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APPALACHIAN BRIDGES TO THE BACCALAUREATE: HOW COMMUNITY COLLEGES AFFECT TRANSFER SUCCESS

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APPALACHIAN BRIDGES TO THE BACCALAUREATE:
HOW COMMUNITY COLLEGES AFFECT TRANSFER SUCCESS

A COMPANION 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

By
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Lexington, Kentucky

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Lexington, Kentucky

2011

ABSTRACT OF DISSERTATION

APPALACHIAN BRIDGES TO THE BACCALAUREATE:
HOW COMMUNITY COLLEGES AFFECT TRANSFER SUCCESS

Statement of the problem. Too few community college students who intend to transfer and earn a baccalaureate degree actually do. This is a problem because postsecondary education is a key factor in economic mobility, and community colleges enroll a disproportionate number of nontraditional, part-time and low-income students. Although individual factors must be considered by community colleges, they often are out of the control of the institution. This study focused on the institutional factors, including the ways that organizational structures contribute to the success of a community college's transfer program.

Design. This companion study was conducted by a four-member research team. In order to describe the transfer population and institutional characteristics, a quantitative analysis was conducted for the student population, which included 338 spring and summer 2009 Associate in Arts and/or Associate in Science (AA/AS) graduates from four Appalachian community colleges. This analysis indicated that individual student characteristics did not explain the differences in institutional transfer rates. Two of the institutions were identified as statistically significant institutions promoting transfer success. Students from these high-impact community colleges were found to be at least two times more likely to transfer than students attending the low-impact institutions.

Each member of the research team looked at a different aspect of the transfer experiences of the cohort. Two components explored institutional perspectives by interviewing 27 faculty, staff, and leaders from the four community colleges. The other two components examined student perceptions of their community college transfer experiences.

Major conclusions. One component of the companion study examined the interplay of informal and formal organizational structures of community colleges in the context of successful transfer. A typology model was created to illustrate the interface of structural elements that plays a role in the differentiation between high-impact and low-impact institutions. Findings indicated that two elements seem to make a difference in a

community college's ability to impact successful transfer: (a) the existence of strong internal and external ties, and (b) the level of integration of transfer services.

       Amber Decker
Student's Signature

       11/12/11
Date

APPALACHIAN BRIDGES TO THE BACCALAUREATE:
HOW COMMUNITY COLLEGES AFFECT TRANSFER SUCCESS

By

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<u>November 10, 2011</u>
      Date

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I have been fortunate to have many mentors in my life. Angie Taylor is the amazing woman who first helped me to believe that there are no limits to what I can do in this world. She is not only a mentor, but a true friend who I credit with many of my personal and professional accomplishments. Laura Kroeger is another mentor who supported me through this lengthy journey. My running buddy, Sue Noyes also provided countless hours of listening and advising through early morning runs. These women will never know how much they have made a difference in my life.

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Chapter 1
Introduction

This dissertation is part of a collaborative study that examines the ways in which institutional and student characteristics impact the pathway to the baccalaureate degree for Appalachian community college students in eastern Kentucky. The current emphasis in postsecondary education policy in Kentucky is to increase the educational attainment rate within the Commonwealth, with a goal of doubling the number of baccalaureate degree holders by 2020. The Appalachian region of Kentucky has the lowest rate of academic attainment within the state.

This dissertation follows a journal article format. Following this first chapter introduction; the second chapter is a technical report that synthesizes the findings from the four-part collaborative study; chapter three describes my individual study in a journal article format; chapter four is a scholarly essay relating the results of my individual study to current state-level policy in a journal article format; and chapter five is a conclusion providing a personal reflection on the dissertation process. References and appendices are included at the end of each chapter.

The collaborative study described in Chapter 2 was developed in part by a four-member research team. Team members were a part of the EdD cohort program at the University of Kentucky (UK), a member of the Carnegie Project on the Education Doctorate (CPED). CPED is a national effort intended to strengthen the education doctorate by making it a more relevant degree for the academic leaders for the nation's educational system. The CPED pedagogy develops scholarly practitioners who combine practical wisdom with professional skills and knowledge to identify and solve problems

of practice through intensive collaboration. The UK EdD cohort program integrated this pedagogy through collaborative projects throughout the coursework culminating in companion dissertations by research teams that examined problems of practice in community colleges.

During the last semester of coursework, program faculty and cohort members identified mutually acceptable teams based on research interests and complementary skill sets. My team was comprised of Michelle Dykes, Christopher Phillips, and Nancy Preston. We all had a common research interest related to the bridge between community colleges and four-year institutions. In our course readings for the program and our professional careers, we understood that few students who enter the community college with the intent to transfer actually do. We wanted to explore this problem of practice by focusing on a specific geographic region and by capturing the voices of different populations who are affected by this issue. After months of discussion and an extensive literature review, the team settled on an in-depth, mixed-method study of four Appalachian community colleges. Each researcher developed his or her own research questions with careful consideration of how the results might be connected upon completion of the study. Projects include two institutional studies and two studies of students' perceptions of transfer. A synthesis of these findings and results are reflected in Chapter 2, Building the Bridge to Transfer Success: An In-Depth Study of Four Appalachian Community Colleges.

My individual research project focused on how organizational structures might impact successful transfer. Phillips and I used the institution as the unit of analysis in our studies and conducted interviews of 27 faculty, staff, and leaders at the four community

colleges. I focused on the institution's formal and informal structures, while Phillips explored the policies and practices related to transfer. I utilized an emergent design to develop a typology of six elements identified as important to transfer through the institutional interviews, and secondary data sources including transfer materials, website information, and other available documents. A description of this study and analysis is included in Chapter 3, Organizational Structures: How Community Colleges Affect Transfer Success.

The third manuscript in this dissertation is an essay that explores the ways in which community college organizational structures can be changed in order to integrate new statewide transfer policies to ensure better student outcomes. This scholarly essay utilizes the findings in Chapter 3 to examine what organizations might need to change in order to successfully implement new legislative mandates related to transfer between community colleges and four-year institutions. This reflective piece can be found in Chapter 4, Implementation of Transfer Mandates: How Organizations Must Change.

My individual research study explored the interface between the structure of community colleges and successful transfer. Findings indicated that the structural elements where there are the clearest differences between the high- and low-impact community colleges are the strength of external and internal ties, as well as the degree of integration of the transfer center structures. The results of this study can be used by community college leaders and practitioners to improve persistence of transfer students by optimizing organizational structures to increase transfer success.

Chapter 2:
Building the Bridge to Transfer Success:
An In-Depth Study of Four Appalachian Community Colleges
Amber Decker, Michelle Dykes, Christopher Phillips, and Nancy Preston

Executive Summary

Background

The role of community colleges in facilitating student transfer is critical to the achievement of national, state, and regional goals for educational attainment. Upward economic mobility is more strongly tied to educational attainment today than at any other time in America's history. Research indicates that those born into poverty are four times more likely to reach the top income quintile as adults if they have a baccalaureate degree. Without a degree, nearly half of those born into the lowest income quintile remain there as adults (Furchtgott-Roth, Jacobsen, & Mokher 2009). Given that community colleges enroll a disproportionate number of low-income students, their role in the postsecondary continuum is pivotal to ensure the upward mobility of those needing help the most. This study focuses on the unique geographic region of Appalachia Kentucky, which has been described as one of the poorest areas in the nation (USDA, 2008). Most counties in this region have only single-digit percentage rates of baccalaureate degree holders (KY CPE, 2008).

The purpose of the study was to examine the ways in which institutional and student characteristics matter in the pathway to the baccalaureate degree for Appalachian community college students in eastern Kentucky. Dougherty (1994) asserts that higher education must explore the impact of structural factors on the gap in baccalaureate degree attainment. Although two-thirds of this gap can be attributed to differences in individual

student characteristics, studies indicate that students who start at a community college receive 11-19% fewer baccalaureate degrees than four-year college entrants (Dougherty, 1994).   That this sizable gap cannot be accounted for by student characteristics warrants the exploration of institutional factors that influence successful transfer. This study controlled for individual student characteristics and included community colleges operating within the same geographic area and policy environment to provide a reliable comparison of institutions.

Methodological Approach

This study employed a mixed-method approach, comprised of a quantitative analysis of student outcome and survey data as well as qualitative study of student, faculty, and staff perspectives on the transfer experience. The study design included two quantitative components: (a) descriptive and inferential statistical analysis of student data describing the transfer population and identifying institutional and student characteristics that were significant to transfer success and persistence, and (b) a survey to determine if transfer students' perceptions of mattering predicts their transfer persistence (Dykes, 2011). Qualitative research was conducted in two phases. First, interviews were conducted with faculty, staff, and administration at each of the participating community colleges to explore their perceptions of institutional factors that affect transfer success (Decker, 2011, Phillips, 2011). Second, interviews with a sub-population of students from the participating colleges who successfully transferred were conducted to examine the ways in which location-bound adults attending college, specifically nontraditional-aged Appalachian women perceive the supports and challenges to baccalaureate attainment (Preston, 2011).

The setting for the study was Appalachia Kentucky. In addition to a history of severe and persistent poverty, this eastern part of Kentucky also has one of the lowest rates of education achievement in the country. Although statewide educational achievement is low—only 19.7 percent of Kentuckians have earned baccalaureate or higher degrees (U.S. Census Bureau, 2008)—most counties in the Appalachian region of Kentucky have only single-digit percentage rates of baccalaureate degree holders (Kentucky Council on Postsecondary Education, 2008).

Four community colleges operate within the study's geographic region. Analysis was conducted to determine the significance of attending a particular community college on transfer to a four-year institution and persistence at the four-year institution. These results identified which participating community colleges had higher transfer success when controlling for individual student characteristics, thereby suggesting that institutional factors played a role in the disparity among rates of transfer. Two of the institutions were identified as statistically significant institutions promoting transfer success. Students from these high-impact community colleges were at least two times more likely to transfer than students attending the low-impact institutions controlling for gender, age, grade point average, and total cumulative hours.

Key Findings

The key findings of the study confirm the literature on transfer culture and provide new insights that are regionally specific, as well as a more in-depth discussion facilitated by the team approach employed in exploring the topic of transfer. The framework used to describe the findings and results of the study was developed through an emergent design. The framework includes six elements and helps to examine the

interface of informal and formal structures that plays a role in the differentiation between high-impact and low-impact institutions. Findings and results of the study help to further explain these differences in transfer success among the participating institutions. A synthesized analysis identified four major themes that seem to contribute to transfer success. A summary of each theme and corresponding elements is provided below.

The role of the institution. Study participants reported that the institutions' understanding of students' multiple social and economic roles is critical to transfer success. Well-integrated transfer services, on-campus baccalaureate programs, and flexible rules and policies were all mentioned as indicators that institutions are aware of the struggles that students encounter when trying to balance multiple life roles.

The role of advising. Advising was the most prevalent practice reported as key to successful transfer. Students asserted that misadvising resulted in unnecessary coursework and increased time and cost to degree. Community college faculty and staff stated that a lack of updated transfer information was a major challenge to accurate advising.

The role of faculty. Students' perceptions of acceptance by faculty in the classroom significantly predicted the probability of persistence toward a baccalaureate degree. This indicates the importance of faculty participation in the transfer process. Interviews with community college faculty found a wide disparity of understanding of the critical nature of their role in transfer success for students.

The role of partnerships. The two high-impact institutions had strong partnerships with four-year institutions including a high number of baccalaureate programs available on campus. Many students stated that they were unable to leave the

region, and they relied on on-campus programs in order to earn their baccalaureate degree. Other key community partnerships were also identified as critical to ensure accurate perceptions of the purpose of community colleges within the educational continuum.

Recommendations

The findings of the study resulted in several recommendations to promote increased student transfer and persistence to the baccalaureate degree:

- expand system-wide transfer agreements,

- increase collaborative agreements between two-year and four-year institutions,

- develop a comprehensive, student-centered advising model,

- implement a strong system of internal and external communications,

- advance the mandates required by House Bill 160 (the transfer bill),

- create institutional partnerships to meet the needs of location-bound transfer students, and

- integrate transfer services into the entire student experience.

Policy Landscape

*"Now is the time to build a firmer, stronger foundation for growth that will not
only withstand future economic storms, but one that helps us thrive and compete
in a global economy. It's time to reform our community colleges so that they
provide Americans of all ages a chance to learn the skills and knowledge
necessary to compete for the jobs of the future."*

- President Barack Obama

The above quote by President Obama shows the dramatic change in the federal

approach to the increasing importance of our nation's community colleges. As of 2011,

over twelve million students attend community colleges in the United States each year

(American Association of Community Colleges [AACC], 2011). To illustrate the

changes toward a national oversight of community colleges, the National Office of

Community College Initiatives is now a part of the College Board Advocacy and Policy

Center. In addition, the Bush and Obama Administrations have recognized the

importance of community colleges. President Bush funded community colleges to

develop homeland security community- based programs and job training. President

Obama started the American Graduate Initiative to provide a ten year $12 billion plan to

invest in America's community colleges. President Obama with second lady Dr. Jill

Biden held the first White House Summit on Community Colleges in October 2010 to

discuss and highlight the importance of funding and supporting America's community

colleges.

During the 2010 Kentucky legislative session, policymakers passed House Bill

160, or the transfer bill, to ease students' transition from community college toward the

baccalaureate. House Bill 160 established the following outcomes:

- Beginning in 2012-2013 academic year, associate degree programs will be limited to 60 credit hours and baccalaureate degree programs will be limited to 120 credit hours for most programs.

- KCTCS and public universities will implement a statewide agreement for alignment of lower-level Associate in Arts and Associate in Science coursework with standard core content and learning outcomes as well as a standardization of college transcriptions.

- KCTCS will develop, implement, and maintain a numbering system for lower-level general education courses and establish statewide course classification and procedures to monitor the transfer and crediting of lower-level courses.

- Community college students, upon admission to a public university with an earned Associate in Arts or Science degree, will be deemed to have met all general education requirements and are exempted from repeating similar courses in a baccalaureate program beginning in 2012.

- Community college transfer students will receive priority for admission over out-of-state students if they meet the same admission criteria.

If changes in programs, courses, or learning outcomes occur, colleges must verify that a clear path to the baccalaureate degree still exists for community college students who plan to transfer.

Mission creep, or mission drift, in the field of community and technical colleges is defined as the transition from the community college's primary mission shift from transfer to vocational programs in the 1950's and 1960's (Dougherty, 2001; Brint & Karabel, 1989). Through the years, community colleges have absorbed several other

missions such as workforce training, remedial education and community education

(Cohen & Brawer, 2003; Dougherty, 1994; Kasper, 2002). These multiple missions

require faculty and staff support as well as program development and funding sources.

Another key issue is resource allocation among these various missions. These competing

interests in a comprehensive community college often breed power struggles among

faculty, programs, and divisions (Dougherty & Townsend, 2006).

Community colleges struggle with competing missions to meet the needs of

multiple stakeholders including students, businesses, governments, and the public.

Transfer programs were the primary mission of the community college at its founding

(Townsend & Wilson, 2006). Koos (1924) found that the early community college

offered about three-fourths of its coursework in transfer or liberal arts. This collegiate

function of the community college best paralleled the four-year institution making the

community college viable, scholarly and credible to parents, state governments, and

students. The vocationalization of community colleges was achieved out of necessity for

meeting economic demands, technology and globalization (Brint & Karabel, 1989). This

change in mission and direction of community colleges was fostered by government

policymakers, student demands, and business interests (Dougherty, 2001).

Given the realities of the Great Recession, the global economy, and the business

community demands, the importance of the transfer mission of community colleges has

never been more urgent in the nation, as well as for economically marginal rural regions

of the country such as Appalachia, including Eastern Kentucky. Kentucky's Council on

Postsecondary Education (CPE) has set an aggressive goal of doubling the number of

baccalaureate degree holders statewide by 2020. The purpose of this initiative is to

realize a Kentucky goal of raising the standard of living and quality of life to the national average by 2020. According to CPE (2007) and the Appalachian Regional Commission (ARC) (ARC, 2010), the fastest way to increase per capita income is to raise the percentage of Kentuckians with a four-year degree. States with higher numbers of baccalaureate degree holders generally have a higher quality of life and stronger, more diverse economies (CPE, 2007). Through this double the numbers initiative, CPE has placed an increased focus on the community college mission toward transfer in order to meet the ambitious goal of nearly 800,000 baccalaureate holders by 2020.

However, because of limited employment opportunities in Appalachia for baccalaureate degrees, technical or vocational education provides better opportunities for students to gain employment without leaving the region (Jepsen, 2010). Community college personnel tend to perceive that technical or vocational degrees have higher economic value due to being tied to the local labor markets and therefore meeting the economic needs of place-bound students. Many of the baccalaureate programs currently offered to place-bound students in the region are in disciplines that have saturated the local job markets. It is imperative that educational leaders determine how to bridge the gap between increasing the number of baccalaureate degree holders in Appalachia while simultaneously meeting the needs of local labor markets through workforce development.

CPE oversees and coordinates Kentucky's educational system as directed by the Kentucky Postsecondary Education Improvement Act of 1997. This bill, also known as House Bill 1, created the Kentucky Community and Technical College System (KCTCS), the state's ninth institution of higher education. House Bill 1 merged the Commonwealth's technical and community colleges into 15 separate community and

technical college districts. In 2004, the General Assembly added Lexington Community College to KCTCS, and subsequently the institution changed its name to Bluegrass Community and Technical College. Today, KCTCS has 16 community and technical college districts with spring 2011 enrollment of over 100,000 students. The primary directive from House Bill 1 was to increase the educational level of Kentuckians. This includes increasing the number of Kentuckians with associate degrees, but also increasing the number of baccalaureate degree holders.

In 2011, the sixteen KCTCS college presidents recommended two primary strategies to transform the transfer process. First, the college presidents endorsed the idea 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 a national model of excellence. The second transformation strategy endorsed by the KCTCS President's Leadership Team was to utilize a comprehensive approach to developing partnerships and agreements with four -year institutions by creating pathways for students completing associate degrees to transfer to baccalaureate degree programs.

This study examines the institutional and student characteristics that matter in the pathway to the baccalaureate degree. The following review of literature provides background to situate the study within the context of prior research and considers existing transfer research as it relates to a description of Appalachia as a unique context for the study, community college origins and missions, and the predictors of transfer success. The results of a mixed method study of transfer success, defined as successful retention of students into their major course of study in the baccalaureate, are then provided followed by recommendations for policy and practice appropriate for community and

technical college leaders faced with the challenges of bridging transfer to the

baccalaureate for students in economically vulnerable rural regions.

Appalachia as Context

> **"***Appalachia contains many sophisticated urban centers, and in those
> communities life is not much different from that in cities across America.
> But there is an underlying difference that comes from our past, our
> heritage.***"**

-Mari-Lynn Evans

Appalachia is defined by the ARC (2010) as "a 205,000 square-mile region that

follows the spine of the Appalachian Mountains from southern New York to northern

Mississippi."   The ARC was formed by Congress in 1965 as an economic development

agency that serves 420 counties in 13 states. The formation of this agency resulted from

the growing awareness of the poverty that existed in the region (ARC, 2010). Senator

Jack Kennedy, during his 1960 presidential campaign, visited the central Appalachian

region and singled out the area as impoverished. When President Lyndon Johnson

launched his War on Poverty programs a few years later, a primary focus was on

Appalachia (Santelli, 2004). The evolution of Appalachian culture has been influenced

by the opinions of outsiders. The idea that Appalachia is a peculiar place characterized

by homespun lifestyles is evident in popular culture. The media has presented

Appalachia as being represented by the cartoon character Snuffy Smith who spends his

time hiding his moonshine from the revenuers. Darker portrayals of Appalachian culture

can be found in the movie *Deliverance* that presents Appalachians as being dangerous

savages (Santelli, 2004). Harkins (2004) argues that even government programs and

policies, including the 1960's War on Poverty, contributed to the societal view of Appalachians as being materially and culturally deprived.

Billings, Norman, and Ledford (1999) observed that "…mountain people, it seems are acceptable targets for hostility, projection, disparagement, scapegoating, and contempt" (p.3). This long-held view that Appalachian citizens are the root cause of the social and economic problems has been found not only in the voices of "outsiders", but also in the opinions of Appalachian authors themselves. In 1962, Letcher County attorney, Harry Caudill published *Night Comes to the Cumberlands: A Biography of a Depressed Area*. This book, which became a classic of Appalachian literature, placed much of the blame for the extreme poverty and other social problems of the region squarely on the back of the residents. Other Appalachian authors also propagated the stereotypical view of mountain culture. Weller (1965) reported that the people of Appalachia were fatalistic in their views and that their view of human activity was a state of being rather than doing. These views have extended to the educational arena. While, as reflected by Caudill (1962), the high dropout rates and the low rates of educational attainment have often been attributed to the poor efforts of students, others have argued that this is another case of blaming the victim. Alternatively, a social reproduction view of educational attainment in Appalachia suggests that the poor performance of schools and students results from the external control of regional wealth and the lack of availability of industries that provide high-wage jobs (Shaw, DeYoung, & Rademacher, 2004).

The current study utilizes this rich context of Appalachian history and culture as a unique background by which to explore what factors contribute to transfer success in

rural regions. Should transfer be a primary mission for community colleges? Does successful transfer hinge on the student's abilities and background characteristics? Can the institution really make a difference in individual student success? The following sections speak to these questions as well as continuing to situate the current study within existing literature.

Transfer Mission

Higgins and Katsinas (1999) argue that the transfer mission of community colleges is the most significant within these multiple-mission institutions, providing students with access to the social and economic benefits of a baccalaureate degree. The concept of the community college began in the early 1900s with the establishment of the nation's first public community college, Joliet Community College in Illinois in 1901 (Kasper, 2002). In the early years, community colleges were created as extensions of the local school systems in communities without access to universities (Ratcliff, 1978). Communities with a university presence often established community colleges to serve freshman and sophomore levels so that the four-year universities could focus on upper-division and graduation education (Dougherty, 1994).

In the 1930s, community colleges shifted their focus to provide job training to address the widespread unemployment associated with the Great Depression (Kasper, 2002). After World War II, the GI Bill and the increased skill level required by labor market demands promoted the need for more postsecondary opportunities. In 1947, the Truman Commission Report was published recommending the establishment of a network of public community colleges that would charge little or no tuition, so that every capable American had access to a college education (Thompson, 1978). As Baby

Boomers became of age to attend college in the 1960s and 1970s, community college enrollments surged and additional facilities were constructed during this period of great economic growth. Today, community colleges enroll about 50% of total undergraduates (*Students at community colleges*, 2009), placing them in a critical role in the world of higher education.

Community colleges serve as the primary access point to postsecondary education for many underrepresented groups, such as minority, first-generation, nontraditional, and low-income students (Bailey & Morest, 2006). The role of the community college in the transfer process is to ensure that students persist and make the transition to the four-year institution. It is imperative for community colleges to establish best practices to support their students to enroll, persist, and transfer to four-year institutions. Otherwise, America's community colleges will unwittingly serve as a tracking mechanism, losing in the transfer process a substantial number of students who aspire to a baccalaureate degree (Pincus, 1980).   Considering that transfer has such major societal implications, it is critical that we determine what factors contribute to successful transfer. What are the predictors of transfer success? The next section will provide the existing research addressing this question.

Predictors of Transfer Success

Numerous studies describe the influences of student and institutional characteristics on successful transfer, defined as community college students who persist to the senior year at the four-year institution. This relevant literature provides a conceptual framework for the proposed study. Student characteristics that predict successful transfer are organized into two categories, (a) characteristics of students likely

to transfer to a four-year institution, and (b) characteristics of students likely to persist at the four-year institution. Institutional factors that influence successful transfer include (a) relationships between community colleges and four-year institutions, (b) institutional policies and practices relating to transfer, and (c) organizational environments and structures.

Student Characteristics

Numerous studies have focused on student-oriented factors that predict persistence in college and transfer success (Adelman, 1992; Crook & Lavin, 1989; Grubb, 1991; Kinnick & Kempner, 1988). While community colleges may have limited control over many of these factors, student characteristics are important in identifying and understanding why some students successfully transfer and earn a baccalaureate while others do not. Studies indicate that being low-income and first-generation (Choy, 2002; Ishitani, 2006; Nunez & Cuccaro-Alamin, 1998); being female and/or a minority (Eddy, Christie, & Rao, 2006; Lee & Frank, 1990; Velez & Javalgi, 1987); having low peer and parent support (Harbin, 1997); and being academically underprepared (Harrell & Forney, 2003; Striplin, 1999) have a negative impact on college persistence and transfer success. The rigor of the high school curriculum (Choy, Horn, Nunez, & Chen, 2000; Horn & Kojaku, 2004; Pascarella, Wolniak, Pierson, & Terenzini, 2003) and community college GPA (Cejda, Kaylor, & Rewey, 1998; McGrath & Spear, 1991) have also been found to be related to persistence and transfer.

Even though certain individual student characteristics can predict successful transfer and persistence, a gap still exists between baccalaureate degree attainment of students who start at the community college and those who start at the four-year

institution. Although two-thirds of this gap can be attributed to differences in individual

student characteristics, studies indicate that even when these differences are controlled,

students who start at a community college receive 11-19% fewer baccalaureate degrees

than four-year college entrants (Dougherty, 1994).   What can institutions do to influence

successful transfer?

Institutional Characteristics

Other studies have instead focused on institution-oriented factors (Laanan, 2004;

Eggleston & Laanan, 2001; Zamani, 2001).   In contrast to student characteristics,

institutional factors can be influenced by the organization and therefore provide the

opportunity for significant improvement in the transfer process. Amey, Eddy, and

Campbell (2010) suggest that collaborative partnerships between two- and four- year

institutions provide benefits to students, institutions, and the society. Dougherty (1994)

posits that one factor in students being unsuccessful in the transfer process is the

difference between the culture of two- and four- year institutions. Astin (1984) suggests

that the quality of any policy or practice is directly related to the extent of that policy or

practice to promote student involvement. Schlossberg (1989) asserts that colleges must

ensure that programs, practices, and policies are designed in ways that help people feel

that they matter. The creation of campus environments that demonstrate to all students

that they matter should lead to increased involvement and accomplishment of academic

and personal goals.

A number of studies attempt to identify the institutional factors that promote

transfer and persistence. The transfer process is complex and presents challenges to

studying the value of discrete institutional structures, policies, and practices that make a

difference. Various uncontrollable factors such as the college's geographic location and local economic contexts can affect the success of a college's transfer programs. Cohen (2003) found that institutional transfer rates typically vary little from year to year because it is difficult to ascertain what to change in order to ensure better outcomes. Numerous studies have found that the most promising practices within the control of the institution involve such factors as academic advising processes (Jenkins, 2007; Pascarella & Terenzini, 1991), transfer centers (Poisel & Stinard, 2006), and formal and informal relationships with four-year institutions and other community organizations (Amey, Eddy & Campbell, 2010).

Existing research confirms that both student and institutional factors matter in the pathway to the baccalaureate. How do these two types of factors relate to one another? An institution must gain an understanding about its student population in order to provide programs and services that will aid in their success. Numerous studies have found that students who felt important to even one person at the institution persisted and completed at much higher rates than those students who were not engaged (Astin, 1984; Schlossberg, 1989; Tinto, 1975, 1993). This framework of mattering connects the importance of exploring the perceptions of students and institutional personnel in the context of transfer. The following section presents the foundation of the mattering framework (Rosenberg & McCullough, 1981).

Mattering

Rosenberg originally coined the term "mattering" as the feeling that others depend on us, are interested in us, and are concerned about what happens to us (Rosenberg & McCullough, 1981). Schlossberg and Warren found that students were

academically engaged if they felt they mattered to an advisor or institution (Schlossberg, 1989). This concept is related to Astin's (1984) theory of student involvement that purports that a student's level of social and academic involvement on campus positively impacts persistence. Tinto (1975, 1993) also found that students who were socially integrated and involved in the college environment were more likely to persist. Schlossberg (1989) asserts that colleges must ensure that programs, practices, and policies are designed in ways that help people feel that they matter. The creation of campus environments that demonstrate to all students that they matter should lead to increased involvement and accomplishment of academic and personal goals.

This study is built upon the assumption that community colleges can influence transfer success. Numerous reports focus on student characteristics and indicate that students with similar backgrounds, abilities, and aspirations who enter the community college earn significantly fewer baccalaureate degrees than those students who start college at a four-year institution (Anderson, 1984; Nunley & Breneman, 1988; Velez, 1985). Institutional practices have shown to make a difference in successful student transfer. Schlossberg's (1989) assertion that institutions have a responsibility to develop programs and policies that make students feel as if they matter implies that the cultural environmental must also be considered. This study focused on providing an understanding of the various pathways that Appalachian community college graduates travel in pursuit of the baccalaureate degree.

Study Design

The purpose of the study was to examine the ways in which institutional policies and structures impact the pathway to the baccalaureate degree for Appalachian

community college students in Kentucky. To accomplish this, a mixed-method study was employed, comprised of a quantitative analysis of student outcome and survey data as well as qualitative study of student, faculty, and staff perspectives on the transfer experience. Quantitative analysis included two components: (a) descriptive and inferential statistics describing the transfer population and identifying institutional and student characteristics that were significant to transfer success and persistence, and (b) logistic regression analysis and odds ratios to determine transfer students' perceptions of mattering to their transfer success (Dykes, 2011). Qualitative research was conducted in two phases. First, interviews were conducted with faculty, staff, and administration at each of the participating community colleges to explore their perceptions of institutional factors that affect transfer success (Decker, 2011, Phillips, 2011). Second, interviews with a sub-population of students from the participating colleges who successfully transferred were conducted to examine the ways in which location-bound adults attending college, specifically nontraditional-aged Appalachian women perceive the supports and challenges to baccalaureate attainment (Preston, 2011). This latter component of the study is important because mobility is a particularly challenging aspect of post-secondary achievement for rural students.

Quantitative Methods

In order to describe the transfer population and identify institutional and student characteristics that were significant to transfer success and persistence, a quantitative analysis was conducted to calculate the overall transfer rate for the student population and for the four individual colleges to measure student transfer success. Institutional and overall transfer rates were calculated as the percentage of Associate in Arts and/or

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Associate in Science (AA/AS) graduates from spring and summer 2009 that successfully matriculated to and persisted at the four-year institution through fall 2010 (See Appendix A: Table 2:10). Student characteristics included age, gender, race, socioeconomic status, grade point average, and total cumulative hours earned upon graduation from the community college with the AA/AS degree. The study population included 338 AA/AS graduates from four KCTCS Appalachian community colleges. These descriptive statistics confirmed that the four participating community colleges were similar providing a reliable comparison of institutions. These colleges also operate in the same policy environment, serve similar student populations, and are similar in size and scope. These commonalities provide the opportunity to research other institutional factors that may play a role in distinguishing between high impact and low impact community colleges in the context of successful transfer.

The current study uses both the institution and the student as the unit of analysis to examine in what ways institutional and student factors can help explain the differences in transfer rates. Additional analysis was conducted to determine the significance of attending a particular community college on transfer to and persistence at the four-year institution. These results identified which participating community colleges had higher transfer success when controlling for individual student characteristics, thereby suggesting that institutional factors played a role in the disparity among rates of transfer. Two of the institutions were identified as statistically significant institutions promoting transfer success and will subsequently be labeled "high impact". Students from these high impact community colleges were at least two times more likely to transfer than

students attending the low-impact institutions controlling for gender, age, grade point average, and total cumulative hours.

The second quantitative component utilized the Mattering Scales Questionnaire for College Students (MSQCS) (Kettle, 2001), which was administered in Spring 2011 to obtain students' perceptions of mattering (See Appendix B). The main purpose of the assessment was to determine if students with high perceptions of mattering have higher retention rates (Schlossberg, 1989). The MSQCS contains 45 questions with five subscales including administration, advising, peers, multiple roles, and faculty. The subscales measure perceptions about a variety of institutional policies and practices and relationships that promote a sense of mattering for students. Results allowed for a comparison of student perceptions of mattering at four community colleges that operate in similar contexts. This provided an opportunity to explore institutional structures, practices, and policies that might contribute to heightened perceptions of mattering.

Qualitative Methods

The qualitative component of the study included two parts. First, interviews and site visits were conducted at the four participating community colleges to gain an understanding of how college leaders and transfer staff and faculty perceived how the organizational structures, policies, and practices of their institutions are related to successful transfer. Twenty-seven individuals were interviewed, including those holding leadership positions of vice president or above, as well as staff and faculty positions directly involved with the transfer process. Significant themes that emerged from the interviews were investigated further through secondary data sources including college websites, organizational charts, transfer handbooks, guides and other supporting

documentation. Results of the interviews and secondary data sources were compared to prior research through an extensive literature review in order to identify any major discrepancies to earlier findings.

Second, because loyalty to place is often cited as a key value for Appalachian residents and non-traditional age students are an important population in community and technical college enrollments, but are less likely to transfer, interviews were conducted with a sub-group of the student population to explore their perceptions on the ways that baccalaureate programs located on community college campuses provide them access to four-year degrees (See Appendix E). The study participants were Appalachian women who have delayed college participation and have adult responsibilities that include family responsibilities, employment, and community ties, which have resulted in them being unable or unwilling to leave their homes to transfer to traditional universities. Twenty-four female students were interviewed.

Institutional Profiles

Descriptive and inferential statistics provided institutional profiles of the four participating community colleges for a specific student cohort, spring/summer 2009 AA/AS graduates. Table 2.1 illustrates the profiles:

Table 2.1
Institutional Profiles of the Four Appalachian Community Colleges

		All	High Impact A	High Impact B	Low Impact A	Low Impact B
Total spring/summer 2009 AA/AS graduates		338	58	73	85	122
Female		227/67%	40/69%	40/55%	57/67%	90/74%
Male		111/33%	18/31%	33/45%	28/33%	32/26%
Traditional (18-24)		201/59%	25/43%	51/70%	44/52%	81/66%
Non-Traditional (25+)		137/41%	33/57%	22/30%	41/48%	41/34%
Pell-Eligible		329/97%	52/90%	71/97%	85/100%	121/99%
Non-Pell-Eligible		9/3%	6/10%	2/3%	0/0%	1/1%
Total Cumulative Hours Earned						
Mean		86.46	83.41	81.78	99.34	81.74
Med		78.0	78.0	74.0	87.0	76.0
SD		28.11	26.42	28.16	32.10	22.98
Max		246	191	246	215	229
Min		57	60	60	60	57
Transfer Rate*		163/48%	37/64%	48/66%	33/38%	45/37%
Persistence after Transfer**		115/71%	30/81%	31/65%	21/63%	33/73%
Full-time versus Adjunct Faculty			95/111	106/95	109/93	95/70
Technical Certificates (TC) versus Associate Degrees (AD) Awarded	Female	TC-1140	218	127	439	356
		AD-965	226	175	266	298
	Male	TC-1355	476	283	307	289
		AD-382	110	92	79	101
Total		TC-2495 AD-1347	TC-694 AD-336	TC-410 AD-267	TC-746 AD-345	TC-645 AD-399

*Defined as the total number/percent of 2009 spring/summer AA/AS graduates who enrolled at a four-year university in fall 2009.
**Defined as the total number/percent of students who transferred and persisted at the four-year university through fall 2010.

Findings and Results
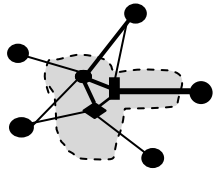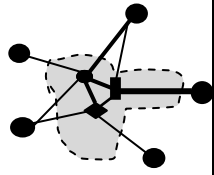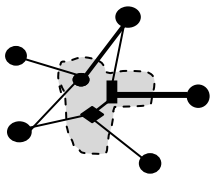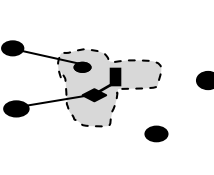
The framework used to describe the findings and results of the study is a typology developed by one of the authors hereafter entitled the Community College Typology for Transfer Success (Decker, 2011). The typology model was developed to illustrate the interplay among multiple types of informal and formal organizational structures in the context of transfer success. The framework includes six elements for each of the participating community colleges and helps to examine the interface of informal and formal structures that plays a role in the differentiation between high impact and low impact institutions. Other findings and results of the study help to further explain these differences in transfer success among the participating institutions. Community college leaders and practitioners can utilize these findings and results to identify what types of policies, practices, and structures they might consider to enhance their institutions' impact on transfer.

The Community College Typology for Transfer Success includes six data elements that emerged through interviews with transfer administrators, faculty, and staff at the four participating institutions. A thorough document analysis also informed the included elements. The first element reflects the organization's network structure including internal and external ties identified as important to the transfer process. Institutions were categorized according to the degree and strength of their internal and external ties. The second element indicates the formal organizational structure of the college and is assigned according to a provost (P) versus non provost model (NP). Typically, community colleges operate within two types of systems: (a) a traditional Provost model that incorporates academic and student affairs under one leader who

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reports to the President, or (b) a model that separates the academic and student affairs'

functions under two leaders who each report to the president. The study included the

formal organizational structure in the typology to determine if this element was important

to an institution's capability to influence transfer success.

The third element involves the level of integration of transfer services within the

college. An "I" indicates that a high level of integration of transfer services, and a "D"

means that the institution has a discrete set of services geared towards transfer. Elements

four through six deal with the number of four-year programs and institutions on campus,

as well as those within driving distance of the community colleges.   Table 2.2 illustrates

the typology elements for each of the high-impact and low-impact community colleges

included in the study.

Table 2.2

Community College Typology for Transfer Success

Element	High-impact colleges		Low-impact colleges	
	A	B	A	B
1. Internal and External Ties	Strong Internal and Strong External	Strong Internal and Strong External	Weak Internal and Strong External	Weak Internal and Weak External
2. Organizational Structure	NP	P	NP	NP
3. Transfer Center Structure	I	I	D	D
4. # of on-campus BA programs	7	8	6	1
5. # of 4-year schools on-campus	2	2	6	1
6. # of 4-year schools within driving distance	4	1	0	3

In the development of the typology matrix, student characteristics and other institutional factors were controlled in order to explore other explanations for the disparity of transfer success among four Appalachian community colleges. Findings support other research that suggests that no single practice guarantees institutional effectiveness; it is the combination of many factors within complex systems that promotes effectiveness (Hannon & Freeman, 1989; Ichniowski, Shaw & Prennushi,

1997). As illustrated in the typology, many informal and formal structures play a role in the differentiation between high-impact and low-impact institutions. No element can be identified as the one best structure, yet taken as a whole certain conditions seem to distinguish the high-impact community colleges from the low-impact community colleges.

Two elements seem to distinguish the high-impact community colleges from the low-impact community colleges: the degree of external and internal ties and the level of integration of the transfer center structures. Both of the high-impact institutions are identified as having strong external and internal ties. One of the low-impact colleges operates demonstrated strong external and weak internal ties. The two high-impact community colleges were identified as having well-integrated transfer centers/services, and the two low-impact community colleges were described as having discrete transfer centers. The transfer services of the high-impact colleges were described as infused within the regular operations of admissions, advising, and graduation. The low-impact institutions described their transfer centers as discrete departments that essentially served as information repositories for students interested in transfer. The primary difference among the typology elements is related to internal ties. It appears that the existence of strong external ties is not enough to make an impact on transfer. Strong internal ties are necessary for an institution to be effective in successful transfer.

Additional findings from other components of the study support the typology elements. This study incorporated both student (Dykes, 2011; Preston, 2011) and institutional (Decker, 2011; Phillips, 2011) perspectives about the transfer process allowing for a robust description of this complex topic. The typology was informed by

the institutional perspective through interviews with faculty, staff, and administration from each of the community colleges. The following description focuses on how student and institutional perspectives might help explain the elements of the typology that differentiate high-impact and low-impact community colleges.

The Role of the Institution

A key theme revealed throughout the study involved institutional awareness of the multiple roles of students. Results from the mattering survey as well as findings from student interviews indicated that the institutions' understanding of their multiple roles was an important factor

> *Student perspective: "It's really difficult to keep things going; I work full-time at a gas station, have a two-year old, and go to school full-time."*
>
> *--Emma, age 23*

to their transfer success (Dykes, 2011; Preston, 2011). The Multiple Roles Subscale on the mattering survey measures the perception that administration acknowledges competing student demands. This subscale significantly predicted the probability of persistence toward a baccalaureate degree (Dykes, 2011). This result was further supported by the interviews with students, in which they reported a variety of roles that competed for their time. Students indicated a difficulty in balancing demands as parents, students, workers, caregivers, etc (Preston, 2011). In addition to student responses, community college faculty, staff, and administration reported the importance of connecting with students on an individual level to understand their particular needs (Decker, 2011; Phillips, 2011). By gaining a comprehensive picture of the students' lives, institutions can employ programs and services that address actual needs at times and locations to meet student demands.

These student and institutional perspectives support the typology elements involving transfer center structures, and providing access through on-campus baccalaureate programming. Students who have multiple responsibilities benefit from integrated transfer programs and services. Many students reported that they were location-bound and could not have left the area to attend a four-year institution. In interviews with students enrolled in baccalaureate degrees on or near community college campuses, nearly all related that they would not be able to complete their degrees if the regional programs did not exist. A married student who works and has young children remarked, "I want to be a teacher. The only way that this is possible for me is to have a program here. I can't move my family so I can earn a degree" (Preston, 2011). Flexible policies, such as late administrative office hours and alternative course scheduling, that allow students to meet other responsibilities are important in influencing persistence toward a baccalaureate degree. This may be particularly true for rural areas like the ones included in this study (Dykes, 2011).

The Role of Advising

Advising was reported as a crucial process for transfer success by both students and institutional personnel. During the interviews with community college faculty, staff, and administration, advising emerged as the prevailing practice that promoted or hindered transfer success (Decker, 2011; Phillips, 2011). A challenge identified by many of the students involved being misadvised into lower-level courses needed for their baccalaureate programs and enrollment in unnecessary classes.

> *Institutional Perspective: "Advising is key for students to start off on the right path to transfer. If they come in the summer, they end up seeing whoever is around, and may not meet with the most appropriate person."*
> *--Pam, Community College Faculty Member*

One student related, "I never felt like I had an advisor at the community college – I saw someone new every semester. I ended up pretty much doing my own advising since so many of my friends were misadvised." Another common theme that emerged about community college advising was the tendency for advisors to have students enroll in classes that they did not need for either their associate degree or transfer. Several students related that they had 75 or more hours when they transferred. One woman who entered the university with senior status related that her advisor did not explain to her that she would need more than 40 hours of upper-level courses to earn a baccalaureate degree (Preston, 2011). This might indicate a communication breakdown within and between institutions.

Although advising is a practice conducted by individuals, the organizational analysis found in this study indicates that advising should also be seen as an organizational feature of institutional success in promoting transfer. This study found a negative relationship between students who earned over 90 total cumulative hours and successful transfer and persistence (See Appendix A: Table 2.4 & Table 2.5). If a good information flow does not exist within an institution, students may not have access to accurate information about which courses to take each semester. If strong ties do not exist between two-year and four-year institutions, community college advisors might not have up-to-date information about transfer agreements, baccalaureate course requirements, and other changes to programs. The importance of advising supports the typology element of internal and external ties. The high-impact community colleges demonstrated strong internal and external connections, providing the opportunity for an effective advising network. The low-impact community colleges seemed to lack the

degree of internal ties required for an adequate information flow to ensure accurate advising (Decker, 2011).

The Role of Faculty

The role of faculty also emerged as an important ingredient to transfer success. Students reported on the mattering survey that acceptance by faculty in the classroom was critical to their success. In fact, the

> *Student perspective: "I was so scared to start college, I was afraid I wasn't smart enough, but my teachers made me feel like I could succeed."*
> *--Trish, age 46*

faculty subscale of the survey significantly predicted the probability of persistence toward a baccalaureate degree. The student perception of feeling comfortable, noticed, and treated equitably in the classroom positively impacts transfer persistence. This may be particularly important among nontraditional students, who are often returning to the classroom after being out for several years (Dykes, 2011). This result further supports the notion of integrating transfer programs and services within the institution. Faculty should have a clear understanding of the transfer process and incorporate the information into their classrooms.

Roughly half of faculty at each of the institutions in this study are employed part-time (KCTCS, 2010), which may affect faculty-student interaction outside of the classroom. It may be more difficult for students to meet during scheduled office hours or to receive advising with part-time faculty. Part-time faculty may engage in less training and not be as aware of transfer-related issues as their full-time counterparts. Further, it is difficult to require part-time faculty, particularly those who teach online courses, to engage with students outside of class (Dykes, 2011)

While students found faculty to play an important role in the transfer process (Dykes, 2011), faculty were less aware of their importance in encouraging and assisting students progress through the educational pipeline (Decker, 2011; Phillips, 2011). Community college faculty interviewed in the study reported their perceptions of a shift in institutional mission away from the transfer function. Their perceptions reflect the historic shift in the community college national and state agendas, moving from an original focus on transfer to one of workforce development. The current emphasis is on completion, including a renewed focus on transfer (Decker, 2011; Phillips, 2011). This appeared to be reflected in the study's institutional profiles.

Table 2.3
Completion, Transfer, and Persistence

	All	High Impact A	High Impact B	Low Impact A	Low Impact B
Total spring/summer 2009 AA/AS graduates	338	58	73	85	122
Transfer Rate	163/48%	37/64%	48/66%	33/38%	45/37%
Persistence after Transfer	115/71%	30/81%	31/65%	21/63%	33/73%

As illustrated in Table 2.3, one of the low-impact community colleges had the highest number of AA/AS graduates in the cohort, the lowest percentage of transfers, but a fairly high rate of persistence at the four-year institution after transfer (See Appendix A: Table 2.9). This seemingly contradictory data might be explained by a combination of factors, including the shift in focus to completion with the limited opportunities for transfer available at this low-impact community college. The institution seems to perform exceedingly well with helping students earn their AA/AS degrees, yet yielded the lowest percentage of students who actually transferred. This might be linked to the typology elements of the number of baccalaureate programs available locally. Students

may be encouraged to earn a degree in order to fulfill the completion agenda, yet are restricted to continuing to a four-year institution near home. Unfortunately, for many rural areas there is limited access to these types of institutions for students who cannot move away.

The Role of Institutional Partnerships

Strong partnerships provide the opportunity for access to four-year programs for rural students who do not live in close proximity to university campuses. Students who were interviewed for this study reported the importance of having access to postsecondary education in their local area. Participants expressed that they have feelings of attachment to their Appalachian communities and the residents of the area and indicated their intention to remain in their home communities. These student perspectives might further explain the importance of partnerships between community colleges and four-year institutions. Many of these students would not have had the opportunity to pursue a baccalaureate degree if the community colleges did not provide access through on-campus programs (Preston, 2011). The high-impact community colleges had numerous baccalaureate programs available on campus as well as the internal and external ties required to ensure success.

Community college faculty, staff, and administration interviewed for the study reported that a high degree of coordination with on-campus and local four-year institutions resulted in a more seamless transition for students (Decker, 2011; Phillips, 2011). The typology elements that capture these key partnerships include number of four-year institutions offering on-campus programs, number of baccalaureate/graduate programs offered on-campus, and number of four-year institutions within reasonable

driving distance. Three of the community colleges, including one low-impact institution offered a high number of baccalaureate programs on the community college campus.

Institutional perspective: *"Communication is more difficult with institutions that are far away, and most of our students want to stay in the community."*
---Ted, Community College Advisor

What factors might help explain the limited number of transfers from the low-impact community college, given such a high number of available four-year programs?

This institution also exhibited weak internal ties, so it is possible that even though the four-year programs were available on campus, students may not have been made aware of these opportunities. The two high-impact community colleges were described as having strong internal ties, which could indicate that not only were students more aware of the opportunities, but also that the four-year programs took on the "feel" or "culture" of the community college (Decker, 2011).

In addition to partnerships with four-year institutions, relationships with the community in general were discussed as an important underlying factor to organizational success with transfer. Community college faculty, staff, and administration who were interviewed reported some of the misperceptions of the community about the role of the community college. Community colleges were viewed as a place for students who were location-bound, underprepared for college, or otherwise deemed not suitable for a four-year institution (Decker, 2011; Phillips, 2011). Building these external relationships is crucial in helping the community develop an accurate understanding of the role of community colleges in the pathway to the baccalaureate.

Recommendations

  This study of community college transfer within Appalachia Kentucky resulted in several recommendations to promote increased student transfer and to encourage transfer persistence. The goal of these recommendations is to increase the educational attainment rate of the region to levels consistent with policy goals. Economists agree that the level of education of citizens is directly related to the economic level of a geographical area. The need for an increase in the number of students who transfer to universities is particularly important in Appalachia Kentucky where severe and persistent poverty exist and a much lower rate of highly educated citizens reside (ARC, 2010). Ziliak posits that the deeply rooted poverty in Appalachia Kentucky will continue until the college completion gap between this area and the rest of the country is closed (2007).   The following bulleted list includes the major recommendations informed by the study:

Expand System-Wide Transfer Agreements

  While several system-wide transfer agreements with four-year institutions are in place, specific institutional agreements with baccalaureate-granting institutions often complicate the transfer process. Without common and consistent transfer agreements that are readily available to the public, students do not have a clear understanding of what credits will transfer, and other pertinent information about how the transfer process works. Since KCTCS uses a common transcript for all course work, the use of system-wide articulation agreements would make the transfer process clear and seamless. This system could help to prevent students from repeating courses taken at the community college, thereby accelerating time to completion.

Increase Collaborative Agreements

Currently, baccalaureate programs are provided by both private and public four-year institutions located on or near community college campuses. These degree programs provide access for students who cannot move away. More than 50 percent of the community college student population is 24 years of age or older, and a significant number of younger students maintain adult responsibilities, which result in them being unable to relocate to traditional residential campuses. The Appalachian community colleges in this study that had the highest rates of transfer and baccalaureate persistence among their student population were closely connected with four-year institutions that offer multiple degrees within their communities.

The scope of the baccalaureate degrees offered to these place-bound students is limited. Four-year programs widely available within the region include education, nursing, social work, human services, and university studies. Many of the baccalaureate programs currently offered to place-bound students in the region are in disciplines that have saturated the local job markets. Limited opportunities exist for programs of study in the areas of science and technology, which typically result in higher paying employment within high-demand fields. Needs of the specific communities should be assessed in order to identify the most appropriate programs. It is imperative that educational leaders determine how to bridge the gap between increasing the number of baccalaureate degree holders in Appalachia while simultaneously meeting the needs of local labor markets through workforce development.

Develop a Comprehensive, Student-Centered Advising Model

Faculty, staff, and student participants in this study voiced a concern about consistency in advising, defined as the planning and scheduling of classes. It is important that students receive advising in a model that considers the individual, long-term educational goals of students. In order for students to complete their degrees in a timely manner and begin the transfer process, advisors must be well informed about the requirements of the receiving institutions, existing articulation agreements, and the barriers commonly faced by the student population. Community colleges included in the study utilized advisors who served in staff and faculty roles (Decker, 2011; Phillips, 2011; Preston, 2011).

Typically, new students visit an "advising center" and meet with a staff advisor who helps them with their first-semester schedule. Beyond the first semester, each community college followed different policies regarding advising. One institution allowed students with a certain number of credit hours to completely self-enroll through an electronic system. Most of the institutions required students in developmental courses to visit an advisor until they successfully completed their developmental sequences. Once they have completed their developmental courses, students are assigned a faculty advisor from their program of study. Faculty, staff, and administration from the community colleges indicated that although advising was critical to the transfer process, they agreed that improvements could be made to the existing model. Up-to-date and readily accessible checksheets that clearly take a student through the pathway to a baccalaureate program would greatly enhance the advising and student self-enrollment processes (Decker, 2011; Phillips, 2011).

Implement a Strong System of Internal and External Communications

Community college faculty, staff, and administration interviewed for the study identified a gap in communicating information relevant to encouraging student transfer. Clear processes for sharing information within each institution must be developed. A more complicated communication gap exists between the sending and receiving transfer institutions. Strong collaborative efforts must be based in processes for inter-institutional communications. Shared institution responsibility for these processes should be established. Transfer and advising personnel from both the two- and four- year institutions should participate in regularly schedule forums to address articulation and other transfer policy needs (Decker, 2011).

Maintaining accurate up-to-date transfer information from receiving institutions is a challenging task. This requires a strong system of communication that is maintained over long periods of time. Establishing an appropriate model for inter- institutional communication would allow for an understanding of evolving transfer policies, gives voice to both the two- and four- year institutions, and allows for addressing the changing needs of the student population and the regional economic system (Decker, 2011).

Advance the Mandates of House Bill 160

House Bill 160 provides the mechanism to expand the capacity of the state's postsecondary system to ensure seamless transfer between community colleges and four-year institutions. The bill assures that students will not be required to repeat or take additional lower-level courses to fulfill baccalaureate degree requirements in the same major. Although House Bill 160 takes the necessary first step of ensuring the seamless transfer of credit, establishing the partnerships and maintenance of transfer information

will be actions required of each college with the appropriate four-year institutions. This will require strengthening external relationships and potential changes to existing practices to improve the transfer experience.

Develop Institutional Partnerships to Meet the Needs of Location-Bound Students

A significant number of Appalachian community college students are location-bound. The community colleges which have existing partnerships to deliver four-year degrees within the region have a much higher rate of transfer and persistence. The number of degree programs is positively correlated with these higher rates of academic attainment. The two and four-year institutions should have a goal of establishing partnerships which are founded on strong communications, equal voice in related transfer issues, and meeting the needs of the specific regional community. The implementation of these partnerships will require strong commitment from the leadership of both sending and receiving institutions in order to promote a cultural of collaborative partnership. The expansion of concurrent enrollment agreements is an essential part of institutional collaborative. Currently, students who are enrolled concurrently receive financial aid through the baccalaureate-granting institutions. Because of differing institutional calendars, students frequently are dropped from community college classes and are required to pay large fees in order to be reinstated in their required courses. Penalties charged to the students because of institutional issues must be addressed by both the sending and receiving institutions (Preston, 2011).

Integrate Transfer Services into the Entire Student Experience

Transfer planning is often limited to the final semester of a students' community college enrollment. This results in students having difficulty meeting their major

requirements for transfer and accumulating excessive hours. This is costly in terms of both time and financial aid.   In order to facilitate successful student transfer, it is important that their long-term educational goals be assessed earlier in their community college experience. A majority of community college students relate that they plan on earning a baccalaureate degree, but only a small percentage achieve this goal. It is essential that transfer planning begins in the initial advising process. By encouraging students to consider their long-term educational goals early on in their college careers, advisors can assist students in planning schedules and providing transfer information. It is highly recommended that this be built into the advising model.

Students may benefit from increased contact with part-time faculty, who tend to engage with students outside of the classroom less than their full-time counterparts (Shuetz, 2002). Because roughly half of the faculty at the institutions in this study are part-time, it would be beneficial to increase integration of part-time faculty at the institutions and contact with these professionals with students. It may be helpful to determine a means of paying part-time faculty for attending faculty meetings and professional development opportunities so as to stay up-to-date on college initiatives and relevant transfer issues (Dykes, 2011).

Conclusion

American community colleges play a crucial role in facilitating student transfer, which improves social and economic mobility of those with the lowest incomes. This study examined student and institutional characteristics that help to increase the rate of student transfer toward baccalaureate attainment. The setting was four institutions in Appalachia Kentucky that operate within the same community college system and policy

environment, allowing researchers to compare institutional factors. A mixed-method approach was utilized: a quantitative analysis of both survey data and student outcomes and a qualitative analysis of student, faculty, and staff perspectives on the transfer function. The researchers used the Community College Typology for Transfer Success (Decker, 2011) to describe the findings and results, which help to explain differences in transfer and persistence rates among the four institutions. Four resulting themes were found

First, institutions need to understand the multiple and competing social and economic roles of students and to be flexible in providing transfer services that are well-integrated on the community college campus. Second, community college faculty, staff, and administration need to be knowledgeable and up-to-date regarding the transfer process and available options for students. While campuses may offer transfer centers, it is the responsibility for everyone who advises students to take an active role in ensuring that students will not be misinformed. Third, teaching faculty should make a concerted effort to make students feel accepted and comfortable in the classroom, which was found to be a significant predictor of not only transfer but persistence toward the baccalaureate. Lastly, baccalaureate degree programs should be made available on community college campuses, particularly for students who are unable to relocate or to travel long distances to a four-year institution to attend classes. Programs should be offered in disciplines that are tied directly to local labor markets. Further, the transfer function should be integrated into the entire transfer experience, with visible partnerships with four-year institutions. The state needs to implement system-wide transfer agreements under which these partnerships can flourish.

The researchers recommend that the Community College Typology for transfer Success (Decker, 2011) be applied in other institutional settings to test the recommendations discussed above. Replicating this study, it would be helpful to determine system-wide student and institutional characteristics that promote transfer and persistence toward the baccalaureate. Additionally, it would be beneficial to compare the Typology results among urban and rural institutions and among those that are located geographically close to or away from four-year institutions. Do students in these different settings feel that different institutional policies and practices are important in helping them to transfer to a four-year institution?

Appendices

Table 2.4

Regression 1: Total Cumulative Hours Regressed Against Successful Transfer

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% Lower	CI Upper
Constant	-0.248188	0.669033	-0.37	0.711			
Gender	-0.216216	0.240534	-0.90	0.369	0.81	0.50	1.29
Race	-0.612150	0.617349	-0.99	0.321	0.54	0.16	1.82
Age	0.099731	0.231846	0.43	0.667	1.10	0.70	1.74
Cum. GPA	0.383949	0.224644	1.71	0.087	1.47	0.95	2.28
Tot. Cum. Hours	0.875647	0.266043	3.29	0.001	2.40	1.43	4.04

The regression analysis of the 338 students from the spring/summer 2009 graduates with the transfer associate degree; Associate in Arts or Associate in Science, provided evidence for one highly significant variable and one weakly significant variable associated with student transfer. Gender, race, age each were statistically insignificant variables related to transfer. Cumulative grade point average is classified as a dichotomous variable with 1 signaling grade point average greater than or equal to 3.25 upon graduation and zero for grade point average below 3.25. Cumulative grade point average was weakly significant at the 10% significance level with a p-value of 0.087. Total cumulative hours earned upon graduation was also a dichotomous variable for 1 signaling earned credit hours below 90 and zero for credit hours earned greater than or equal to 90 upon graduation. Total cumulative hours were found to be highly significant at the 1% significance level with a p-value of 0.001.

Table 2.5

Regression 2: Total Cumulative Hours Regressed Against Successful Persistence

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% Lower	CI Upper
Constant	-0.169086	0.673400	-0.25	0.802			
Gender	-0.085996	0.251556	-0.34	0.732	0.92	0.56	1.50
Race	-1.203635	0.615143	-1.96	0.050	0.30	0.09	1.00
Age	-0.080316	0.243019	-0.33	0.741	0.92	0.57	1.49
Cum. GPA	0.388863	0.236398	1.64	0.100	1.48	0.93	2.34
Tot. Cum. Hours	0.739097	0.292122	2.53	0.011	2.09	1.18	3.71

The regression analysis of the 338 students from the spring/summer 2009 graduates with the transfer associate degree; Associate in Arts or Associate in Science, provided evidence for one highly significant variable and one weakly significant variable associated with student persistence. Gender, race, age each were statistically insignificant variables related to persistence. Cumulative grade point average is classified as a dichotomous variable with 1 signaling grade point average greater than or equal to 3.25 upon graduation and zero for grade point average below 3.25. Cumulative grade point average was weakly significant at the 10% significance level with a p-value of 0.10. Total cumulative hours earned upon graduation was also a dichotomous variable for 1 signaling earned credit hours below 90 and zero for credit hours earned greater than or equal to 90 upon graduation. Total cumulative hours were found to be significant at just over the 1% significance level with a p-value of 0.011.

Table 2.6

Regression 3: Colleges 1 & 2 with College 4 Omitted

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% Lower	CI Upper
Constant	-0.648830	0.704526	-0.92	0.357			
Gender	-0.078571	0.251057	-0.31	0.754	0.92	0.57	1.51
Race	-0.751337	0.646098	-1.16	0.245	0.47	0.13	1.67
Age	0.185278	0.243253	0.76	0.446	1.20	0.75	1.94
Cum. GPA	0.226335	0.235306	0.96	0.336	1.25	0.79	1.99
Tot. Cum. Hours	0.801860	0.283926	2.82	0.005	2.23	1.28	3.89
College 1	1.104820	0.343546	3.22	0.001	3.02	1.54	5.92
College 2	1.166580	0.325241	3.59	0.000	3.21	1.70	6.07
College 3	0.350170	0.313494	1.12	0.264	1.42	0.77	2.62

These four Appalachian community colleges each have similar descriptive statistics regarding gender, race, and age. Results indicate that grade point average is weakly significant, while cumulative credit hours earned are highly significant. Higher grade point average leads to more transfer success and better persistence, while fewer than 90 credit hours earned leads to more transfer success and better persistence. In addition, by running four separate regressions omitting one of the four community colleges in each regression, results indicated that colleges 1 and 2 were high impact and colleges 3 and 4 were low impact relative to each other. Table 2.6 shows that when omitting college 4, colleges 1 and 2 are statistically similar as noted by their statistically significant p-values with college 3 having a p-value that is statistically insignificant.

Table 2.7

Regression 4: Colleges 1 & 2 with College 3 Omitted

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% Lower	CI Upper
Constant	-0.298660	0.715618	-0.42	0.676			
Gender	-0.078571	0.251057	-0.31	0.754	0.92	0.57	1.51
Race	-0.751337	0.646098	-1.16	0.245	0.47	0.13	1.67
Age	0.185278	0.243253	0.76	0.446	1.20	0.75	1.94
Cum. GPA	0.226335	0.235306	0.96	0.336	1.25	0.79	1.99
Tot. Cum. Hours	0.801860	0.283926	2.82	0.005	2.23	1.28	3.89
College 1	0.754649	0.370587	2.04	0.042	2.13	1.03	4.40
College 2	0.816406	0.348687	2.34	0.019	2.26	1.14	4.48
College 4	-0.350170	0.313494	-1.12	0.264	0.70	0.38	1.30

These four Appalachian community colleges each have similar descriptive statistics regarding gender, race, and age. Results indicate that grade point average is weakly significant, while cumulative credit hours earned are highly significant. Higher grade point average leads to more transfer success and better persistence, while fewer than 90 credit hours earned leads to more transfer success and better persistence. In addition, by running four separate regressions omitting one of the four community colleges in each regression, results indicated that colleges 1 and 2 were high impact and colleges 3 and 4 were low impact relative to each other. Table 2.7 shows that when omitting college 3, colleges 1 and 2 are statistically similar as noted by their statistically significant p-values with college 4 having a p-value that is statistically insignificant.

Table 2.8

Regression 5: Colleges 3 & 4 with College 2 Omitted

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% Lower	CI Upper
Constant	0.517746	0.741134	0.70	0.485			
Gender	-0.078571	0.251057	-0.31	0.754	0.92	0.57	1.52
Race	-0.751337	0.646098	-1.16	0.245	0.47	0.13	1.67
Age	0.185278	0.243253	0.76	0.446	1.20	0.75	1.94
Cum. GPA	0.226335	0.235306	0.96	0.336	1.25	0.79	1.99
Tot. Cum. Hours	0.801860	0.283926	2.82	0.005	2.23	1.28	3.89
College 1	-0.061757	0.382342	-0.16	0.872	0.94	0.44	1.99
College 3	-0.816406	0.348687	-2.34	0.019	0.44	0.22	0.88
College 4	-1.166580	0.325241	-3.59	0.000	0.31	0.16	0.59

These four Appalachian community colleges each have similar descriptive statistics regarding gender, race, and age. Results indicate that grade point average is weakly significant, while cumulative credit hours earned are highly significant. Higher grade point average leads to more transfer success and better persistence, while fewer than 90 credit hours earned leads to more transfer success and better persistence. In addition, by running four separate regressions omitting one of the four community colleges in each regression, results indicated that colleges 1 and 2 were high impact and colleges 3 and 4 were low impact relative to each other. Table 2.8 shows that when omitting college 2, colleges 3 and 4 are statistically similar as noted by their statistically significant p-values with college 1 having a p-value that is statistically insignificant.

Table 2.9

Regression 6: Colleges 3 & 4 with College 1 Omitted

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% Lower	CI Upper
Constant	0.455989	0.733641	0.62	0.534			
Gender	-0.078571	0.251057	-0.31	0.754	0.92	0.57	1.51
Race	-0.751337	0.646098	-1.16	0.245	0.47	0.13	1.67
Age	0.185278	0.243253	0.76	0.446	1.20	0.75	1.94
Cum. GPA	0.226335	0.235306	0.96	0.336	1.25	0.79	1.99
Tot. Cum. Hours	0.801860	0.283926	2.82	0.005	2.23	1.28	3.89
College 2	0.061757	0.382342	0.16	0.872	1.06	0.50	2.25
College 3	-0.754649	0.370587	-2.04	0.042	0.47	0.23	0.97
College 4	-1.104820	0.343546	-3.22	0.001	0.33	0.17	0.65

These four Appalachian community colleges each have similar descriptive statistics regarding gender, race, and age. Results indicate that grade point average is weakly significant, while cumulative credit hours earned are highly significant. Higher grade point average leads to more transfer success and better persistence, while fewer than 90 credit hours earned leads to more transfer success and better persistence. In addition, by running four separate regressions omitting one of the four community colleges in each regression, results indicated that colleges 1 and 2 were high impact and colleges 3 and 4 were low impact relative to each other. Table 2.9 shows that when omitting college 1, colleges 3 and 4 are statistically similar as noted by their statistically significant p-values with college 2 having a p-value that is statistically insignificant.

MSQCS Research Questions and Data Analysis

Mattering Perception among the Community Colleges

Research Question #1 stated: Was mattering perception statistically significant among the three community colleges? An ANOVA found that there were no significant differences between the three community colleges on any subscale. The first table shows the mean scores on the five MSQCS subscales among the two-year institutions. The second table shows the ANOVA Table for MSQCS means among the two-year institutions.

Table 2.10
MSQCS Subscale Means by Institution

MSQCS Subscale		High Impact A	Low Impact A	Low Impact B
Administration Subscale	Mean	38.84	42.04	40.89
	SD	7.669	6.811	4.719
	Std Err of Mean	1.759	1.390	.776
	Variance	58.807	46.389	22.266
Advising Subscale	Mean	31.32	33.29	32.46
	SD	5.803	4.592	3.783
	Std Err of Mean	1.331	.937	.622
	Variance	33.673	21.085	14.311
Peers Subscale	Mean	43.53	45.58	45
	SD	6.703	7.027	4.416
	Std Err of Mean	1.538	1.434	.726
	Variance	44.930	49.384	19.500
Multiple Roles Subscale	Mean	26.63	27.17	26.97
	SD	5.166	4.517	3.296
	Std Err of Mean	1.185	.922	.542
	Variance	26.690	20.406	10.860
Faculty Subscale	Mean	30.74	32.96	32.11
	SD	4.039	4.930	3.373
	Std Err of Mean	.927	1.006	.555
	Variance	16.316	24.303	11.377

Table 2.11

ANOVA Table for MSQCS Subscale Means among Community Colleges

MSQCS Subscale		Sum of Squares	Df	Mean Square	F	Sig.
Administration Subscale	Between Groups (Combined)	109.948	2	54.974	1.446	.242
	Within Groups	2927.052	77	38.014		
	Total	3037.000	79			
Advising Subscale	Between Groups (Combined)	41.435	2	20.717	.993	.375
	Within Groups	1606.253	77	20.860		
	Total	1647.687	79			
Peers Subscale	Between Groups (Combined)	46.980	2	23.490	.683	.508
	Within Groups	2646.570	77	34.371		
	Total	2693.550	79			
Multiple Roles Subscale	Between Groups (Combined)	3.073	2	1.563	.088	.916
	Within Groups	1340.727	77	17.412		
	Total	1343.800	79			
Faculty Subscale	Between Groups (Combined)	52.677	2	26.339	1.607	.207
	Within Groups	1262.210	77	16.392		
	Total	1314.887	79			

Predictors of Transfer Persistence

Research question #2 stated: Does mattering perception influence transfer persistence when student characteristics of gender, marital status, enrollment status, work status, age, number of dependents, developmental course completion, first generation status, low-income status, extracurricular participation, and Student Support Services (TRIO) participation status are controlled? A logistic multiple regression was utilized using the above variables as predictors and transfer persistence as the criterion at levels of significance of .01, .05, and .10. The significant predictors, listed in order from most to least significant, are: (1) MSQCS Faculty Subscale, (2) MSQCS Multiple Roles Subscale, and (3) first-generation status (table below).

Table 2.12
Predictors of Transfer Persistence

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% Lower	CI Upper
Constant	-5.81816	3.21831	-1.81	0.071			
Administration Subscale	0.0019064	0.115783	0.02	0.987	1.00	0.80	1.26
Advising Subscale	0.104785	0.14352	0.74	0.462	1.11	0.84	1.47
Faculty Subscale	0.573535	0.196747	2.92	0.004	1.77	1.21	2.61
Multiple Roles Subscale	0.488252	0.186870	2.61	0.009	1.63	1.13	2.35
Age	0.250330	0.0340117	0.74	0.462	1.03	0.96	1.10
Gender	-0.330248	0.671263	-0.49	0.623	0.72	0.19	2.68
Marital Status	-0.0909570	0.304545	-0.30	0.765	0.91	0.50	1.66
Work Hours	0.204426	0.207095	0.99	0.324	1.23	0.82	1.84
Dependents	0.393426	0.307312	1.28	0.200	1.48	0.81	2.71
First-Generation	2.38254	0.945660	2.52	0.012	10.83	1.70	69.13
Low-Income	0.0428515	0.612127	0.07	0.944	1.04	0.31	3.46
Extracurricular Activities	0.580629	0.617049	0.94	0.347	1.79	0.53	5.99
SSS Participation Status	-0.132356	0.795991	-0.17	0.868	0.88	0.18	4.17

The Faculty and Multiple Roles Subscale predictors were found to be significant at the 1% level, while the first-generation status was significant at approximately the 1% level. All other variables were found to be not significant. Coefficients are positive on Faculty and Multiple Roles Subscale predictors, meaning that higher scores result in increased persistence. The Coefficient for first-generation status is positive, meaning that first-generation students are most likely to persist after transfer. Further, the odds ratio for this variable illustrates that first-generation students are 10 times more likely to persist than continuing-education students.

Several statistics were utilized to test for "goodness of fit" and significance of the regression model. See table below.

Table 2.13
Goodness-of-Fit Tests

Method	Chi-Square	DF	P
Pearson	77.1847	64	0.125
Deviance	85.6548	64	0.037
Hosmer-Lemeshow	4.2547	8	0.833

According to the Pearson goodness-of-fit test, the regression model is a good fit for this research question. According to the Deviance goodness-of-fit, which shows a model being a good fit only above 1%, results are less meaningful due to significance levels at 1%.

Mattering Scales Questionnaire for College Students (MSQCS) - Revised
Includes Demographic Survey and Cover Letter

How did [institution] treat you? Take 15 minutes and tell us.

One of the goals of [institution] is to operate a student-centered campus. Working with [institution], I am trying to determine how the college treated you while you were a student.

Your participation is voluntary and confidential. You have been assigned a code number that will be used to identify your responses. All information will be recorded anonymously, and the results will be reported as a group. No responses will be reported individually. Only I, as the researcher, will know your name, but I will not divulge it or identify your answers to anyone. All information will be held in the strictest confidence. <u>I encourage you to complete the questionnaire and return it by [date].</u>

Alternatively, if you would rather complete the survey online, please go to [website address] by [date] and enter code # _____.

INSTRUCTIONS FOR RETURNING THE QUESTIONNAIRE
- **Check to make sure you have answered all questions.**
- **Check to make sure your answers are legible.**
- **To mail, insert into the self-addressed, stamped envelope provided. No postage is required. Drop the envelope in any post office mailbox.**

Thank you for your participation!!

Mattering Scales Questionnaire for College Students

Please circle the response that best described your feelings while you were a student at [institution]. Please select a response for each item.

**SD=STRONGLY DISAGREE   D=DISAGREE   N=NEITHER AGREE OR DISAGREE
A=AGREE   SA=STRONGLY AGREE**

1. The administration seemed to consider student priorities as important...................SD D   N   A   SA

2. My advisor didn't seem to remember things we discussed before.....................SD D   N   A   SA

3. I had a hard time finishing my degree because of time limits on completing course requirements..SD D   N   A   SA

4. I got support from my classmates when I needed it.......................................SD D   N   A   SA

5. The university's policy of transfer credits penalized students.........................SD D   N   A   SA

6. My questions seemed to put faculty members on the defensive.......................SD D   N   A   SA

7. The faculty and administrators were sensitive to my other responsibilities.........SD D   N   A   SA

8. I sometimes felt alone and isolated at the college......................................SD D   N   A   SA

9. The administrative rules and regulations were clear to me.............................SD D   N   A   SA

10. My professors interpreted assertiveness as a challenge to their authority............SD D   N   A   SA

11. The administration set things up to be easy for them, not the students...............SD D   N   A   SA

12. It was hard for me to adjust to the school environment.................................SD D   N   A   SA

13. If my advisor didn't know the answer to my questions, he or she would seek out the answers..SD D   N   A   SA

14. The classroom atmosphere encouraged me to speak out in class.......................SD D   N   A   SA

15. I felt my classmates reacted positively to my experience and knowledge............SD D   N   A   SA

16. My professors seemed to recognize other students but not me........................SD D   N   A   SA

17. I didn't have time to complete the administrative tasks the college required ......SD D   N   A   SA

18. There was always someone on campus that could help me when I had a question or problem...SD D   N   A   SA

19. I felt like I fit in my classes..SD D   N   A   SA

20. The administrative offices were not open at times when I needed them...............SD D   N   A   SA

21. The administration made efforts to accommodate students.............................SD D   N   A   SA

Please continue to the next page.

22 I had a good relationship with my classmates.……..……………………….SD   D   N   A   SA

23 Sometimes I felt out of place in the classroom.……………………...........SD   D   N   A   SA

24 The college did not commit enough resources to off-campus courses………….SD   D   N   A   SA

25 There was always an advisor available to talk with me if I need to ask a question.………………………………………………………………….SD   D   N   A   SA

26 My classmates would help me catch up to the new technologies if I needed it…SD   D   N   A   SA

27 My experience-based comments were accepted by my professors…...…..………SD   D   N   A   SA

28 It took too long to register or correct registration problems………..….………SD   D   N   A   SA

29 Administrative staff was helpful in answering my questions…..………………..SD   D   N   A   SA

30 Fellow students didn't seem to listen to me when I shared my life experiences…SD   D   N   A   SA

31 Unless I had another student like me in class, no one really understood how hard it was to be there.……………………………………………………….SD   D   N   A   SA

32 The college offered alternatives to the traditional semester-length courses (example: weekend courses).…………………………………………..………SD   D   N   A   SA

33 I had adequate opportunities to get to know fellow students.………….............SD   D   N   A   SA

34 Campus rules and regulations seemed to have been made for someone other than me.……………………………………………………………………….SD   D   N   A   SA

35 My age sometimes got in the way of my interactions with other students….........SD   D   N   A   SA

36 Some of the jokes my professors told made me feel uncomfortable……………..SD   D   N   A   SA

37 Classes were offered at times that were good for me………………….………SD   D   N   A   SA

38 I felt welcome on campus.…………………………………….…………............SD   D   N   A   SA

39 The classroom desks were uncomfortable……………...……………..………….SD   D   N   A   SA

40 I felt my activity fees were spent in a way that was meaningful to me………….SD   D   N   A   SA

41 My advisor had office hours at times that I was on campus………………..........SD   D   N   A   SA

42 Departmental rules sometimes made my goals difficult or impossible…….…......SD   D   N   A   SA

43 The school newspaper didn't discuss student issues that were relevant to me……SD   D   N   A   SA

44 My professors sometimes ignored my comments or questions…..……………….SD   D   N   A   SA

45 I sometimes felt my professors wanted me to hurry up and finish speaking…….SD   D   N   A   SA

Please continue to the next page.

Schlossberg, N., Lasalle, A., & Golec, R. (1990). *The Mattering Scales for Adult Students in Higher Education*. Washington, DC: American Council on Education.

1   **Age as of October 1, 2010?**   _____ years old

2   **Gender:** *(Check one)*   ☐ Male   ☐ Female

3   **Marital status:** *(Check one)*
☐ single (never been married)
☐ unmarried and living with partner / significant other
☐ married
☐ divorced
☐ widowed
☐ separated

4   **Enrollment status the majority of the time you attended [institution]:** *(Check one)*
☐ Full-time student (enrolled in at least 12 credit hours this semester)
☐ Part-time student (enrolled in less than 12 credit hours this semester)

5   **Did you work while attending [institution]?** *(Check one)*
☐ No **(Go to #7)**
☐ Sometimes **(Go to #6)**
☐ Yes **(Go to #6)**

6   **If Yes or Sometimes, what is the average number of hours you worked per week the majority of the time you attended [institution]?** *(Check one)*
☐ 0-10 hours
☐ 11-20 hours
☐ 21-30 hours
☐ 31-40 hours
☐ Over 40 hours

7   **Did you have dependents living with you while attending [institution]?** *(Check one)*
(Examples: spouse, children, grandchildren, parents, or others that you were <u>financially responsible</u> for.)
☐ No **(Go to #9)**
☐ Yes **(Go to #8)**

8   **If yes, how many dependents did you have while you were a student at [institution]?**

_____ Number of Dependents

9   **Did you take developmental courses while you were a student at [institution]?** *(Check one)*
☐ No **(Go to #11 on next page)**
☐ Yes **(Go to #10)**

10   **If Yes, how many developmental courses did you take while at [institution]?** *Check one)*
☐ 1
☐ 2
☐ 3 or more

                                           Please continue to the next page.

11 Were you a participant in the federal TRIO Student Support Services (SSS) program [other name] while a student at [instition]? *(Check one)*

    ☐ No   **(Go to #17 on the next page)**

    ☐ Yes   **(Go to #12)**

12 If Yes, please mark which of the following services you utilized from SSS [other name] staff. *(Check all that apply.)*

    ☐ Help registering for classes

    ☐ Keeping track of grades through mid-term progress/grade reports filled out by instructors and turned in to SSS [other name] staff

    ☐ Help talking to instructors about problems I had in class

    ☐ Tutoring by people with a 4-year college degree

    ☐ Tutoring by other students working in the tutoring lab or academic support center

    ☐ Help figuring out what career I would like best

    ☐ Help with problems I had in my personal life

    ☐ Trips with SSS [other name] staff and other students

    ☐ Help with the transfer process (*filling out forms, transferring financial aid to the new school, knowing what classes would transfer, sending transcripts, etc.*)

    ☐ Supplemental Grant Assistance (*Money paid to you*)

    ☐ College / campus visits to 4-year schools

    ☐ Workshops, either online or in person

    ☐ Help filling out financial aid forms

    ☐ Help for students with disabilities

13 Of the services you stated you utilized, please mark which helped you most. *(Check all that apply.)*

    ☐ Help registering for classes

    ☐ Keeping track of grades through mid-term progress/grade reports filled out by instructors and turned in to SSS [other name] staff

    ☐ Help talking to instructors about problems I had in class

    ☐ Tutoring by people with a 4-year college degree

    ☐ Tutoring by other students working in the tutoring lab or academic support center

    ☐ Help figuring out what career I would like best

    ☐ Help with problems I had in my personal life

    ☐ Trips with SSS [other name] staff and other students

    ☐ Help with the transfer process (*filling out forms, transferring financial aid to the new school, knowing what classes would transfer, sending transcripts, etc.*)

    ☐ Supplemental Grant Assistance (*Money paid to you*)

    ☐ College / campus visits to 4-year schools

    ☐ Workshops, either online or in person

    ☐ Help filling out financial aid forms

    ☐ Help for students with disabilities

Please continue to the next page.

14 How often did you use or participate in SSS [other name] activities? *(Check one)*

      □ 0-3 times / semester

      □ 4-6 times / semester

      □ 7 or more times / semester

15 How often did you visit SSS [other name] staff in person? *(Check one)*

      □ 0-3 times / semester

      □ 4-6 times / semester

      □ 7 or more times / semester

16 How often did you communicate with SSS [other name] staff over the phone or by email? *(Check one)*

      □ 0-3 times / semester

      □ 4-6 times / semester

      □ 7 or more times / semester

17 Did either one of your parents/guardians have a bachelor's degree at the time you attended [institution]? *(Check one)*

      □ No

      □ Yes

18 Did you receive a Pell Grant while you attended [institution]? *(Check one)*

      □ No

      □ Yes

19 Were you involved in extracurricular activities or clubs while you attended [institution]? (Example: student government, college newspaper, Phi Theta Kappa, Phi Beta Lambda, etc.) *(Check one)*

      □ No

      □ Yes

20 Are you currently enrolled in a 4-year college working toward a bachelor's degree?

      □ No **(Go to #23)**

      □ Yes **(Go to #21)**

21 If yes, what school do you attend?

      College or University:_____

22 If yes, what is your expected graduation date?

      Expected Graduation Date:_____

23 Please list an email address where I can contact you if I can't read one of your answers:

      Email Address:_____

You have reached the end of the survey. Thank you!

MSQCS Subscales

Results are meant to be utilized as a campus ecology measure to uncover

environmental trends rather than to interpret individual responses. Further, scale

intercorrelation analysis revealed that a total instrument score is not interpretable and that

the five scales should be individually reported (Kettle, 2001; Schlossberg, et al., 1990).

Survey items are scored on a 5-point Likert scale, with 24 items with reverse values. The

questions for each subscale are listed in the table below, with reversed values identified

by an asterisk.

Table 2.14

Questions Used to Measure MSQCS Subscales

Subscale	Questions
Administration	1, 5*, 7, 11*, 21, 24*, 28*, 32, 34*, 40, 43*
Advising	2*, 9, 13, 18, 25, 29, 37, 41
Peers	4, 8*, 14, 15, 19, 22, 26, 30*, 33, 35*, 38
Multiple Roles	3*, 12*, 17*, 20*, 31*, 39*, 42*
Faculty	6*, 10*, 16*, 23*, 27, 36*, 44*, 45*

Participant Demographics

Table 2.15. *Participant Demographics*

Variable			Total	ACTC	HCTC	SKCTC
Age	Traditional		45%	32%	42%	54%
	Nontraditional (25 & older)		55%	68%	58%	46%
	Mean		30.5	34.4	31.6	27.9
	SD		11.43	12.44	11.19	10.64
Gender	Male		30%	38%	37%	22%
	Female		70%	63%	63%	78%
Marital Status	Single		41.3%	15.8%	41.7%	45.9%
	Unmarried / Living with Partner		3.8%	5.3%	4.2%	2.7%
	Married		45%	57.9%	45.8%	37.8%
	Divorced		11.3%	21.1%	8.3%	8.1%
	Widowed		2.5%	0%	0%	5.4%
Enrollment Status	Part-Time		13.8%	15.8%	12.5%	13.5%
	Full-Time		86.3%	84.2%	87.5%	86.5%
Work Status	Didn't Work		25%	26.3%	20.8%	24.3%
	Worked	1-10hrs/wk	4.9%	0%	0%	8.1%
		11-20hrs/wk	14.8%	5.3%	12.5%	13.5%
		21-30hrs/wk	27.9%	26.3%	16.7%	21.6%
		31-40hrs/wk	36.1%	26.3%	41.7%	18.9%
		41+hrs/wk	16.4%	15.8%	8.3%	13.5%
Dependents	None		53.8%	47.4%	54.2%	56.8%
	1 Dependent		18.8%	5.3%	29.2%	18.9%
	2 Dependents		16.3%	36.8%	12.5%	8.1%
	3 Dependents		2.5%	5.3%	0%	2.7%
	4 Dependents		6.3%	5.3%	0%	10.8%
	No Response		2.5%	0%	4.2%	2.7%
Developmental Course Completion	None		50%	63.2%	29.2%	56.8%
	1 Developmental Course		15%	15.8%	25%	8.1%
	2 Developmental Courses		23.8%	21.1%	20.8%	2.7%
	3 or More Developmental Courses		11.3%	0%	25%	8.1%
SSS Partici-pation Status	SSS Participant		20%	21%	12.5%	24.3%
	SSS Non-Participant		80%	79%	87.5%	75.7%
First Generation Student	1st Generation		79%	68%	83%	81%
	Not 1st Generation		21%	32%	17%	19%
Pell Recipient Status	Pell Recipient		61%	58%	67%	59.5%
	Pell Nonrecipient		39%	42%	33%	40.5%

Table 2.15 Continued

Extra-curricular Activities	Involved	27.5%	26%	17%	35%
	Not Involved	72.5%	74%	83%	65%
Transfer Persistence	Persister	48%	47%	42%	51%
	Non-Persister	52%	53%	58%	46%
	No Response	0%	0%	0%	3%
Transfer Destination	Eastern Kentucky University	10%	0%	12.5%	13.5%
	Lindsey Wilson College	10%	0%	8.3%	16.2%
	Morehead State University	10%	26.3%	8.3%	2.7%
	Ohio University Southern	3.8%	10.5%	4.2%	0%
	Lincoln Memorial University	2.5%	0%	0%	5.4%
	Union College	2.5%	0%	0%	5.4%
	Bluefield State University	1.3%	5.3%	0%	0%
	Colorado Technical University (Online)	1.3%	0%	0%	2.7%
	Midway College	1.3%	0%	4.2%	0%
	Northern Kentucky University	1.3%	5.3%	0%	0%
	University of Kentucky	1.3%	0%	0%	2.7%
	Weber State University	1.3%	0%	4.2%	0%

INDIVIDUAL STUDENT INTERVIEW GUIDE

Meeting Time _____

Meeting Place _____

Participant Pseudonym _____

Interview questions and prompts:

Tell me about your life in Appalachia Kentucky.

Tell me about where you live.

Tell me about your roles in your family and community.

What kind of educational experiences have you had in your life?

 How did you decide which four-year program in which to enroll?

What are the differences in your community college experiences and your university experiences?

Tell me in what ways your educational experiences have affected your roles in your family and community.

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Chapter 3
Organizational Structures: How Community Colleges
Affect Transfer Success

The development of community colleges democratized higher education by providing access to groups of people who historically had been excluded from entering college (McGrath & Van Buskirk, 1999). To that end, they have served their purpose well by enrolling over half of undergraduates in the United States including many minority, low income, and first-generation students (*Students at community colleges*, 2009). Community colleges serve their community through multiple missions including the transfer mission, which focuses on assisting students in transitioning to a four-year institution to earn a baccalaureate degree. Of those students who start at the community college with intent to transfer, only 20-25% actually do, and even fewer go on to earn a baccalaureate degree. The number of students "lost" in the transfer process indicates a waste of individual talent as well as a clear deficiency in the postsecondary education system (Handel, 2007).

Community colleges serve as the primary access point to postsecondary education for many underrepresented groups, such as minority, first-generation, nontraditional, and low-income students (Bailey & Morest, 2006). Individuals look to community colleges as a less expensive pathway to baccalaureate degree attainment. Community colleges provide the chance towards greater economic opportunity and improved quality of life (Dougherty, 1994). Higher levels of education not only promise macro level societal advances, but significant benefits for individuals including increased earnings, access to health care and better opportunities for the next generation (*Success is what counts*, n.d).

This study builds upon the assumption that community colleges have a certain amount of influence over the success of transfer students. For the purpose of this study, transfer students are defined as those students who graduated from an Associate of Arts and Associate of Science degree program, commonly referred to as transfer degree programs. Numerous reports focus on student characteristics and indicate that students with similar backgrounds, abilities, and aspirations who enter the community college earn significantly fewer baccalaureate degrees than those students who start college at a four-year institution (Anderson, 1984; Nunley & Breneman, 1988; Velez, 1985). It is estimated that community college entrants who have baccalaureate aspirations earn 11-19% fewer baccalaureate degrees than their counterparts who begin college at a four-year institution (Dougherty, 1994).

Research indicates that if community college students make it to the four-year institution, they fare better than students who start at the four-year institution (Dougherty, 1994). Thus, the role of the community college in the transfer process is to ensure that students persist and make the transition to the four-year institution. It is imperative for community colleges to establish best practices to support their students to enroll, persist, and transfer to four-year institutions. Otherwise, America's community colleges will unwittingly serve as a tracking mechanism, losing in the transfer process a substantial number of students who aspire to a baccalaureate degree (Pincus, 1980).

Establishing a sense of mattering, involvement, and integration with students is a well-documented method for promoting persistence and success (Astin, 1984; Schlossberg, 1989; Tinto, 1993). Tinto's (1993) research indicates that both formal and informal systems within the institution promote integration and persistence. Astin (1984)

suggests that the quality of any policy or practice is directly related to the extent of that policy or practice to promote student involvement. Mattering provides a construct for how involvement can be achieved (Schlossberg, 1989). Many institutions create structured student support services to offer opportunities for students to engage with the college. Although numerous studies indicate that integration has a positive impact on individual student persistence, the overall persistence rate of community college students is still dismal (Deil-Amen, 2005; Karp, Hughes, & O'Gara, 2008). This macro-level shortcoming of community colleges suggests the need to understand how the organizational structure impacts increased student involvement and engagement leading to higher persistence and transfer success.

This study seeks to explore the interface between the structure of community colleges and successful transfer. The goal is to gain an understanding of how the formal and informal structures of the organization affect students and their pathway to the baccalaureate degree. The study utilized social network theory to identify the patterns of connections of the four community colleges that influence increased persistence and degree attainment for transfer students. An emergent design helped create a typology of each participating community college through interviews with leaders, faculty, and staff, and a review of secondary data sources including organizational charts, transfer handbooks, guides and other supporting documentation. A quantitative analysis was then conducted to enable a comparison of attending a particular institution and the likelihood of community college students transferring to a four-year institution and persisting towards a baccalaureate degree. The results of this study can be used by community

college leaders and practitioners to improve persistence of transfer students by optimizing organizational structures to increase transfer success.

Statement of the Problem

Too few community college students who intend to transfer and earn a baccalaureate degree actually do. Seventy percent of community college students enter college with the goal of earning a baccalaureate degree or higher; less than 25% make it through the transition to the four-year institution, and 60% of those who make it go on to earn a four-year degree (Dougherty, 1994). This is a problem because postsecondary education is a key factor in economic mobility, and community colleges enroll a disproportionate number of nontraditional, part-time and low-income students. Projections by the United States Bureau of Labor Statistics indicate that most of the high-wage jobs of the future will require a baccalaureate degree or higher for entry-level positions or for career advancement (Dohm & Schniper, 2007). Data covering the last four decades reveal that adults who earn college degrees have significantly higher family incomes than do adults who have a high school degree or are high school dropouts (Haskins, Holzer, & Lerman, 2009). Given that community colleges provide access to individuals who may not otherwise have an avenue into the postsecondary system, the limited number of students who successfully transfer and earn the baccalaureate degree indicates an urgent problem worthy of study to ensure that America's higher education system does not assist in maintaining social inequality (Dougherty & Townsend, 2006).

Dougherty (1994) asserts that higher education must explore the impact of structural factors on the gap in baccalaureate degree attainment between students who start at the community college and those who start at the four-year institution. Although

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two-thirds of this gap can be attributed to differences in individual student characteristics, studies indicate that even when these differences are controlled, students who start at a community college receive 11-19% fewer baccalaureate degrees than four-year college entrants (Dougherty, 1994). This sizable gap that cannot be accounted for by student characteristics warrants the study of institutional factors that influence successful transfer.

Purpose of the Study

The purpose of this study is to examine the relationship between the structures of community colleges and successful transfer. The goal is to gain an understanding of how the network structures of the organization affect students and their pathway to the baccalaureate degree. The conceptual framework of the study assumes that there are both individual and institutional factors that influence the transfer process and student persistence. Although individual factors must be considered by community colleges, they often are out of the control of the institution. This study focuses on the institutional factors, including the ways that organizational structures contribute to the success of a community college's transfer program. For example, two community colleges may appear to have similar organizational charts, yet their transfer rates and success may vary. The difference in outcomes can be explored by identifying the organizational structures and features that might impact the transfer process. These connections support the behavior and performance of a system (Birnbaum, 1988).

The study presents a typology of four Appalachian community colleges illustrating how distinct organizational structures and features relate to an institution's impact on students transferring to a four-year institution and persisting towards a

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baccalaureate degree. The Community College Typology for Transfer Success Model

gives insight to community college leaders on how they might optimize their

organizational networks and successful transfer strategies to make informed decisions

about adjusting processes to ensure better outcomes. Recommendations are described

about the types of formal and informal structures that are related to best practices in the

transfer process.

<div align="center">**Literature Review**</div>

This study examines the connection between the organizational structures of

community colleges and successful transfer. This section provides a review of literature

to provide ample background to situate this study within the context of prior research.

The first section presents information about organizational theory including open versus

closed systems, loose coupling, and social networks. The second section includes a brief

description of successful transfer indicators. This section concludes with a discussion

about how this study will address a gap in the literature.

Organizational Theory and Social Networks

Dougherty (1994) asserts that something about community colleges hinders

persistence even when differences in student characteristics are controlled. This study

focuses on one aspect of community colleges that may influence persistence of

baccalaureate aspirants: formal and informal organizational structures. Academic

organizations function as a complex system characterized by interactions among different

interdependent structures (Marion, 2002). The system is separated from its environment

by a boundary (Kast & Rosenzweig, 1973). Organizational theorists categorize systems

into two types including closed and open (Scott, 1987). Closed systems are characterized

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as having strict boundaries that allow for little interaction with the environment. They are linear and actions are predictable. Open systems have permeable boundaries that promote numerous interactions with the environment and system parts, making for a dynamic and nonlinear structure that is unpredictable (Birnbaum, 1988). As social institutions, community colleges are typically defined as open systems.

One way to understand community colleges as open systems is to study how the elements within the system are connected. Weick (1976) describes these connections as coupled events that maintain some level of separateness. The level of coupling between system elements can be determined by the extent to which the elements have common variables (Glassman, 1973). The coupling elements can range from tight to loose. The fewer variables in common, the more loosely coupled the elements. The patterns of loose and tight coupling define the organizational structure of the system (Birnbaum, 1988). Although no single pattern is considered effective in all situations, some ways of organizing are considered better under certain conditions (Galbraith, 1973). This study seeks to identify the patterns of connections of the four community colleges that influence increased persistence and degree attainment for transfer students.

Social network theory provides a basis for viewing organizations from an interactionist perspective by focusing on relationships rather than attributes alone. Social actors, or nodes function within a network of interrelationships with other actors. Brass, et.al. (2004) defines a network as a set of nodes and the set of ties displaying some relationship or lack of relationship between the nodes, which can be individuals, groups or organizations. Social networks are used to represent social structure (Wellman, 1988).

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These ties, or connections, will be analyzed to determine the level of tight or loose coupling within the community colleges in this study.

The strength of a tie is determined by the amount of time, emotional intensity, the level of intimacy, and the reciprocity involved with the connection (Granovetter, 1973). Network closure is associated with Coleman's idea that a high degree of interconnectedness within a network promotes better performance because of enhanced communication, establishment of common norms, and the potential to diminish opportunistic behavior (Burt, 2000; Coleman, 1990; Lin, 1999). A well-connected network contributes to collaborative action and potential for a good flow of communication in which all members have access to necessary information. This concept can be related to tight coupling in that the individuals or departments within the organization share many common variables.

The concept of structural holes recognizes the importance of having breaks in the social structure that provide a competitive advantage to resources (Burt, 1997, 2000, 2005). The idea of structural holes builds upon the work of Granovetter (1973) who studied the strengths of weak ties. Structural holes can be understood as a break in the social structure identifiable by the absence of ties or the presence of weak ties. Individuals who bridge such holes have a strategic advantage through access to new and diversified information/resources. They can also serve as a bridge between disconnected individuals or groups, thereby creating a critical tie to ensure the flow of information within an organization. Figure 3.1 illustrates the concept of structural holes and bridges. This idea is similar to Weick's (1976) idea of loose coupling in that weak ties are associated with fewer common variables. Loose coupling and weak ties are often absent

from the research because they primarily deal with connections that are limited or absent.

Social network analysis provides the tools to measure all of the different types of

Figure 3.1: Illustration of Structural Holes and Bridge
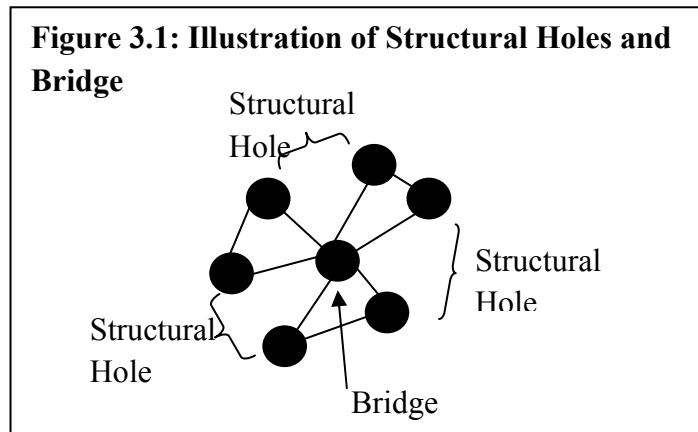
connections resulting in a comprehensive picture of the structural arrangement of the

organization.

Although the theoretical underpinning of network closure and structural holes

seems contradictory, Burt (2001) has joined the two into a hypothesis about the network

structure of social capital. Burt (1992) describes the relationship between industry profit

margins and market structure. The research indicates that profit margins increase with

closure among producers, and also increase with the number of non-redundant suppliers

and markets, thereby supporting the idea that network closure and structural holes

promote a higher level of performance. Reagans and Zuckerman (1999) studied the

performance of 223 corporate resource and development units and found that units were

more productive if they had a dense communication network within the unit, while

maintaining a high number of non-redundant connections outside the team. Although

these studies provide evidence from the corporate environment about the integration of

network closure and structural hole analysis, the same principles can be applied to higher education.

Figure 3.2 illustrates Burt's (2001) matrix depicting how the combination of network closure and structural holes converge to maximize organizational performance.

Figure 3.2: Burt's (2001) Matrix of Network Closure and Structural Holes

External Lack of Constraint (non-redundant connections beyond the group)

4 — 1

High — Low network closure, high structural holes | High network closure, high structural holes **High performance**

Low — Low network closure, low structural holes **Low performance** | High network closure, low structural holes

3 — Low | High — 2

Internal Lack of Constraint (network closure within the group)

Quadrant 4 Example

Quadrant 2 Example

Quadrant 1 Example

Quadrant 3 Example

This study includes in a typology for each community college a description of which quadrant each organization operates and describes the ways in which these structures contribute to the group and organizational performance in the transfer process and experience.

Transfer Success

A number of studies attempt to analyze the institutional factors that promote successful transfer. The complexity of the transfer process presents challenges to document the value of specific institutional characteristics in promoting transfer. Individual student background and motivational variables; community colleges' structural, academic, and financial conditions; and various uncontrollable factors such as the college's geographic location and local economic contexts can all affect the success of a college's transfer programs. Cohen (2003) asserts the difficulties of changing transfer rates at a college, and that institutional transfer rates typically vary little from year to year. Numerous studies suggest the most promising practices within the influence of the institution involve organizational structures such as academic advising processes (Jenkins, 2007; Pascarella & Terenzini, 1991), transfer center structures (Poisel & Stinard, 2006), formal and informal relationships with four-year institutions and other community organizations (Amey, Eddy & Campbell, 2010).

This study contributes to this body of knowledge by examining the organizational structures that may lead to successful transfer. On the surface, the formal organizational chart of community colleges may appear similar, yet the performance of the institutions in helping transfer students persist may vary. On the other hand, the organizational chart may differ significantly, yet the performance of the institutions may be similar. The difference in outcomes can be explained by digging deeper and exploring multiple organizational structures and features. The behavior of a system relies upon the details of these connections (Birnbaum, 1988). Numerous studies indicate the critical nature of

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these ties that make up the college environment and their impact on successful transfer (Dixon Rayle & Chung, 2007; Schlossberg, 1989; Tinto, 1975, 1993).

Gaps in the Research

Numerous studies have attempted to explore the issue of transfer by focusing on student-oriented factors (Adelman, 1992; Crook & Lavin, 1989; Grubb, 1991; Kinnick & Kempner, 1988), or institution-oriented factors (Laanan, 2004; Eggleston & Laanan, 2001; Zamani, 2001). Most of these studies examine the disparity in achievement according to various individual and organizational characteristics. Few studies reveal the inner workings of the institution that impact student success. Very little research has been conducted utilizing social network theory in higher education. This study fills this gap in the research by incorporating an analysis of institutional structures and features that may explain the differences in the likelihood of students successfully transferring and persisting towards a baccalaureate degree.

<center>**Research Methodology**</center>

This study explores the interface between the structures of community colleges and successful transfer. The overarching research question is in what ways do the formal and informal structures of community colleges relate to transfer success? One sub-question further guided the study: Does attending a certain type of community college contribute to a higher likelihood of transfer success? An emergent design was utilized in order to identify the relevant data points to include in the community college typology. Burt's Matrix of Network Closure and Structural Holes provided the foundation of the exploration. Burt's Matrix was adapted to better suit the structural nature of community

colleges. As a result, a new model was created to illustrate the certain type of community college that relates to higher transfer success.

Research Design

In order to create the institutional typology for transfer success, I reviewed multiple sources of data. First, I conducted interviews at the four participating community colleges to gain an understanding of how college leaders and transfer staff and faculty perceived how the organizational structures of their institutions are related to successful transfer. Twenty-seven individuals were interviewed, including those holding leadership positions of vice president or above, as well as staff and faculty positions directly involved with the transfer process. Significant themes that emerged from the interviews were investigated further through secondary data sources including college websites, organizational charts, transfer handbooks, guides and other supporting documentation. I compared the results of the interviews and secondary data sources to prior research through an extensive literature review in order to identify any major discrepancies to earlier findings. I compiled all of this information into a list of data elements that served as the foundation for the community college typology for transfer success.

Research Setting

The setting of the study included four community colleges located in the Appalachian region of eastern Kentucky. These institutions are member colleges of the Kentucky Community and Technical College System (KCTCS) and follow common policies and procedures related to transfer. The student populations of the colleges possess many of the same demographic characteristics. KCTCS recognizes these

similarities by comparing data results of these four institutions as related to indicators such as student enrollments, retention, graduation, and transfer. This allowed for a more relevant comparison of the four organizational structures and their affect on successful transfer.

A supplemental component to the study ensured a reliable comparison of institutions. In a companion study (Decker, Dykes, Phillip, & Preston, 2011), logistic regression analysis determined that individual student characteristics did not explain the differences in institutional transfer rates. The current study uses the institution as the unit of analysis to determine if organizational structures can help explain the differences in transfer rates. Additional regressions and odds ratio statistics were calculated to determine the significance of attending a particular community college on transfer to a four-year institution and persistence at the four-year institution. These results identified which participating community colleges had higher transfer success when controlling for individual student characteristics, thereby suggesting that institutional factors played a role in the disparity among rates of transfer. Two of the institutions were identified as statistically significant institutions promoting transfer success. Students from these high impact community colleges are at least two times more likely to transfer than students attending the low-impact institutions controlling for gender, age, grade point average, and total cumulative hours.

This study takes into account student characteristics and certain institutional characteristics that allow for a comparison of high impact versus low impact community colleges. The four community colleges included in the study operate in the same policy environment, serve similar student populations, and are similar in size and scope. These

commonalities provide the opportunity to research other institutional factors that may play a role in distinguishing between high impact and low impact community colleges in the context of successful transfer.

Research Participants

Twenty-seven staff, faculty, and administrators from the four community colleges participated in semi-structured interviews. Fifteen individuals were interviewed from the high impact community colleges including five faculty members, five staff members and five administrators. Twelve individuals were interviewed from the low-impact community colleges including three faculty members, six staff members, and three administrators. Initially, the transfer contacts listed in the KCTCS catalog were contacted and invited to participate. Snowball sampling was used to identify additional participants, and a representative sampling of faculty, staff, and administrators was selected.

Data Collection and Analysis

Interviews were conducted utilizing the principles of Rapid Assessment Process (RAP). RAP utilizes a team of at least two researchers for intensive data collection and analysis in order to produce results that allow insight into the perspectives of participants (Beebe, 2001). RAP is especially appropriate for qualitative research in certain contexts including (a) when the subject of inquiry needs to be explored in a local context, (b) when the research question is attempting to examine a relationship, and (c) when the research is meant to be collaborative by seeking respondents' perceptions and stories to the topic of inquiry (Creswell, 1998). Because this research is part of a companion study, researchers with the same target population and similar overall purpose conducted the

qualitative interviews together. RAP was an appropriate fit in this research design in order to elicit perceptions and stories to study the institutional impact on transfer success.

The principles of RAP guided the qualitative inquiry over a short time period with intensive data analysis (Beebe, 2001). RAP utilizes an intensive, collaborative approach using triangulation, iterative data analysis and additional data collection to allow researchers to quickly gain a preliminary understanding of the research phenomenon (Beebe, 2001). The following is a list of questions that guided the semi-structured interviews:

- What are your perceptions about how the structures of your college affect successful transfer?

- How do the informal networks relate to the formal organizational structure of your college?

- Why do you think students are successful in transferring to a four-year institution?

- What are the key obstacles that prevent students from transferring to a four-year institution?

- How would you describe the internal and external relationships or connections of the institution? How well do internal departments communicate and cooperate to contribute to student success? How well are these departments connected to entities outside the college, such as four-year institutions that could assist in the transfer process?

An important principle of RAP is the intensive team interaction required for triangulation. More than one researcher allowed for multiple perspectives about a single piece of information. The potential for triangulation is based on different interpretations

of the same information provided by the constant and intense interaction among the researchers and the respondents (Beebe, 2001).

Immediately following each interview, the researchers met to identify trends and patterns, as well as unexpected results. These preliminary conclusions were used to support new lines of inquiry, and changes as new information emerged (Beebe, 2001). A large block of time was scheduled at the end of each college visit to prepare an informal, preliminary report that was shared with the respondents for additional comment. The data were analyzed using Miles and Huberman's (1994) three-step approach including (a) coding the data, (b) displaying the data, and (c) drawing conclusions. This phase of the analysis is reported through a narrative and graphic description of the findings, which illustrates the typology of each community college.

I utilized the interview responses to develop the data elements for the community college typology for transfer success. For example, as respondents talked about how their position and department interacted with other departments during the transfer process, I listened for examples of the strength of the connections within the institution. As respondents discussed which structures provided the most support for transfer students, I then investigated further evidence of these structures through secondary data sources. For example, if respondents described the strong partnerships with on-campus baccalaureate programs as a best institutional structure, I explored the number and types of programs available on campus, as well as prior research available on this practice. If interview data, secondary data, and prior research all confirmed this structure as a viable practice, I included the institutional feature as a potential data element for the typology.

Discussion of Findings

The typology model used to describe each community college includes elements that emerged through significant themes revealed through the interviews with faculty, staff, and administration, as well as key factors found in the literature review. Informal and formal structural elements included in the typology were found to be critical institutional factors in the pathway to the baccalaureate.

Informal Network Structures

Informal network structures were identified through interview responses about the connections and communications between internal departments and external entities, such as four-year institutions, secondary schools, and community organizations. Utilizing the principles of Burt's Matrix of Network Closure and Structural Holes, each community college's informal structures are illustrated based on evidence gathered through the interviews and secondary data collection. Two of the major themes revealed through the interviews involved relationships, including internal and external connections. Research participants indicated that a key issue with transfer success is the lack of connections between departments, which hinders communication flow vital to disseminating accurate information about transfer to students.

One example of a gap in communication is the student transition from the initial advising center to a faculty advisor. The advising center is charged with assisting students with their first semester schedule, which is critical in starting students along the correct pathway. Once students identify a major, they are assigned to a faculty advisor. The interviews revealed a wide disparity in the knowledge about transfer and feeling of ownership of faculty advisors to the transfer process. The range covered virtually no

knowledge and total lack of ownership of one faculty member to another faculty member who had developed comprehensive checksheets for programs beginning at the community college and continuing through to a graduate degree. The latter faculty member guaranteed transfer success for students who followed the prescribed schedule.

External relationships were also identified as key to the institution's ability to impact transfer success. A major theme that emerged from the interviews was the importance of partnerships with four-year institutions. This included two levels of partnerships: (a) on-campus offerings of baccalaureate and graduate degrees, and (b) number of and relationships with institutions within driving distance of the community college campuses. Research participants reported a high degree of coordination with on-campus and local four-year institutions that resulted in a more seamless transition for students. They also stated that communication was more difficult with institutions located farther away, which hindered transfer to those institutions. In the typology, the following elements are included to capture these key partnerships: number of four-year institutions offering on-campus programs, number of baccalaureate/graduate programs offered on-campus, and number of four-year institutions within reasonable driving distance.

In addition to partnerships with four-year institutions, relationships with the community in general were discussed as an important underlying factor to organizational success with transfer. Research participants from each of the schools discussed some of the misperceptions of the community about the role of the community college. The institutions were not viewed as a viable option for all students who seek a baccalaureate degree. Rather, community colleges were seen as a place for students who were location-

bound, underprepared for college, or otherwise deemed not suitable for a four-year institution. Building these external relationships is crucial in battling misperceptions about the role of community colleges in the pathway to the baccalaureate.

Burt's Matrix of Network Closure and Structural Holes was adapted to illustrate the internal and external connections found to be important institutional factors in transfer success. This new model, the Community College Matrix of External and Internal Ties incorporates four distinct informal network structures as depicted below.

Figure 3.3: Community College Matrix of External and Internal Ties
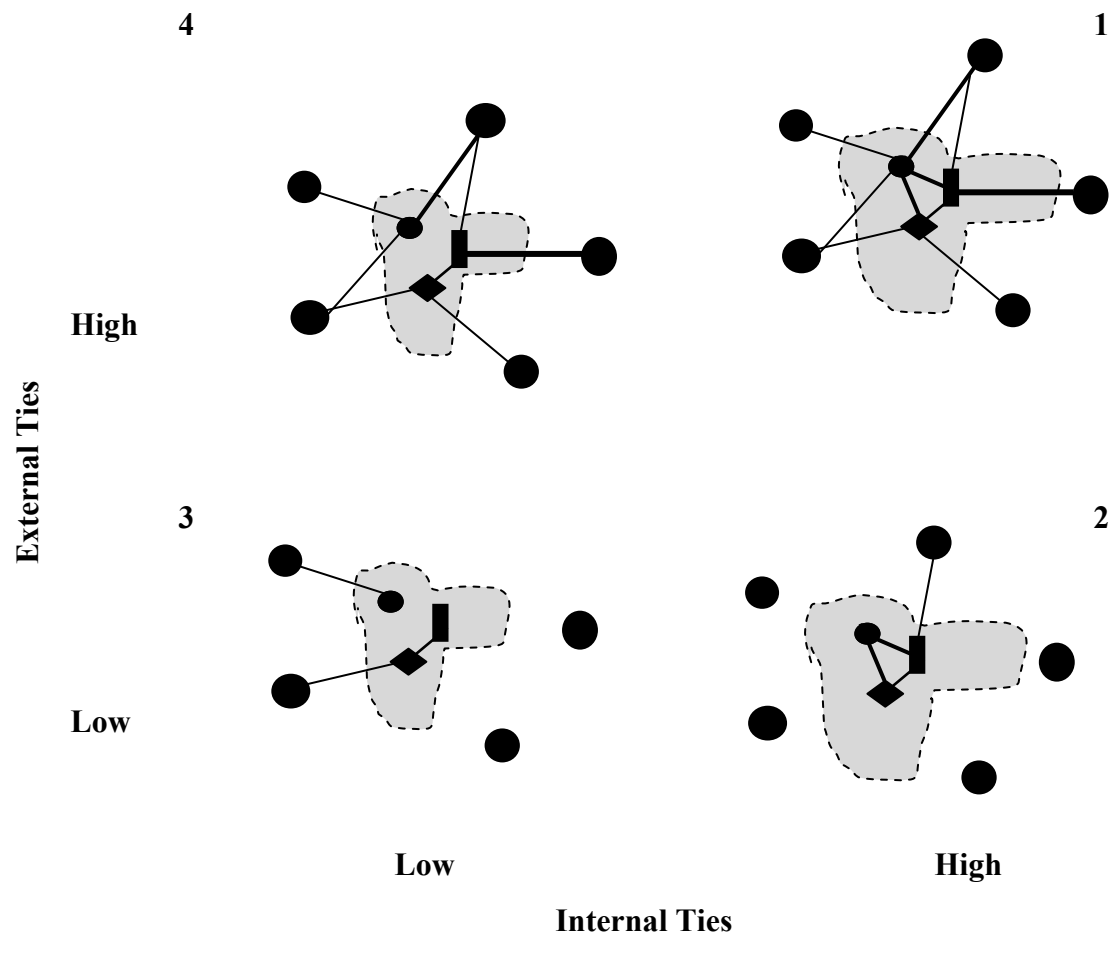
I developed criteria associated with each type of tie to determine which quadrant fit each participating community college. External ties involve evidence of relationships with the community and organizations outside of the college. Internal ties are indicated by evidence of the relationships between departments within the community college environment. During the interviews, participants were asked specifically about external and internal connections and I listened for examples of each type of tie. I also reviewed college websites, brochures, and flyers on campus for evidence of external and internal ties. Colleges with a high number and degree of external connections were identified as having high external ties, and those with a limited amount and degree of external connections were identified as having low external ties. Likewise, colleges were assigned as high or low based on the number and strength of internal ties. Colleges with high external and high internal ties operate within quadrant 1. Colleges with high internal ties and low external ties are in quadrant 2. Colleges with low external ties and low internal ties are in quadrant 3. Colleges with high external ties and low internal ties operate in quadrant 4.

The following rubric was used to assign the colleges within the matrix of external and internal ties. Four probing questions were used to determine the strength of internal and external ties, and colleges were assigned as strong or weak accordingly. Research participants were asked to use this ranking system for all questions: (a) not at all, (b) slight, (c) moderate, (d) high, and (e) very high. If the majority of a respondent's answers ranked the institution as not at all or slight to describe their organizational structures, I assigned their college as having weak ties. If the majority of a respondent's answers ranked the institution as moderate, high, or very high, I assigned their college as having

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strong ties. The first two questions describe internal ties, and the last two questions describe external ties.

Does your college's organizational structure facilitate effective support for transfer students?

Is support for transfer students coordinated across units (e.g., academic programs/advising/financial aid)?

Do college leaders at encourage partnerships and collaborations with faculty and staff at institutions to which your students most commonly transfer?

Do you interact with your counterparts at one or more of the institutions to which your students most commonly transfer?

The two high-impact community colleges were found to operate within quadrant 1 of the matrix. During the interviews, participants from each of these community colleges described strong external and internal connections. Both of these colleges exhibited a high number and degree of external ties documented by multiple partnerships with four-year institutions on and off campus. Examples were given of strong partnerships with other types of community entities such as secondary schools and community-based organizations that supported student success. One of the low-impact community colleges was found to operate in quadrant 4, with evidence of high external ties and low internal ties. This college had the highest number of strong partnerships with four-year institutions on campus, but interview participants described a lack of internal connections to ensure accurate and timely communication. Interviews and the secondary data review of the other low-impact community college indicated low internal and low external ties. This college is presented with numerous challenges associated with geography that are beyond its control, including the lack of four-year institutions

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within reasonable driving distance, as well as driving times in excess of two hours between campuses.

Formal Organizational Structures

Research participants were asked to describe the formal organizational structure in the context of transfer services. The formal organizational chart of each institution was also reviewed. Each institution has unique characteristics in the ways in which it is organized. Typically, community colleges operate within two types of systems (a) a traditional Provost model that incorporates academic and student affairs under one leader who reports to the President, or (b) a model that separates the academic and student affairs' functions under two leaders who each report to the president. One of the high-impact institutions utilizes a traditional Provost model, and the other three community colleges have leadership positions for both academic and student affairs who report directly to the president. The important transfer functions identified in the study fall under both academic and student affairs. Initial advising, transfer centers, and SSS programs are under the direction of student affairs. Faculty advising, coursework and scheduling, and articulation agreements with four-year institutions are managed by academic affairs. Strong collaboration is required to ensure a seamless transition for students between so many different departments. In the typology, formal organizational structure is designated as either "P" for Provost Model, or "NP" for Non-Provost Model.

The organizational structure of transfer services was an important theme that emerged during the interviews. Each of the community colleges has a designated career and transfer center with varying types and levels of services available for students. The career and transfer centers were described as discrete departments that primarily promote

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transfer and serve as transfer information repositories. Perceptions revealed during the interviews indicated that the more integrated and infused the transfer advising, information, and support, the better equipped the institution was to contribute to transfer success. Transfer services that were more isolated were viewed as less effective.   In the typology, the structure of transfer services is labeled as "I" for integrated, or "D" for discrete.

Implications for Practice

The results of this study can be used to improve persistence of transfer students by optimizing organizational structures to increase transfer success. Community college leaders and practitioners can utilize the Community College Typology of Transfer Success to assess where their organizations exist currently, and to consider what types of structures they might consider to enhance their institutions' impact on transfer. Table 3.1 summarizes all of the findings based on the typology of each of the high-impact and low-impact community colleges.

Table 3.1

Community College Typology for Transfer Success

Element	High-impact community colleges		Low-impact community colleges	
	A	**B**	**A**	**B**
1. Matrix Quadrant	1	1	4	3
2. Organizational Structure	NP	P	NP	NP
3. Transfer Center Structure	I	I	D	D
4. # of on-campus BA programs	7	8	6	1
5. # of 4-year schools on-campus	2	2	6	1
6. # of 4-year schools within driving distance	4	1	0	3

This study examines the interplay among multiple types of informal and formal organizational structures in the context of transfer success. Student characteristics and other institutional factors were controlled to allow for an exploration of other explanations for the disparity of transfer success among four Appalachian community colleges. Findings here support other research on organizational environments that suggest that no single practice makes an institution effective; it is the interaction of many factors within complex systems that supports effectiveness (Hannon & Freeman, 1989; Ichniowski, Shaw & Prennushi, 1997). As illustrated in the Community College Typology for Transfer Success, it is the interface of informal and formal structures that plays a role in the differentiation between high impact and low impact institutions. No

single element can be isolated as the best structure, yet taken as a whole, certain conditions seem to distinguish the high-impact community colleges from the low-impact community colleges.

Findings indicate that the elements of the typology model where there is the clearest difference between the high- and low-impact community colleges is where the colleges fall in the matrix of external and internal ties, as well as the degree of integration of the transfer center structures. Both of the high-impact institutions are identified as quadrant 1 in the Community College Matrix of External and Internal Ties, defined as having strong external and internal ties. One of the low-impact colleges operates in quadrant 4 with strong external and weak internal ties. These three institutions have a strong presence of four-year institutions and baccalaureate programs on campus. The primary difference among the typology elements is related to internal ties. It appears that the existence of strong external ties is not enough to make an impact on transfer. Strong internal ties are necessary for an institution to be effective in successful transfer.

The second element that differentiates the high- and low-impact institutions was the organizational structure of transfer services. The two high-impact community colleges were identified as having well-integrated transfer centers/services, and the two low-impact community colleges were described as having discrete transfer centers. This organizational structure is tied to the internal connections within the institution. The transfer services of the high-impact colleges were described as infused within the regular operations of admissions, advising, and graduation. This integration was also evident on the colleges' websites with transfer information being embedded within the entire site. The low-impact institutions described their transfer centers as discrete departments that

essentially served as information repositories for students interested in transfer. This type of structural arrangement presented challenges to students receiving the information at points critical to the transfer process.

Limitations and Recommendations

One limitation of the study is the assumption that institutions have influence over the transfer success of students. Ultimately, students are responsible for their own successful transfer, and reasons for not transferring can be completely unrelated to institutional factors. This study did not account for the students' intention and reasons for not transferring. Future research can consider incorporating a student focus to gain an understanding of how student intent to transfer and reasons for not transferring relate to institutional factors. This new information can provide community colleges the insight to address issues related to student intent that might somehow be affected by institutional programs and services. Although the study did account for individual student and certain institutional characteristics to allow for a reliable comparison, the small sample size requires that the findings be considered suggestive in nature. Future research can utilize similar methods with larger samples to be more conclusive.

Conclusions

The transfer mission of the community college is likely to get stronger as more students pursue the baccalaureate degree and as the high school diploma loses its worth in contributing to economic mobility (Dougherty & Townsend, 2006). Community colleges will experience higher enrollment of baccalaureate aspirants as tuition continues to rise at four-year institutions (Morest, 2006). Although numerous studies have explored institutional factors within the context of postsecondary education, no studies were found

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that utilized social network theory as a methodological and theoretical framework to identify the organizational structures that might affect transfer. This new information contributes to the existing research and serves as a catalyst for further research in organizational strategies for helping community colleges best serve students in the transfer process.

Appendix
Informed Consent Form

Consent to Participate in a Research Study

Institutional and Student Characteristics that Matter in the Pathway to the

Baccalaureate Degree for Appalachian Community College Students in Kentucky

Appalachian Community College Transfer
Perceptions of Institutional Transfer Success

Organizational Structure and Mattering: How Community Colleges Affect Transfer Success

WHY ARE YOU BEING INVITED TO TAKE PART IN THIS RESEARCH?

You are being invited to take part in a research study about institutional and student characteristics that matter in the pathway to the baccalaureate degree. You are being invited to take part in this research study because you have been identified as a staff member or college leader involved with the transfer process at your college. If you volunteer to take part in this study, you will be one of about 24 people to do so.

WHO IS DOING THE STUDY?

The person in charge of this study is Amber Decker, a doctoral student at the University of Kentucky, Department of Education Policy Studies and Evaluation. She is being guided in this research by Dr. Jane Jensen. Other researchers involved in the study are Christopher Phillips, Michelle Dykes, and Nancy Preston who are also doctoral students in the same program.

WHAT IS THE PURPOSE OF THIS STUDY?

The proposed study seeks to explore the interface between institutional and student characteristics and transfer success indicators. By doing this study, we hope to learn how different characteristics affect students and their pathway to the baccalaureate degree.

ARE THERE REASONS WHY YOU SHOULD NOT TAKE PART IN THIS STUDY?

Any person may decline participation without harm.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?

The research procedures will be conducted at the participants' home campus. You will need to come to the designated place on campus one time during the study. Each visit will take about 45 minutes. The total amount of time you will be asked to volunteer for this study is 45 minutes during the month of December, 2010 or January, 2011.

WHAT WILL YOU BE ASKED TO DO?

During a 45-minute interview, you will be asked to reflect on information about your college's institutional and student characteristics related to the transfer process. This information will be provided to you by the researchers. Researchers will ask you questions about your perceptions regarding how these characteristics are related to various transfer success indicators. After completion of the interview, the researchers will discuss and compile the major themes that emerge from your responses.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

To the best of our knowledge, the things you will be doing have no more risk of harm than you would experience in everyday life.

WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?

There is no guarantee that you will get any benefit from taking part in this study. Your willingness to take part, however, may, in the future, help community colleges as a whole better understand the transfer experience.

DO YOU HAVE TO TAKE PART IN THE STUDY?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering.

IF YOU DON'T WANT TO TAKE PART IN THE STUDY, ARE THERE OTHER CHOICES?

If you do not want to be in the study, there are no other choices except not to take part in the study.

WHAT WILL IT COST YOU TO PARTICIPATE?

There are no costs associated with taking part in the study.

WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?

You will not receive any rewards or payment for taking part in the study.

WHO WILL SEE THE INFORMATION THAT YOU GIVE?

We will make every effort to keep private all research records that identify you to the extent allowed by law.

Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers, we will write about the combined information we have gathered. You will not be personally identified in these written materials. We may publish the results of this study; however, we will keep your name and other identifying information private.

We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. All data will remain in the possession of the researchers or be kept in a locked cabinet or password protected system at the researchers' office.

We will keep private all research records that identify you to the extent allowed by law. However, there are some circumstances in which we may have to show your information to other people. We may be required to show information which identifies you to people who need to be sure we

have done the research correctly; these would be people from such organizations as the University of Kentucky.

CAN YOUR TAKING PART IN THE STUDY END EARLY?
If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. You will not be treated differently if you decide to stop taking part in the study.

The individuals conducting the study may need to withdraw you from the study. This may occur if you are not able to follow the directions they give you, if they find that your being in the study is more risk than benefit to you, or if the study ends early for a variety of reasons.

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS, CONCERNS, OR COMPLAINTS?

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator(s), Amber Decker at amber.decker@kctcs.edu or (859) 442-1147, or Chris Phillips at chris.phillips@kctcs.edu or (606) 679-8501. If you have any questions about your rights as a volunteer in this research, contact the staff in the Office of Research Integrity at the University of Kentucky at 859-257-9428 or toll free at 1-866-400-9428. We will give you a signed copy of this consent form to take with you.

_____   _____
Signature of person agreeing to take part in the study   Date

_____
Printed name of person agreeing to take part in the study

_____   _____
Name of [authorized] person obtaining informed consent   Date

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Chapter 4
Implementation of Transfer Mandates: How Organizations Must Change

The purpose of this article is to explore the ways in which community college organizational structures can be changed in order to integrate new statewide transfer policies to ensure better student outcomes. This article deals with a specific legislation and corresponding state transfer action plan that is similar to actions taken by other states to address poor transfer rates and success for community college students. A recent study explored four Appalachian community colleges and the ways in which organizational structures contribute to the success of transfer programs. The results of this study and the new legislative mandates will be reviewed to determine if the new policies will support the study's recommended organizational structures. How do these new policies interface with existing organizational structures, and how might these structures be altered in order to implement effective change?

Academic organizations function as complex systems characterized by interactions among different interdependent structures (Marion, 2002). Community colleges are typically defined as open systems having permeable boundaries that promote numerous interactions with the environment and system parts. These systems contain a dynamic and nonlinear structure that is unpredictable (Birnbaum, 1988). Certain scholars agree with this notion of understanding organizations as nonscientific, subjective and contextual (Marion, 2002; Wicks & Freeman, 1998). They assert that leaders have a great deal of influence over organizational structure, and yet these structures are only loosely related to organizational outcomes. Leaders must understand their organization's coupling patterns in order to carry out successful change efforts (Weick, 1976).

How do community college leaders come to understand their organization's coupling patterns in the context of successful transfer? As statewide legislative mandates designed to improve the transfer process are handed down to community colleges and universities, academic leaders must determine ways to alter their organizational structures to implement effective change efforts. One way to understand community colleges as open systems is to study how the elements within the system are connected. Although no single pattern is considered effective in all situations, some ways of organizing are considered better under certain conditions (Galbraith, 1973). This article discusses a recent study of four Appalachian community colleges and the ways in which organizational structures contribute to the success of a community college's transfer program. The results of this study will be related to the new legislative mandates within the state and how these might align with the recommended organizational structures.

Transfer as a Problem of Practice

Too few community college students who intend to transfer and earn a baccalaureate degree actually do. Seventy percent of community college students enter college with the goal of earning a baccalaureate degree or higher; less than 25% make it through the transition to the four-year institution, and 60% of those who make it go on to earn a four-year degree (Dougherty, 1994). This is a problem because postsecondary education is a key factor in economic mobility, and community colleges enroll a disproportionate number of nontraditional, part-time and low-income students. Given that community colleges provide access to individuals who may not otherwise have an avenue into the postsecondary system, the limited number of students who successfully transfer and earn the baccalaureate degree indicates an urgent problem worthy of study to

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ensure that America's higher education system does not assist in maintaining social inequality (Dougherty & Townsend, 2006).

Statewide transfer agreements and articulation policies are often created to facilitate the transition of students between community colleges and four-year institutions. These types of agreements are designed to improve the coordination of postsecondary institutions to increase the number of students successfully transferring and earning baccalaureate degrees (Ignash & Townsend, 2000; Knoell, 1990). The efficacy of such mandates is difficult to ascertain due to the intricacies involved with attempting to measure transfer success and evaluate policies aimed at assisting students in making this educational transition (Roksa, 2009). Recent research suggests that just the presence of such statewide agreements does not improve the transfer rates of community college students (Anderson, Sun, & Alfonso, 2006; Roksa, 2009; Roksa & Keith, 2008). How these agreements and policies are carried out locally must be studied in order to gain a better understanding of the ways in which organizations can change in order to ensure better outcomes.

Transfer Mandates

Many states are passing legislative mandates to improve outcomes for transfer students. Students who want to transfer from one institution to another must understand the often complicated process including things like which institutions will accept their coursework, which credits will transfer, and what financial aid is available. This information can be facilitated through statewide transfer and articulation policies. Transfer is defined as the procedure by which credit hours earned at one institution are accepted toward a degree at another institution; articulation relates to the statewide

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policies or agreements among institutions to accept the transfer of credits. Policymakers are focusing more attention to transfer and articulation as more students start their postsecondary careers at community colleges.

An ideal set of statewide transfer and articulation policies would include agreement between two-year and four-year institutions on a common core of general education courses covering the first two years of postsecondary education (Education Commission, 2011). Associate degree graduates who complete general education coursework at a community college could transfer to a four-year institution with junior status. Students who transfer prior to earning an associate degree would be assigned credit for individual courses completed toward the general education requirements. Some type of comprehensive, up-to-date, and easily accessible repository of transfer information should be available for students to check on their progress to a degree. Three transfer and articulation policy options implemented by states typically include:

- Only the full general education core is transferable; or,
- Only certain majors or "blocks" of study are transferable; or,
- Individual courses within the general education core are transferable.

The third option allows the most flexibility and would reach the most students given that 65% of all community college students transfer prior to earning their associate degree (Anderson, 2006; NCES, 1996). In each of these policy options, both two-year and four-year institutions in the state must collaborate closely to identify necessary core courses and to ensure that all courses meet the same rigorous standards.

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<p style="text-align: center;">**One State's Example**</p>

The situation in one state's example allows for a unique glimpse at how existing community college's transfer challenges are being addressed through a new legislative mandate, and how these relate to key structural features found to be crucial to transfer success.

Figure 4.1: Transfer Mandates and Community College Structures
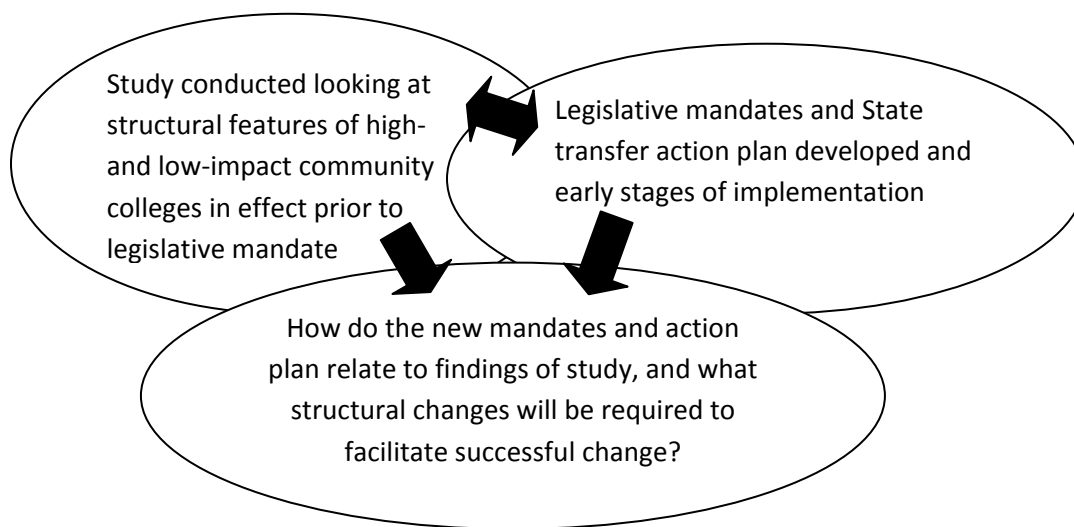
The Mandate

House Bill 160 was passed to provide assurance that students who earn an associate degree from the state's community and technical college system and transfer to a baccalaureate program at a four-year institution will: (a) meet all general education requirements, (b) not be required to repeat or take additional lower-level courses to fulfill BA/BS degree requirements in same major, (c) be admitted based on the same criteria as those students earning lower-division credits at the same university, (d) receive priority admission to a public university over out-of-state students if they meet the same

admission criteria, and (e) have access to an appeals process for denial of transfer credit (KY CPE, 2010).

The purpose of the legislation is to expand the capacity of the state's postsecondary system to provide a seamless transfer between community colleges and four-year institutions. The goal is to increase the number of students successfully transferring and earning a baccalaureate degree and minimizing duplication of credit. The state's Council on Postsecondary Education convened academic leaders from the postsecondary sector to develop a statewide transfer action plan. The plan is designed to promote student mobility across the state's postsecondary system by aligning general education and major pre-requisite learning outcomes and establishing a common course numbering system in the community and technical college system. The plan also expands the definition of transfer to account for the actual transfer activity taking place within the system. The plan includes a statewide transfer technology system to assist students and institutions in transfer planning (KY CPE, 2010). The table below provides a summary of the key tenets of the legislative mandate and state transfer action plan (KY Transfer Action Plan, 2011):

Table 4.1

Key Tenets and Outcomes of Transfer Mandate

Tenet	Outcomes
Common course numbering system for general education courses for all sixteen community and technical colleges	Allows universities to align their general education requirements with a system instead of each individual community and technical college
Alignment of learning outcomes and competencies for the 33 credit hour general education core transfer component	Ensures all general education courses within AA/AS/AAS degree programs to apply to BA/BS degree requirements and to be identified within the statewide transfer website
Alignment of learning outcomes and competencies for associate degree majors with relevant baccalaureate degree programs	Ensures discipline specific course equivalencies between public postsecondary institutions that will be identified within the statewide transfer website
Common course numbering system and alignment of learning outcomes and competencies for technical program courses within all sixteen community and technical colleges	Allows universities to determine applicability of technical courses within the Associate in Applied Science degree programs toward baccalaureate degree requirements
Full implementation of statewide transfer technology infrastructure connected to the information technology systems of all state postsecondary institutions.	Provide faculty, staff, students, legislators, and community with single website for transfer information including transfer equivalencies for courses at all public institutions

The tenets and outcomes related to the state's transfer legislative mandate and action plan

seem to meet the requirements of an ideal set of statewide policies described as those that

will impact the greatest number of students, as well as mandates that include a centralized

technology plan with easy access to information (Education Commission, 2011).

Essentially, the first four tenets build the infrastructure required to ensure the seamless

transfer of credits, and the fifth tenet creates a centralized communication system to make

the information accessible to everyone. How do these new policies interface with

existing organizational structures, and how might these structures need to be altered in order to implement effective change?
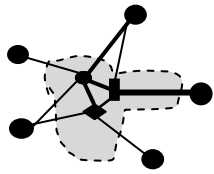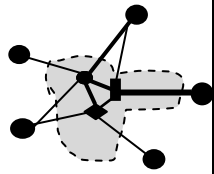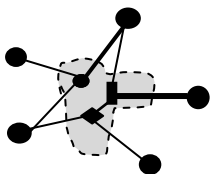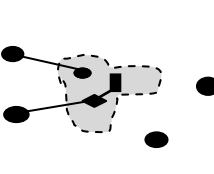
Snapshot of a Region

At the same time the state legislative mandate was passed and the transfer action plan was created, a study was conducted to explore the interface between the structures of community colleges and successful transfer. Does attending a certain type of community college contribute to a higher likelihood of transfer success? An emergent design was utilized in order to identify the relevant data points to include in a community college typology. The setting of the study included four community colleges located in the Appalachian region of the state. These institutions are member colleges of the same state system and follow common policies and procedures related to transfer. The student populations of the colleges possess many of the same demographic characteristics, as these four institutions are used in comparison studies as related to indicators such as student enrollments, retention, graduation, and transfer. This allowed for a more relevant comparison of the four organizational structures and their affect on successful transfer.

The study examined the interplay among multiple types of informal and formal organizational structures in the context of transfer success. Student characteristics and other institutional factors were controlled to allow for an exploration of other explanations for the disparity of transfer success among four Appalachian community colleges. Findings here support other research on organizational environments that suggest that no single practice makes an institution effective; it is the interaction of many factors within complex systems that supports effectiveness (Hannon & Freeman, 1989; Ichniowski, Shaw & Prennushi, 1997). As illustrated in the resulting typology, it is the

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interface of informal and formal structures that plays a role in the differentiation between high-impact and low-impact institutions. No single element can be isolated as the best structure, yet taken as a whole, certain conditions seem to distinguish the high-impact community colleges from the low-impact community colleges. The table below illustrates the key structural elements included in the typology:

Table 4.2: *Community College Typology for Transfer Success*

Element	High-impact colleges		Low-impact colleges	
	A	B	A	B
1. Internal and External Ties	Strong Internal and Strong External	Strong Internal and Strong External	Weak Internal and Strong External	Weak Internal and Weak External
2. Organizational Structure*	NP	P	NP	NP
3. Transfer Center Structure**	I	I	D	D
4. # of on-campus BA programs	7	8	6	1
5. # of 4-year schools on-campus	2	2	6	1
6. # of 4-year schools within driving distance	4	1	0	3

*The organizational structure refers to the formal structure of the college: either a "P" for a traditional Provost model that incorporates academic and student affairs under one leader who reports to the President, or a "NP" for a model that separates the academic and student affairs' functions under two leaders who each report to the president.

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**The transfer center structure is designated as an "I" if transfer services/programs were identified as being integrated throughout the college, and a "D" if they were identified as being discrete programs/services.

Two elements seem to distinguish the high-impact community colleges from the low-impact community colleges: the degree of external and internal ties and the level of integration of the transfer center structures. Both of the high-impact institutions are identified as having strong external and internal ties. One of the low-impact colleges demonstrated strong external and weak internal ties. The two high-impact community colleges were identified as having well-integrated transfer centers/services, and the two low-impact community colleges were described as having discrete transfer centers. The transfer services of the high-impact colleges were described as infused within the regular operations of admissions, advising, and graduation. The low-impact institutions described their transfer centers as discrete departments that essentially served as information repositories for students interested in transfer. The primary difference among the typology elements is related to internal ties. It appears that the existence of strong external ties is not enough to make an impact on transfer. Strong internal ties are necessary for an institution to be effective in successful transfer.

Putting it all Together

How do the transfer mandates and the study results relate to ensure that the new policies can be implemented effectively at the local level? The study revealed the importance of connections, both internal and external to the community colleges. This seems to indicate the need for a strong flow of accurate and timely information both inside and outside the organization. The high-impact community colleges exhibited strong internal and external connections. How do these connections fit in with the new

mandates and in what ways will these new mandates facilitate the structural changes required to move low-impact colleges into the high-impact category?

The first four mandate tenets require the alignment of curriculum among and between public postsecondary institutions. The fifth mandate provides for an electronic mechanism to make this and other transfer information accessible to everyone. These tenets and action steps help to build the statewide infrastructure to increase the number of students successfully transferring and earning a baccalaureate degree and minimizing duplication of credit. However, as the study found, even in the same policy environment community colleges perform differently in respect to successful transfer outcomes. If improvements are made to the statewide infrastructure, what has to happen at the college level to ensure successful change?

Articulation agreements are an essential first step in providing access to the baccalaureate for community college students (Ignash & Townsend, 2000; Rifkin, 2000). However, many scholars argue that to significantly increase transfer and baccalaureate attainment, academic leaders must go beyond articulation agreements and actively collaborate with other institutions (Case, 1999; Chatman, 2001; DiMaria, 1998). These types of partnerships might be more effective because they seek to alter organizational structures and practices at both the community college and the university to improve the overall transfer process (Kisker, 2007). Although the state legislative mandate and transfer action plan take the necessary first step of ensuring the seamless transfer of credit, establishing the partnerships will be an action required of each college with the appropriate four-year institutions. This will require strengthening external relationships and potential changes to existing practices to improve the transfer experience.

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The study of the high- and low-impact Appalachian community colleges found that external connections alone are not sufficient to make a significant impact on successful transfer. Strong internal networks are also necessary to ensure that faculty, staff, and students have the same information regarding the transfer process. The high-impact community colleges were identified as having transfer services and programs embedded within the organization, whereas the low-impact institutions were found to isolate their transfer services and programs as separate opportunities. The flow of information was limited at the low-impact institutions, which could lead to misadvising and an increased amount of time and money to degree. The transfer mandate and state action plan address this information gap through the statewide electronic website that will be accessible to everyone. Individual community colleges must ensure that their faculty, staff, and students are aware and trained to utilize this valuable resource.

In addition to changes at the community college level, four-year institutions must consider ways in which they can support the transfer process. A recent report gave voice to the perspectives of four-year institution leaders (College Board, 2011). The report acknowledged the increasing importance of community colleges in the pathway to the baccalaureate. The four-year leaders who were interviewed for the report offered the following three primary recommendations: (a) include transfer students as a priority in the institutional mission; (b) provide transfer students with the same level and intensity of services as first-year students; and (c) be aware of the unique needs of transfer students. Four-year institutions have to create a transfer-receptive culture in order to assist community college graduates in making a successful transition. The distinctions between the environments of community colleges and four-year universities are often significant

(Jain, et al., 2011). Statewide mandates do not address for these challenges further indicating the need for strong collaboration between institutions.

Both community colleges and four-year institutions are going to have to alter their organizations in order to successfully implement the new transfer mandates. Other higher education institutions that do not operate within states undergoing these new guidelines can also learn from changes being made. How do postsecondary leaders manage such a change initiative to ensure better outcomes? Colleges are typically considered open systems requiring leaders to understand how change impacts complex and interactive sets of systems (Marion, 2002). Statewide transfer mandates will force changes to multiple levels within the system including entire institutions, departments, divisions, programs, courses, faculty, staff, and students. Leaders must anticipate how these alterations will interact among the diverse set of systems in order to ensure effective change. For example, once the common course numbering system is developed by faculty and academic leaders, information must be disseminated to student services for use in academic advising. This internal linkage is critical for full implementation of the transfer mandate to take place. This same information must also be accessible to advisors at the four-year institutions to ensure that community college transfer students are received in accordance with the new transfer guidelines. Just changing one part of the system will not ensure better student outcomes.

Conclusion

The statewide legislative mandate required by House Bill 160 and the transfer action plan will be measured by statewide improvements on transfer benchmarks such as improved transfer rates, increased baccalaureate attainments, and other appropriate

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indicators. This type of evaluation will yield important information by which to judge

the overall effectiveness of the statewide mandate. However, it will be limited in the

information about what practices and organizational structures were altered to carry out

the mandates, and which of these were effective. It will be important to also conduct

institutional level studies to explore in what ways the institutions integrated the tenets of

the mandate, and to determine differences in high- and low-impact colleges. Student

perspectives will need to be included to ensure that the new policies are actually

improving their transfer experience.

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Chapter 5
Conclusion

Many great insights were garnered during the process of completing a companion study. Working with three other people on a common research topic allows one to view the topic from various perspectives and to better understand the dynamics at play. Discussions of results and findings were invaluable during this process. The following relates the four general themes that resulted from these discussions.

First, our group soon realized that general mandates, be they state or national, will not benefit an area unless local needs, dynamics, and trends are addressed and incorporated. Each college in the Kentucky Community and Technical College System is unique, and that is exactly what makes our system so unique. Even colleges in the Appalachian region that were included in this study have unique characteristics in addition to the numerous similarities. While the Double the Numbers mandate seeks to increase the number of baccalaureate degree holders, this may not come to fruition in the areas included in this study unless programs are brought to the area that are tied to the local labor markets.

Each of the colleges in this study confers more technical than transfer degrees. This might be largely a result of local labor markets; students often earn higher wages after earning a technical or vocational degree or diploma than a transfer degree. Further, many of the baccalaureate programs offered in these areas are in disciplines that have little local demand or that pay very little. Essentially, the job market in these fields have been saturated by the large number of students who enter these programs for the sole purpose of the ability to earn a four-year degree while not leaving the area. In order to

benefit the national completion agenda and Double the Numbers mandate while simultaneously benefiting students and local economies, these baccalaureate programs should be tied to the technical disciplines that are thriving in these areas.

Second, the group realized that it is crucial to determine what specific characteristics about baccalaureate programs for location-bound students promote persistence once a student has transferred. Are there institutional agendas and political undercurrents that may promote or hinder student success? In most instances, a culmination of characteristics affects persistence.

Third, we learned that the responsibility of transfer planning should be shared throughout the entire college community: faculty, both full-time and adjunct; staff; and administration. The transfer mission should be integrated into the college culture and climate in such a way that students should consider the transfer option the first time they step foot onto campus until graduation. An important aspect of the transfer planning responsibility includes open communication throughout both the system and the individual college. Everyone needs access to up-to-date information regarding checksheets, articulation agreements, transfer scholarships, etc. A breakdown in this communication results in decreased numbers of transfer students.

Lastly, we learned that it is difficult to carry out a study of this scope among four people with different personalities, backgrounds, and strengths who live substantial distances from one another. Planning four unique individual studies that fit within the framework of a general theme, synthesizing results, and creating a final product was more difficult than we initially imagined. However, the benefits of conducting this research collaboratively immensely outweigh any difficulties encountered along the way.

In the end, we felt that our research was better for having completed a companion study and that we covered the topic with a breadth that could not have been achieved otherwise.

The journey of a collaborative study and associated companion dissertation proved to be one worth taking. Although considered nontraditional, I believe the collaborative nature of this work was reflective of professional practice in the world of higher education. In the community college setting, collaboration is required on multiple levels. Committee work and group decision-making are a part of daily life. The numerous collaborative projects involved in the cohort program provided the perfect laboratory for us to develop and refine our leadership and teamwork skills.

I am a champion of the power of teams and so this format was aligned with my values. In forming the team, I purposely selected individuals who had complementary skills to mine, as well as diverse perspectives in hope that this combination of skills and outlooks would enrich our dissertation experience. This diversity of thought brought challenges along with the benefits. Differences in motivation, workload, and accountability promoted tensions at certain times during the process. Working through these differences provided an opportunity for personal and professional growth that was not anticipated in the beginning. In the end, the team concept encouraged all members to move forward and finish, and we are four proud doctors of education.

Appendices

Appendix A: Quantitative Analysis

Table 2.4

Regression 1: Total Cumulative Hours Regressed Against Successful Transfer

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% Lower	CI Upper
Constant	-0.248188	0.669033	-0.37	0.711			
Gender	-0.216216	0.240534	-0.90	0.369	0.81	0.50	1.29
Race	-0.612150	0.617349	-0.99	0.321	0.54	0.16	1.82
Age	0.099731	0.231846	0.43	0.667	1.10	0.70	1.74
Cum. GPA	0.383949	0.224644	1.71	0.087	1.47	0.95	2.28
Tot. Cum. Hours	0.875647	0.266043	3.29	0.001	2.40	1.43	4.04

The regression analysis of the 338 students from the spring/summer 2009 graduates with the transfer associate degree; Associate in Arts or Associate in Science, provided evidence for one highly significant variable and one weakly significant variable associated with student transfer. Gender, race, age each were statistically insignificant variables related to transfer. Cumulative grade point average is classified as a dichotomous variable with 1 signaling grade point average greater than or equal to 3.25 upon graduation and zero for grade point average below 3.25. Cumulative grade point average was weakly significant at the 10% significance level with a p-value of 0.087. Total cumulative hours earned upon graduation was also a dichotomous variable for 1 signaling earned credit hours below 90 and zero for credit hours earned greater than or equal to 90 upon graduation. Total cumulative hours were found to be highly significant at the 1% significance level with a p-value of 0.001.

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Table 2.5

Regression 2: Total Cumulative Hours Regressed Against Successful Persistence

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% Lower	CI Upper
Constant	-0.169086	0.673400	-0.25	0.802			
Gender	-0.085996	0.251556	-0.34	0.732	0.92	0.56	1.50
Race	-1.203635	0.615143	-1.96	0.050	0.30	0.09	1.00
Age	-0.080316	0.243019	-0.33	0.741	0.92	0.57	1.49
Cum. GPA	0.388863	0.236398	1.64	0.100	1.48	0.93	2.34
Tot. Cum. Hours	0.739097	0.292122	2.53	0.011	2.09	1.18	3.71

The regression analysis of the 338 students from the spring/summer 2009 graduates with the transfer associate degree; Associate in Arts or Associate in Science, provided evidence for one highly significant variable and one weakly significant variable associated with student persistence. Gender, race, age each were statistically insignificant variables related to persistence. Cumulative grade point average is classified as a dichotomous variable with 1 signaling grade point average greater than or equal to 3.25 upon graduation and zero for grade point average below 3.25. Cumulative grade point average was weakly significant at the 10% significance level with a p-value of 0.10. Total cumulative hours earned upon graduation was also a dichotomous variable for 1 signaling earned credit hours below 90 and zero for credit hours earned greater than or equal to 90 upon graduation. Total cumulative hours were found to be significant at just over the 1% significance level with a p-value of 0.011.

Table 2.6

Regression 3: Colleges 1 & 2 with College 4 Omitted

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% Lower	CI Upper
Constant	-0.648830	0.704526	-0.92	0.357			
Gender	-0.078571	0.251057	-0.31	0.754	0.92	0.57	1.51
Race	-0.751337	0.646098	-1.16	0.245	0.47	0.13	1.67
Age	0.185278	0.243253	0.76	0.446	1.20	0.75	1.94
Cum. GPA	0.226335	0.235306	0.96	0.336	1.25	0.79	1.99
Tot. Cum. Hours	0.801860	0.283926	2.82	0.005	2.23	1.28	3.89
College 1	1.104820	0.343546	3.22	0.001	3.02	1.54	5.92
College 2	1.166580	0.325241	3.59	0.000	3.21	1.70	6.07
College 3	0.350170	0.313494	1.12	0.264	1.42	0.77	2.62

These four Appalachian community colleges each have similar descriptive statistics regarding gender, race, and age. Results indicate that grade point average is weakly significant, while cumulative credit hours earned are highly significant. Higher grade point average leads to more transfer success and better persistence, while fewer than 90 credit hours earned leads to more transfer success and better persistence. In addition, by running four separate regressions omitting one of the four community colleges in each regression, results indicated that colleges 1 and 2 were high impact and colleges 3 and 4 were low impact relative to each other. Table 2.6 shows that when omitting college 4, colleges 1 and 2 are statistically similar as noted by their statistically significant p-values with college 3 having a p-value that is statistically insignificant.

Table 2.7

Regression 4: Colleges 1 & 2 with College 3 Omitted

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% Lower	CI Upper
Constant	-0.298660	0.715618	-0.42	0.676			
Gender	-0.078571	0.251057	-0.31	0.754	0.92	0.57	1.51
Race	-0.751337	0.646098	-1.16	0.245	0.47	0.13	1.67
Age	0.185278	0.243253	0.76	0.446	1.20	0.75	1.94
Cum. GPA	0.226335	0.235306	0.96	0.336	1.25	0.79	1.99
Tot. Cum. Hours	0.801860	0.283926	2.82	0.005	2.23	1.28	3.89
College 1	0.754649	0.370587	2.04	0.042	2.13	1.03	4.40
College 2	0.816406	0.348687	2.34	0.019	2.26	1.14	4.48
College 4	-0.350170	0.313494	-1.12	0.264	0.70	0.38	1.30

These four Appalachian community colleges each have similar descriptive statistics regarding gender, race, and age. Results indicate that grade point average is weakly significant, while cumulative credit hours earned are highly significant. Higher grade point average leads to more transfer success and better persistence, while fewer than 90 credit hours earned leads to more transfer success and better persistence. In addition, by running four separate regressions omitting one of the four community colleges in each regression, results indicated that colleges 1 and 2 were high impact and colleges 3 and 4 were low impact relative to each other. Table 2.7 shows that when omitting college 3, colleges 1 and 2 are statistically similar as noted by their statistically significant p-values with college 4 having a p-value that is statistically insignificant.

Table 2.8

Regression 5: Colleges 3 & 4 with College 2 Omitted

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% Lower	CI Upper
Constant	0.517746	0.741134	0.70	0.485			
Gender	-0.078571	0.251057	-0.31	0.754	0.92	0.57	1.52
Race	-0.751337	0.646098	-1.16	0.245	0.47	0.13	1.67
Age	0.185278	0.243253	0.76	0.446	1.20	0.75	1.94
Cum. GPA	0.226335	0.235306	0.96	0.336	1.25	0.79	1.99
Tot. Cum. Hours	0.801860	0.283926	2.82	0.005	2.23	1.28	3.89
College 1	-0.061757	0.382342	-0.16	0.872	0.94	0.44	1.99
College 3	-0.816406	0.348687	-2.34	0.019	0.44	0.22	0.88
College 4	-1.166580	0.325241	-3.59	0.000	0.31	0.16	0.59

These four Appalachian community colleges each have similar descriptive statistics regarding gender, race, and age. Results indicate that grade point average is weakly significant, while cumulative credit hours earned are highly significant. Higher grade point average leads to more transfer success and better persistence, while fewer than 90 credit hours earned leads to more transfer success and better persistence. In addition, by running four separate regressions omitting one of the four community colleges in each regression, results indicated that colleges 1 and 2 were high impact and colleges 3 and 4 were low impact relative to each other.   Table 2.8 shows that when omitting college 2, colleges 3 and 4 are statistically similar as noted by their statistically significant p-values with college 1 having a p-value that is statistically insignificant.

Table 2.9

Regression 6: Colleges 3 & 4 with College 1 Omitted

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% Lower	CI Upper
Constant	0.455989	0.733641	0.62	0.534			
Gender	-0.078571	0.251057	-0.31	0.754	0.92	0.57	1.51
Race	-0.751337	0.646098	-1.16	0.245	0.47	0.13	1.67
Age	0.185278	0.243253	0.76	0.446	1.20	0.75	1.94
Cum. GPA	0.226335	0.235306	0.96	0.336	1.25	0.79	1.99
Tot. Cum. Hours	0.801860	0.283926	2.82	0.005	2.23	1.28	3.89
College 2	0.061757	0.382342	0.16	0.872	1.06	0.50	2.25
College 3	-0.754649	0.370587	-2.04	0.042	0.47	0.23	0.97
College 4	-1.104820	0.343546	-3.22	0.001	0.33	0.17	0.65

These four Appalachian community colleges each have similar descriptive statistics regarding gender, race, and age. Results indicate that grade point average is weakly significant, while cumulative credit hours earned are highly significant. Higher grade point average leads to more transfer success and better persistence, while fewer than 90 credit hours earned leads to more transfer success and better persistence. In addition, by running four separate regressions omitting one of the four community colleges in each regression, results indicated that colleges 1 and 2 were high impact and colleges 3 and 4 were low impact relative to each other. Table 2.9 shows that when omitting college 1, colleges 3 and 4 are statistically similar as noted by their statistically significant p-values with college 2 having a p-value that is statistically insignificant.

Mattering Perception among the Community Colleges

Research Question #1 stated: Was mattering perception statistically significant among the three community colleges? An ANOVA found that there were no significant differences between the three community colleges on any subscale. The first table shows the mean scores on the five MSQCS subscales among the two-year institutions. The second table shows the ANOVA Table for MSQCS means among the two-year institutions.

Table 2.10
MSQCS Subscale Means by Institution

MSQCS Subscale		High Impact A	Low Impact A	Low Impact B
Administration	Mean	38.84	42.04	40.89
Subscale	SD	7.669	6.811	4.719
	Std Err of Mean	1.759	1.390	.776
	Variance	58.807	46.389	22.266
Advising	Mean	31.32	33.29	32.46
Subscale	SD	5.803	4.592	3.783
	Std Err of Mean	1.331	.937	.622
	Variance	33.673	21.085	14.311
Peers Subscale	Mean	43.53	45.58	45
	SD	6.703	7.027	4.416
	Std Err of Mean	1.538	1.434	.726
	Variance	44.930	49.384	19.500
Multiple Roles	Mean	26.63	27.17	26.97
Subscale	SD	5.166	4.517	3.296
	Std Err of Mean	1.185	.922	.542
	Variance	26.690	20.406	10.860
Faculty	Mean	30.74	32.96	32.11
Subscale	SD	4.039	4.930	3.373
	Std Err of Mean	.927	1.006	.555
	Variance	16.316	24.303	11.377

Table 2.11

ANOVA Table for MSQCS Subscale Means among Community Colleges

MSQCS Subscale		Sum of Squares	Df	Mean Square	F	Sig.
Administration Subscale	Between Groups (Combined)	109.948	2	54.974	1.446	.242
	Within Groups	2927.052	77	38.014		
	Total	3037.000	79			
Advising Subscale	Between Groups (Combined)	41.435	2	20.717	.993	.375
	Within Groups	1606.253	77	20.860		
	Total	1647.687	79			
Peers Subscale	Between Groups (Combined)	46.980	2	23.490	.683	.508
	Within Groups	2646.570	77	34.371		
	Total	2693.550	79			
Multiple Roles Subscale	Between Groups (Combined)	3.073	2	1.563	.088	.916
	Within Groups	1340.727	77	17.412		
	Total	1343.800	79			
Faculty Subscale	Between Groups (Combined)	52.677	2	26.339	1.607	.207
	Within Groups	1262.210	77	16.392		
	Total	1314.887	79			

Predictors of Transfer Persistence

Research question #2 stated: Does mattering perception influence transfer persistence when student characteristics of gender, marital status, enrollment status, work status, age, number of dependents, developmental course completion, first generation status, low-income status, extracurricular participation, and Student Support Services (TRIO) participation status are controlled? A logistic multiple regression was utilized using the above variables as predictors and transfer persistence as the criterion at levels of significance of .01, .05, and .10. The significant predictors, listed in order from most to least significant, are: (1) MSQCS Faculty Subscale, (2) MSQCS Multiple Roles Subscale, and (3) first-generation status (table below).

Table 2.12
Predictors of Transfer Persistence

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% Lower	CI Upper
Constant	-5.81816	3.21831	-1.81	0.071			
Administration Subscale	0.0019064	0.115783	0.02	0.987	1.00	0.80	1.26
Advising Subscale	0.104785	0.14352	0.74	0.462	1.11	0.84	1.47
Faculty Subscale	0.573535	0.196747	2.92	0.004	1.77	1.21	2.61
Multiple Roles Subscale	0.488252	0.186870	2.61	0.009	1.63	1.13	2.35
Age	0.250330	0.0340117	0.74	0.462	1.03	0.96	1.10
Gender	-0.330248	0.671263	-0.49	0.623	0.72	0.19	2.68
Marital Status	-0.0909570	0.304545	-0.30	0.765	0.91	0.50	1.66
Work Hours	0.204426	0.207095	0.99	0.324	1.23	0.82	1.84
Dependents	0.393426	0.307312	1.28	0.200	1.48	0.81	2.71
First-Generation	2.38254	0.945660	2.52	0.012	10.83	1.70	69.13
Low-Income	0.0428515	0.612127	0.07	0.944	1.04	0.31	3.46
Extracurricular Activities	0.580629	0.617049	0.94	0.347	1.79	0.53	5.99
SSS Participation Status	-0.132356	0.795991	-0.17	0.868	0.88	0.18	4.17

The Faculty and Multiple Roles Subscale predictors were found to be significant at the 1% level, while the first-generation status was significant at approximately the 1% level. All other variables were found to be not significant. Coefficients are positive on Faculty and Multiple Roles Subscale predictors, meaning that higher scores result in increased persistence. The Coefficient for first-generation status is positive, meaning that first-generation students are most likely to persist after transfer. Further, the odds ratio for this variable illustrates that first-generation students are 10 times more likely to persist than continuing-education students.

Several statistics were utilized to test for "goodness of fit" and significance of the regression model. See table below.

Table 2.13
Goodness-of-Fit Tests

Method	Chi-Square	DF	P
Pearson	77.1847	64	0.125
Deviance	85.6548	64	0.037
Hosmer-Lemeshow	4.2547	8	0.833

According to the Pearson goodness-of-fit test, the regression model is a good fit for this research question. According to the Deviance goodness-of-fit, which shows a model being a good fit only above 1%, results are less meaningful due to significance levels at 1%.

Appendix B

Mattering Scales Questionnaire for College Students (MSQCS)

Revised- Includes Demographic Survey and Cover Letter

How did [institution] treat you?
Take 15 minutes and tell us.

One of the goals of [institution] is to operate a student-centered campus. Working with [institution], I am trying to determine how the college treated you while you were a student.

Your participation is voluntary and confidential. You have been assigned a code number that will be used to identify your responses. All information will be recorded anonymously, and the results will be reported as a group. No responses will be reported individually. Only I, as the researcher, will know your name, but I will not divulge it or identify your answers to anyone. All information will be held in the strictest confidence. <u>I encourage you to complete the questionnaire and return it by [date].</u>

Alternatively, if you would rather complete the survey online, please go to [website address] by [date] and enter code # _____.

INSTRUCTIONS FOR RETURNING THE QUESTIONNAIRE
- **Check to make sure you have answered all questions.**
- **Check to make sure your answers are legible.**
- **To mail, insert into the self-addressed, stamped envelope provided. No postage is required. Drop the envelope in any post office mailbox.**

Thank you for your participation!!

Mattering Scales Questionnaire for College Students

Please circle the response that best described your feelings while you were a student at [institution]. Please select a response for each item.

SD=STRONGLY DISAGREE   D=DISAGREE   N=NEITHER AGREE OR DISAGREE
A=AGREE   SA=STRONGLY AGREE

1. The administration seemed to consider student priorities as important..................SD D   N   A   SA

2. My advisor didn't seem to remember things we discussed before.................SD D   N   A   SA

3. I had a hard time finishing my degree because of time limits on completing course requirements...SD D   N   A   SA

4. I got support from my classmates when I needed it.............................SD D   N   A   SA

5. The university's policy of transfer credits penalized students.........................SD D   N   A   SA

6. My questions seemed to put faculty members on the defensive.....................SD D   N   A   SA

7. The faculty and administrators were sensitive to my other responsibilities.........SD D   N   A   SA

8. I sometimes felt alone and isolated at the college.....................................SD D   N   A   SA

9. The administrative rules and regulations were clear to me.............................SD D   N   A   SA

10. My professors interpreted assertiveness as a challenge to their authority...........SD D   N   A   SA

11. The administration set things up to be easy for them, not the students...............SD D   N   A   SA

12. It was hard for me to adjust to the school environment...............................SD D   N   A   SA

13. If my advisor didn't know the answer to my questions, he or she would seek out the answers..SD D   N   A   SA

14. The classroom atmosphere encouraged me to speak out in class.....................SD D   N   A   SA

15. I felt my classmates reacted positively to my experience and knowledge............SD D   N   A   SA

16. My professors seemed to recognize other students but not me.......................SD D   N   A   SA

17. I didn't have time to complete the administrative tasks the college required ......SD D   N   A   SA

18. There was always someone on campus that could help me when I had a question or problem...SD D   N   A   SA

19. I felt like I fit in my classes..SD D   N   A   SA

20. The administrative offices were not open at times when I needed them...............SD D   N   A   SA

21. The administration made efforts to accommodate students.........................SD D   N   A   SA

Please continue to the next page.

22	I had a good relationship with my classmates…………………………………	SD	D	N	A	SA
23	Sometimes I felt out of place in the classroom…………………………........	SD	D	N	A	SA
24	The college did not commit enough resources to off-campus courses………….	SD	D	N	A	SA
25	There was always an advisor available to talk with me if I need to ask a question………………………………………………………………………	SD	D	N	A	SA
26	My classmates would help me catch up to the new technologies if I needed it…SD		D	N	A	SA
27	My experience-based comments were accepted by my professors……...………..	SD	D	N	A	SA
28	It took too long to register or correct registration problems………...…...…........	SD	D	N	A	SA
29	Administrative staff was helpful in answering my questions…...……………….	SD	D	N	A	SA
30	Fellow students didn't seem to listen to me when I shared my life experiences…SD		D	N	A	SA
31	Unless I had another student like me in class, no one really understood how hard it was to be there………………………………………………………..	SD	D	N	A	SA
32	The college offered alternatives to the traditional semester-length courses (example: weekend courses)……………………………………………………	SD	D	N	A	SA
33	I had adequate opportunities to get to know fellow students……………..………	SD	D	N	A	SA
34	Campus rules and regulations seemed to have been made for someone other than me………………………………………………………………………	SD	D	N	A	SA
35	My age sometimes got in the way of my interactions with other students………..	SD	D	N	A	SA
36	Some of the jokes my professors told made me feel uncomfortable…………….	SD	D	N	A	SA
37	Classes were offered at times that were good for me…………..………………	SD	D	N	A	SA
38	I felt welcome on campus………………………………………...……………	SD	D	N	A	SA
39	The classroom desks were uncomfortable…………………...….………………	SD	D	N	A	SA
40	I felt my activity fees were spent in a way that was meaningful to me……………	SD	D	N	A	SA
41	My advisor had office hours at times that I was on campus…………...…………	SD	D	N	A	SA
42	Departmental rules sometimes made my goals difficult or impossible…….......…	SD	D	N	A	SA
43	The school newspaper didn't discuss student issues that were relevant to me……	SD	D	N	A	SA
44	My professors sometimes ignored my comments or questions…...……………..	SD	D	N	A	SA
45	I sometimes felt my professors wanted me to hurry up and finish speaking…….	SD	D	N	A	SA

Please continue to the next page.

Schlossberg, N., Lasalle, A., & Golec, R. (1990). *The Mattering Scales for Adult Students in Higher Education*. Washington, DC: American Council on Education.

1   **Age as of October 1, 2010?**   _____ years old

2   **Gender:** *(Check one)*   □ Male   □ Female

3   **Marital status:** *(Check one)*
         □ single (never been married)
         □ unmarried and living with partner / significant other
         □ married
         □ divorced
         □ widowed
         □ separated

4   **Enrollment status the majority of the time you attended [institution]:** *(Check one)*
         □ Full-time student (enrolled in at least 12 credit hours this semester)
         □ Part-time student (enrolled in less than 12 credit hours this semester)

5   **Did you work while attending [institution]?** *(Check one)*
         □ No **(Go to #7)**
         □ Sometimes **(Go to #6)**
         □ Yes **(Go to #6)**

6   **If Yes or Sometimes, what is the average number of hours you worked per week the majority of the time you attended [institution]?** *(Check one)*
         □ 0-10 hours
         □ 11-20 hours
         □ 21-30 hours
         □ 31-40 hours
         □ Over 40 hours

7   **Did you have dependents living with you while attending [institution]?** *(Check one)*
(Examples: spouse, children, grandchildren, parents, or others that you were <u>financially responsible</u> for.)
         □ No **(Go to #9)**
         □ Yes **(Go to #8)**

8   **If yes, how many dependents did you have while you were a student at [institution]?**

         _____ Number of Dependents

9   **Did you take developmental courses while you were a student at [institution]?** *(Check one)*
         □ No **(Go to #11 on next page)**
         □ Yes **(Go to #10)**

10   **If Yes, how many developmental courses did you take while at [institution]?** *Check one)*
         □ 1
         □ 2
         □ 3 or more   Please continue to the next page.

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11 Were you a participant in the federal TRIO Student Support Services (SSS) program [other name] while a student at [instition]? *(Check one)*

  ☐ No **(Go to #17 on the next page)**

  ☐ Yes **(Go to #12)**

12 If Yes, please mark which of the following services you utilized from SSS [other name] staff. *(Check all that apply.)*

  ☐ Help registering for classes

  ☐ Keeping track of grades through mid-term progress/grade reports filled out by instructors and turned in to SSS [other name] staff

  ☐ Help talking to instructors about problems I had in class

  ☐ Tutoring by people with a 4-year college degree

  ☐ Tutoring by other students working in the tutoring lab or academic support center

  ☐ Help figuring out what career I would like best

  ☐ Help with problems I had in my personal life

  ☐ Trips with SSS [other name] staff and other students

  ☐ Help with the transfer process *(filling out forms, transferring financial aid to the new school, knowing what classes would transfer, sending transcripts, etc.)*

  ☐ Supplemental Grant Assistance *(Money paid to you)*

  ☐ College / campus visits to 4-year schools

  ☐ Workshops, either online or in person

  ☐ Help filling out financial aid forms

  ☐ Help for students with disabilities

13 Of the services you stated you utilized, please mark which helped you most. *(Check all that apply.)*

  ☐ Help registering for classes

  ☐ Keeping track of grades through mid-term progress/grade reports filled out by instructors and turned in to SSS [other name] staff

  ☐ Help talking to instructors about problems I had in class

  ☐ Tutoring by people with a 4-year college degree

  ☐ Tutoring by other students working in the tutoring lab or academic support center

  ☐ Help figuring out what career I would like best

  ☐ Help with problems I had in my personal life

  ☐ Trips with SSS [other name] staff and other students

  ☐ Help with the transfer process *(filling out forms, transferring financial aid to the new school, knowing what classes would transfer, sending transcripts, etc.)*

  ☐ Supplemental Grant Assistance *(Money paid to you)*

  ☐ College / campus visits to 4-year schools

  ☐ Workshops, either online or in person

  ☐ Help filling out financial aid forms

  ☐ Help for students with disabilities

Please continue to the next page.

14 How often did you use or participate in SSS [other name] activities? *(Check one)*

  ☐ 0-3 times / semester
  ☐ 4-6 times / semester
  ☐ 7 or more times / semester

15 How often did you visit SSS [other name] staff in person? *(Check one)*

  ☐ 0-3 times / semester
  ☐ 4-6 times / semester
  ☐ 7 or more times / semester

16 How often did you communicate with SSS [other name] staff over the phone or by email? *(Check one)*

  ☐ 0-3 times / semester
  ☐ 4-6 times / semester
  ☐ 7 or more times / semester

17 Did either one of your parents/guardians have a bachelor's degree at the time you attended [institution]? *(Check one)*

  ☐ No
  ☐ Yes

18 Did you receive a Pell Grant while you attended [institution]? *(Check one)*

  ☐ No
  ☐ Yes

19 Were you involved in extracurricular activities or clubs while you attended [institution]? (Example: student government, college newspaper, Phi Theta Kappa, Phi Beta Lambda, etc.) *(Check one)*

  ☐ No
  ☐ Yes

20 Are you currently enrolled in a 4-year college working toward a bachelor's degree?

  ☐ No **(Go to #23)**
  ☐ Yes **(Go to #21)**

21 If yes, what school do you attend?

  College or University:_____

22 If yes, what is your expected graduation date?

  Expected Graduation Date:_____

23 Please list an email address where I can contact you if I can't read one of your answers:

  Email Address:_____

You have reached the end of the survey. Thank you!

Appendix C
MSQCS Subscales

Results are meant to be utilized as a campus ecology measure to uncover environmental

trends rather than to interpret individual responses. Further, scale intercorrelation analysis

revealed that a total instrument score is not interpretable and that the five scales should be

individually reported (Kettle, 2001; Schlossberg, et al., 1990). Survey items are scored on a 5-

point Likert scale, with 24 items with reverse values. The questions for each subscale are listed

in the table below, with reversed values identified by an asterisk.

Table 2.14

Questions Used to Measure MSQCS Subscales

Subscale	Questions
Administration	1, 5*, 7, 11*, 21, 24*, 28*, 32, 34*, 40, 43*
Advising	2*, 9, 13, 18, 25, 29, 37, 41
Peers	4, 8*, 14, 15, 19, 22, 26, 30*, 33, 35*, 38
Multiple Roles	3*, 12*, 17*, 20*, 31*, 39*, 42*
Faculty	6*, 10*, 16*, 23*, 27, 36*, 44*, 45*

Table 2.15. *Participant Demographics*

Variable			Total	ACTC	HCTC	SKCTC
Age	Traditional		45%	32%	42%	54%
	Nontraditional (25 & older)		55%	68%	58%	46%
	Mean		30.5	34.4	31.6	27.9
	SD		11.43	12.44	11.19	10.64
Gender	Male		30%	38%	37%	22%
	Female		70%	63%	63%	78%
Marital Status	Single		41.3%	15.8%	41.7%	45.9%
	Unmarried / Living with Partner		3.8%	5.3%	4.2%	2.7%
	Married		45%	57.9%	45.8%	37.8%
	Divorced		11.3%	21.1%	8.3%	8.1%
	Widowed		2.5%	0%	0%	5.4%
Enrollment Status	Part-Time		13.8%	15.8%	12.5%	13.5%
	Full-Time		86.3%	84.2%	87.5%	86.5%
Work Status	Didn't Work		25%	26.3%	20.8%	24.3%
	Worked	1-10hrs/wk	4.9%	0%	0%	8.1%
		11-20hrs/wk	14.8%	5.3%	12.5%	13.5%
		21-30hrs/wk	27.9%	26.3%	16.7%	21.6%
		31-40hrs/wk	36.1%	26.3%	41.7%	18.9%
		41+hrs/wk	16.4%	15.8%	8.3%	13.5%
Dependents	None		53.8%	47.4%	54.2%	56.8%
	1 Dependent		18.8%	5.3%	29.2%	18.9%
	2 Dependents		16.3%	36.8%	12.5%	8.1%
	3 Dependents		2.5%	5.3%	0%	2.7%
	4 Dependents		6.3%	5.3%	0%	10.8%
	No Response		2.5%	0%	4.2%	2.7%
Developmental Course Completion	None		50%	63.2%	29.2%	56.8%
	1 Developmental Course		15%	15.8%	25%	8.1%
	2 Developmental Courses		23.8%	21.1%	20.8%	2.7%
	3 or More Developmental Courses		11.3%	0%	25%	8.1%
SSS Partici-pation Status	SSS Participant		20%	21%	12.5%	24.3%
	SSS Non-Participant		80%	79%	87.5%	75.7%
First Generation Student	1st Generation		79%	68%	83%	81%
	Not 1st Generation		21%	32%	17%	19%
Pell Recipient Status	Pell Recipient		61%	58%	67%	59.5%
	Pell Nonrecipient		39%	42%	33%	40.5%

Table 2.15 Continued

Extra-curricular Activities	Involved	27.5%	26%	17%	35%
	Not Involved	72.5%	74%	83%	65%
Transfer Persistence	Persister	48%	47%	42%	51%
	Non-Persister	52%	53%	58%	46%
	No Response	0%	0%	0%	3%
Transfer Destination	Eastern Kentucky University	10%	0%	12.5%	13.5%
	Lindsey Wilson College	10%	0%	8.3%	16.2%
	Morehead State University	10%	26.3%	8.3%	2.7%
	Ohio University Southern	3.8%	10.5%	4.2%	0%
	Lincoln Memorial University	2.5%	0%	0%	5.4%
	Union College	2.5%	0%	0%	5.4%
	Bluefield State University	1.3%	5.3%	0%	0%
	Colorado Technical University (Online)	1.3%	0%	0%	2.7%
	Midway College	1.3%	0%	4.2%	0%
	Northern Kentucky University	1.3%	5.3%	0%	0%
	University of Kentucky	1.3%	0%	0%	2.7%
	Weber State University	1.3%	0%	4.2%	0%

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Appendix E

INDIVIDUAL STUDENT INTERVIEW GUIDE

Meeting Time _____

Meeting Place _____

Participant Pseudonym _____

Interview questions and prompts:

Tell me about your life in Appalachia Kentucky.

Tell me about where you live.

Tell me about your roles in your family and community.

What kind of educational experiences have you had in your life?

How did you decide which four-year program in which to enroll?

What are the differences in your community college experiences and your university experiences?

Tell me in what ways your educational experiences have affected your roles in your family and community.

Appendix F
Informed Consent Form

Consent to Participate in a Research Study

Institutional and Student Characteristics that Matter in the Pathway to the

Baccalaureate Degree for Appalachian Community College Students in Kentucky

Appalachian Community College Transfer
Perceptions of Institutional Transfer Success

Organizational Structure and Mattering: How Community Colleges Affect Transfer Success

WHY ARE YOU BEING INVITED TO TAKE PART IN THIS RESEARCH?

You are being invited to take part in a research study about institutional and student characteristics that matter in the pathway to the baccalaureate degree. You are being invited to take part in this research study because you have been identified as a staff member or college leader involved with the transfer process at your college. If you volunteer to take part in this study, you will be one of about 24 people to do so.

WHO IS DOING THE STUDY?

The person in charge of this study is Amber Decker, a doctoral student at the University of Kentucky, Department of Education Policy Studies and Evaluation. She is being guided in this research by Dr. Jane Jensen. Other researchers involved in the study are Christopher Phillips, Michelle Dykes, and Nancy Preston who are also doctoral students in the same program.

WHAT IS THE PURPOSE OF THIS STUDY?

The proposed study seeks to explore the interface between institutional and student characteristics and transfer success indicators. By doing this study, we hope to learn how different characteristics affect students and their pathway to the baccalaureate degree.

ARE THERE REASONS WHY YOU SHOULD NOT TAKE PART IN THIS STUDY?

Any person may decline participation without harm.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?

The research procedures will be conducted at the participants' home campus. You will need to come to the designated place on campus one time during the study. Each visit will take about 45 minutes. The

total amount of time you will be asked to volunteer for this study is 45 minutes during the month of December, 2010 or January, 2011.

WHAT WILL YOU BE ASKED TO DO?

During a 45-minute interview, you will be asked to reflect on information about your college's institutional and student characteristics related to the transfer process. This information will be provided to you by the researchers. Researchers will ask you questions about your perceptions regarding how these characteristics are related to various transfer success indicators. After completion of the interview, the researchers will discuss and compile the major themes that emerge from your responses.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

To the best of our knowledge, the things you will be doing have no more risk of harm than you would experience in everyday life.

WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?

There is no guarantee that you will get any benefit from taking part in this study. Your willingness to take part, however, may, in the future, help community colleges as a whole better understand the transfer experience.

DO YOU HAVE TO TAKE PART IN THE STUDY?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering.

IF YOU DON'T WANT TO TAKE PART IN THE STUDY, ARE THERE OTHER CHOICES?

If you do not want to be in the study, there are no other choices except not to take part in the study.

WHAT WILL IT COST YOU TO PARTICIPATE?

There are no costs associated with taking part in the study.

WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?

You will not receive any rewards or payment for taking part in the study.

WHO WILL SEE THE INFORMATION THAT YOU GIVE?

We will make every effort to keep private all research records that identify you to the extent allowed by law.

Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers, we will write about the combined information we have gathered. You will not be personally identified in these written materials. We may publish the results of this study; however, we will keep your name and other identifying information private.

We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. All data will remain in the possession of the researchers or be kept in a locked cabinet or password protected system at the researchers' office.

We will keep private all research records that identify you to the extent allowed by law. However, there are some circumstances in which we may have to show your information to other people. We may be

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required to show information which identifies you to people who need to be sure we have done the research correctly; these would be people from such organizations as the University of Kentucky.

CAN YOUR TAKING PART IN THE STUDY END EARLY?
If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. You will not be treated differently if you decide to stop taking part in the study.

The individuals conducting the study may need to withdraw you from the study. This may occur if you are not able to follow the directions they give you, if they find that your being in the study is more risk than benefit to you, or if the study ends early for a variety of reasons.

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS, CONCERNS, OR COMPLAINTS?

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator(s), Amber Decker at amber.decker@kctcs.edu or (859) 442-1147, or Chris Phillips at chris.phillips@kctcs.edu or (606) 679-8501. If you have any questions about your rights as a volunteer in this research, contact the staff in the Office of Research Integrity at the University of Kentucky at 859-257-9428 or toll free at 1-866-400-9428. We will give you a signed copy of this consent form to take with you.

_____   _____
Signature of person agreeing to take part in the study   Date

_____
Printed name of person agreeing to take part in the study

_____   _____
Name of [authorized] person obtaining informed consent   Date

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<div align="center">**Vita**</div>

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Educational Institutions Attended and Degrees Awarded

University of Kentucky   Doctoral Candidate, Educational Policy Studies
and Evaluation

University of Louisville   Masters Degree, Human Resource Education

Northern Kentucky University Bachelor of Arts, Journalism

Professional Positions

Gateway Community and Technical College

January 2008-Present   *Director of Grants and Contracts*

January 2010-Present   *Adjunct Faculty*

June 2000-January 2008   *Director of Adult Education*

Northern Kentucky Adult Reading Program, Covington, Kentucky

December 1995-June 2000   *Executive Director*

May 1994-December 1995   *Volunteer in Service to America (VISTA)*

Scholastic and Professional Honors

- Gateway New Horizons Staff Award, 2011
- KCTCS New Horizons System-Wide Staff Award, 2011
- Chair, Spirit of Innovation Recognition Planning Team, 2011
- Chair, Night of Excellence Planning Team, 2007-2008
- Graduate, KCTCS President's Leadership Seminar, Class 2011
- Graduate, Women in Leadership Development, Class 2010
- Graduate, Gateway LEAD Program, Class 2008
- Graduate, Teacher Leadership of Northern Kentucky, Class 2007

Professional Publications

Burns, T. & Decker, A. (2011). Connecting experiential learning, service learning, and student-run businesses. *Community College Entrepreneurship, Summer/Fall*, 28.