lt;25 Mean</th>
<th>&lt;25 SD</th>
<th>25-34 Mean</th>
<th>25-34 SD</th>
<th>35-44 Mean</th>
<th>35-44 SD</th>
<th>45-54 Mean</th>
<th>45-54 SD</th>
<th>55+ Mean</th>
<th>55+ SD</th>
<th>ANOVA F</th>
<th>df=4, 3917</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Research</td>
<td>.874</td>
<td>.333</td>
<td>.825</td>
<td>.380</td>
<td>.845</td>
<td>.363</td>
<td>.811</td>
<td>.392</td>
<td>.712</td>
<td>.456</td>
<td>6.648</td>
<td>.000</td>
</tr>
<tr>
<td>Academic Advisor</td>
<td>.751</td>
<td>.433</td>
<td>.673</td>
<td>.469</td>
<td>.659</td>
<td>.475</td>
<td>.682</td>
<td>.466</td>
<td>.620</td>
<td>.489</td>
<td>8.650</td>
<td>.000</td>
</tr>
<tr>
<td>Professor/Instructor</td>
<td>.508</td>
<td>.500</td>
<td>.474</td>
<td>.500</td>
<td>.477</td>
<td>.500</td>
<td>.510</td>
<td>.501</td>
<td>.507</td>
<td>.504</td>
<td>1.049</td>
<td>.380</td>
</tr>
<tr>
<td>Course Equiv. Guides</td>
<td>.398</td>
<td>.490</td>
<td>.401</td>
<td>.490</td>
<td>.428</td>
<td>.495</td>
<td>.362</td>
<td>.481</td>
<td>.377</td>
<td>.488</td>
<td>1.007</td>
<td>.403</td>
</tr>
<tr>
<td>Transfer Center</td>
<td>.296</td>
<td>.457</td>
<td>.242</td>
<td>.429</td>
<td>.253</td>
<td>.435</td>
<td>.233</td>
<td>.423</td>
<td>.294</td>
<td>.459</td>
<td>3.503</td>
<td>.007</td>
</tr>
<tr>
<td>Transfer Pathway Guides</td>
<td>.290</td>
<td>.454</td>
<td>.232</td>
<td>.423</td>
<td>.272</td>
<td>.445</td>
<td>.239</td>
<td>.427</td>
<td>.214</td>
<td>.413</td>
<td>3.517</td>
<td>.007</td>
</tr>
<tr>
<td>Student Support Services (TRIO)</td>
<td>.197</td>
<td>.398</td>
<td>.199</td>
<td>.399</td>
<td>.239</td>
<td>.427</td>
<td>.271</td>
<td>.445</td>
<td>.324</td>
<td>.471</td>
<td>4.456</td>
<td>.001</td>
</tr>
</tbody>
</table>
Do concerns about the transfer process differ among students of differing ages? If so, how do these concerns differ?

Transfer student capital is also accumulated when a student actively deals with personal issues and concerns surrounding the transfer process. Identifying concerns can be a driving factor in initiating the process of successfully dealing with ones’ concerns and increasing one’s level of self-efficacy. The factors where students indicated the greatest level of concern with the transfer process were paying for school, academic preparedness, and time management. Concern levels regarding these three factors were highest across all cohorts. With the exception of a few means among lower-ranked areas of concern, the rank order of these concern items was basically the same from cohort to cohort.

However, in general, the overall level of concern about the transfer process was greater among traditional than nontraditional students. Looking across cohorts, the level of concern declined slightly but significantly as students moved into older age groups, with a slight uptick in the 55+ cohort. This modest correlative decline was consistent across all age cohorts, with the exception of the specific concern about child care. This concern peaked in the 25-34 age cohort and then declined from there. This pattern seems to make sense, considering general family demographics. Still, the overall lower level of concern exhibited by the older age cohorts in relation to those under 25 was statistically significant, which may be one reason for these students’ lower usage rates of services. If they do not feel high levels of concern, or if they feel those concerns are less relevant to their everyday experiences, it is less likely that they would seek assistance.
The nine concern items respondents were asked to rate (1= ”not a concern”, 10= ”very concerned”) were:

- Paying for School
- Being Academically Prepared
- Time Management
- Larger classes
- “Fitting in” with other students
- Parking
- Finding your way around campus
- Transportation
- Child care

Examining the overall concern means sample-wide, as illustrated in Table 4-26, respondents overwhelmingly stated that cost of attendance, time management, and academic preparedness were the leading concerns.

Table 4-26: Reported concerns about transfer process

<table>
<thead>
<tr>
<th>Concern</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paying for School</td>
<td>4035</td>
<td>8.79</td>
<td>2.222</td>
</tr>
<tr>
<td>Time Management</td>
<td>4029</td>
<td>7.55</td>
<td>2.741</td>
</tr>
<tr>
<td>Academic Preparedness</td>
<td>4036</td>
<td>7.51</td>
<td>2.871</td>
</tr>
<tr>
<td>Larger Classes</td>
<td>4020</td>
<td>5.61</td>
<td>3.273</td>
</tr>
<tr>
<td>Navigating Campus</td>
<td>4026</td>
<td>5.61</td>
<td>3.322</td>
</tr>
<tr>
<td>Parking</td>
<td>4027</td>
<td>5.06</td>
<td>3.306</td>
</tr>
<tr>
<td>Transportation</td>
<td>4018</td>
<td>4.44</td>
<td>3.434</td>
</tr>
<tr>
<td>“Fitting in” with students</td>
<td>4035</td>
<td>3.63</td>
<td>3.051</td>
</tr>
<tr>
<td>Child Care</td>
<td>3982</td>
<td>3.36</td>
<td>3.529</td>
</tr>
<tr>
<td><strong>Overall mean of concerns</strong></td>
<td><strong>4041</strong></td>
<td><strong>5.73</strong></td>
<td><strong>1.892</strong></td>
</tr>
</tbody>
</table>

Looking at the mean levels of concern first as traditional vs. nontraditional, students over the age of 25 had a lower overall level of concern than the younger students.
did in all categories where there was a statistically significant difference in means, with the exception of child care. In that category, students over the age of 25 had a considerably higher level of concern. Even so, that particular category was still near the bottom of the list of overall concerns. Supplemental examination of correlation coefficients between traditional and nontraditional groups and these various concerns indicated that they were weak. The highest correlation was a Spearman’s rho (3935) =.188, p<.05 for the correlation between nontraditional students and level of concern about child care. Again, several of these variables failed the Levene test for homogeneity in variance, so crosstabular analysis was performed to double check these findings. The crosstabs would be too clumsy to display here, but the same variables were considered significant in crossttabular analysis and ANOVA.

Table 4-27: Mean concerns -- Traditional vs. Nontraditional

<table>
<thead>
<tr>
<th>Concern Item</th>
<th>&lt;25 Mean</th>
<th>SD</th>
<th>25+ Mean</th>
<th>SD</th>
<th>F</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paying for School</td>
<td>8.73</td>
<td>2.192</td>
<td>8.87</td>
<td>2.227</td>
<td>3.641</td>
<td>.056</td>
</tr>
<tr>
<td>Academic Preparedness</td>
<td>7.49</td>
<td>2.803</td>
<td>7.54</td>
<td>2.929</td>
<td>.324</td>
<td>.569</td>
</tr>
<tr>
<td>Time Management</td>
<td>7.47</td>
<td>2.690</td>
<td>7.62</td>
<td>2.784</td>
<td>2.824</td>
<td>.093</td>
</tr>
<tr>
<td>Larger Classes</td>
<td>5.81</td>
<td>3.189</td>
<td>5.43</td>
<td>3.341</td>
<td>13.722</td>
<td>.000</td>
</tr>
<tr>
<td>Fitting in with students</td>
<td>3.95</td>
<td>3.113</td>
<td>3.32</td>
<td>2.950</td>
<td>43.901</td>
<td>.000</td>
</tr>
<tr>
<td>Parking</td>
<td>5.26</td>
<td>3.228</td>
<td>4.87</td>
<td>3.366</td>
<td>13.847</td>
<td>.000</td>
</tr>
<tr>
<td>Navigating Campus</td>
<td>6.06</td>
<td>3.192</td>
<td>5.21</td>
<td>3.389</td>
<td>65.360</td>
<td>.000</td>
</tr>
<tr>
<td>Transportation</td>
<td>4.71</td>
<td>3.403</td>
<td>4.19</td>
<td>3.444</td>
<td>23.070</td>
<td>.000</td>
</tr>
<tr>
<td>Child Care</td>
<td>2.73</td>
<td>3.197</td>
<td>3.94</td>
<td>3.716</td>
<td>119.392</td>
<td>.000</td>
</tr>
<tr>
<td><strong>Total Mean of Concerns</strong></td>
<td><strong>5.805</strong></td>
<td><strong>1.821</strong></td>
<td><strong>5.671</strong></td>
<td><strong>1.953</strong></td>
<td><strong>5.044</strong></td>
<td><strong>.025</strong></td>
</tr>
</tbody>
</table>

df=1, 3691

Looking at the concern levels across the various cohorts, the findings were somewhat similar (see Table 4-28). Generally, the overall level of concern drops slightly
as the student gets older, with a slight uptick once a student reaches the 55+ cohort. While the categories of significant difference remain the same as in the traditional vs. nontraditional breakdown, the correlations are quite weak. The strongest significant correlation between age cohort and concern at the p<.05 level is parking on campus, with a Spearman’s rho (3692) = -.052, p<.05.

Overall, while there are some differences in level of concern between students in different age cohorts, the general pattern is that reported concern decreases somewhat as a student gets older – with the exception of the concern about child care, which understandably would rise as a student moved through adulthood – peaking in a student’s 30’s and 40’s. Otherwise, the association of age cohort on a student’s overall level of concern about transferring to a four-year school appears to be modest.
Table 4-28: Mean Concerns -- Across age cohorts

<table>
<thead>
<tr>
<th>Concern Item</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>F</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paying for School</td>
<td>8.73</td>
<td>2.192</td>
<td>8.79</td>
<td>2.316</td>
<td>9.03</td>
<td>1.986</td>
<td>8.92</td>
<td>2.159</td>
<td>8.36</td>
<td>2.924</td>
<td>3.005</td>
<td>.017</td>
</tr>
<tr>
<td>Academic Preparedness</td>
<td>7.49</td>
<td>2.803</td>
<td>7.39</td>
<td>3.002</td>
<td>7.64</td>
<td>2.829</td>
<td>7.84</td>
<td>2.842</td>
<td>7.71</td>
<td>2.905</td>
<td>1.927</td>
<td>.103</td>
</tr>
<tr>
<td>Time Management</td>
<td>7.47</td>
<td>2.690</td>
<td>7.54</td>
<td>2.830</td>
<td>7.76</td>
<td>2.657</td>
<td>7.67</td>
<td>2.858</td>
<td>7.41</td>
<td>2.836</td>
<td>1.451</td>
<td>.214</td>
</tr>
<tr>
<td>Fitting in with students</td>
<td>5.81</td>
<td>3.189</td>
<td>5.45</td>
<td>3.383</td>
<td>5.50</td>
<td>3.294</td>
<td>5.13</td>
<td>3.254</td>
<td>5.59</td>
<td>3.439</td>
<td>11.39</td>
<td>.000</td>
</tr>
<tr>
<td>Transportation</td>
<td>3.95</td>
<td>3.113</td>
<td>3.25</td>
<td>2.935</td>
<td>3.43</td>
<td>3.005</td>
<td>3.27</td>
<td>2.896</td>
<td>3.51</td>
<td>2.938</td>
<td>6.597</td>
<td>.000</td>
</tr>
<tr>
<td>Child Care</td>
<td>2.73</td>
<td>3.197</td>
<td>4.88</td>
<td>3.895</td>
<td>3.51</td>
<td>3.512</td>
<td>1.95</td>
<td>2.320</td>
<td>1.57</td>
<td>1.901</td>
<td>88.371</td>
<td>.000</td>
</tr>
<tr>
<td>Total Mean of Concerns</td>
<td><strong>5.81</strong></td>
<td><strong>1.821</strong></td>
<td><strong>5.76</strong></td>
<td><strong>1.987</strong></td>
<td><strong>5.67</strong></td>
<td><strong>1.910</strong></td>
<td><strong>5.39</strong></td>
<td><strong>1.896</strong></td>
<td><strong>5.61</strong></td>
<td><strong>1.964</strong></td>
<td>3.362</td>
<td>.009</td>
</tr>
</tbody>
</table>

df=4, 3967
Age Cohort and Transfer Student Capital

To review, the data presented to this point demonstrate that a student’s reported intent to transfer decreases as they get older, whether that age difference is categorized as traditional vs. nontraditional or across the various age cohorts. Age was also related to when students began their exploration of the transfer process and looking at specific schools. Older students tended to start their transfer search later than younger students. On the other hand, no major significant differences were found in what students find important in their choice of a transfer destination other than the importance of the availability of online courses, which increases as a student gets older.

There were few significant relationships between student age and the individual methods that students use to research transfer destinations. However, there did seem to be an inverse relationship between the number of sources used to research transfer destinations and a student’s age cohort.

Similar associations were seen regarding age and the usage of transfer-related campus services. There were no major differences in relative usage of the various individual services. In other words, the ranking of services used was similar across cohorts. However, importantly, the overall levels of usage of these transfer-related services declined as students moved into older age cohorts.

As for the concern about transfer that students express – a student’s age had little to do with what aspects they were concerned about regarding the transfer process, with the exception of whether a student had child care needs. Again, however, there was a notable decline in level of concern in older age cohorts.
To examine the effect of the accumulation of transfer student capital vis a vis intent to transfer across the various cohorts, linear regression analysis was performed with intent to transfer as a dependent variable. The data show that when looking at age cohort alone, subsequent age cohorts show a statistically significant negative effect on intent to transfer. When other demographic variables are added to the model, increasing age cohort remained a significant negative effect on intent to transfer, rendering most other demographic variables non-significant.

However, when including scales that reflect actions through which a student accumulates transfer student capital – access of services, planning for transfer, researching transfer destinations, and mean level of concern – age cohort became a non-significant effect on intent to transfer, thus illustrating the overall effect of transfer student capital on a student’s intent to transfer. Increased use of transfer services, starting the planning process early, and researching specific destinations all had strong, positive effects on intent to transfer. Increased levels of concern had a statistically significant negative effect, but that effect was extremely modest.

While there is an apparent decrease in intent to transfer as a student moves through the older age cohorts, this decrease may be an indirect effect of the diminished overall accumulation of transfer student capital in older age cohorts, since the data show that older students tend to access transfer resources at a lower rate and start their transfer planning processes later than traditional-aged students. As well, older students tend to report lower overall levels of concern with the transfer process, which may indicate that they would feel less need to access these services to ameliorate these concerns.
To test whether age differences on intent to transfer are a direct or indirect effect, stepwise linear regression analyses were performed using transfer intent as the dependent variable. First, the regression was performed using dichotomous variables for each of the various age cohorts (using the under 25 cohort as a reference variable). The results of the first model are shown in Table 4-29. Collinearity statistics are within appropriate tolerances. All variables have tolerances above .871 (cutoff is .1) and VIF scores below 1.148 (cutoff is 10). The r-squared value for this model is .015, indicating that it accounts for 1.5% of the variance in transfer intent. This model indicates that each of the age cohorts has a modest, negative effect on intent to transfer. Students in the 25-34, 35-44, 45-54, and 55+ categories have lower levels of transfer intent than students under the age of 25.

Table 4-29: Regression Model 1 -- Intent to transfer

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>8.153</td>
<td>.057</td>
<td>142.512</td>
<td>.000</td>
</tr>
<tr>
<td>25-34</td>
<td>-.397</td>
<td>.094</td>
<td>-.068</td>
<td>-4.213</td>
</tr>
<tr>
<td>35-44</td>
<td>-.568</td>
<td>.114</td>
<td>-.079</td>
<td>-4.965</td>
</tr>
<tr>
<td>45-54</td>
<td>-.898</td>
<td>.152</td>
<td>-.092</td>
<td>-5.903</td>
</tr>
<tr>
<td>55+</td>
<td>-1.356</td>
<td>.297</td>
<td>-.070</td>
<td>-4.570</td>
</tr>
</tbody>
</table>

$R^2 = .015$; adj. $R^2 = .014$

Next, demographic categories were added to the model. These categories included total credits earned (broken up into 15 credit-hour categories: 0-15, 16-30, etc.), whether a student had attended college previously, declared degree (undecided used as reference variable), gender (female as reference category), marital status (single, never married vs. married or previously married), number of children, first generation student status,
Hispanic ethnicity, white (all non-white races combined and used as a reference category), and employment status (employed used as reference category).

Results of this model are illustrated in Table 4-30. Collinearity statistics again revealed few concerns with multicollinearity – all variables’ tolerances were above .325 and had VIF scores under 3.077. The r-squared for this model was 0.84, indicating that it accounted for 8.4% of the variance in transfer intent. As in the first model, membership in the nontraditional cohorts demonstrated significantly negative differences in transfer intent as compared to the under 25 cohort, with that negative effect increasing as a student moved into older cohorts. Among other variables, declaring an Associate in Arts/Science major had a significantly positive effect in intent compared to being undecided, but declaring an Associate in Applied Science was non-significant. The total number of credits earned had a modestly positive effect on intent to transfer. Being single, never married, was a significantly positively related to transfer intent, in comparison to ever being married. Gender did not have a significant effect. Being Hispanic had a significantly positive effect in comparison to non-Hispanic, but white vs. non-white racial differences were not significant in their effect on intent. Finally, not being employed had a significantly negative effect on intent to transfer.
Table 4-30: Regression Model 2 -- Intent to Transfer

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Unstd. Coefficients</th>
<th>Std. Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>6.666</td>
<td>.229</td>
<td>29.123</td>
<td>.000</td>
</tr>
<tr>
<td>25-34</td>
<td>-.252</td>
<td>.114</td>
<td>-.043</td>
<td>-2.208</td>
</tr>
<tr>
<td>35-44</td>
<td>-.413</td>
<td>.139</td>
<td>-.058</td>
<td>-2.964</td>
</tr>
<tr>
<td>45-54</td>
<td>-.709</td>
<td>.181</td>
<td>-.070</td>
<td>-3.928</td>
</tr>
<tr>
<td>55+</td>
<td>-1.428</td>
<td>.335</td>
<td>-.070</td>
<td>-4.268</td>
</tr>
<tr>
<td>Attended college</td>
<td>-.029</td>
<td>.091</td>
<td>-.005</td>
<td>-3.320</td>
</tr>
<tr>
<td>previously</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total credits earned</td>
<td>.206</td>
<td>.030</td>
<td>.116</td>
<td>6.793</td>
</tr>
<tr>
<td>Associate in</td>
<td>1.274</td>
<td>.144</td>
<td>.241</td>
<td>8.833</td>
</tr>
<tr>
<td>Science/Arts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate in Applied</td>
<td>.258</td>
<td>.152</td>
<td>.047</td>
<td>1.698</td>
</tr>
<tr>
<td>Science</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single, Never Married</td>
<td>.391</td>
<td>.104</td>
<td>.075</td>
<td>3.747</td>
</tr>
<tr>
<td>Number of Children</td>
<td>.008</td>
<td>.038</td>
<td>.004</td>
<td>.225</td>
</tr>
<tr>
<td>First Generation</td>
<td>-.047</td>
<td>.094</td>
<td>-.008</td>
<td>-4.98</td>
</tr>
<tr>
<td>Student</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>.546</td>
<td>.253</td>
<td>.034</td>
<td>2.157</td>
</tr>
<tr>
<td>White, Non-Hispanic</td>
<td>-.102</td>
<td>.139</td>
<td>-.012</td>
<td>-7.38</td>
</tr>
<tr>
<td>Male</td>
<td>.161</td>
<td>.101</td>
<td>.025</td>
<td>1.591</td>
</tr>
<tr>
<td>Not Employed</td>
<td>-.351</td>
<td>.090</td>
<td>-.062</td>
<td>-3.914</td>
</tr>
</tbody>
</table>

r²=.083; adj r²=.080

In the third and final model, the variables related to the accumulation of transfer student capital were added. These variables included when a student started his or her planning process, whether they were considering specific colleges, mean access of services, and mean level of concern.

Collinearity statistics with this regression (see Table 4-31) were again within appropriate tolerances. All variables have tolerances above .321 and VIF scores below 3.117. The r-squared value for this model is .309, indicating that it accounts for 30.4% of
variance in transfer intent. Hence, much more variance in intent to transfer was explained by the inclusion of the transfer capital measures.

Looking first at age cohort in this model, age cohort no longer has a statistically significant effect on intent to transfer once transfer student capital measures are added. In fact, the standardized beta coefficient for all cohorts’ dummy variables decreased by at least 50% with the addition of the capital measures. This attenuation suggests that the effects of “cohort” are mediated by the accumulation of transfer student capital.

Variables related to the accumulation of transfer student capital all have statistically significant effects on a student’s intent to transfer. Considering being a transfer student before starting at the community college or during a student’s first semester has a positive effect ($\beta=1.117$), as does whether a student has started considering specific transfer destinations ($\beta=1.698$), and the rate at which they access transfer-related services on their campus ($\beta=1.506$). These are the strongest significant effects on intent to transfer in the model of any variables. A student’s level of concern has a statistically significant negative effect, but that effect is much weaker ($\beta=-.050$). These results imply that the decrease in transfer intent as a student moves into sequentially older age cohorts, as shown in the previous models, is an indirect effect. This decrease is actually due to older students’ overall lower levels of accumulation of transfer student capital.

Other significant variables affecting intent to transfer include the total number of credits a student has earned ($\beta=.162$); declaring an Associate in Arts/Science major\(^{10}\)

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\(^{10}\) This should follow, considering that the Associate in Arts and Associate in Science majors are designed as transfer majors. Declaring the proper major could also be considered an accumulation of transfer student capital.
(β=.610), and not being employed (β= -.175). Number of children, credits earned, gender, race/ethnicity, and first generation student status were not statistically significant in this model.

In summary, while age cohorts do have some effect on a student’s intent to transfer and other aspects of the transfer process, the actions generally understood to increase the level of transfer student capital have a much more powerful effect on a student’s overall intent to transfer. Since students in older age cohorts tend to access transfer related services less often, gather information about transfer destinations later in their community college career, and actively make plans to transfer at a lower rate that traditional age students, students in these cohorts would not have accumulated as much transfer student capital and thus should report a lower degree of transfer intent.
Table 4-31: Regression Model 3 — Intent to Transfer

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Unstd. Coefficients</th>
<th>Std. Error</th>
<th>Std. Coeff.</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>4.946</td>
<td>.244</td>
<td></td>
<td>20.280</td>
<td>.000</td>
</tr>
<tr>
<td>25-34</td>
<td>.067</td>
<td>.096</td>
<td>.013</td>
<td>.695</td>
<td>.487</td>
</tr>
<tr>
<td>35-44</td>
<td>-.109</td>
<td>.117</td>
<td>-.017</td>
<td>-.933</td>
<td>.351</td>
</tr>
<tr>
<td>45-54</td>
<td>-.143</td>
<td>.155</td>
<td>-.016</td>
<td>-.922</td>
<td>.357</td>
</tr>
<tr>
<td>55+</td>
<td>-.425</td>
<td>.276</td>
<td>-.024</td>
<td>-1.540</td>
<td>.124</td>
</tr>
<tr>
<td>Started Transfer</td>
<td>1.138</td>
<td>.079</td>
<td>.229</td>
<td>14.429</td>
<td>.000</td>
</tr>
<tr>
<td>Research Before</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Usage of Services</td>
<td>1.505</td>
<td>.148</td>
<td>.161</td>
<td>10.189</td>
<td>.000</td>
</tr>
<tr>
<td>Considering Specific</td>
<td>1.681</td>
<td>.082</td>
<td>.328</td>
<td>20.408</td>
<td>.000</td>
</tr>
<tr>
<td>Transfer Destinations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean of Transfer</td>
<td>-.048</td>
<td>.019</td>
<td>-.039</td>
<td>-2.566</td>
<td>.010</td>
</tr>
<tr>
<td>Concerns</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total credits earned</td>
<td>.146</td>
<td>.025</td>
<td>.093</td>
<td>5.770</td>
<td>.000</td>
</tr>
<tr>
<td>Associate in Science/Arts</td>
<td>.625</td>
<td>.123</td>
<td>.133</td>
<td>5.098</td>
<td>.000</td>
</tr>
<tr>
<td>Associate in Applied</td>
<td>.229</td>
<td>.129</td>
<td>.047</td>
<td>1.779</td>
<td>.075</td>
</tr>
<tr>
<td>Science</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single, Never Married</td>
<td>.117</td>
<td>.087</td>
<td>.025</td>
<td>1.348</td>
<td>.178</td>
</tr>
<tr>
<td>Number of Children</td>
<td>.022</td>
<td>.032</td>
<td>.011</td>
<td>.701</td>
<td>.483</td>
</tr>
<tr>
<td>First Generation Student</td>
<td>.059</td>
<td>.078</td>
<td>.011</td>
<td>.761</td>
<td>.447</td>
</tr>
<tr>
<td>Hispanic</td>
<td>.205</td>
<td>.200</td>
<td>.015</td>
<td>1.023</td>
<td>.306</td>
</tr>
<tr>
<td>White, Non-Hispanic</td>
<td>-.046</td>
<td>.117</td>
<td>-.006</td>
<td>-.391</td>
<td>.696</td>
</tr>
<tr>
<td>Full Time Employment</td>
<td>.188</td>
<td>.090</td>
<td>.037</td>
<td>2.086</td>
<td>.037</td>
</tr>
<tr>
<td>More than Part Time</td>
<td>.102</td>
<td>.104</td>
<td>.017</td>
<td>.977</td>
<td>.329</td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part Time Employment</td>
<td>.130</td>
<td>.097</td>
<td>.023</td>
<td>1.329</td>
<td>.184</td>
</tr>
</tbody>
</table>

\[ r^2 = .309 \text{ adj } r^2 = .304 \]
Chapter 5 – DISCUSSION

To review, a student’s membership in a particular age cohort appears to have an effect on a student’s reported intent to transfer and on certain aspects of the transfer process, but it is the overall accumulation of transfer student capital which has a much more proximal effect on whether a student intends to transfer to a four-year school. The focus of this study is on the applied effects of transfer student capital, but the results touch on several areas of the theoretical framework considered in the review of literature. In this section, some of these extensions of theory will be further explored, along with implications for practice at both two and four-year schools.

Implications for Theory

Transfer Student Capital

The concept of transfer student capital itself is expanded by this research. When Laanan posited his concept of transfer student capital, the concept was framed in terms of a transfer student’s academic performance at a four-year institution and how well that student was able to resist transfer shock. The more transfer student capital a student accumulated while they were students at a community college (or other school from which they may have transferred), the more successful that student would be after they successfully complete the transfer process and begin their new chapter at a four-year institution. Thus, Laanan was focusing on the effects of transfer student capital on the “back end” of the transfer process.

In comparison, this exploration into students pre-transfer seems to indicate that when a student goes through the processes of accumulating transfer student capital, that student is not only improving their odds of eventual success at their new institution – they
are bolstering their intent to go through that process in the first place. In sum, this study has extended the concept of transfer student capital to apply to important actions as a student begins the actual transfer process. Additionally, the results of this study offer additional interpretations into Laanan’s own discussion of the predictive power of transfer student capital in determining a student’s academic and social integration into the contexts of a student’s new four-year school.

In the academic realm, Laanan et al. found “students’ motivations for transfer and academic counseling experiences at a community college were negatively influencing the academic adjustment” (2011, p. 191). Laanan uses “academic counseling” as an equivalent term for academic advising, and he wonders whether students have received accurate information at the two year school before transferring. This certainly might follow, as two-year academic advisors may be more focused towards completion of a student’s associate degree than on aligning those degree requirements with an eventual bachelor’s degree. In doing so, however, Laanan assumes that the students are actually taking advantage of these sorts of available services while at the community college, and/or that they have an understanding of the process of aligning their course enrollments concurrently with the requirements at both the two and four year school. The data indicate that students are simply not using these sort of support services as often as they could, and that the use of these services declines as students move into subsequent age cohorts. Thus, it is difficult to make the assumption that Laanan does that it is incorrect information that the students are receiving – rather, it is whether the students are receiving that information at all.
As well, Laanan’s LTS-Q items measuring “motivations for transfer” do not examine the same factors as the concept of intent to transfer at the two-year school. Laanan examines “motivation” for transfer in terms of baccalaureate completion rather than the actual transfer transition itself. Laanan’s motivation items ask students about aspects related to academic reputation – for instance, whether they believe graduates of a particular four year school gain admission to top graduate/professional schools, get good jobs, and their perceived rankings in national magazines (Laanan, 2004, p. 203). In short, the assumption is that the students are making the jump to the four-year school with the intent of using their credential as a means to not only improve socioeconomic status, but to gain a certain level of prestige and also perhaps “transfer” to a graduate school. In examining the data, academic reputation is not given as a primary reason why students choose a particular school as a possible transfer destination. The students seem much more interested in whether a school offers a particular program than how that program’s quality may be viewed from an external perspective.

Similarly, examining a student’s social integration at a four-year school, Laanan states, “[C]ourse learning at a community college was not positively influencing students’ social transfer adjustment” and suggests that a student develops social skills over time regardless of their academic experiences (Laanan et al., 2011, p. 191). While this may well be the case, the outcome of this study, specifically the “Social Aspect” factor generated in the analysis, indicates that community college students do not highly prioritize social engagement on their new campus as an important factor when making transfer decisions, and is likely not a major part of the student’s mindset when initially entering the new environment. Students are much more interested, at least at the
beginning of their time as a transfer student, in how long it will take to complete their chosen program and whether they are going to be able to afford the cost of attendance. Laanan goes on to point out that interactions with faculty at the four-year school, as well as whether the student feels the campus is welcoming, have positive effects on a student’s social interaction. These sorts of student post-transfer engagement activities are undoubtedly efficacious in helping to retain students once they reach the four-year school (which is completely consistent with the observations of Tinto, Astin, etc.) – but students may not be thinking of those sorts of activities as a decision factor before making the jump between institutions.

Future iterations of the concept of transfer student capital should focus additionally on the student’s actual experiences in the community college environment and their motivations for making the initial transfer, rather than examining the typical outcomes that a native four-year student pursues.

**Nontraditional Students**

The age of 25 does provide a convenient break-point for comparing students who are starting college and university directly from high school and those who began later. Most high school students do graduate at around the age of 18, and 76% of student complete a bachelor’s degree within six years (Cataldi et al., 2011), so that age cutoff is logical. As Kim (2002) indicates, however, lumping all students who are 25 years old or older may be inadequate to properly explore the varied experience of students who did not follow a direct path to a bachelor’s degree.

This research supports Kim’s view to a great extent. Merely looking at the traditional vs. nontraditional dichotomy would have masked many of the differences
indicated by the research, especially when considering aspects of the experience like concerns about child care among 25-34 olds, the desire for more personal interaction among the older age cohorts, or the increasingly diminishing use of services as students grow older. While there are some generalizations about age cohort effects we can draw from these data, those effects are potentially mitigated by interventions designed to increase students’ levels of transfer student capital. Thus, examining age cohorts more closely may lead to a data-driven illustration of how smaller, more targeted interventions may be more beneficial for particular groups of students of a certain age.

Also, these observations somewhat assuage Fairchild’s (2003) criticism of Tinto & Astin – namely that their research focuses on traditional-aged students and may not accurately reflect the processes that help or hinder and adult student’s retention and success. Among other things, Tinto and Astin’s theories each indicate that students who form connections with faculty and staff and access services at an institution tend to be more engaged, have higher levels of persistence, and earn better grades than students who simply take courses and do not foster those sorts of connections. The interventions that colleges, both two- and four-year, develop to serve their students can result in an increased number of these sorts of connections, resulting in overall improved academic performance and reduced levels of transfer shock through increased transfer student capital. However, those connections potentially arise in different ways for different age cohorts. Since older students reported that they did not prioritize the development of those relationships during their time at community college, this could hinder these students’ overall accumulation of transfer student capital and thus reduce their level of students’ transfer intent.
Considerations for Other Theoretical Constructs

As students are considering making the jump from two-year to four-year school, regardless of their age, an individual student’s intent to transfer offers a glimpse into where a student sees him or herself in the future. When a student expresses a high level of confidence that they will eventually become a successful transfer student, they are presenting that as their particular self-concept. This ties into Bandura’s (1977) concept of self-efficacy and Schlossberg’s Transition Theory (Evans et al., 1998).

Self-Efficacy

In Moser’s (2013) revision of the Laanan questionnaire, a “motivation and self-efficacy” section was added, which included items to better capture whether a student had declared a major, intended to graduate from their four-year institution, felt that they were academically capable, and had a strong desire to graduate. All of these items relate to the concept of self-efficacy, in that these are personal reflections on what an individual believes they can accomplish, which leads to introspection about how one can achieve these goals or maintain a certain level of performance. While these self-efficacious beliefs are not predictive, in and of themselves, of academic success, they do allow an individual to lay the groundwork for progress towards goals.

Even so, in the realm of transfer student capital as studied at the four-year level, self-efficacy is included in the construct as a way to determine how successfully a student feels he or she may have made the transition to the four year school and whether they feel that they can succeed in the environment. Students with higher levels of self-efficacy also have higher baseline levels of transfer student capital and thus should be able to
successfully resist transfer shock and/or attrition. Transfer student capital acts as a buffer against those undesirable outcomes.

However, at the community college level, the processes and behaviors through which a student accumulates transfer student capital run parallel to the sorts of processes and behaviors which increase a student’s level of self-efficacy. Transfer student capital acts as an amplifier of positive outcomes – in this case, intent to go through the transfer process. To successfully pass through the transfer process, a student builds his or her level of self-efficacy through mastery experiences, vicarious experiences, and social persuasion. Rather than a “chicken or egg” relationship, transfer student capital and self-efficacy at the two-year level seem to be synergistic concepts, working in tandem to help a student move from one academic environment to another. Transfer student capital is built through an individual’s external interactions and use of available resources, while the building of academic self-efficacy is ultimately introspective -- being based on the internal processing of one’s interactions with one’s environment. These two processes would logically create a positive feedback loop towards a student’s eventual success, and that conceptual relationship may be worth examining.

Schlossberg’s Transition Theory

Regarding Schlossberg’s theory, the transfer process would be termed an “anticipated” transition, so individuals would necessary plan – whether formally or informally – how to move through that transition. In doing so, they would view that transition’s impact on their day-to-day lives, since students would have to view themselves in a new and different academic context – the “situation” aspect of a transition. As Rice (2003) indicated, students have different concerns and must balance
multiple roles as they juggle the requirements of being a student – which includes the necessity of planning for the transfer process, an aspect of transfer student capital-building. These multiple roles, then, could make it more difficult for a student to adequately plan for the transfer process – potentially leading towards an attitude of “I’ll deal with it when the need arises” displayed by many community college students as illustrated by Monroe (2006). The more external roles a student must balance, the less a student is able to focus exclusively (or at least largely) on the transfer process. If students are not proceeding mindfully through the transfer process, they are not accumulating transfer student capital as effectively as they could, and it would follow that a student’s reported intent to transfer would be lower than students who are demonstrating such intention.

A student actively working to increase the level of transfer student capital he or she possesses is effectively moving through the process of seeing themselves as becoming a student at a new institution. This student must envision what he or she believes is the best way for them to manage that sort of transition. The more often a student avails themselves of opportunities to build their level of transfer student capital, the better able they will be to feel the degree of control which Schlossberg discusses as critical to successfully managing such a transition. As well, the student would be better able to recognize that they might need assistance from others – be those others members of the academic community or members of their personal community outside the campus grounds. With these additional inputs and supports, a student would be able to more effectively create personal success strategies that relate to their particular situation.
As a student accumulates transfer student capital, then, Schlossberg’s theory would suggest that the student would evidence a lower level of stress and anxiety and feel more comfortable in a context that involves at least some degree of uncertainty. This lower level of anxiety would necessarily improve a student’s odds of success and would also bolster one’s intent to complete the process – in this case, transferring successfully.

**Implications for Practice**

The results of this study indicate that a student’s accumulation of transfer student capital has a significant influence on his or her eventual intent to transfer to a four-year institution. While age cohort has a statistically significant effect on a student’s intent to transfer – more statistically significant than any other demographic delineation in the tested model – those effects are mitigated by a student’s accumulation of transfer student capital through the access of information and services. Therefore, the accumulation of transfer student capital and the concomitant increase in reported intent to transfer seems to have much more to do with how intentional a student is about moving through the transfer process itself at a particular point in time, rather than on a student’s particular life situation, family structure, or background.

Since it is a student’s own academic actions that drive the accumulation of transfer student capital, it follows that academic institutions should assist students in this process through targeted intervention and support. In providing these interventions, institution – both four year and two year – must find ways to assure that students of all ages are actively engaged in seeking out and using these services. As Kasworm (2010) points out, students become less engaged with campus as they age, partly because they may not see the institution as welcoming and accepting to students like them. If these
interventions -- which can be initiated at numerous points across a student’s academic timeline – are coupled with more effective communication to help a student connect more readily to the institution, this should provide an opportunity for these students to benefit from increased service utilization and institutional connection, thus increasing their stockpile of transfer student capital.

**Suggestions during Student Entry to Community College**

As demonstrated by Lang (2009), simply informing a student that the opportunity to transfer to a four-year school exists does not increase one’s interest or motivation in that eventual transfer. Announcing articulation agreements and transfer partnerships with different schools and programs may yield positive publicity for an institution in a community, but it likely will not motivate a student to pursue these programs. If that hypothetical announcement is coupled with a detailed plan of how a student would seamlessly progress from initial enrollment at least through the designated transition point for a student, preferably involving completion of an associate degree, the student would better be able to develop at least a rough term-by-term plan of how they would reach that transition. Developing such a plan is crucial, even (or perhaps especially) if it involves part-time attendance. These sorts of transfer pathways allow a student, especially a student balancing multiple roles, to effectively build an academic plan for various contingencies, whether these be life circumstances, work obligations, family responsibilities, and so on, again increasing their level of transfer student capital.

Additionally, it benefits a student for an institution to be very specific about bachelor’s degree options that can be pursued with transfer-based majors. Many community colleges simply offer Associate of Arts and Associate of Science degrees as
stand-alone majors. Institutions often indicate that potential transfer students should major in one of these degree programs without providing any additional information about how those particular associate degree programs eventually connect to a bachelor’s degree\textsuperscript{11}. These sorts of degrees must be accompanied with some sort of guidance that a student can access – whether through online resources, professors, advisors, etc. – that allows them to make good long term choices in course enrollment.

Also, many institutions often simultaneously offer two-year terminal degrees in similar programs, which can cause confusion. For instance, a student entering a community college may wish to eventually become a Certified Public Accountant, which requires a minimum credential of a bachelor’s degree. Such a student would need to be in a program that would facilitate an eventual transfer into a bachelor’s level Accounting program at a four-year school. However, the community college might also offer a two-year Accounting degree, which is sufficient for careers such as bookkeeping or public accounting assistant (Wilson & Ridner, 2015). A student lacking the knowledge of the difference between those two programs might simply tell an Admissions professional that they wish to “major in Accounting,” which could lead them to declare an incorrect major -- an obvious blow to a student’s intent to transfer. An institutional focus on communicating different academic paths within a subject area might ameliorate this confusion and aid in accumulation of transfer student capital.

Most institutions also require an orientation for new students of some sort. Orientation is generally when an institution makes new students aware of services

\textsuperscript{11} For an example, see “Associate Degrees and Transfers” at http://gateway.kctcs.edu/en/Academics/Programs_of_Study.aspx
available on campus such as financial aid, tutoring, campus organizations, academic advising, and the like. Including specific sessions for students who express an intent to eventually transfer to a four-year school that focuses on services specific to potential transfer students could be a way to help a student begin gathering knowledge of resources and how to access these services. This knowledge could prove very useful among nontraditional students who tend to access services at a lower rate, perhaps because they are not aware that the services exist, or they may not understand how to ask for that sort of assistance. Also, especially for students balancing multiple roles and schedules, finding alternative methods of delivering orientation information would be essential, as many students cannot logistically spend hours at a sitting in one place. Online options and/or modular orientations may assist in this process, while still allowing the desired institutional engagement and initial boost to transfer student capital.

**Suggestions while Students are Attending Community College**

As discussed, the more often a student accesses transfer-related services at their campus, the higher their level of transfer student capital and the stronger their intent to transfer becomes. From an institutional level, a student’s term-to-term planning often revolves around the academic advising process. This process assures that a student is taking the correct courses in the proper sequence to achieve their desired educational outcome. The base assumption is that the institution possesses the correct information to pass along to students to assist them in the process. While this is often the case for the terminal associate degrees, proper *transfer* advising would require an advisor to have the knowledge of course equivalencies between institutions, if not up-to-date academic pathways, to assure that students are taking applicable courses for their eventual
bachelor’s degree while in the process of earning an associate’s. Four-year schools should work actively with their primary two-year feeder colleges to assure that accurate information is available to advisors and students alike to assure smooth progress and proper planning for the future. This also would require four year schools to publicize curricular changes, alterations in course equivalencies, and the like in an active manner.

Many institutions, in an attempt to bolster student retention, provide programmatic services specifically to groups that are often labeled “at-risk,” such as minority students, first-generation students, and nontraditional students under a justification that the needs of the members of a particular group will not be met by the institutional service offerings for the “typical” student population. The results of this study show, however, that these demographic subcategories of student have little significance when looking at a student’s eventual intent to transfer.

In light of such findings, the benefit of these sorts of programs seem to be less related to the attention to the specific category of student, but rather that these programs offer more efficient access to these sorts of services. For instance, a student who works with the Student Support Services (TRIO) office as a first-generation college student will have convenient proximity to services that build transfer student capital; will gain access to resources to assist with potential life issues outside the classroom; and will have more of an opportunity to model positive student behaviors from existing participants.

Following, students across differing age cohorts could benefit from the sort of arrangements provided by these “wraparound services,” On many community college campuses, nontraditional students can actually be a majority of the students. Thus, considering services that align with the particular concerns of an age cohort could then
help those students learn about and access other services that would accelerate their accumulation of transfer student capital. For instance, since the 25-34 cohort expressed increased levels of concern about child care and if an institution decides to offer such services in response to this reported concern; then perhaps tutoring or academic support workshops could be offered in an adjacent space, making those services more convenient to access.

**Suggestions for Assisting Students in Collecting Transfer Information**

As the data demonstrated, community college students of all ages overwhelmingly prefer researching transfer-related information, both at their own institution and at potential four-year destinations, in an online format. While students may take advantage of search sites and online school-location surveys from time to time, the majority of students state that they will simply attempt to directly access the information from an institutional website.

The major implication of this finding, of course, is that institutions must prioritize efforts to maintain online information in formats that are easy to access and easy to understand. Academic-related transfer information is often buried on institutional websites in lieu of admissions information for first-time students. For instance, a four-year institution might publish a curriculum guide to a bachelor’s degree for native students, but not provide easy-to-understand course equivalencies so that a student wishing to transfer could see in advance how their credits would be accepted by the new school. Often, students are required to actively apply to a four-year school (which typically involves an application fee – a financial barrier for many community college students) before they will be provided with an accurate evaluation of their credits. Four-
year institutions should assure that students can get these and other common transfer-related questions, such as typical expenses outside the provided cost of attendance, availability of classes, timelines for academic programs, additional admissions requirements, and the like answered with a minimum of effort.

Also, as shown by this study, recruitment efforts by four-year schools must necessarily differ from the recruiting of first-time freshmen matriculating from high school. Students in this sample report that they more interested in the practical aspects of program completion: availability of programs, cost, financial aid availability, and an accurate measure of time to degree. While campus culture, class size, and extracurricular activities may be important aspects for retaining transfer students after they arrive on campus, focusing on those aspects of the college experience during the recruitment process likely will not resonate with many students researching transfer.

As well, many four-year schools do not actively recruit adult students as “normal” transfer students – focusing instead on the younger students as primary targets. While this is understandable from a historical perspective, four-year schools who do not recruit nontraditional students are passing over a sizable percentage of the overall student body, as the data reflect.

To attract older students, some institutions provide limited evening and weekend college options often marketed as “for working adults” or “executive” that are separate and sundry from the “traditional” academic programs. These programs often have separate faculty and are may not be seen as connected to the “real” college. While the necessity of flexible scheduling is clear, these programs should be integrated with and connected to the larger academic departments so that students can move between these
types programs with more ease, to better allow the students to build their transfer student capital by making accurate plans for their present life circumstances.

**Suggestions for Assistance with the Transfer Process**

A two-year institution can help a student accumulate transfer student capital by educating them in the ins and outs of the transfer process and the expectations of a transfer student. This process should include “nuts and bolts” information of ordering transcripts, updating financial aid information, financial literacy (since tuition will undoubtedly be higher at the four year school), academic expectations, study skills and the like. These are the sorts of topics often covered in “Intro to College” courses, enrollment in which should be encouraged for students who plan to eventually progress to a four-year institution. If such courses are not available, such information can be integrated into the curricula of other courses which enroll a high-percentage of potential transfer students, such as a second-semester English composition course.

However, as has been pointed out, simply providing information likely will be insufficient to increase the level of transfer student capital in these potential transfer students. This information can be made more applicable through exercises in self-authorship such as those outlined by Foote and So (2015). Self-authorship, a concept developed by Baxter Magolda (1999), involves personal reflection in goal setting and intentional planning – which boosts both self-efficacy and transfer student capital. Foote and So’s work suggests that reflective discussion and aiding a student in exploring his or her internal voice through activities like journaling can better assist a student in integrating these sorts of concepts in a personal academic context. These sorts of activities can be integrated in many contexts across the curriculum.
Additionally, wraparound services – the “hand hold for a little bit” referenced by Townsend and Wilson (2006) should be effective avenues through which students can efficiently build their supply of transfer student capital. While this analysis reflects that being a part of a subpopulation such as a nontraditional student or ethnic minority does not, in and of itself, have a strong effect on a student’s intent to transfer, wraparound services may provide a comfortable environment where an individual may access the sorts of activities or model the sorts of behaviors that bolster the accumulation of transfer student capital. Institutions might look at the structure of these sorts of existing programs to see what could be adapted more broadly to attract more students to the proximity of these sorts of positive behaviors.

Two- and four-year schools can also work collaboratively on the mechanics of the transfer process, identifying potential barriers such as initial academic advising, hidden transfer costs such as transcript and application fees, and time commitments for initial orientation and advising to smooth the process for students who may not have the transfer student capital to navigate the process as smoothly as possible.

Additionally, partner institutions should explore possibilities such as dual-enrollment options for students at community college to experience classroom environments and campus culture at the four-year school during their tenure at the community college. Such programs have been demonstrated to increase retention and transfer rates at community college for students who have already selected a particular transfer destination (Rosenberg, VonHandorf, Nienaber, & Bevins, 2015).
Study Limitations

As with most online surveys, there are several potential limitations to this particular studies. The survey had an overall response rate of 8.28%. While this response rate yielded a sufficient sample size (n=4439) to establish statistical significance, the analysis rests on the assumption that the characteristics of the response set are, as they appear to be, generally demographically representative of the student population at large. While gender was not deemed to be statistically significant in the final regression models, there could be data issues masked by the underrepresentation of men in certain age cohorts, as the overall sample skewed female.

Related, the 55+ cohort was numerically quite small compared to the other cohorts – even if the percentage of such students in the sample was similar to the population at large. With a small relative number of these students, firm conclusions about some of the findings about that particular cohort may need to be revisited in future studies, perhaps oversampling this particular cohort.

While the survey population includes responses from all sixteen of the KCTCS colleges, it must be noted that these data may not be generalizable beyond the KCTCS system. This analysis treated all students in a similar fashion, although a student’s experience may obviously be different in different regions of the state. The differences in urban vs. rural students were not explored in this analysis. As well, different community colleges across the country have different demographic structures, so the outcomes measured with this instrument may not be applicable in other contexts, especially community colleges with relatively low numbers of nontraditional students.
An online survey obviously lacks the actual presence of a researcher while the survey is being administered. Without a researcher present, the assumption exists that the respondents understand the language contained within the survey and are able to easily interpret the questions that are posed. Different institutions may have different terms for certain transfer resources. For instance, a campus may not have a “transfer center,” per se – but rather have transfer services combined with other academic services, such as career and personal counseling. Respondents would need to interpolate the terms used in the survey to the associated services on their own campus.

Also, as with most survey research, an assumption of honesty among the respondents is in existence. Since an incentive was offered to survey completers, some respondents may have simply clicked through the survey as quickly as possible to earn a chance to win one of those incentives. This behavior might cause some degree of statistical noise, and would be nearly impossible to guard against with the available survey system.

The survey instrument itself was designed to be completed in a relatively quick fashion – 10-15 minutes or less\textsuperscript{12}. Designing a survey in this way obviously limits the number of response items included on the instrument, which was deemed a necessary tradeoff to increase the completion rate across the population. Fewer response items could potentially limit the applicability of some of the transfer student capital measures, since there are so many potential aspects to this concept. Also, many of these concepts – for instance, goal setting and academic planning, could be considered interrelated, so the

\textsuperscript{12} In comparison, the original Laanan Transfer Student Questionnaire (L-TSQ) is designed as a 25-30 minute administration.
potential exists for measurement error when looking at the effects of transfer student
capital accumulation. As well, the large sample size increases the risk of a Type I error, as
the likelihood increases for some small differences to become statistically significant. If
an opportunity exists in the future to administer a longer version of the survey, future
administrations should include items about full or part time enrollment and
socioeconomic status, as well as scales specific to academic self-efficacy and more in-
depth examinations of what a student views as his or her academic “support system” on
and off campus.

**Suggestions for Future Research**

The focus of this initial study was to generate an initial set of quantitative data for
understanding differences in how KCTCS students in various age cohorts accumulate
transfer student capital. Now that this baseline has been established, more qualitative
study can follow – perhaps based from some of the open-ended response questions from
the survey instrument. For instance, initial exploration of the qualitative data gathered as
part of this effort indicate that, of the 2864 valid responses to the question “What is the
best way colleges can communicate transfer related information to students?” the word
“email” appears 1300 times. “Web,” “online,” or “Internet” appeared 327 times. More in-
depth qualitative research could reveal specifically the sorts of online tools and
communication that students actually prefer to give a more accurate picture of how
students are actually performing online searches or accessing material on the Internet.

These data could also be examined to see if there are demographic differences
between what a student believes is the best way to communicate – as a number also
included “phone,” “face to face,” “text,” and other methods. Similar qualitative thematic
analyses could be performed on how students reported that their colleges could make the transfer process easier. Both of these analyses could then give way to more in-depth qualitative studies, such as personal interviews and focus groups. These sorts of analyses could lead to some additional potential solutions for increasing nontraditional students’ use of transfer-related services, ultimately increasing both their accumulation of transfer student capital and intent to transfer.

While the focus of this analysis is at a statewide level, additional analyses could be performed at particular institutions, or between institutions in urban and rural settings, to determine if geographical differences can also play a role in the accumulation of transfer student capital. As well, if institutions adopted some of the aforementioned policy recommendations to bolster students’ levels of transfer student capital, measuring the impact of those interventions on intent to transfer and usage of services could be tracked and analyzed in conjunction with these students’ performance at the baccalaureate institution.

Since it appears through this analysis that the accumulation of transfer student capital may impact student experiences differently at the two-year and four-year school, it would be interesting to see if the increase in intent to transfer measured by this analysis would have an effect post-transfer on the academic performance of these students. Two- and four-year schools would need to partner in sharing this sort of academic outcome data between institutions.

One of the more interesting cross-disciplinary potentials for further exploration would be the connection between the accumulation of transfer student capital and a student’s level of academic self-efficacy. The two concepts have the potential to have
synergistic effects on one another – and both may effect a student’s intent to transfer and potential performance post-transfer, although one is an internally-focused process while the other is externally-focused. Opportunities exist for both qualitative and quantitative examination of these potentially related concepts.

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Chapter 6 -- CONCLUSION

The national spotlight continues to focus on community colleges as a primary mode of educational access for millions across the United States. President Barack Obama proposed universal community college in his 2015 State of the Union address, in which he set forth a vision of a future United States in which “two years of college becomes as free and universal in America as high school is today” (Calvert, 2015). If enacted, a large, multigenerational influx of students onto community college campuses would likely follow. American higher education needs to be proactive both in preparation for this new wave of students, but in understanding how best to serve the needs of this population as they move towards degree completion and, for many, transfer to pursue additional education.

While the effect of age on a student’s intent to transfer from a community college to a four year school to pursue a bachelor’s degree may be limited in and of itself, this study suggests that both two- and four-year schools should be cognizant of the effect that age plays on a student’s access of support services, and how students who access these services less often tend not to express an intent to continue down their academic path towards a bachelor’s degree. The study shows that a “one-size fits all” design for building student awareness and usage of these sorts of programs may be insufficient to create the sort of desired outcomes – such as increased retention, increased rate of completion, and increased number of successful transfers – desired by most community colleges.

As well, four year schools who limit their recruiting efforts towards nontraditional students are missing out on a large swath of potential new students on their campus. While campus diversity is often measured in terms of race and ethnicity, a
multigenerational student body also increases the richness of a campus experience, especially if these students can be integrated into the social fabric of a four-year institution once they transfer. A four-year school should not put this cart before the horse. These students, in general, do not express interest in this sort of integration, at least initially. Emphasizing the importance of involvement on campus one a student makes the successful transition would be more impactful if a student can create – with the help of the four-year institution – a plan to deal with existing life logistics.

The process of assisting students of all generations with their accumulation of transfer student capital should bear fruit in helping students achieve their personal goals thus creating a larger pool of successful students and graduates. This better-educated populace, outfitted with the academic and life skills that come from the accumulation of transfer student capital and, eventually, their associate and bachelor’s degrees, will in turn be more effective in addressing future issues and challenges facing our society.

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Appendix A – Study Instrument

Class Climate

Transfer Survey - Fall 2014v2

Mark as shown: ☐ ☐ ☐ ☐ ☐ Please use a ball-point pen or a thin felt tip. This form will be processed automatically.
Correction: ☐ ☐ ☐ ☐ ☐ Please follow the examples shown on the left hand side to help optimize the reading results.

1. Transfer Survey - Fall 2014

Thank you for participating in the Transfer Student Survey. The purpose of this survey is to better understand how students get information about transferring, planning their academic path, and overcoming obstacles. With your help, colleges will be able assist students in getting more of what they need to make good transfer decisions. All of your responses are confidential. Please answer the following questions as honestly as possible.

2. Academic Background

2.1 What credential are you currently pursuing? ☐ Associate of Arts or Associate in Science ☐ Associate of Applied Science ☐ Undecided

2.2 Did you attend another college(s) or university(ies) before you enrolled at Gateway?

☐ Yes ☐ No

If "Yes" which college(s) or university(ies) did you attend? Please list one college per box. Start with the most recent college or university attended.

2.3 College 1

2.4 College 2

2.5 College 3

2.6 College 4

2.7 College 5

2.8 How many total college credit hours have you earned so far in your college career? ☐ 0-15 ☐ 16-30 ☐ 31-45

☐ 46-60 ☐ 61 or more

3. Transfer Intent and Transfer Services

3.1 How likely are you to transfer to a four-year college or university after you finish at your current college? Absolutely ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Absolutely will not transfer

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3. Transfer Intent and Transfer Services  [Continue]

| 3.2 When did you start considering a transfer to a four-year college or university? |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| ☐ Before I started at my current college |
| ☐ During my first semester at my current college |
| ☐ After my first year at my current college |
| ☐ I will not be transferring to a four-year college or university |

If you answered "I will not be transferring to a four-year college or university", please go to the section 4-Demographic Information of the survey.

3.3 Have you considered specific four-year transfer colleges or universities?  ☐ Yes  ☐ No

If "Yes", which colleges or universities are you considering? Please list a maximum of 5 colleges or universities listing one college per box.

3.4 College 1

3.5 College 2

3.6 College 3

3.7 College 4

3.8 College 5

3.9 Would you consider pursuing a bachelor's degree entirely online?  ☐ Yes  ☐ No

How important are each of these factors to you in choosing a transfer four-year college or university?

<table>
<thead>
<tr>
<th>3.10 Distance from home</th>
<th>Not at all important</th>
</tr>
</thead>
<tbody>
<tr>
<td>A main reason</td>
<td>☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.11 Availability of desired major</th>
<th>Not at all important</th>
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</thead>
<tbody>
<tr>
<td>A main reason</td>
<td>☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.12 Cost</th>
<th>Not at all important</th>
</tr>
</thead>
<tbody>
<tr>
<td>A main reason</td>
<td>☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.13 Variety of class times/flexible scheduling</th>
<th>Not at all important</th>
</tr>
</thead>
<tbody>
<tr>
<td>A main reason</td>
<td>☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.14 Safety</th>
<th>Not at all important</th>
</tr>
</thead>
<tbody>
<tr>
<td>A main reason</td>
<td>☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.15 Class Size</th>
<th>Not at all important</th>
</tr>
</thead>
<tbody>
<tr>
<td>A main reason</td>
<td>☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.16 School/Campus life</th>
<th>Not at all important</th>
</tr>
</thead>
<tbody>
<tr>
<td>A main reason</td>
<td>☐</td>
</tr>
</tbody>
</table>
### 3. Transfer Intent and Transfer Services [Continue]

| 3.17 Extracurricular activities | Not at all important |
| 3.18 Scholarship/financial aid availability | Not at all important |
| 3.19 Know students currently attending | Not at all important |
| 3.20 Academic reputation | Not at all important |
| 3.21 Online courses | Not at all important |

#### 3.22 Which methods have you used to research four-year transfer colleges and universities? (select all that apply)
- [ ] College websites
- [ ] Online surveys
- [ ] Instructors/Professors
- [ ] Other schools' instructors/ professors
- [ ] College fairs
- [ ] Staff
- [ ] Recruiters from other schools
- [ ] Friends/classmates
- [ ] Other

#### 3.23 If "Other", please describe.

#### 3.24 Which method would you prefer to use to research four-year transfer colleges and universities? (select one)
- [ ] College websites
- [ ] Online surveys
- [ ] Instructors/Professors
- [ ] Other schools' instructors/ professors
- [ ] College fairs
- [ ] Staff
- [ ] Recruiters from other schools
- [ ] Friends/classmates
- [ ] Other

#### 3.25 If "Other", please describe.

How often have you used the following resources for developing a plan for transferring to a four-year school as a student at your current college?

#### 3.26 Academic Advisor
- [ ] Never
- [ ] Once a month
- [ ] More than once a month
- [ ] 1 or 2 times
- [ ] Once a semester

#### 3.27 Instructor/Professor
- [ ] Never
- [ ] Once a month
- [ ] More than once a month
- [ ] 1 or 2 times
- [ ] Once a semester

#### 3.28 Transfer Center
- [ ] Never
- [ ] Once a month
- [ ] More than once a month
- [ ] 1 or 2 times
- [ ] Once a semester

#### 3.29 College website
- [ ] Never
- [ ] Once a month
- [ ] More than once a month
- [ ] 1 or 2 times
- [ ] Once a semester
### Transfer Intent and Transfer Services

#### 3.30 Student Support Services (TRIO)
- [ ] Never
- [ ] Once a month
- [ ] 1 or 2 times
- [ ] Once a semester

#### 3.31 Course equivalency guides
- [ ] Never
- [ ] Once a month
- [ ] 1 or 2 times
- [ ] Once a semester

#### 3.32 Transfer pathway guides
- [ ] Never
- [ ] Once a month
- [ ] 1 or 2 times
- [ ] Once a semester

#### 3.33 Four-year college and university websites
- [ ] Never
- [ ] Once a month
- [ ] 1 or 2 times
- [ ] Once a semester

#### 3.34 Four-year college and university advising office
- [ ] Never
- [ ] Once a month
- [ ] 1 or 2 times
- [ ] Once a semester

#### 3.35 Collegefish
- [ ] Never
- [ ] Once a month
- [ ] 1 or 2 times
- [ ] Once a semester

How useful were the following resources for getting four-year transfer college and university transfer information? (If you have not used a resource, please select "NA")

#### 3.36 Academic Advisor
- Not useful
- [ ] Not at all
- [ ] Somewhat useful
- [ ] Very useful
- [ ] Extremely useful
- [ ] NA

#### 3.37 Instructor/Professor
- Not useful
- [ ] Not at all
- [ ] Somewhat useful
- [ ] Very useful
- [ ] Extremely useful
- [ ] NA

#### 3.38 Transfer Center
- Not useful
- [ ] Not at all
- [ ] Somewhat useful
- [ ] Very useful
- [ ] Extremely useful
- [ ] NA

#### 3.39 College website
- Not useful
- [ ] Not at all
- [ ] Somewhat useful
- [ ] Very useful
- [ ] Extremely useful
- [ ] NA

#### 3.40 Student Support Services (TRIO)
- Not useful
- [ ] Not at all
- [ ] Somewhat useful
- [ ] Very useful
- [ ] Extremely useful
- [ ] NA

#### 3.41 Course equivalency guides
- Not useful
- [ ] Not at all
- [ ] Somewhat useful
- [ ] Very useful
- [ ] Extremely useful
- [ ] NA

#### 3.42 Transfer pathway guides
- Not useful
- [ ] Not at all
- [ ] Somewhat useful
- [ ] Very useful
- [ ] Extremely useful
- [ ] NA

#### 3.43 Four-year college and university websites
- Not useful
- [ ] Not at all
- [ ] Somewhat useful
- [ ] Very useful
- [ ] Extremely useful
- [ ] NA

#### 3.44 Four-year college and university advising office
- Not useful
- [ ] Not at all
- [ ] Somewhat useful
- [ ] Very useful
- [ ] Extremely useful
- [ ] NA

#### 3.45 Collegefish
- Not useful
- [ ] Not at all
- [ ] Somewhat useful
- [ ] Very useful
- [ ] Extremely useful
- [ ] NA

Please rate the quality of the following transfer related services you have received at your college. (If you did not use a service, please select NA)
3. Transfer Intent and Transfer Services  [Continue]

<table>
<thead>
<tr>
<th>Question</th>
<th>Rating Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.46 Advising about transfer requirements</td>
<td>Not useful at all, Outstanding, NA</td>
</tr>
<tr>
<td>3.47 Availability of academic advising</td>
<td>Not useful at all, Outstanding, NA</td>
</tr>
<tr>
<td>3.48 Assistance with the transfer process</td>
<td>Not useful at all, Outstanding, NA</td>
</tr>
<tr>
<td>3.49 Providing transfer documents and pathways</td>
<td>Not useful at all, Outstanding, NA</td>
</tr>
</tbody>
</table>

How concerned are you with the following as a transfer student at a four-year college or university?

<table>
<thead>
<tr>
<th>Question</th>
<th>Rating Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.50 Paying for school</td>
<td>Not concerned at all, Extremely concerned</td>
</tr>
<tr>
<td>3.51 Being academically prepared</td>
<td>Not concerned at all, Extremely concerned</td>
</tr>
<tr>
<td>3.52 Time management</td>
<td>Not concerned at all, Extremely concerned</td>
</tr>
<tr>
<td>3.53 Larger classes</td>
<td>Not concerned at all, Extremely concerned</td>
</tr>
<tr>
<td>3.54 “Fitting in” with other students</td>
<td>Not concerned at all, Extremely concerned</td>
</tr>
<tr>
<td>3.55 Parking</td>
<td>Not concerned at all, Extremely concerned</td>
</tr>
<tr>
<td>3.56 Finding your way around campus</td>
<td>Not concerned at all, Extremely concerned</td>
</tr>
<tr>
<td>3.57 Transportation</td>
<td>Not concerned at all, Extremely concerned</td>
</tr>
<tr>
<td>3.58 Child care</td>
<td>Not concerned at all, Extremely concerned</td>
</tr>
</tbody>
</table>

3.59 What three things could your college do to make the transfer process easier for you? (Please provide one suggestion per line)

3.60 What is the best way colleges can communicate transfer related information to students?

4. Demographic Information

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 What is your gender?</td>
<td>Female, Male, Prefer not to respond</td>
</tr>
</tbody>
</table>

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4. Demographic Information  [Continue]

4.2 What year were you born in?

|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|

4.3 What is your current employment status?

- Full-time (35 or more hours a week)
- More than part-time (21 to 34 hours a week)
- Part-time (1 to 20 hours a week)

4.4 What is your relationship status?

- Not working
- Single, never married
- Separated
- Widowed
- Married
- Divorced
- Living with a partner

4.5 How many children, under 18, are living in your home?

- 0
- 1
- 2
- 3
- 4
- 5 or more
- Yes
- No

4.6 Has anyone else in your family (parents, first cousins, etc.) attended college?

4.7 What is your ethnicity?

- Hispanic or Latino
- Not Hispanic or Latino

4.8 What is your race? (select all that apply)

- White/Caucasian
- Black or African American
- Native American
- Asian/Pacific Islander
- Middle Eastern

5. Prize Entry

5.1 Do you wish to be entered in a drawing for one of ten (10) $50 prizes and one of fifty (50) $10 prizes?

- Yes
- No
5. Prize Entry  [Continue]

5.2 If "Yes", please provide your name, phone number, and email address. Your personal information will not be linked to your survey responses and will only be used for contact purposes if you are a winner. Winners will be notified after the survey closes.
June 9th, 2014

Michael J. Rosenberg
Gateway Community & Technical College
790 Thomas More Parkway
Edgewood, KY 41017

RE: Generational Differences in Transfer Student Capital

Dear Mr. Michael J. Rosenberg:

After careful consideration of your application to the KCTCS Human Subjects Review Board, I have determined that you are eligible for exemption from federal regulations regarding the protection of human subjects based on your research using a procedure that meets the exempt review criteria section 7 (2).

Thank you for your cooperation in meeting the federal requirements for conducting research that utilizes human subjects. We appreciate your notification to this board and we will keep your information on file.

Sincerely,

[Signature]

Jay K. Box, Ed.D.
Chancellor
Chair, KCTCS Human Subjects Review Board

cc: Christina Whitfield, Ph.D.
    System Director of Research and Policy Analysis
Appendix C – UK IRB Approval

EXEMPTION CERTIFICATION

MEMO: Michael Rosenberg
       Educational Policy Studies
       616 Linden Ave
       Newport, KY 41071
       PI phone #: (859) 815-7681

FROM: Institutional Review Board
      c/o Office of Research Integrity

SUBJECT: Exemption Certification for Protocol No. 14-0695-X4B

DATE: October 9, 2014

On October 9, 2014, it was determined that your project entitled, Generational Differences in Transfer Student Capital, meets federal criteria to qualify as an exempt study.

Because the study has been certified as exempt, you will not be required to complete continuation or final review reports. However, it is your responsibility to notify the IRB prior to making any changes to the study. Please note that changes made to an exempt protocol may disqualify it from exempt status and may require an expedited or full review.

The Office of Research Integrity will hold your exemption application for six years. Before the end of the sixth year, you will be notified that your file will be closed and the application destroyed. If your project is still ongoing, you will need to contact the Office of Research Integrity upon receipt of that letter and follow the instructions for completing a new exemption application. It is, therefore, important that you keep your address current with the Office of Research Integrity.

For information describing investigator responsibilities after obtaining IRB approval, download and read the document "PI Guidance to Responsibilities, Qualifications, Records and Documentation of Human Subjects Research" from the Office of Research Integrity's IRB Survival Handbook web page [http://www.research.uky.edu/oir/IRB-Survival-Handbook.html#PIResponsibilities]. Additional information regarding IRB review, federal regulations, and institutional policies may be found through ORI’s website [http://www.research.uky.edu/oir]. If you have questions, need additional information, or would like a paper copy of the above mentioned document, contact the Office of Research Integrity at (859) 257-9428.
Appendix D – UK IRB Study Modification Approval

Modification to Subject Recruitment and Procedures/Materials Approved

Modification Review Approval Ends (unspecified) IRB Number 14-0695-X4B

TO: Michael Rosenberg
Educational Policy Studies
616 Linden Ave.
Newport, KY 41071
Phone #: (859) 851-7681

FROM: Chairperson/Vice Chairperson
Institutional Review Board (IRB)

SUBJECT: Approval of Modification Request for Protocol 14-0695-X4B

DATE: November 12, 2014

On November 10, 2014, the Institutional Review Board approved your request for modifications in your protocol entitled:

Generational Differences in Transfer Student Capital

If your modification request necessitated a change in your approved informed consent/assent form(s), attached to the new IRB-approved consent/assent form(s) to be used when enrolling subjects. [Note, subjects can only be enrolled using informed consent/assent forms which have a valid "IRB Approval" stamp, unless waiver from this requirement was granted by the IRB.

Note that at Continuation Review, you will be asked to submit a brief summary of any modifications approved by the IRB since Initial review or the last continuation review, which may impact subject safety or welfare. Please take this approved modification into consideration when preparing your summary.

For information describing investigator responsibilities after obtaining IRB approval, download and read the document "PI Guidance to Responsibilities, Qualifications, Records and Documentation of Human Subjects Research" from the Office of Research Integrity's Guidance and Policy Documents web page [http://www.research.uky.edu/ori/human/guidance.html#PReg]. Additional information regarding IRB review, federal regulations, and institutional policies may be found through ORI's web site [http://www.research.uky.edu/ori]. If you have questions, need additional information, or would like a paper copy of the above mentioned document, contact the Office of Research Integrity at (859) 257-9428.

Chairperson/Vice Chairperson

An Equal Opportunity University


Michael J. Rosenberg

EDUCATION

University of Arizona, Tucson, Arizona
MA in Higher Education 1995

Duke University, Durham, North Carolina
AB in English, Certificate in Women’s Studies 1992

PROFESSIONAL EXPERIENCE

Gateway Community & Technical College, Florence, KY
Director of Transfer 2011-present

University of Cincinnati, Cincinnati, OH
Director of Student Affairs & Academic Advising 2006-2011
College of Allied Health Sciences

Academic Advisor 2004-2006
Center for Access and Transition

University of Kentucky, Lexington, KY
Learning Skills Coordinator 1998-2004

Florida Atlantic University, Boca Raton, FL
Coordinator of Academic Support Services 1997-1998

University of Richmond, Richmond, VA
Richmond College Area Coordinator 1996-1997

Albion College, Albion, MI
Assistant Director of Residence Life 1995-1996

PUBLICATIONS


PROFESSIONAL PRESENTATIONS

• Rosenberg, M.J., Bevins, K. (2015, April) Gateway2NKU: Building Partnerships, Pathways, and Programs. Presentation at the Region 3 Conference of the National Academic Advising Association, Covington, KY.

• Rosenberg, M.J., Griffin, B. (2015, February) Assessing and Improving Transfer Student Preparation. Presentation at the annual conference of the National Institute for the Study of Transfer Students, Atlanta, GA.


• Rosenberg, M.J. (2007, June) The Millennial Student: A Slightly Different Take. Presentation at the annual conference of the Ohio Academic Advising Association, Columbus, OH.