8-2014

Access Barriers To Higher Education For Rural Community College Students

Shanda Carter
University of Arkansas, Fayetteville

Access Barriers To Higher Education For Rural Community College Students

Access Barriers To Higher Education For Rural Community College Students

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Education in Higher Education

By

Shanda Carter
Florida State University
Bachelor of Science in Exercise Science, 2005
Pittsburg State University
Master of Science in Educational Leadership, 2007

August 2014
University of Arkansas

This dissertation is approved for recommendation to the Graduate Council.

_____
Dr. Michael Miller
Dissertation Director

_____
Dr. John Murry
Committee Member

_____
Dr. Adam Morris
Committee Member

Abstract

The purpose for conducting the study was to examine factors related to rural low-income, first generation college students' obstacles to community college enrollment. The study examined barriers students overcame to attend college and focused on rural college students from two community colleges in Missouri and Arkansas. The following questions guided the research:

1. What attendance barriers did rural community college students identify as being most difficult for them to overcome?
2. Were there differences between the self-identified attendance barriers based on gender for male and female rural community college students?
3. Were there differences in attendance barriers for rural community college students based on whether they enrolled immediately out of high school or postponed attendance?
4. Were there differences in attendance barriers for rural community college students based on low-income or first generation classifications?

A purposeful sample was chosen and 170 surveys were collected overall. Results were tabulated using descriptive statistics. The survey results showed that respondents believed their cumulative GPA had a great deal of influence on their decision to enroll at the local, rural community college. Financial aid eligibility and if the student's parents had attended a community college or university also played a major role in their successful enrollment.

Table of Contents

Chapter 1

Introduction

Context of the Problem

Access to higher education for all students is drawing increased attention among researchers in postsecondary education, and the need for an educated workforce has never been stronger as the global economy develops. "Some predict that by 2020, 40 percent of the global workforce will be knowledge workers with a need for tertiary qualifications (Daniel, Kanwar & Uvalic-Trumbic, 2009, p. 30). Also important is equal access for all students to higher education regardless of income or family background (Boggs, 2011). Equal access to higher education can provide students the opportunity to obtain a college degree, and Teran (2007) noted that "anything can be considered a barrier if it impedes the path to a college degree" (p. 17).

As college enrollments increase nationally, there are still barriers for students to access higher education (Bell, Rowan-Kenyon, & Perna, 2009). Rural community college students in particular continue to face obstacles in accessing postsecondary education. These students face challenges such as living in areas with weak economies, traveling long distances to get to schools, poor educational preparation, and inconsistent access to technology (Garza & Eller, 1998). According to Webber and Boehmer (2008), another problem for many students is poor educational college preparation, and these students are often first-generation, require basic information about financial aid and general college-life information, and in many cases access community colleges first in their postsecondary enrollment. A study by Mckinney and Novak (2013) found students who enrolled in community colleges often had the most difficulty acquiring the information and guidance they needed to make informed decisions about the college process because many of them were first-generation or low-income students.

Consequently, rural community colleges must employ new and different measures to reach students.

Miller and Tuttle (2006) wrote the following about the rural community college:

> Community colleges can be important mechanisms in improving a locale's quality of life and how communities view themselves. Through the provision of resources and opportunities-both educational and social-community colleges can be an integral part of community success. Their role is particularly important for rural America, where the out-migration of the rural population has been over 15% during the past decade. (p. 55)

Higher education is associated with higher income, a better quality of life and a higher socioeconomic status (Boggs, 2011). However, rural community college students face a plethora of non-educational barriers such as lack of child-care services, reliable transportation, financial aid (Bell, Rowen-Kenyon, & Perna, 2009) and obstacles to technology such as adequate internet access (Wilson, 2012). This study was designed to explore the barriers rural community college students see for themselves.

Statement of the Purpose

The purpose for conducting this study was to examine factors related to rural low-income, first generation college students' obstacles to community college enrollment. The study examined barriers students overcame to attend college and how well prepared they perceive themselves to be once enrolled. The study focused on rural college students from two similar community colleges in Missouri and Arkansas.

Statement of Research Questions

1. What attendance barriers do rural community college students identify as being most difficult for them to overcome?
2. Are there differences between the self-identified attendance barriers based on gender for male and female rural community college students?

3. Are there differences in attendance barriers for rural community college students based on whether they enrolled immediately out of high school or postponed attendance?
4. Are there differences in attendance barriers for rural community college students based on low-income or first generation classifications?

Definitions

First-generation college student: Students whose parents did not enroll in postsecondary education. (NCES, 1998).

Low-income: NCES defines low-income as "those whose family income was below 125 percent of the federally established poverty level for their family size" (U.S. Department of Education, 2000, p. 2).

Rural Community College: Typically characterized by a single campus institution with a single governing board. Most provide vocational and transfer curricula for students and provide opportunities for community involvement. Typically has an enrollment of 2,500 students or less (Katsinas, 2003).

Underprepared student: A student who comes to college without the skills to successfully complete college-level work (Gallard, Albritton, & Morgan, 2010). These students may not meet certain entry-level placement scores to enroll in college-level courses (Barbatis, 2010).

Traditional student: A student that graduates high school and enrolls in college full-time immediately after graduating (FDOE, 2003).

Non-traditional student: One that does not fit the definition of a traditional student. This type of student may have been financially independent from parents, have delayed enrollment, attended part-time, and have dependents (FDOE, 2003).

Assumptions

The researcher acknowledged the following assumptions of the study:

1. All participants accurately and honestly completed the survey to the best of their knowledge and ability.
2. The sample studied was purposeful and was intended to reflect the general characteristics of rural community college students.
3. The study accepted the assumption that rural community college students possess obstacles different than those of other community college students.

Delimitations and Limitations

The study had several limitations, although the study provided an in depth understanding of access issues for rural community college students, the findings are based on students at only two rural community colleges. Therefore, the findings of the study cannot be generalized to all schools and states. Second, only a small number of students have taken this survey at each school. The entire student body was not surveyed and so the results are not necessarily representative of all students at the community colleges surveyed. Finally, the survey was administered during the spring semester of 2014. By surveying students at this time in the semester, students with obstacles may have already withdrawn. While important, these limitations do not minimize the contribution of this study which examines rural, low-income and first generation students' obstacles while in college.

Significance of Study

Past research has not addressed the multitude of barriers that specifically face rural low-income and first generation college students. By exploring the obstacles faced by rural community college students, high school administrators, policy makers, and higher education

faculty and administrators can better understand these students, their needs, and provide them with better services. This might mean the more effective recruitment of students from these backgrounds, providing better transition experiences, and enhancing retention activities. Also, findings might provide policy makers with the data to show funding needs for services and programs that can assist students in higher education.

The majority of students attending rural community colleges are students from the surrounding areas (Cross & Burney, 2005), and these students are coming directly from their high schools into their local community colleges. Rural high schools typically have smaller enrollments and high teacher to student ratios, therefore, course offerings, especially in the higher-level math and science courses, are rarely offered. Rose and Betts (2004) found:

> Math courses that students take in high school are strongly related to students' earnings around 10 years later, even after taking account of demographic, family, and school characteristics, as well as the student's highest educational degree attained, college major, and occupation. (p. 510)

Many high schools cannot even attract foreign language instructors, and consequently, they do not offer these classes. Many public state universities require students to have one to two years of a foreign language in high school, and thus, the small rural schools hinder students by not preparing them for college ("Revised CBHE recommended," 2006).

Low-income rural youth have fewer opportunities than their peers in larger high schools that can offer more opportunities to participate in quality extracurricular programs and clubs. Funding for extracurricular activities has shifted from dedicated resources that are distributed equally throughout the districts to local sources such as the parent teacher associations or private clubs (Cohen, Taylor, Zonta, Vestal, & Schuster, 2007), and it is essential that students have "the opportunity to have a place to learn, to question, to be with others who share such values and, together, develop a sense of hope for the future within which science becomes a tool for action"

(Rahm, Moore, & Martel-Reny, 2005, p. 7). Many rural high schools also lack quality teachers and cannot afford to pay teachers the same wage as larger, better funded high schools. With fewer resources, rural schools must rely on teachers to play multiple roles, and in some cases, a single teacher might teach all of the science or math classes in school. The teachers can easily become less enthusiastic toward teaching and student learning, and hence, underprepared high school students can flood the doors of community colleges.

Barriers to higher education are also present for first generation students. A study conducted by Legutko (2008) surveyed 12th grade students who lived in rural Pennsylvania. The study revealed an inverse relationship between parents' educational attainment and planned college attendance. When comparing family influence of rural Pennsylvania high school students from 1995 and 2005, a trend showing students with both parents having high school as their highest educational attainment were much more likely to choose college attendance after graduation, suggesting that the family values a higher education.

Although there have been several studies done that reflect the barriers of low-income, first generation students, little is known about rural students and the barriers that affect their postsecondary educational choices. Rural students face differing barriers to higher education than students from other demographics. Pascarella, Pierson, Wolniak, and Terenzini (2004) found:

> Compared to their peers, first-generation college students tend to be at a distinct disadvantage with respect to basic knowledge about postsecondary education (e.g., costs and application process), level of family income and support, educational degree expectations and plans, and academic preparation in high school. (p. 250)

Teachers and administrators from rural community colleges will benefit from this study by understanding the issues the students face on a daily basis. Results provided information from low-income, first generation, rural community college students' experiences and expectations of their institution while in school. Additionally, findings showed how the

community college is integrated into each of the two rural communities and the role they play within each.

Theoretical Framework

There are three theories that are relevant to studying barriers rural community college students face when going to college: Cultural capital theory, Econometric model theory, and Chapman's behavioral model. Cultural capital theory explains how low-income, first generation students are already entering school at a lower social level than their peers from a higher socioeconomic (SES) background. Low-income students come to school without the knowledge of middle-class socially acceptable behaviors. These are often referred to as the hidden rules of society. One example of this would be to say excuse me when you are walking through a crowd, or to tell someone bless you after they sneeze. "The concept of cultural capital was developed by Pierre Bourdieu and Jean-Claude Passeron to analyze the impact of culture on the class system and on the relationship between action and social structure" (Lamont & Lareau, 1988, p. 154).

The theory by Lamont and Lareau (1988) is best explained below:

> The well known argument goes as follows: Schools are not socially neutral but reflect the experiences of the "dominant class." Children from this class enter school with key social and cultural cues, while working class and lower class students must acquire the knowledge and skills to negotiate their educational experience after they enter school (p. 155).

Rural community college students are greatly affected by the theory of cultural capital upon arrival at higher educational institutions. In colleges and universities, there are several students from many differing SES backgrounds. Rural students may have grown up around everyone being from the same class, however, entering into college may be their first exposure to this type of difference among their peers.

Econometric model theory is another reason why making the transition from a rural high school to a higher education institution is difficult for students. Perna (2000) stated, "Under econometric models, decisions are based on a comparison between the present value of perceived lifetime benefits and the present value of perceived lifetime costs" (p. 118). This theory describes how students choose a higher education institution based on the rewards perceived versus expenditure.

From a rural student perspective, it can be difficult to see the rewards over the costs. It is also difficult for students to see the rewards because many 18-22 year old's cognitive decision making skills are not yet developed. It is challenging for many students that age to see beyond the here and now. They are more concerned with what is happening today or next week, not necessarily next year or in the next four years. The cost of investing in a college degree includes things such as room and board, tuition and fees, and books and supplies (Perna, 2000). The rewards of attending college include social and cultural activities, higher lifetime earnings, and lower probability of unemployment (Perna, 2000).

The next theory that is relevant when studying barriers to higher education is a behavioral model of how students select a college or university proposed by Robert Chapman (1986). His theory suggests that college choice is a series of decisions for students. Chapman (1986) described his theory in five steps below:

> The five components of the college selection process model describe the stages through which students move along the path toward the ultimate selection of a college. The stages are as follows: Pre-Search Behavior; Search behavior; Application Decision; Choice Decision; and, Matriculation Decision. (p. 246)

Pre-Search begins when the student weighs the costs/benefits associated with attending college. The search stage encompasses the student looking for the right attributes that match the student's needs and wants in a college or university. Next, application decision describes when

the student submits an application for acceptance. Chapman (1986) explained choice decision to be "by definition, the choice set consists of all those colleges to which a student is admitted" (p. 248). Lastly, matriculation decision occurs when the student actually begins attendance at the institution. It is one thing to decide where to go to college and another to actually follow through with the decision to go. Many of these stages are sought out by the student. The research suggests that not all students will go through each step, nor will they always know to identify each step during their decision-making process.

Chapter II

Review of Literature

A working knowledge of how community colleges operate within their rural community is necessary to understand the results of this study. Therefore, this chapter is divided into three major sections: Community College Students, Underprepared Students, and Access Issues for Students. The literature for this chapter stems from the University of Arkansas library and multiple research databases such as EBSCO and ProQuest.

History of the Community College

There have been rapid changes in programming offered at community colleges in recent years. An important purpose of the community college is to prepare students to transfer to four-year institutions (Nutting, 2011). Along with the changing needs of the current workforce have come changes in the needs of the community college student. Many community colleges are moving from certificate-based programs to offering more degree options. For instance, community colleges have been challenged to balance vocational training programs with local occupational needs, and students also require expanded academic programs for transfer (Vacik, Nadler, & Miller, 2006).

At many community colleges students never need to leave campus to graduate with a bachelor's degree from a sponsoring four-year institution. "Students who elect to enroll in higher education no longer need to immediately leave rural areas for their entrance into higher education, as articulation agreements have opened access at local community colleges" (Miller, Pope, & Steinmann, 2006, p. 716).

Community Colleges and the Community

Community colleges serve their community in several ways, including for the benefit of community citizens and their economy. For example, at a rural community college in southwest Missouri, the residents who live in the county in which the college is located receive reduced tuition rates. Additionally, the local businesses receive revenue from college students and employees, and local businesses are provided with an educated workforce. This is important for local communities to take note of, as Miller and Tuttle (2006) wrote "Rural community colleges have been viewed by residents, state legislators, and policy makers as catalysts for sustaining high-quality of life opportunities for rural America" (p. 57). These are important statements that show how community colleges can aid local community members in working to reduce the poverty level in their neighborhoods as well as bring about a better quality of life for all.

A report conducted by Miller and Tuttle (2007) discussed how rural community colleges develop their communities and the people who live in them. The report found several themes related to community self-identity. They were community inclusiveness, community pride, value-added community, and definition of a town. The first theme, Community Inclusiveness identified that local citizens rely more on the community college for meeting places and a place to come together, not just for higher education opportunities. Theme two, Community Pride, focused on how local citizens and business and industry leaders described themselves as fostering a sense of civic pride. The Value-Added Community theme revealed how citizens felt they led a better rural life because of the presence of the college in their community. Lastly, theme four described how the college had the potential to define a given community, including its values, sense of direction, and expectation.

The leadership of the rural community college is vital to the success of the community as well. "In rural areas where community colleges play such a substantial role in workforce development, college leaders need to be vigilant in their protection of serving their communities' needs" (Vacik, Nadler, & Miller, 2006, p. 318). Not only does the president of a rural community college need to serve students, staff, and faculty of the college, but also, must serve the community by meeting with business leaders, attending funerals, making appearances, and raising money for the institution. The community college and those who represent it fill several roles throughout the community by building partnerships with those in which they serve.

Profile of Students

Important to the study is an understanding of the background of the students being served at the rural community college. "Each institution must know the population it serves and develop strategies and plans that complement the political realities and technical capacities of each state and school" (Baldwin, Bensimon, Dowd, & Kleinman, 2009, p. 86). The American Association of Community Colleges (2013) provided the following data regarding community college students nationwide as of fall 2011.

Table 1.
American Association of Community Colleges Student Report of Rural Community College Students

Characteristic	Frequency
Enrollment	
Full-Time	3.27 Million
Part-Time	4.76 Million
Age	
Less than 21	39%
22-39	45
40+	15
Gender	
Male	43
Female	57
Ethnicity	
White	52
Hispanic	18
Black	15
Native American	1
Other/Unknown	9

There are several types of students who attend community colleges, many classified as at-risk, including low-income, first-generation, non-traditional, and students with disabilities. Additionally, research by Miller and Tuttle (2006) concluded that rural community colleges introduce diversity to students, produce an educated workforce, and provide a multitude of new opportunities for students to experience cultural and social opportunities. These experiences give students the skills they need to live outside their rural communities. "Postsecondary education has long been considered one of the surest ways to overcome underprivileged social conditions" (Wang, 2009, p. 570). With this knowledge, students in rural communities can change their family dynamic.

First-generation students have been defined as "undergraduates whose parents never enrolled in postsecondary education" ("First- generation students," 1998, p. 4). According to the

NCES report (1998), first-generation students were more likely to enroll in two-year community colleges, attend part-time, be older, and have dependents. A study of two-year community college students by Francis and Miller (2008) found that many first-generation students are at risk for academic failure in postsecondary education because of their communication apprehension levels. Additionally, they concluded that students dealt with this issue of adversity in many ways including humor, assertiveness, and practice.

Low-income students were defined as those whose family income was below 125% of the federally established poverty level for their family size. NCES (2000) reported that in 1995 roughly 26% of community college students were considered low-income students. The report also identified that several minority groups were more likely to be considered low-income as well as students in the 24-29 age range.

Underprepared Students

There is an increasing number of students coming from high school to college without the necessary skills to succeed. These students are underprepared for college coursework, and this is a major problem as colleges and universities spend billions of dollars each year on remediation. Also, families and students must bear some of these costs. "A recent report by Strong American Schools concluded that the direct cost to students and families, as measured in tuition and fees, was $700 million annually" (Handel & Williams, 2011, p. 29).

Underprepared students who attend college also cause a problem for retention and graduation rates. If and when they do graduate, underprepared students usually take longer than average to graduate (Crews & Aragon, 2007). Also, developmental education students end up with more student loan debt because they are taking additional classes, and many of these students simply give up before reaching graduation (Gallard, Albritton, & Morgan, 2010).

Effects on Higher Education

Underprepared high school students attending college has had drastic effects on higher education by draining the college resources. "Estimates regarding the cost of remedial education to colleges and universities in the United States run anywhere between $1 billion and $2 billion per year" (Handel & Williams, 2011, p. 29). Not only is this a large expense for colleges, but many underprepared students do not graduate. Another impact on colleges is that faculty members lower expectations of students, as many deem it easier to lower their expectations than to fight for what they think is the best way for the students to learn. Teachers who try new approaches to learning are deemed "risky because it veers away from conventional ways of thinking about teaching and learning for "at risk" students" (Johannessen, 2003, p. 11). This, in turn, can impact faculty burn out, as "Faculty in a wide range of disciplines and programs who have no background or training in working with underprepared students are often required to teach students who lack the necessary reading, writing, or mathematical skills to succeed" (Kozeracki & Brooks, 2006, p. 65). Often, remedial courses are not faculty members first choice of classes to teach, yet these classes are desperately needed, especially on community college campuses. "With a majority of beginning community college students enrolling in remedial/developmental coursework, serving these once marginal students is now a central function of most community colleges" (Deil-Amen, 2011, p. 59).

Because of the high cost of providing these courses, one California college proposed an idea to do away with remedial courses altogether. However, "because of the lack of the growing number of underprepared students who cannot meet existing standards," (Cartwright, 1996, p. 45) this plan will never come to fruition. Unfortunately, colleges and universities need student

tuition dollars to keep their doors open, and if the qualified pool of applicants simply is not enough, they must make exceptions to make sure their doors stay open.

There are also effects from lack of preparation on underprepared minorities. A study at a public HBCU investigated the academic and social experiences of 11 Black males who entered the university through its developmental studies program and graduated. This study found that "participants in this study credited their professors for encouraging them to believe in themselves and work toward their full potential" (Palmer, Davis, & Maramba, 2010, p. 98). However, most of the participants cited family support and campus interactions as the main reason they persisted to graduation, and the remedial education program was rarely mentioned.

There are several forces contributing to remedial education at the local and national levels. Locally, developmental course sequences at colleges and universities for underprepared students could be improved. "By increasing the number of requirements and extending the time to degree, remediation may negatively impact student outcomes such as persistence, major choice, and eventual labor market returns" (Bettinger & Long, 2009, p. 737). For example, at Crowder College students are able to take the COMPASS test to assess their skill levels on the same day they fill out an application for enrollment. Next, the student is placed in courses according to their skill level, but, the student has not been adequately prepared to even take the COMPASS test. Therefore, they may be placed in classes that potentially could have been avoided with a small amount of preparation before taking the COMPASS exam.

Several of the development course sequences have three or four levels a student must complete before entering college-level courses. To complete a course sequence it may take the student up to two years to get through the required developmental courses before taking any college level courses. A study conducted by the National Center for Developmental Education

found that "among students who took and passed developmental mathematics with a grade of C or better, 77.2% also passed the regular college mathematics course with a grade of C or better" (Hodges, 1998, p. 62.) These findings prompt administrators to question if the student would have been just fine taking the college level mathematics course to begin with, or if remediation indeed was necessary.

Not only do developmental education courses make the student take longer to complete college, but it also affects their financial aid. If a student takes multiple developmental courses, financial aid eligibility may be limited due to new limits on credit hours obtained. This could ultimately leave the student with no choice but to withdrawal from college (Crews & Aragon, 2007).

Nationwide, high schools are not producing college-ready students, and even the students who are academically gifted choose not to work hard. "Without incentives to study diligently, many students are disengaged in high school and, as a result, underprepared for college" (Toby, 2009, p. 42). There has long been a gap in communication between the colleges and high schools.

There are several forces that could solve this problem. At the local level, instructors could work to develop new instructional techniques to reach students and employ effective teaching methods. Professional staff members could improve by utilizing targeted intervention programs when advising students. For example, the University of Missouri-Kansas City (UMKC) has developed an intervention that allows instructors to record their lectures. This idea was brought about because "attempts have been made at some institutions to address this problem, but often they are temporary, met with resistance, or not given enough planning and time to yield meaningful outcomes" (Hurley, Patterson, & Wilcox, 2006, p. 43). Under this type

of instruction, students enroll in a Video-based Supplemental Instruction (VSI) course. During these classes, the facilitator may stop the video to check for understanding or to discuss further, more difficult topics. This type of instruction allows students to pause and sort out their understanding of the topic before they become overwhelmed. In a traditional lecture setting, this type of learning would not be possible.

Employing effective teaching techniques is vital when working with the underprepared. Instructors of developmental education need to make it a priority and must be interested in serving this student population. "Unfortunately, some teachers teach developmental students for reasons that are not in the best interest of students" (Smittle, 2003, p.11). Examples of this could be that it works with the instructor's schedule, or they may think it would be easier or require less preparation.

The Targeted Intervention for Developmental Education Students (T.I.D.E.S.) model for professional staff members is a way for advisors to accurately advise students into developmental education courses and experiences. This targeted intervention was developed at Appalachian State University where it is used in the student affairs division. Boylan (2009) lists the following action steps

> (1) Take an inventory of available campus and community courses and services. (2) Develop student profiles to determine the types of services that might be helpful to students with various characteristics. (3) Assess individual students skills and characteristics. (4) Advise students using this assessment information to plan interventions. (5) Deliver targeted interventions according to the plan. (6) Monitor students and evaluate their progress. (7) Revise the targeted interventions as necessary. (p. 15)

One downside to this model is that it takes more time per student because of the specific profile each student has. However, these seven steps will help advisors to "not only place students in

courses but also place them in experiences that will either supplement or replace developmental courses" (Boylan, 2009, p. 15).

At the national level, there are several ways to help solve the problem of underprepared high school students entering postsecondary education. First of all, colleges could work to increase their admission standards so that they are more selective. However, with selectivity comes exclusivity. Unfortunately, many of the underprepared students "come disproportionately from low SES (socioeconomic status) families and from ethnic and linguistic minority backgrounds" (Johannessen, 2003, p. 6).

Another way to decrease the number of underprepared students is to work together with K-12 education to bridge the gap between high school and college. There has always been blaming from both sides. Colleges blame high schools, and high schools blame middle schools and middle schools blame elementary schools. At some point the blaming needs to stop. However, if everyone would commit to working together, there would be much more accomplished (Nemko, 1990).

Colleges and universities across the nation are working to provide new alternatives for underprepared students. For example, at Bronx Community College of the City in New York, a study was conducted to find out what factors contributed to underprepared college students persistence to graduation. The study found "ways to enhance the academic experience of underprepared college students: (a) include critical pedagogy, (b) integrate co-curricular activities with the academic disciplines, and (c) increase student-faculty interactions" (Barbatis, 2010, p. 14). Several other colleges are assessing their developmental education programs as well. However, not enough is known at this time as to how effective these programs actually are.

If admission standards are raised at colleges and universities nationwide, K-12 education

will have to begin to take the necessary steps to equip their graduates with college-ready preparedness levels. Nemko (1990) stated the following:

> Colleges should attempt to broaden access, but only to students with a reasonable chance for success. If there isn't a sufficient pool of such students, the response must not be to admit the under-qualified. The response must be to build the pool of the qualified. (p. 9)

By providing alternatives for the underprepared, not everyone will feel the pressure to go to college. Students need to know their options before deciding on their future.

Improving vocational education programs for students will help them to find their careers early on. Students interested in vocational fields of study could have hands-on experience working in these fields as early as high school or junior high. Additionally, career counseling in high school has practically been eradicated by the overarching demands placed on school counselors. Counselors now spend the majority of their time on paperwork, proctoring tests, or dealing with mental health issues. Some high schools are bringing in grant programs for advisors to specifically discuss college and career opportunities with high school students. Several schools in Missouri are taking part in these grant programs. The program coordinators work directly with students to ensure their post-secondary success.

Access to Higher Education

The term "access" to higher education may have many meanings in different contexts. In this study, access to higher education is defined not just as providing accessibility through open admissions and low tuition rates at rural community colleges, but by aggressively engaging in outreach initiatives, providing counseling services to students, job placement, partnerships with community service organizations, recruitment of disadvantaged students, and by building partnerships with universities for transfer students (Garza & Eller, 1998).

Historical Viewpoint

Until recently, many people believed you could earn a good living with just a high school diploma. College was not a necessary investment into a future, and was usually reserved for more of the upper-class individuals. As the demand for a more skilled workforce has evolved, so has the need for more specialized training and thus, a more educated workforce (Brock, 2010).

The federal government has taken a limited role in higher education. Before 1960, many discriminatory laws and social norms kept higher education out of reach for minorities, women, and those with limited financial resources (Brock, 2010). In 1947 the Truman Commission described the landscape of higher education. The highly controversial report offered several recommendations based on their research findings. Interestingly, they were similar to recommendations made today to improve higher education. Gilbert and Heller (2013) stated that the Truman Commission

> Asks us to create real, consistent, financially-supported access for many different types of students; to develop much stronger mechanisms for cooperation across and among the various levels of government; and, among other things, to knit higher education more closely into the fabric of our educational systems and communities because it is vital to the nation. (p. 439)

The Truman Commission identified financial resources as one of the major barriers for students to attend higher education institutions (Gilbert & Heller, 2013). Since then, the federal government has created several pieces of legislation such as the Higher Education Act of 1965 and the G.I. bill to aid students in overcoming this barrier. For example, the Higher Education act of 1965 helps students get loans and grant aid to pay for school and the G.I. Bill gives financial resources to veterans for education.

Similar to the Truman Commission, the Spellings Commission was written in 2006 to describe the future of higher education and provide recommendations. This highly debated

report included recommendations such as providing access to citizens all throughout their lives, higher education systems that adapt to the economic changes and the global economy, and institutions that provide high quality instruction while maintaining affordability to students and taxpayers that support them ("A test of leadership," 2006). The Spellings Commission targeted five key areas: Access, Affordability, Quality, Accountability, and Innovation. The report has yet to make any key changes in the current higher education landscape; however, it has spurred discussions on simplifying the Free Application for Federal Student Aid (FAFSA).

Why Access is a Problem

Access is a problem for many rural community colleges in several ways. The need to improve access and retention rates for underserved populations such as first-generation, minority, and low-income students is an issue that directly affects rural community colleges (Boggs, 2011). First, tuition and fees have increased due to the decreases in state funding nationwide. The economic downturn over the past few years has forced the states to make drastic budget cuts, and some states have cut higher education budgets of up to 15%. This has led several community colleges to raise tuition rates. Further, state policymakers have been putting major pressure on institutions to improve efficiency and constantly do more with less. They are expecting to see results with the financial investments they are making into higher education, and have turned to performance based funding to demonstrate how well the state's tax dollars are being spent.

Policy barriers also hinder credit transfer to baccalaureate institutions for community college students. There is very little coordination among institutions in states as well as across states to encourage credit transfer. Differing graduation standards and inadequate student record keeping systems make it difficult to track students to try and solve this problem (Boswell, 2004).

Budget cuts to student financial aid programs and significant shifts from need-based to merit-based aid have prompted more financial problems for underserved student populations. The different financial aid rules and regulations deter students from achieving success in higher education instead of encouraging it. Part-time students, single mothers, and high school drop-outs are just a few examples of the types of students that are greatly affected by the decrease in financial dollars available for students.

Policies, Programs, and Pathways that Increase Access for Students

Literature has described several recommendations given to promote increased access to higher education for rural community college students. At the institutional level, rural community colleges could enact new policies to benefit underserved student populations that would increase degree attainment. Boswell (2004) has suggested policies to accomplish this task:

1. Partner with local K-12 school systems to make sure high school graduates are coming prepared for college level work.
2. Allocate sufficient financial resources to institutions to address the growing needs of students today. With funding being cut in all areas, it is important that the students' needs are not being left behind.
3. Increase the number of baccalaureate degrees offered at the rural community colleges. This will promote 4-year degree attainment as well as increase access to universities for students.
4. Promote institutional alignment and seamless student transitions so that students across the state know when and how their credits will transfer to other institutions.

5. Create joint admissions agreements with proximal baccalaureate degree granting institutions so that students may be admitted to the 4-year institution upon completion of certain degree requirements.

6. Work towards streamlining assessments with statewide constituents. Make sure that placement testing at each institution corresponds with those of other state institutions so admissions standards and course competencies are equivalent among institutions.

Local, state, and federal governments have also worked to create programs to expand access at community colleges for students in rural areas. Garza and Eller (1998) wrote:

> In severely distressed rural areas, the community college is often the institution best capable of initiating and nurturing the local partnerships and regional collaborations that can find solutions for critical community problems (p.31).

Listed below are descriptions of several community organizations, federally funded programs, and foundation initiatives working to overcome access barriers for rural community college students.

Achieving the Dream: Funded by the Lumina Foundation, Achieving the Dream promotes practices for improvement of entry and success in education beyond high school for underrepresented students. Their goals include preparing students academically, financially, and socially for success after high school, improved higher education completion rates, and increased productivity to serve more students (Boggs, 2011).

Educational Opportunity Centers (EOC): This is a federally funded grant that provides in-depth financial aid information and academic and career counseling to students of low socioeconomic backgrounds. These grants are awarded to community colleges and universities nationwide (Dotolo, 2007).

The Rural Community College Initiative: Assists colleges in severely distressed rural areas to establish programs that increase access to higher education institutions for underserved and disadvantaged populations in rural areas. This initiative is funded by the Ford Foundation (Garza & Eller, 1998).

Gates Foundation Postsecondary Success Initiative: This initiative focuses on ensuring the student ends up with a degree or certificate with economic value. Community colleges have been targeted to focus on improving remedial education, which has been noted as being a significant barrier to degree completion for students (Boggs, 2011).

GEAR UP: Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) is a federally funded program created to provide resources to students to increase the number of low-income students who are prepared for postsecondary education. It serves students from 6th grade through 12th grade (Trivette, Wilson-Kearse, Dunst, & Hamby, 2012).

Obama Administration Higher Education Agenda: Obama has asked Americans to commit to at least one year of higher education or career training. He has increased the Pell grant award and created a tax credit for students called the American Opportunity Tax Credit. The Trade Adjustment Assistance Act provides funds to help displaced workers obtain postsecondary educations at community colleges (Boggs, 2011).

Access to college has been linked to several issues: how middle class families pay for college, how prepared students are for college, and how underserved populations such as low socioeconomic students or minorities overcome social disadvantage (Bragg, Kim, & Barnett, 2006). In 2004, the Lumina foundation created a new initiative called Academic Pathways to Access and Student Success (APASS) to research secondary to postsecondary transition options for students. "Academic pathways refer to boundary-spanning curricula, instructional and

organizational strategies, and meaningful assessments that either link or extend from high school to college" (Bragg, Kimm, & Barnett, 2006). From this research, nine academic pathways were documented:

Advanced Placement- This program involves a student taking a course and then passing a test at the end of the class that will earn them college credit. These tests are implemented by high schools across the country and serve as a way to help underrepresented high school students transition to college. This program has a long history of enrolling minority and low socioeconomic high school students into its courses.

Bridge Programs- These programs help students transition to college by providing access to youth and adult students. They typically target minority, low-income, or students with special interests such as math and science related career fields. These programs prepare students academically for college-level coursework and simulate the college experience before their actual college career begins.

College-Level Examination Program (CLEP)- A test administered by the College Board that promotes college credit for working adults, home-schooled students, military personnel, and for the traditional college student. These tests give college credit to students upon passage for certain subjects and core classes offered at higher education institutions.

Distance learning/virtual high schools and college- Distance learning is instruction delivered to students in more than one location or method. This is one way to bring college-level curriculum to students instead of students going to the college to receive instruction. Rural students, low-achieving, and at-risk students are the target population for this type of instruction. Information can be distributed via text, online, CD-ROM, and through interactive television. This benefits students because "Geographic distance and insufficient transportation often make it

difficult for rural individuals with family and work responsibilities to pursue higher education" (Garza & Eller, 1998).

Dual credit, dual enrollment, and concurrent enrollment- Dual credit is when students receive both high school and college credit upon passing the course. Dual or concurrent enrollment is where high school students are enrolled in college courses but may not receive high school credit for taking the college course. These options are one of the most effective pathways for students to gain access to college. Many times, the tuition rate has been discounted for these students as well. However, these courses are not always offered at high schools and accessibility may depend upon demographic and geographic locations.

Early and middle college high schools- These programs provide opportunities to concurrently earn a high school diploma and associate degree by age 18. This is one of the fastest growing pathways that assist low-achieving students and minorities in accessing higher education. Several community colleges are taking a lead role in this initiative as well.

GED programs as a bridge to college- These programs seek to provide students with the option of completing a college degree after passing the GED test. Adult Basic Education (ABE) programs target low-achieving, low-income, minority, and rural students. GED coursework is often offered by community colleges and provides a bridge to higher education enrollment.

International Baccalaureate- Established in 1968 as a way for students in their last two years of high school to prepare for college-level work. Established by international schools to create a common curriculum for entrance into post-secondary schools. Rural, low-income, and minority students are those most commonly identified with this program, however, very few states see this pathway as the best way to reach underserved students.

Tech Prep and College Tech Prep- This was established in 1990 through the Carl D. Perkins Vocational and Technical Education Act, and promotes the integration of technical education with community and technical colleges. Several community colleges are involved in this program which provides access to college for students after high school graduation. The primary student group this act intends to serve is "disadvantaged populations" (Bragg, Kim, & Barnett, 2006).

Several of the pathways, policies, and programs available to rural community college students are making great gains in providing access to students. However, many students are still not being reached. It is important students know how to access these available programs as well. Mckinney & Novak (2013) stated, "In 2007-2008, approximately 42% of community college students who were eligible to receive Pell grant funding did not file the Free Application for Federal Student Aid (FAFSA). Additionally, rural community college students are working on overcoming non-educational barriers such as lack of child-care, health problems, insufficient transportation, and technology issues. Community service agencies, legislators, community colleges, and universities all need to work together to aid students in overcoming these barriers so that a more knowledgeable workforce may be created.

Chapter III

Research Methodology

Rural community college students face numerous challenges once they are enrolled, but few studies have attempted to document the barriers they believe they face prior to enrollment. The purpose for conducting the current study was to examine factors related to rural low-income, first generation college students' obstacles to enrollment. As described in this chapter, two rural community colleges in the mid-west were surveyed with descriptive statistics used to build an initial, baseline profile of these students and their barriers to enrollment. The chapter has been divided into the following sections: location of the study, instrumentation, data collection, data analysis, and chapter summary.

Location of the Study

The study identified barriers of higher education access to low-income, first generation rural college students by studying college students from two community colleges in Missouri and Arkansas. Both community colleges are located in rural communities. The community college studied in Missouri has approximately 5,800 students at all of their locations combined, and in Arkansas, the community college studied has approximately 1,000 students attending.

The college located in Missouri is residential two-year community college founded in 1963. The campus dorms house approximately 200 students each semester. They offer men's soccer, baseball, women's softball, and women's basketball. Additionally, the college offers Associate of Arts, Associate of Science, Associate of Applied Science, and certificates. This college is located in a rural town of approximately 12,000 residents.

The community college studied in Arkansas is a non-residential campus located in a town of approximately 6,000 residents. This college offers associate degrees and certificates and has no collegiate athletic programs. The college was founded in 1983.

Sample

A purposeful sample was used. The target sample size was to receive two-hundred completed surveys; one-hundred from each school. We collected the data in a basic English class from each school. At these community colleges, all students must complete an English class to graduate with an associate's degree and to transfer on to a four-year university. Surveying students in these classes provided an adequate and representative sample of the entire student population and reduced sampling error. Access to participant data was first gained by the Department of Institutional Research at the University of Arkansas. After they reviewed the study an IRB was issued to begin the research. Next, a letter was sent to each community college for permission to collect the data on their students.

Purposeful sampling was used before the data collection began. Purposeful sampling is "when researchers intentionally select individuals and sites to learn or understand the central phenomenon" (Creswell, 2008, p. 214). Further, homogenous sampling was used in this study. Homogeneous sampling occurs when the researcher chooses a certain subgroup of a population and then studies individuals in that group (Creswell, 2008).

Instrumentation

This study used a quantitative design method, meaning that data was collected from a sample with an intention of generalizing to all similar students at the two institutions where data was collected. In quantitative research, data is collected using instruments with preset questions and responses, gathering numeric data, and collecting information from a large amount of

research subjects (Creswell, 2008). To collect the data, a modified survey instrument was used (see Appendix A). The instrument was based on the work of Dr. Phillip Wilson (2012), and as the instrument was used in similar settings, was assumed to have a similar level of reliability and validity. The instrument, unlike Wilson's, sought only to identify key barriers to community college student enrollment.

The modified-Wilson instrument has 13 items, all variables identified by Wilson as impacting student enrollment. In addition to students self-identifying their attributes or characteristics on the survey, they are asked to indicate to what extent they perceive the variable to impact their ability to enroll in college.

Collection of Data

The survey was distributed in the basic English classes at each institution involved in the study. The survey consisted of thirteen questions and could be completed using pen or pencil. The researcher provided instructions to each of the faculty members on how to administer the survey. The following statement was on the top of each survey for students to read:

> The purpose of this study is to examine the factors related college students' obstacles in which they face while in college. This study will examine the barriers students overcame to go to college and how well prepared they were once they got there. Your participation in this study is entirely voluntary and you maintain the right to withdraw at any time. All individual responses will be held in strictest confidence, and only group data will be reported. If you have questions or concerns about the study, please feel free to contact Shanda Carter [redacted]) or Michael Miller ([redacted]

After the students completed the survey they handed it in to the instructor in which he or she then placed it in a manila envelope stamped an addressed to the researcher. The instructor then mailed the completed surveys to the researcher.

Data Analysis

Four questions were asked to clarify the purpose of the study. They are as follows:

1. What attendance barriers do rural community college students identify as being most difficult for them to overcome?
2. Are there differences between the self-identified attendance barriers based on gender for male and female rural community college students?
3. Are there differences in attendance barriers for rural community college students based on whether they enrolled immediately out of high school or postponed attendance?
4. Are there differences in attendance barriers for rural community college students based on low-income or first generation classifications?

Question 1 is a descriptive question that I analyzed by using descriptive statistics such as frequency distributions, mean, median, and mode. In Question 2, if cell sizes are appropriate, a t-test will be used to show whether there is a significant difference in perceived barriers based on gender. T-Tests are used when comparing two variables, one that is categorical and one that is continuous (Creswell, 2008, p. 199). In Question 3, a t-test will be used if cell sizes are appropriate to show if there were differences in access barriers between those that chose to attend college and those that postponed enrollment until later in life. A t-test will be used to analyze the perceived barrier differences for those that were either low-income or first generation in Question 4 if cell sizes are appropriate. Survey questions 7-12 were used to answer research question 1. Survey questions 1, 4-12 were used to answer research question 2. Research question

3 was answered by using survey questions 2, 4-12 and research question 4 was answered by using survey questions 3-12.

Chapter Summary

The purpose for conducting this survey was to identify access barriers faced by rural community college students. A quantitative research design was chosen and purposeful sampling was used to ensure the appropriate response rate. An adaptation of Dr. Phillip Wilson's (2012) survey was used. The data was analyzed by using descriptive statistics and t-tests.

Chapter IV

Results

Community college leaders are searching for ways to increase the retention rates of their students. Knowing more about the obstacles students face to higher education will aid these institutions in several ways. Additionally, state funding has recently been tied to the success of students and graduation rates, they might be able to improve their financial situation by improving student success.

By identifying obstacles rural community college students face to higher education, community college leaders can work to overcome these challenges as well as provide additional opportunities to students. For example, some schools have on-site daycare facilities for students to take their children to while in class; similarly, low-cost computer access and work-study opportunities can help students overcome barriers to success.

This chapter describes the results of the study by providing answers to the four research questions posed regarding barriers to higher education for rural community college students. Descriptive statistics were used to analyze the data, and a chapter summary concludes the chapter.

Summary of the Study

The study sought to understand barriers to higher education faced by rural community college students. The nature of the problem arises from the need for equal access to higher education for all students. Little has been studied on rural community college students and the obstacles that they face in higher education. Often, rural communities do not have adequate resources to prepare students for post-secondary education; therefore, the study sought to identify those obstacles faced by students.

Two rural community colleges were selected for inclusion in the study, one in Missouri and one in Arkansas. Surveys were completed by students in the basic English classes of both rural community colleges. The college located in Missouri was from a rural community of approximately 12,000 residents and had a student population of roughly 5,800 students at all of their campuses combined. The college located in Arkansas had approximately 1,000 students and resided in a town of about 6,000 people.

Purposeful sampling was used to collect data for the report. The target sample size was to receive 100 completed surveys from each institution in the study. One-hundred and seventy surveys were ultimately collected. Demographic questions such as age, gender, grade point average, number of semester hours completed, and marital status were asked as well as if the student owned a computer, had taken any remedial coursework, had an internet connection, how many hours a week the student studied, if the student was a first generation college student, if the student was a financial aid recipient, and how many miles round trip the student travels to school every day. Additionally, questions were followed by questions regarding whether or not they believed it impacted their ability to enroll in college.

The research from the study may be used by students, higher education administrators and faculty, K-12 teachers and administrators, and local and state legislatures. Higher education administrators and faculty can use these results to recruit and retain students at rural community colleges. Faculty may use the results to adjust their coursework in a way that may better suit the rural community college student. K-12 teachers and administrators may use the data to prepare the future students of rural community colleges in a way that may best prepare them to be successful in post-secondary education. And, state legislators may use the results when deciding budgets allocations for rural community colleges.

Collection of Data Results

The Missouri school was contacted through the college's Vice President of Academic Affairs who gave approval to conduct the study on campus. Next, the researcher worked closely with the Division Chair of the Communications department to ensure surveys were distributed to each class correctly. This occurred during the first two weeks of February 2014. Surveys were counted out and labeled for each instructor. Next, the surveys were delivered to the instructor's mailbox for them to be picked up. A deadline of one week was given for them to return the surveys to the division chair. They were voluntarily completed by the students and once completed, the students turned them in to a sealed envelope at the front of the classroom. Once all surveys had been collected, each instructor delivered them to the division chair. Last, the division chair mailed the surveys to the researcher.

The rural community college located in Arkansas was first contacted through their President who gave permission to conduct the study on campus. Next, the researcher mailed the surveys during the first part of February 2014. The surveys were then given to the full-time English faculty at that campus. The surveys were distributed to the students and completed. Next, the instructors sent them back to the president of the institution and he then mailed them in a pre-paid envelope provided by the researcher.

Data Analysis

Table 2 lists the data collected from survey respondents. Of the 170 surveys completed, there were 67 males and 103 females. Close to 74% of the students were under the age of 20. Sixty-four percent reported they had a cumulative GPA between 3.0-4.0, and 87% were single. Additionally, 93.5% of students surveyed owned a computer and 86.5% of them had an internet connection at home. Questions 3b-12b were analyzed by using a 3-point Likert-type scale. The

respondents chose “Not at All,” “Somewhat,” or “A Great Deal,” and each were given values of 1, 2, and 3 respectively. These responses were converted to a numeric format and analyzed in Tables 3-6. Of the 170 surveys received for some question items, not all respondents completed that survey item.

Table 2.
Demographic Characteristics

	N	%
Gender		
Male	67	39.4
Female	103	60.6
Age		
Under 20	126	74.1
21-25	27	15.9
25-50	15	8.8
Over 50	0	0
No Response	2	1.2
Did either of your parents attend a community college or university?		
Yes	73	42.9
No	96	56.5
No Response	1	.6
Cumulative GPA		
Below 2.5	10	5.9
2.6-3.0	47	27.6
3.0-4.0	110	64.7
No Response	3	1.8
Number of semester hours completed		
0-14	40	23.5
15-29	85	50
30-44	24	14.1
45-60	17	10
Over 60	4	2.4
Marital Status		
Single	148	87.1
Married	13	7.6

Table 2. (Cont.)
Demographic Characteristics

	N	%
Separated/Divorced	4	2.4
Widowed	0	0
Other	5	2.9
Have you taken Basic Math, Beginning Reading or Beginning English?		
Yes	83	48.8
No	87	51.2
Have you received need based financial aid (grants or loans) this semester?		
Yes	113	66.5
No	57	33.5
Do you own a computer or laptop?		
Yes	159	93.5
No	11	6.5
Do you have an internet connection for your computer or laptop at home?		
Yes	147	86.5
No	22	12.9
No Response	1	.6
How many hours a week do you study?		
0-10	103	60.6
11-15	37	21.8
15-20	20	11.7
Over 20	8	4.7
No Response	2	1.2
How many miles round trip do you travel to get to school each day?		
0-10	78	45.9
11-25	41	24.1
26-50	41	24.1
Over 50	8	4.7
No Response	2	1.2

Research question 1: What attendance barriers did rural community college students identify as being most difficult for them to overcome?

Table 3 shows the mean, standard deviation, and percentages of those who responded either "Not at all," "Somewhat," or "A Great Deal." Sixty-five percent responded that their cumulative GPA had a great deal of impact on their ability to enroll in college. Additionally, 49% of students added that financial aid as well as having an internet connection at home (36.9%) added to their ability to enroll in college. Fifty-five percent of students marked either "somewhat" or "a great deal" to the question regarding if their parents attended a community college or university and how that impacted their ability to enroll in college. Fifty-two percent of students did not think the number of semester hours they had completed affected their ability to enroll in college, and 75% did not think that their marital status had an affect either. Additionally, 68.9% of students did not think taking remedial coursework had any effect on students' ability to enroll in college. Therefore, the most commonly identified attendance barriers were students' cumulative GPA, financial aid status, and lack of access to an internet connection at home.

Table 3.
Self-reported impact on student's ability to enroll in college

	Mean	STD	%Not At All	%Somewhat	%A Great Deal
Did either of your parents ever attend a community college or university?	1.84	.85	45.0%	26.0%	29.0%
What is your cumulative GPA?	1.92	.76	6.0	28.1	65.9
What is the number of semester hours you have completed as of this semester?	1.62	.72	52.12	33.94	13.94
Marital Status	1.36	.68	75.8	13.0	11.2
Have you ever taken, at this college, basic Math, Beginning Reading or beginning English?	1.44	.71	68.9	18.6	12.5
Have you received need-based financial aid (loans or grants) this semester?	2.20	.86	29.2	22.0	48.8
Do you own a computer or laptop?	1.89	.85	42.0	26.6	31.4
Do you have an internet connection for your computer or laptop at home?	1.99	.87	38.1	25.0	36.9
How many hours a week do you study?	1.75	.70	40.6	44.2	15.2
How many miles round trip do you travel to school each day?	1.75	.77	45.3	34.5	20.2

Research Question 2: Were there differences between the self-identified attendance barriers based on gender for male and female rural community college students?

Table 4 contains the group mean score results from the data collected from the survey. The data were put into three columns: men, women, and overall (men and women) and responses to survey questions 3b, 4b, 5b, 6b, 7b, 8b, 9b, 10b, 11b, and 12b were averaged. The mean scores were all very similar to one another. The highest mean for men, women, and both groups was from the question regarding if the student received financial aid that semester and if it had an impact on their ability to enroll in college. The overall mean was 2.20 which indicated that most students either thought that receiving financial aid had "somewhat" or "a great deal" of influence on the student enrolling in college. The largest difference between the means were between men (1.88) and women's (2.06) access to an internet connection at home. The smallest difference in mean scores were hours studied per week with men (1.72) averaging slightly less than women (1.76). The results indicated that there were no differences between the mean (average) scores. Due to cell size difference, an ANOVA was not conducted on survey results.

Table 4.
Group Mean Score Results for Research Question 2

Variable	Mean Men n=66	Mean Women n=102	Mean Overall n=168
Parents ever attend college	1.91	1.79	1.84
Cumulative GPA	1.85	1.97	1.92
Semester hours completed	1.71	1.56	1.62
Marital Status	1.42	1.31	1.36
Taken basic Math, beginning Reading or beginning English	1.50	1.40	1.44
Received need-based financial aid (loans or grants)	2.08	2.27	2.20
Own a computer or laptop	1.92	1.87	1.89
Internet connection at home	1.88	2.06	1.99
Study hours per week	1.72	1.76	1.75
Miles traveled to school each day	1.71	1.78	1.75

Research Question 3: Were there differences in attendance barriers for rural community college students based on whether they enrolled immediately out of high school or postponed attendance?

Table 5 displayed the results from mean scores that were analyzed to identify the differences in student barriers for those who enrolled directly from high school and those that postponed attendance. Data were put into three columns: Under 20, 21-25, and Over 25, and responses to survey questions 3b, 4b, 5b, 6b, 7b, 8b, 9b, 10b, 11b, and 12b were listed. Almost 75% of survey respondents were in the "Under 20" category. Due to unequal cell sizes, only the

mean scores were compared (Howell, 2006). No differences were found between the groups studied. The biggest difference between the means was between the 21-25 age group and the Over 25 age group. When asked if their parents ever attended college the 21-25 age group (2.22) had a slightly higher mean than that of the over 25 group (1.73). Due to cell size differences, an ANOVA was not conducted on the survey results. The smallest difference was between the Under 20 age group and the Overall mean scores in four categories. One-hundredth of a point separated these groups in the following responses to these survey questions: number of semester hours completed, ownership of a computer or laptop, access to an internet connection at home, and miles traveled to school each day.

Table 5.
Group Mean Score Results for Research Question 3

Variable	Mean Under 20 n=125	Mean 21-25 n=27	Mean Over 25 n=15	Mean Overall n=167
Parents ever attend college	1.77	2.22	1.73	1.84
Cumulative GPA	1.97	1.89	1.5	1.92
Semester hours completed	1.60	1.73	1.53	1.61
Marital Status	1.26	1.63	1.67	1.36
Taken basic Math, beginning Reading or beginning English	1.41	1.46	1.67	1.44
Received need-based financial aid (loans or grants)	2.10	2.48	2.40	2.19
Own a computer or laptop	1.91	1.89	1.80	1.90
Internet connection at home	1.98	2.04	1.93	1.99
Study hours per week	1.70	1.88	1.80	1.74
Miles traveled to school each day	1.74	1.77	1.87	1.75

Research Question 4: Were there differences in attendance barriers for rural community college students based on low-income or first generation classifications?

Tables 6 and 7 contain the survey results used to identify differences in attendance barriers based on low-income and first generation students. Table 6 reported the data in three categories: First-generation student responses, Not first-generation, and Both (First generation students and non-first generation students). Survey questions 3b, 4b, 5b, 6b, 7b, 8b, 9b, 10b, 11b, and 12b were analyzed and the group means were reported. Again, financial aid was a big

factor (M=2.20 overall) in student's decision to enroll in college. Due to cell size differences, an ANOVA was not conducted on the data. No differences were found by analyzing the means from this group. In Table 6, the largest difference in means was found between First-Generation (1.44) and Not First-Generation (1.26) when asked about their marital status. There was no difference found in the means (1.99) between groups when asked if they had an internet connection at home. In Table 7, the largest difference between groups was found between those that received FA (2.53) and those that did not receive FA (1.51) when asked about receiving financial aid. The smallest difference between groups was found between those that did not receive financial aid and the overall mean scores when asked about respondents cumulative GPA.

Table 6.
Group Mean Score Results for Research Question 4-First Generation Students

Variable	Mean First-Generation n=73	Mean Not First-Generation n=96	Mean Overall n=169
Parents ever attend college	1.82	1.85	1.84
Cumulative GPA	1.83	1.99	1.92
Semester hours completed	1.56	1.67	1.62
Marital Status	1.48	1.26	1.36
Taken basic Math, beginning Reading or beginning English	1.53	1.37	1.44
Received need-based financial aid (loans or grants)	2.17	2.22	2.20
Own a computer or laptop	1.88	1.91	1.89
Internet connection at home	1.99	1.99	1.99
Study hours per week	1.73	1.76	1.75
Miles traveled to school each day	1.78	1.73	1.75

Table 7 showed the difference in mean scores between students who did not receive financial aid (FA), those who did receive financial aid, and both (students that did and did not receive financial aid). The means were calculated on responses received from survey questions 3b, 4b, 5b, 6b, 7b, 8b, 9b, 10b, 11b, and 12b and no differences were identified.

Table 7.
Group Mean Score Results for Research Question 4-Financial Aid Recipients

Variable	Mean Received FA n=113	Mean Did Not Receive FA n=57	Mean Overall n=170
Parents ever attend college	1.83	1.86	1.84
Cumulative GPA	1.93	1.91	1.92
Semester hours completed	1.66	1.54	1.62
Marital Status	1.38	1.32	1.36
Taken basic Math, beginning Reading or beginning English	1.44	1.43	1.44
Received need-based financial aid (loans or grants)	2.53	1.51	2.20
Own a computer or laptop	2.00	1.68	1.89
Internet connection at home	2.05	1.86	1.99
Study hours per week	1.81	1.61	1.75
Miles traveled to school each day	1.86	1.54	1.75

Chapter Summary

The chapter presented the results from the survey of Rural Community College Student Obstacles given during the spring semester of 2014 at two rural community colleges located in Missouri and Arkansas. The surveys were distributed to the participating institutions and were completed by the students in their basic English class. Once completed, instructors collected the surveys and mailed them to the researcher, with 170 surveys collected. The data were analyzed

by using descriptive statistics such as mean, median, mode, and percentages and no significant differences were found about obstacles to rural community college enrollment.

Chapter V

Conclusions, Recommendations, and Discussion

The chapter provides a summary of the study, conclusion, recommendations, and discussion of the study on rural community college student barriers to higher education. In addition, recommendations for future practice and research are given.

Summary of the Study

The purpose for conducting the study was to examine factors related to rural low-income, first generation college students' obstacles to community college enrollment. The study examined barriers students overcame to attend college and focused on rural college students from two community colleges in Missouri and Arkansas. This is a problem for students because equal access to higher education is still a problem throughout our country. Rural community colleges student especially face greater hardships. Problems faced by rural community college students range from lack of transportation, poor educational preparation, and insignificant technological opportunities (Garza & Eller, 1998).

The significance of the study was to understand this population that might lead to more effective recruitment of students from these backgrounds, provide better transition experiences, and enhanced retention activities. Additionally, the findings can be used to sustain and promote better personal development for residents in rural communities. Miller and Tuttle (2007) wrote that the rural community college develops the community as well as the people that live in them, and that promotes greater community pride and awareness of higher education.

Results provided a better understanding of rural community college students as well as a general knowledge of study habits, technology use, and other demographic details relating to students at these remote locations. A purposeful sample of student data was gathered at each of

the two rural community college's studied. The survey results were collected and a demographic analysis was used to identify rural community college students' barriers to higher education. The means were compared and no significant differences were found.

Research Question #1 asked: What attendance barriers did rural community college students identify as being most difficult for them to overcome? The most commonly identified attendance barriers were students' cumulative GPA, financial aid status, and lack of access to an internet connection at home.

Research Question #2 asked: Were there differences between the self-identified attendance barriers based on gender for male and female rural community college students? The results indicated that there were no differences between the mean (average) scores.

Research Question #3 asked: Were there differences in attendance barriers for rural community college students based on whether they enrolled immediately out of high school or postponed attendance? No differences were found between the groups studied.

Research Question #4 asked: Were there differences in attendance barriers for rural community college students based on low-income or first generation classifications? No differences were found by analyzing the means from this group.

Conclusions

Survey respondents believed that their cumulative GPA had a great deal of influence on their decision to enroll at the local, rural community college. Financial aid eligibility and if the student's parents had attended a community college or university also played a major role in their successful enrollment. Additionally, the number of miles students drove to school each day contributed to re-enrollment as well. Conversely, students did not feel their marital status, if they

had taken remedial coursework, or the number of semester hours they had completed played a part in their ability to enroll in college.

The data from the survey were separated into three groups: Under 20 years of age, 21-25, and over 25. The data were calculated and group means were compared. The age group of 21-25 year olds felt strongly that their parents ability to enroll in a community college or university greatly affected their ability to enroll in college. Additionally, the Under 20 age group felt strongly that their marital status had nothing to do with their ability to enroll in college.

The data were also separated into groups to identify differences in responses between first generation students, non-first generation students, and both groups combined. There were no differences found in the data. However, non-first generation students had higher means in 7 of the questions and first generation students had higher responses in 3. Additionally, the data were segregated to determine if there were statistical differences in those that had received financial aid, those that did not receive financial aid, and both groups combined. The means showed that those who received financial aid felt that this contributed a great deal to their ability to enroll in college. Additionally, those that received financial aid also felt the amount of miles they traveled daily to get to school and back contributed a great deal to their ability to enroll in college.

Recommendations

Based on the findings of the study, the rural community colleges studied should take notice of the research findings. The majority of the students surveyed (68.9%) reported that they did not feel by taking basic math, beginning reading, or English that it aided them in enrolling in higher education. This is surprising because many students (48.8%) have taken remedial coursework. There are several debates going on in higher education right now about the

relevance of remedial coursework and if it is needed or not. The study also revealed 66.5% of students had received need based financial aid during the Spring 2014 semester. Close to 70% of students believed that this had somewhat or a great deal of influence on them to enroll in higher education.

For Practice

1. College administrators need to take note of the importance of financial aid and its ability to impact students' lives. Administrators could use these findings to work together with the state and federal legislatures for more funding opportunities for rural students.
2. Faculty members need to be informed of the research findings as well. Knowing students study habits may help instructors to increase the rigor in their classes. Nearly 61% of students surveyed claim to study between 0-10 hours per week. Additionally, close to 85% believe that this somewhat or not all affects their ability to enroll in college.
3. The institutions surveyed should look to offer more opportunities for students to maximize their use of technology while at home. The use of some form of technology is present in every classroom today. Knowing what students have access to when they are not on campus is important as well. Ninety-four percent of students surveyed own a computer, and 86.5% of them have an internet connection for their computer at home. Fifty-eight percent of students felt either somewhat or a great deal of impact on their ability to enroll in college because they owned a computer or laptop.

For Future Research

1. The study should be conducted with a larger sample of students to gather information and data from students in other rural areas in the US.

2. Students should be surveyed in the first few weeks of the semester to avoid losing data from students that may have already dropped because of access barriers.
3. Low-income data should be collected and analyzed to accurately define socioeconomic class barriers and access issues for students in rural communities.
4. More comprehensive surveys of rural community college students should be developed to take elements such as college student development theory into consideration.
5. Rural comprehensive university students should be surveyed, and results compared to rural community college students.
6. Regional differences in defining "rural" should be examined, and regional with rural elements should be considered.
7. Data should be calculated and analyzed based on race and academic plan.

Discussion

The study was created to increase the awareness of rural community colleges and their students' needs. There is an overall gap in the research for rural students, and more information is needed to further understand the rural community college student. One limitation of the study was that only two rural community colleges participated in the study. Additionally, only 170 surveys were collected so results cannot be generalized for all rural community college students. Further research including more institutions would provide greater resources for community college administrators to draw from.

The surveys could have been distributed to students during the same week of the semester. One school gave the surveys before spring break and one gave it after. This could have affected the number of returned surveys due to the fact that those with barriers may have already dropped out of classes. One school only gave the surveys to full time faculty members to

survey students and the other gave it to all instructors who taught the basic English classes at that school. This resulted in obtaining a much larger number of surveys from one survey site and a much smaller number from the other.

Research question #4 asked about first-generation and low-income students. One unintended consequence was that the survey that did not specifically ask or define if the student was low-income. The closest thing to it was if the student had received financial aid. However, financial aid may encompass grants and student loans. Several students are eligible for loans that would not be considered as low-income.

The literature in chapter 2 provides a great deal of research about rural community colleges. Table 1 shows the average age and gender of rural community college students as of 2011. The research findings were similar in that the majority of survey respondents were women (60.6%) as compared to 57% reported by the American Association of Community Colleges Student Report of Rural Community College Students. Women have been showing up in greater numbers than men at college campuses nationwide. The report also listed the ages of students. The "Less than 21" category was 39%. Our data showed in our "Under 20" category that 74.1% of respondents made up that category. The discrepancy could be from the type of classes surveyed or from the small amount of student responses received.

The theoretical framework from Chapter 3 suggests the Econometric model theory is when students weigh perceived benefits versus costs (Perna, 2000). The study found that rural community college students display these attributes. When asked how many miles the students drive to and from school each day and if this affected their choice in enrolling in college over 50% agreed. Students weighed the cost of gasoline and car maintenance to the perceived benefits of earning a college degree. Additionally, 70% of respondents believed that by

receiving financial aid this aided them in re-enrollment. Students weighed the cost of tuition with the perceived benefits of obtaining a college degree. Students clearly weighed the cost versus the rewards in these cases.

Cultural capital theory explains how low-income, first generation students enter school at a lower social level than their peers from a higher socioeconomic status. The survey results showed that over 66% of respondents reported that they have received some form of financial aid. In addition, 55% of students believed either "somewhat" or "a great deal" that their parents educational attainment level influenced them in their enrollment. The survey data coincides with Cultural Capital theory in that many rural community college students may be entering college without the necessary skills to navigate the varied avenues of higher education in which middle and upper class students come prepared. It is important to identify this obstacle so that administrators may make adjustments to college policies. One suggestion would be to make entrance requirements less daunting and without such formal rhetoric so to ensure that students from low-income and first-generation homes feel more comfortable when entering the college and throughout their time on campus.

Chapter Summary

This chapter provided a summary of the study, conclusions from the researcher, recommendations, and discussion, as well as, answers to the four research questions about what attendance barriers did rural community college students identify as being most difficult for them to overcome, the differences between the self-identified attendance barriers based on gender for male and female students, differences in traditional and non-traditional student barriers, and differences in low-income or first-generation student barriers. Additionally, it provided future

practice recommendations of other rural community college institutions and recommendations for future research.

References

Baldwin, C., Bensimon, E. M., Dowd, A. C., & Kleiman, L. (2011). Measuring student success. In R. Head (Ed.), *New Directions for Community Colleges*, *153*, 75-87.

Barbatis, P. (2010). Underprepared, ethnically diverse community college students: Factors contributing to persistence. *Journal of Developmental Education*, *33*(3), 14-24.

Bell, A. D., Rowan-Kenyon, H. T., & Perna, L. W. (2009). College knowledge of 9th and 11th grade students: Variation by school and state context. *The Journal of Higher Education*, *80*(6), 663-685.

Boggs, G. R. (2011). The American community college: From access to success. *About Campus*, *16*(2), 2-10. Doi: 10.1002/abc.20055

Boswell, K. (2004). Bridges or barriers?. *Change, 36*(6), 22-29.

Boylan, H. R. (2009). Targeted intervention for developmental education students (T.I.D.E.S.). *Journal of Developmental Education*, *32*(3), 14-23.

Bragg, D. D., Kim, E., Barnett, E. A. (2006) Creating access and success: Academic pathways reaching underserved students. In Bragg D.D., Barnett E.A. (Eds.), *New Directions for Community Colleges*. *135*, 5-19. Doi: 10.1002/cc.243

Brock, T. (2010). Young adults and higher education: Barriers and breakthroughs to success. *Future of Children*, *20*(1), 109-132.

Cartwright, G. (1996). Technology & underprepared students: Part one. *Change*, *28*(1), 45.

Chapman, R. G. (1986). Toward a theory of college selection: A model of college search and choice behavior. *Advances in consumer research, 13*, 246-250.

Cohen, D. A., Taylor, S. L., Zonta, M., Vestal, K. D., & Schuster, M. A. (2007). Availability of high school extracurricular sports programs and high-risk behaviors. *Journal of School Health*, *77*(2), 80-86. doi:10.1111/j.1746-1561.2007.00171.x

Community College Fact Sheet (2013). American Association of Community Colleges. Retrieved from: http://www.aacc.nche.edu/AboutCC/Documents/2013facts_fold_revised.pdf

Creswell, J. W. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. (3rd ed.). Prentice Hall.

Crews, D. M., & Aragon, S. R. (2007). Developmental education writing: Persistence and goal attainment among community college students. *Community College Journal of Research and Practice, 31*, 637-652.

Cross, T. L., & Burney, V. H. (2005). High ability, rural, and poor: lessons from project aspire and implications for school counselors. *The Journal of Secondary Gifted Education, 4,* 148-156.

Daniel, J., Kanwar, A., & Uvalic-Trumbic, S. (2009). Breaking higher education's iron triangle. *March/April*, 30-35.

Deil-Amen, R. (2011). Beyond remedial dichotomies: Are 'underprepared' college students a marginalized majority?. In Cox E.M. and Watson J.S. (Eds.), *New Directions for Community Colleges,* (155), 59-71. doi:10.1002/cc.458

Dotolo, L. G. (2007) Working with social service agencies: Providing access for the underserved. In Dotolo L.G., Larrance A.J. (Eds.), *New Directions for Higher Education. 138*, 35-42.

Florida Department of Education, (2003). *Non-traditional students face barriers to degree completion*. Retrieved from website: http://www.fldoe.org/fcs/OSAS/FastFacts/ff67.pdf

Francis, T. A., & Miller, M. T. (2008). Communication apprehension: levels of first-generation college students at 2-year institutions. *Community College Journal of Research and Practice, 32,* 38-55.

Friedl, J., Pittenger, D., & Sherman, M. (2012). Grading standards and student performance in community college and university courses. *College Student Journal*, *46*(3), 526-532.

Gallard, A. J., Albritton, F., & Morgan, M. W. (2010). A comprehensive cost/benefit model: developmental student success impact. *Journal of Developmental Education*, *34*(1), 10-25.

Garza, H., & Eller, R. D. (1998). The role of rural community colleges in expanding access and economic development. In McGrath, D. (Eds.), *New Directions for Community Colleges, 103,* 1998.

Gilbert, C., & Heller, D. E. (2013). Access, equity, and community colleges: The Truman Commission and federal higher education policy from 1947 to 2011. *Journal of Higher Education*, 84(3), 417-443.

Handel, S. J., & Williams, R. A. (2011). Reimagining remediation. *Change, 43*(2), 28-33. doi:10.1080/00091383.2011.556921

Hodges, D. (1998). Evaluating placement and developmental studies programs at a technical institute: Using ACT's underprepared student follow-up report. *Community College Review, 26*(2), 57-66.

Howell, D. (2006). Statistical Home Page. *StatHomePage*. Retrieved April 25, 2014, from http://www.uvm.edu/~dhowell/StatPages/StatHomePage.html

Hurley, M., Patterson, K. L., & Wilcox, F. (2006). Video-based supplemental instruction: Serving underprepared students. In Stone, M.E, Jacobs, G., *New Directions for Teaching & Learning*, (106), 43-53. doi:10.1002/tl.232

Johannessen, L. R. (2003). Achieving success for the "resistant" student. *Clearing House*, *77*(1), 6-13.

Katsinas, S. G. (2003). Toward a classification system for community colleges based on institutional control, geography, governance, and size. In McCormick, A., Cox, R. (Eds.), *New Directions for Community Colleges*, 122, pp. 17-28.

Kozeracki, C. A., & Brooks, J. (2006). Emerging institutional support for developmental education. In Townsend, B.K, Dougherty, K.J. (Eds.), *New Directions for Community Colleges*, (136), 63-73. doi:10.1002/cc.260

Lamont, M., & Lareau, A. (1988). Cultural capital: Allusions, gaps and glissandos in recent theoretical developments. *Sociological theory*, *6*(2), 153-168.

Legutko, R. S. (2008). A decade's difference: Research revisited on family influence of rural high school students' postsecondary decisions. *Rural Educator*, *29*(2), 4-7.

Mckinney, L., & Novak, H. (2013). The relationship between FAFSA filing and persistence among first-year community college students. *Community College Review*, *41*(1), 63-85.

Miller, M. T., Pope, M. L., & Steinmann, T. D. (2006). Trait and behavioral differences among community college students based on gender: results of a national study. *Community College Journal of Research and Practice*, *30*, 715-728.

Miller, M. T., & Tuttle, C. C. (2007). Building communities: how rural community colleges develop their communities and the people who live in them. *Community College Journal of Research and Practice*, *31*, 117-127.

Miller, M. T., & Tuttle, C. C. (2006). Rural community colleges developing perceptions of self-identity. *The Community College Enterprise*, 55-67.

Missouri Coordinating Board for Higher Education, (2006). *Revised CBHE recommended high school core curriculum policy guidelines*. Retrieved from website: http://www.dhe.mo.gov/files/policies/corecurriculum.pdf

Nemko, M. (1990). Underprepared students. *Change*, *22*(3), 9.

Nutting, A. W. (2011). Community college transfer students' probabilities of baccalaureate receipt as a function of their prevalence in four-year colleges and departments. *Education Economics*, *19*(1), 65-87.

Palmer, R. T., Davis, R. J., & Maramba, D. C. (2010). Role of an HBCU in supporting academic success for underprepared black males. *Negro Educational Review*, *61*(1-4), 85-106.

Pascarella, E. T., Pierson, C. T., Wolniak, G. C., & Terenzini , P. T. (2004). First-generation college students: Additional evidence on college experiences and outcomes. *The Journal of Higher Education*, *75*(3), 249-284.

Perna, L. W. (2000). Differences in the decision to attend college among African Americans, Hispanics, and Whites. *The Journal of Higher Education*, *71*(2), 117-141.

Rahm, J., Moore, J. C., & Martel-Reny, M. (2005). The role of afterschool and community science programs in the lives of urban youth. *School Science and Mathematics*, *105*(6), 283-291.

Rose, H., & Betts, J. R. (2004). The effect of high school courses on earnings. *Review of Economics & Statistics*, *86*(2), 497-513.

Teran, C. J. (2007). *Studies on barriers to higher education in Texas*. Retrieved from http://www.tgslc.org/pdf/StudiesonBarriers.pdf

Toby, J. (2010). Using carrots and sticks to improve American colleges. *Society*, *47*(1), 42-47. doi:10.1007/s12115-009-9278-6

Trivette, C. M., Wilson-Kearse, J., Dunst, C. J., & Hamby, D. W. (2012). Access to higher education among high school students: Challenges and solutions. *Journal of Social Sciences*, *8*(2), 252-257.

U.S. Department of Education. (2006). *A test of leadership: Charting the future of U.S. higher education*. Retrieved from website: http://www2.ed.gov/about/bdscomm/list/hiedfuture/reports/final-report.pdf

U.S. Department of Education. (2000). *Low-income students: Who they are and how they pay for their education.* Retrieved from website: http://nces.ed.gov/pubs2000/2000169.pdf

U.S. Department of Education, National Center for Education Statistics. (1998). *First-generation students: Undergraduates whose parents never enrolled in postsecondary education*. Washington, D.C.

Vacik, S., Nadler, D. P., & Miller, M. T. (2006). Community college vocational student expectations of institutional exit support. *Community College Journal of Research and Practice*, *30*, 311-319.

Wang, X. (2009). Baccalaureate attainment and college persistence of community college transfer students at four-year intuitions. *Research in Higher Education, 50,* 570-588. doi: 10.1007/s11162-009-9133-z

Wilson, P. M. (2012). *Trait differences in gender in technology use and study habits of rural community college students.* (Doctoral Dissertation). Retrieved from ProQuest.

Appendix A

Study of Rural Community College Student Obstacles

The purpose of this study is to examine the factors related college students' obstacles in which they face while in college. This study will examine the barriers students overcame to go to college and how well prepared they were once they got there. Your participation in this study is entirely voluntary and you maintain the right to withdraw at any time. All individual responses will be held in strictest confidence, and only group data will be reported.

If you have questions or concerns about the study, please feel free to contact Shanda Scott ([redacted]) or Michael Miller ([redacted]

Instructions: Please mark your answers by making a checkmark next to the appropriate line.

1. Gender

__ Male __ Female

2. Age

__ Under 20 __ 21-25
__ 25-50 __ Over 50

3. Did either of your parents ever attend a community college or university?

__ Yes __ No

In your opinion, to what extent did this impact your ability to enroll in college?

Not at all Somewhat A Great Deal

4. What is your cumulative GPA?

__ Below 2.5 __ 2.6-3.0
__ 3.0-4.0

In your opinion, to what extent did this impact your ability to enroll in college?

Not at all Somewhat A Great Deal

5. What is the number of semester hours you have completed as of this semester?

__ 0-14 __ 15-29

__30-44 __ 45-60
__ Over 60

In your opinion, to what extent did this impact your ability to enroll in college?

Not at all Somewhat A Great Deal

6. Marital Status

__ Single __ Married
__ Separated/Divorced __ Widowed
__ Other

In your opinion, to what extent did this impact your ability to enroll in college?

Not at all Somewhat A Great Deal

7. Have you ever taken, at this college, Basic Math, Beginning Reading or Beginning English?

__ Yes __ No

In your opinion, to what extent did this impact your ability to enroll in college?

Not at all Somewhat A Great Deal

8. Have you received need-based financial aid (loans or grants) this semester?

__ Yes __ No

In your opinion, to what extent did this impact your ability to enroll in college?

Not at all Somewhat A Great Deal

9. Do you own a computer or laptop?

__ Yes __ No

In your opinion, to what extent did this impact your ability to enroll in college?

Not at all Somewhat A Great Deal

10. Do you have an Internet connection for your computer or laptop at home?

__ Yes __ No

In your opinion, to what extent did this impact your ability to enroll in college?

Not at all Somewhat A Great Deal

12. How many hours a week do you study?

__ 0-10 __ 11-15
__15-20 __ Over 20

In your opinion, to what extent did this impact your ability to enroll in college?

Not at all Somewhat A Great Deal

13. How many miles round trip do you travel to get to school each day?

__ 0-10 __ 11-25
__ 26-50 __ Over 50

In your opinion, to what extent did this impact your ability to enroll in college?

Not at all Somewhat A Great Deal

Thank you for your participation in this survey.

Please place your completed survey in the sealed box in the front of the room. You may also fax this survey to [redacted], or scan and return it to Shanda Scott at [redacted]

CROWDER COLLEGE

OFFICE FOR ACADEMIC AFFAIRS
Neosho, Missouri 64850
(417) 455-5740 / Fax: (417) 455-5511

January 28, 2014

To: Institutional Review Board (IRB)

This letter is to acknowledge that Shanda Scott has permission to conduct a Dissertation Survey in ENGL 101 and ENGL 102 on the Neosho Crowder campus.

Best regards,

Dr. Glenn Coltharp
Vice President of Academic Affairs
Crowder College
601 Laclede Avenue
Neosho, MO 64850
Office Phone: 417-455-5740
Office Fax: 417-455-5511

Rich Mountain Community College
Office of the President

1100 College Drive
Mena, Arkansas 71953
Phone 479-394-7622
Fax 479-394-7295
www.rmcc.edu

January 29, 2014

To: Institutional Review Board (IRB)

This letter is to acknowledge that Shanda Scott has permission to conduct a dissertation survey and any related research within any selected class(es) at Rich Mountain Community College.

Respectfully,

Phillip Wilson, President

UNIVERSITY OF ARKANSAS

Office of Research Compliance
Institutional Review

February 24, 2014

MEMORANDUM

TO: Shanda Carter Scott

Mike Miller

FROM: Ro Windwalker

IRB Coordinator

RE: New Protocol Approval

IRB Protocol #: 14-02-469

Protocol Title: *Access Barriers to Higher Education for Rural Community College Students*

Review Type: ☒ EXEMPT ☐ EXPEDITED ☐ FULL IRB

Approved Project Period: Start Date: 02/24/2014 Expiration Date: 02/23/2015

Your protocol has been approved by the IRB. Protocols are approved for a maximum period of one year. If you wish to continue the project past the approved project period (see above), you must submit a request, using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. This form is available from the IRB Coordinator or on the Research Compliance website (http://vpred.uark.edu/210.php). As a courtesy, you will be sent a reminder two months in advance of that date. However, failure to receive a reminder does not negate your obligation to make the request in sufficient time for review and approval. Federal regulations prohibit retroactive approval of continuation. Failure to receive approval to continue the project prior to

the expiration date will result in Termination of the protocol approval. The IRB Coordinator can give you guidance on submission times.

This protocol has been approved for 200 participants. If you wish to make *any* modifications in the approved protocol, including enrolling more than this number, you must seek approval *prior to* implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 210 Administration Building, 5-2208, or irb@uark.edu.

210 Administration Building • 1 University of Arkansas • Fayetteville, AR 72701 Voice (479) 575-2208 • Fax (479) 575-3846 • Email irb@uark.edu

Table 1.
American Association of Community Colleges Student Report of Rural Community College Students

Characteristic	Frequency
Enrollment	
Full-Time	3.27 Million
Part-Time	4.76 Million
Age	
Less than 21	39%
22-39	45
40+	15
Gender	
Male	43
Female	57
Ethnicity	
White	52
Hispanic	18
Black	15
Native American	1
Other/Unknown	9

Table 2.
Demographic Characteristics

	N	%
Gender		
Male	67	39.4
Female	103	60.6
Age		
Under 20	126	74.1
21-25	27	15.9
25-50	15	8.8
Over 50	0	0
No Response	2	1.2
Did either of your parents attend a community college or university?		
Yes	73	42.9
No	96	56.5
No Response	1	.6
Cumulative GPA		
Below 2.5	10	5.9
2.6-3.0	47	27.6
3.0-4.0	110	64.7
No Response	3	1.8
Number of semester hours completed		
0-14	40	23.5
15-29	85	50
30-44	24	14.1
45-60	17	10
Over 60	4	2.4
Marital Status		
Single	148	87.1
Married	13	7.6
Separated/Divorced	4	2.4
Widowed	0	0
Other	5	2.9

Table 2. (Cont.)
Demographic Characteristics

	N	%
Have you taken Basic Math, Beginning Reading or Beginning English?		
Yes	83	48.8
No	87	51.2
Have you received need based financial aid (grants or loans) this semester?		
Yes	113	66.5
No	57	33.5
Do you own a computer or laptop?		
Yes	159	93.5
No	11	6.5
Do you have an internet connection for your computer or laptop at home?		
Yes	147	86.5
No	22	12.9
No Response	1	.6
How many hours a week do you study?		
0-10	103	60.6
11-15	37	21.8
15-20	20	11.7
Over 20	8	4.7
No Response	2	1.2
How many miles round trip do you travel to get to school each day?		
0-10	78	45.9
11-25	41	24.1
26-50	41	24.1
Over 50	8	4.7
No Response	2	1.2

Table 3.
Self-reported impact on student's ability to enroll in college

	Mean	STD	%Not At All	%Somewhat	%A Great Deal
Did either of your parents ever attend a community college or university?	1.84	.85	45.0%	26.0%	29.0%
What is your cumulative GPA?	1.92	.76	6.0	28.1	65.9
What is the number of semester hours you have completed as of this semester?	1.62	.72	52.12	33.94	13.94
Marital Status	1.36	.68	75.8	13.0	11.2
Have you ever taken, at this college, basic Math, Beginning Reading or beginning English?	1.44	.71	68.9	18.6	12.5
Have you received need-based financial aid (loans or grants) this semester?	2.20	.86	29.2	22.0	48.8
Do you own a computer or laptop?	1.89	.85	42.0	26.6	31.4
Do you have an internet connection for your computer or laptop at home?	1.99	.87	38.1	25.0	36.9
How many hours a week do you study?	1.75	.70	40.6	44.2	15.2
How many miles round trip do you travel to school each day?	1.75	.77	45.3	34.5	20.2

Table 4.
Group Mean Score Results for Research Question 2

Variable	Mean Men n=66	Mean Women n=102	Mean Overall n=168
Parents ever attend college	1.91	1.79	1.84
Cumulative GPA	1.85	1.97	1.92
Semester hours completed	1.71	1.56	1.62
Marital Status	1.42	1.31	1.36
Taken basic Math, beginning Reading or beginning English	1.50	1.40	1.44
Received need-based financial aid (loans or grants)	2.08	2.27	2.20
Own a computer or laptop	1.92	1.87	1.89
Internet connection at home	1.88	2.06	1.99
Study hours per week	1.72	1.76	1.75
Miles traveled to school each day	1.71	1.78	1.75

Table 5.
Group Mean Score Results for Research Question 3

Variable	Mean Under 20 n=125	Mean 21-25 n=27	Mean Over 25 n=15	Mean Overall n=167
Parents ever attend college	1.77	2.22	1.73	1.84
Cumulative GPA	1.97	1.89	1.5	1.92
Semester hours completed	1.60	1.73	1.53	1.61
Marital Status	1.26	1.63	1.67	1.36
Taken basic Math, beginning Reading or beginning English	1.41	1.46	1.67	1.44
Received need-based financial aid (loans or grants)	2.10	2.48	2.40	2.19
Own a computer or laptop	1.91	1.89	1.80	1.90
Internet connection at home	1.98	2.04	1.93	1.99
Study hours per week	1.70	1.88	1.80	1.74
Miles traveled to school each day	1.74	1.77	1.87	1.75

Table 6.
Group Mean Score Results for Research Question 4-First Generation Students

Variable	Mean First-Generation n=73	Mean Not First-Generation n=96	Mean Overall n=169
Parents ever attend college	1.82	1.85	1.84
Cumulative GPA	1.83	1.99	1.92
Semester hours completed	1.56	1.67	1.62
Marital Status	1.48	1.26	1.36
Taken basic Math, beginning Reading or beginning English	1.53	1.37	1.44
Received need-based financial aid (loans or grants)	2.17	2.22	2.20
Own a computer or laptop	1.88	1.91	1.89
Internet connection at home	1.99	1.99	1.99
Study hours per week	1.73	1.76	1.75
Miles traveled to school each day	1.78	1.73	1.75

Table 7.
Group Mean Score Results for Research Question 4-Financial Aid Recipients

Variable	Mean Received FA n=113	Mean Did Not Receive FA n=57	Mean Overall n=170
Parents ever attend college	1.83	1.86	1.84
Cumulative GPA	1.93	1.91	1.92
Semester hours completed	1.66	1.54	1.62
Marital Status	1.38	1.32	1.36
Taken basic Math, beginning Reading or beginning English	1.44	1.43	1.44
Received need-based financial aid (loans or grants)	2.53	1.51	2.20
Own a computer or laptop	2.00	1.68	1.89
Internet connection at home	2.05	1.86	1.99
Study hours per week	1.81	1.61	1.75
Miles traveled to school each day	1.86	1.54	1.75