Overcoming Barriers to Admission in a Community College

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OVERCOMING BARRIERS TO ADMISSION IN A COMMUNITY COLLEGE

A Dissertation
Presented to
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Western Kentucky University
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In Partial Fulfillment
Of the Requirements for the Degree of Doctor of Education

By
Nicole R. Cobb

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OVERCOMING BARRIERS TO ADMISSION IN A COMMUNITY COLLEGE

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Higher education institutions currently face a climate that can best be described as tumultuous. Funding cuts and increased external pressure and accountability are forcing institutions to evaluate the way in which they do business. Process improvement methodologies such as lean and Six Sigma have been successfully implemented in industry; colleges and universities are evaluating how these methodologies will fit into higher education. The central research question was: “What are the internal institutional barriers to persistence?” Lean principles served as the theoretical framework for this study. Lean principles rely on subject matter experts to evaluate the processes in which they are involved; these experts make and implement recommendations for continuous improvement. The purpose of this research was to better understand the situation, variation, and complexity of processes in community college admissions, financial aid, and advising departments and their impact on student persistence from the perspective of those who work closely in those environments. This study utilized subject matter experts to identify institutional barriers.

The study involved frontline community and technical college staff working in admissions, financial aid, and advising. A purposeful sampling grid was used to select participants from colleges in the comprehensive community and technical college system. Responses from the semi-structured interviews were recorded and transcribed. Data from the 10 participants were entered and coded. Interviews were synthesized and analyzed for patterns and themes.
Results were organized by the research questions and summarized in outline format. Only the most prominent findings are noted, including: (a) lack of cross training, (b) convenience barriers, (c) lack of standardized work, (d) territorial behaviors, and (e) customer service barriers. Lack of cross training resulted in the need for students to visit multiple departments in order to accomplish simple tasks. Convenience barriers included lack of evening and weekend hours and issues with the actual application. Lack of standardized policies and procedures across the college system particularly with transcripts and walk-in availability, presented a challenge for students in navigating the system. Customer service barriers affected the student experience through the lack of a point person and discouragement of hand holding.
CHAPTER I: STATEMENT OF THE PROBLEM

Introduction

Higher education is ripe with opportunity for improvement. Ongoing cuts to funding and increased accountability have forced institutions to evaluate the way in which they operate. Institutional change often is driven from the top down and neglects to involve those individuals working closely with students. In colleges and universities, students primarily deal with frontline subject matter experts who work closely with a particular process such as admissions, financial aid, and advising. Over the last several decades, organizations outside education have reaped great rewards in quality, productivity, and efficiency by empowering frontline subject matter experts to evaluate the processes with which they work closely (Melton, 2005).

Subject matter experts are best suited to evaluate the processes in which they are involved (Zarbo & D’Angelo, 2006). When changes are made from the top down, the results often are increased complexity and decreased efficiency due to the lack of close and personal knowledge of the real process (Beer & Eisenstat, 2000). Top down changes are not blatant and deliberate attacks by leadership to complicate the process. In many cases leadership is unable to spend adequate time with institutional practices to fully understand them; leaders do not facilitate the college application, process transcripts, or advise students.

Business and industry have come to value trusting and empowering those individuals who work closely with a process and have referred to these individuals as subject matter experts (Zarbo & D’Angelo, 2006). The purpose of this research is to better understand the situation, variation, and complexity of processes in community
college admissions, financial aid, and advising departments and their impact on student persistence from the perspective of those who work closely in those environments. When given the opportunity to participate and to possibly lead continuous process improvement initiatives, subject matter experts have great insight in delivering positive results (Zarbo & D’Angelo, 2006). This research identifies process inefficiency, complexity, and concerns created by the institutions, as seen by the subject matter experts who impact student persistence.

Specifically, this study sought information on the significant experiences and insight of employees working in admissions, financial aid, or advising in a mid-south community and technical college system. The study site was a system of 16 community and technical colleges that were each unique in terms of the counties served, programs offered, size, and structure. Although a part of the system, each college has the flexibility to create an institution that can best serve the region in which it is located. This study utilized qualitative data collected from interviews, which resulted in rich descriptions of the individual lived experiences of personnel working closely with the processes in admissions, financial aid, and advising.

**Purpose of the Study**

This study brings together the mission of community colleges to serve a greater population, existing barriers to persistence, and lean principles of continuous improvement. The purpose of this research is to better understand the situation, variation, and complexity of processes in community college admissions, financial aid, and advising departments and their impact on student persistence from the perspective of those who work closely in those environments. This study investigates the admissions,
financial aid, and advising departments at several community and technical colleges in a mid-south region community college system. Decreased enrollment is a challenge for many institutions as they combat decreases in state appropriations (Zusman, 2005). This has created an interest in the number of applications received as compared to the number who enroll. While community colleges were founded on an open access policy, student services representatives in admissions, financial aid, and advising are viewed as the gatekeepers to access and often perceived as creating barriers to admission and, subsequently, enrollment. Decreased enrollment, in conjunction with poor retention and graduation rates, has forced community colleges to assess current operating procedures and to search for ways to improve student access and success outcomes. “The environment for higher education has changed from one of plenty to one of diminishing resources, there has also been a heightened focus on the part of institutions and states alike on increasing the rate at which students persist and graduate” (Tinto, 2006).

Research is needed on institutional barriers to persistence. Students entering community college often come from first-generation families, have full-time jobs, and many have a family (Horn & Nevill, 2006). While community college students arrive with obstacles of their own, this study seeks to better understand the institutional barriers created by community college departments through policy, practice, and procedures.

“Tremendous expansion of college personnel services since the end of the Second World War has made the professional need for evaluation even greater than before” (Shigley, 1958, p. 18-19). Community and technical colleges have increased enrollments subsequent to Shigley’s statement in 1958, and the need for evaluation continues. According to Shigley, in 1900, approximately 500,000 students were enrolled in higher
education throughout the world. This number represented a small fraction of available college participants. “By 2000, the number of tertiary students had grown two-hundredfold to approximately 100 million people” (Schofer & Meyer, 2005, p. 898).

With rapid growth and change, the increased need for evaluation and quality methods requires little debate; and the challenge is to identify the appropriate tools and methods (O’Neill & Palmer, 2004).

**Background**

This study is based on lean and continuous improvement for removing barriers for students. The research draws on both the literature and body of knowledge of lean and the literature on student persistence. Research relative to college created internal barriers that inhibit student persistence is critical to improving overall student success and, ultimately, economic development. An increasing number of positions require at least some college. By 2020, 65% will require postsecondary education beyond high school (Carnevale, Smith, & Strohl, 2013). The economic downturn of 2008 and subsequent loss of jobs has primarily been recovered, and individuals with a bachelor’s degree have experienced the highest job growth (Carnevale et al., 2013).

In order to retain a competitive economy, society must focus on the higher education of the population (Leslie & Brinkman, 1988). When colleges make an already confusing and complex process even harder by remaining complacent, not only do the students suffer but society as a whole. Addressing these problems has the potential to positively impact the student, the institution, and the community. This type of research is needed and critical to the future success of all stakeholders. Institutions must discover those internal processes that are confusing and/or challenging to the student. All industry
including healthcare, logistics, distribution, higher education, and manufacturing, involve processes that can be improved if one believes in continuous process improvement. Continuous process improvement is critical for higher education institutions to remain relevant (Thalner, 2005).

Postsecondary institutions have turned to enrollment management or strategic enrollment management groups to increase enrollments due to recent declines. These groups are established to monitor enrollment trends and to be proactive in creating interventions for improved conversion rates. Enrollment management teams focus on the number of inquiries of interest, applications received, and students who enroll. According to The Chronicle of Higher Education, public two-year completion rates fluctuate between 15-31% (The Chronicle of Higher Education, n.d.). Only North Dakota and South Dakota exceeded that range, with 40.9% and 51.2%, respectively. In addition to dismal completion rates, community colleges also report low conversion rates, which is the number of students who apply compared to those who enroll. Community colleges lose students both in the application to enrollment process, as well as once they are enrolled.

According to the National Center of Education Statistics (NCES, 2011), 80% of all community college students are employed. Nearly 20% of those work 20 or more hours per week. This statistic would indicate that community colleges should offer admissions, records, financial aid, and other student services that fit the working student’s needs. Community colleges have made some attempts at expanded hours; however, the current state operations should be examined to determine if they fit the needs of students.
In addition to the high percentage of working students, 70% of community college students are enrolled part time, slightly over 30% have dependents, 15% are single parents, and 40% have delayed enrollment (NCES, 2011). While these statistics indicate barriers to persistence, institutions must examine the processes, procedures, practices, and operating guidelines that create these challenges.

This study provides information on barriers created by community colleges and the way in which to remove them or minimize their effects. By doing so, students can transition from the point of application to enrollment with minimal stoppages along the way. Student services personnel in admissions, advising, and financial aid may change the manner in which they create and implement practices due to the increased focus on removing barriers and streamlining the process for students. Institutions can realize increased enrollments due to the improvement in customer satisfaction. In addition to improving the overall process and subsequent enrollment, this research adds to the growing body of knowledge regarding lean principles in higher education. The knowledge gained from subject matter experts can help to create interventions for streamlining the process of admission to enrollment.

All types of industry, including higher education, utilize processes (Melton, 2005). A student must follow a specific process in higher education to flow from completing the application to registering for classes. Processes are in place to register and take placement exams, register for orientation, apply for financial aid, and select and register for classes. Process improvement strategies such as lean principles can be utilized to define and improve existing processes (Womack & Jones, 1996).
Lean

“Do more with less” is the mantra of the decade in higher education. A decade of cuts to state appropriations has left higher education, and community colleges in particular, with the challenge to do more with less. This concept is known as lean principles outside of higher education. Lean thinking is a customer centric approach and thought process aimed at reducing waste (Liker & Hoseus, 2008). Any process throughout history that has been changed in an attempt to cause improvement can be thought of as lean or continuous improvement. In the early 1900s, Henry Ford kicked started the lean movement in America by using interchangeable parts, standardized work, and the assembly line to greatly improve the automobile manufacturing industry (Reeves & Bednar, 1994).

Post World War II, the American economy exited the Great Depression and entered a period of economic growth and prosperity. While Japan was recovering from massive destruction, the American economy was booming (Woods, 2005). By the 1950s American manufacturing was thought of as superior to other countries and had a reputation of producing high quality products. While Japan was in a recovery phase, American manufacturers grew at a rapid pace. Quality experts W. Edwards Deming and Joseph Juran offered their consulting services to American manufacturers in an attempt to teach quality management practices (Landesberg, 1999). For the most part their offers were declined and the quality gurus took their services to Japan, as Japanese industry at that time was thought to produce cheap, trinket, and low quality products (Juran, 1993). Deming and Juran brought their quality management techniques, such as statistical process control, to Japanese manufacturers; and by the 1980s the saying, “If Japan
can…Why can’t we?” emerged (Waddock, 1988). This statement was broadcast on NBC News on June 24, 1980, and is credited with beginning the quality revolution in America. By following the advice of Deming and Juran, Japanese manufacturing had captured the automotive and electronics industry by practicing continuous process improvement. In 1954, Juran was invited to speak to organizations in Japan: “What I told them was what I had been telling audiences in the United States for years. The difference was not what I said but whose ears heard it” (Juran, 1993, p. 42). Japan emerged as a key powerhouse competitor. Increased global competition resulted in loss of market share for American manufacturers and, thus, the game of catch-up began. American manufacturers began to implement the Toyota Production System, which included lean principles and practices.

Toyota in particular packaged a process of continuous process improvement known today as Lean Manufacturing. Toyota’s process of lean is heavily dependent on subject matter experts (SMEs) who work closely with a particular process (Liker & Hoseus, 2008). For effective continuous improvement, leadership must be closely involved with daily operations by going to the gemba; a lean term for going to the place in which the value is created. According to Liker and Hoseus, lean practices and process improvement should be facilitated by leadership and by the SMEs. This high level of cooperation at all levels works to create the best outcomes for customers and for industry.

While often lean is thought to have originated in automotive manufacturing, it can be applied to all industries (Liker & Hoseus, 2008). Automotive manufacturers were the first to embrace the philosophy due to economic pressure to produce more while increasing quality metrics. Automotive manufacturers forced lean thinking on suppliers, who thrust it on their suppliers (MacDuffie & Helper, 1997). Over the last 10 to 15
years, lean principles have surfaced in process industries such as healthcare, logistics and distribution, food services, information technology, and higher education (Melton, 2005). Lean as a philosophy is fairly new to higher education institutions. Hospitals institutionalized lean by facilitating projects throughout the hospital, including improvements to emergency room triage times, reductions in surgical site infections, decreases in turnaround time for hospital procedures, and organization of hospital supplies (Sperl & Ptacek, 2013). Any organization that uses processes can apply lean principles. Piedmont Technical College in South Carolina has successfully implemented lean across the institution (Piedmont Technical College, 2013). They focused their lean implementation on improving their admissions, advising, classrooms, and business processes. Lean process improvement focuses on improving customer satisfaction by producing a product at a faster rate and with higher quality (Womack & Jones, 1996). While lean thinking involves key components and practices, it is fundamentally a culture change. Organizations that implement lean move from accepting the status quo to challenging it, with a continuous rigor and focus on continual process improvement.

Piedmont Technical College is committed to changing to a lean culture and has listed five reasons to implement lean in higher education: saves time/reduces waste; organizes classrooms, storage, and office space; improves customer service and the student experience; standardization; and cost avoidance (Piedmont Technical College, 2013). Lean principles define eight specific types of waste to include defects, overproduction, waiting, confusion, transporting/travel, inventory, motion, and excess processing (Wood, 2004). In higher education students often complain about receiving the runaround and visiting multiple departments and offices to accomplish one task.
Errors in application processes, transcript processing, advising, and financial aid create a negative student experience. Colleges or universities with multiple campus sites typically have various student experiences and processes at each campus indicative of a lack of standardization, which causes confusion and frustration for students who attend multiple campuses.

As lean principles are surfacing in all industries, higher education institutions need to get on board. In 2014 a community and technical college student in the system wrote the following google.com review: “I’m so fed up with jtc giving me the run around with my money! They are saying I didn’t complete my entrance counseling when student loans show I did it on the 11th. It’s always one thing after another” (Google Reviews, n.d.). Online google.com reviews of another college in the system cited issues with customer service and described the staff as unhelpful and uninterested. While these google.com reviews represent only a few unhappy customers, lean thinkers view this as an opportunity to improve higher education processes.

**Community College Challenges/Student Persistence**

Community colleges serve a broad range of customers with varying needs. With an open access policy to admit nearly all students who apply, they are challenged with serving a diverse population (Bahr, Gross, Slay, & Christensen, 2015). Incoming students often are underprepared and lack the college knowledge to be successful. College knowledge can be defined as a student’s understanding of basic college processes such as registration, financial aid, and campus layout, often obtained through family and friend alliances (Conley, 2008). Retention and graduation rates are low and colleges are moving toward a student success model that focuses on improving retention and student
success (Cho & Karp, 2013). Student success can be measured by both academic and nonacademic factors. Retention from year to year, successful completion of “gatekeeper” courses, and passing grades are a few of the means utilized to measure academic success. Nonacademic success often is measured by social engagement, acculturation, student alliances, and interpersonal development (Tinto, 1993). With an increased focus on student success, organizations such as the Lumina Foundation have created data-based and outcomes-driven programs to improve community college processes. Achieving the Dream (ATD) is a model of process improvement for community colleges that requires an institutional commitment to collect and analyze data and to use that information to set measureable goals toward improving student outcomes (Dougherty & Reid, 2007). This type of approach is similar to lean principles. Research is needed to better understand the relationship between student success outcomes and variables thought to impact those outcomes. These factors include social and academic integration and the variables within them.

Community college students are largely underprepared and face a plethora of challenges to successful degree completion (Grimes, 1997). An increasing segment of students require remediation and developmental courses. The underprepared student presents challenges not only to the student but also to the institution. Readiness has risen to the forefront in community colleges and has forced leadership to create, experiment, and pilot methods that seek to improve the success rates of underprepared students. Much of the existing research has focused on incoming qualities of community college students, but little has examined that which the community colleges do that impacts student persistence.
Student persistence often is measured through retention and completion rates. Therefore, the definition of student success is to retain students from fall to fall in a higher education institution and to observe their completion of some type of credential. According to Tinto (1993), theories of student departure have varied through the years; models included personality and disposition factors, individual ability, and intellectual attributes. Tinto pointed out that the lion’s share of past studies on student departure have focused on the individual student rather than the institution. When a student drops out of the institution, previous research has blamed the student rather than the institution. Tinto asserted that this model of student departure is flawed and overlooks the responsibility of the institution on student success. Research has indicated that no one single factor is responsible for student departure, as many factors affect persistence and departure. Tinto agreed that personality, ability, and intellect play a role in student departure, but he believed a broader matrix is needed to better understand departure. This broader matrix includes all actions and activities of institutions. Examples of processes that have caused difficulty for students in persisting beyond application include residency appeals, lack of entrance exam appointments, limited operating hours, and lack of available financial aid and advising counselors. Tinto noted that academic integration includes interactions with faculty and staff personnel. These interactions assist students with navigating the college processes that often are complex and difficult without skilled assistance.

Institutional research that has examined student departure exists and has explored faculty-student ratios and organizational structures. Tinto (1993) presented a theoretical framework for student departure that includes the previously discussed factors. The
model includes academic and social integration, which is the responsibility of both the individual and the institution. Overall, Tinto’s longitudinal model of departure includes pre-entry attributes, goals and commitments, institutional experiences, integration, and further goal planning, all of which lead to the decision to remain or dropout. Pre-entry attributes include family background, prior schooling, and abilities; goals and commitments include both institutional and student intentions; institutional experiences include academic performance, faculty and staff interactions, extracurricular activities, and peer group interactions; and integration includes social and academic integration (Tinto, 1993).

Student success frequently is associated with student engagement, a construct related to student success. Original definitions of the student engagement construct included time spent on task, quality of effort, student involvement, student engagement, and social and academic integration (Kuh, 2009). Tinto’s (1993) theory of student departure identified the importance of intellectual and social integration to student persistence, which impact a student’s commitment to the institution. Social integration is defined as a connectedness with other students and faculty and the perception of being part of the school community. It includes establishing friendships with other students. Community and technical colleges have a unique challenge relative to social and academic integration, as they deal primarily with commuter students who may have outside factors that limit their integration, such as familial and work responsibilities. Kuh (2009) described student engagement as the crux of the way in which American higher education will be changed in the future.
Roughly 51% of all entering college students are educated at a community college (Cohen & Brawer, 1987). Enrollments have fluctuated across the board over the last several years at the comprehensive community and technical college system in the current study. Recruiting students does not appear to be a problem; however, conversion and retention are areas for concern. Community colleges historically have accepted a growing number of underprepared and under resourced students. According to Moss and Young (1995), over half of all entering community college students lack the basic skills for college-level work. These students most likely will drop out without a credential. To improve retention rates, leadership is focused on interventions that impact student success, of which academic and social integration is two components.

Barriers

Student success or failure in higher education is thought of as a function of the overall skills and abilities they bring to the table (Tinto, 2006). Pursuing higher education has the outcome of student success, which is defined as successful completion of a degree or credential. The overall outcome of student success has multiple inputs. Researchers have investigated the numerous and complex inputs of students, such as high school grade point average, ACT scores, full-time or part-time status, dependents, employment status, hours worked, first-generation status, and a variety of other variables (Muilenburg & Berge, 2001). These factors place student persistence on the shoulders of the student. While these issues contribute to student persistence, the institutions carry a share of the responsibility to provide the best environment, opportunities, and support to ensure success (Muilenburg & Berge, 2001).
The process of attending higher education begins with completion of the application to attend. From that first step, several subsequent steps occur prior to the student enrolling. Dependent upon the admit status, students provide high school transcripts and/or ACT test scores, schedule a placement test, attend orientation, apply for financial aid, meet with an advisor, and select and enroll in a class(es). Each step represents action on the part of the student and that of the college and represents an opportunity to lose that student. Higher education institutions consider conversion rates that compare the number of students who applied to the number who are successfully enrolled; however, somewhere between application and enrollment students fall through the cracks and fail to enroll (Adams, 2015). Student success often is measured by the number of students who complete a credential within a defined period of time from the first semester attended. According to the College Affordability and Transparency Center, community and technical colleges in the state system average a 25.8% (see Table 1) completion rate (College Affordability and Transparency Center, n.d.). That figure does not include the number of students who apply but fail to begin their first semester. Institutions expect to lose some applicants to other institutions, although efforts are being made to account for the unexplained loss. In order to increase effectiveness, institutions must consider student background factors and institutional factors that may be barriers to successful admission and subsequent enrollment (Tinto, 2006).
<table>
<thead>
<tr>
<th>College</th>
<th>Completion Rates</th>
<th>Enrollment</th>
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<tr>
<td>Ashland Community &amp; Technical College</td>
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Most citizens of the United States hold a fundamental belief that all individuals should be given the opportunity to pursue their dreams and ambitions, as well as the right to pursue opportunities that will enable them to rise to their greatest potential. Prior to
the rise of community colleges higher education was primarily comprised of private four-year institutions that served the elite. Private colleges were the norm until the Morrill Acts of 1862 and 1890 that established state schools in every state (Cohen & Brawer, 1987). Rapid growth in all areas of higher education has been driven by increased secondary school enrollment. According to Cohen and Braw (1987), the percentage of high school graduates rose from 30% in the 1920s to 75% by 1960. Much of the increased interest in higher education is due to the perception of it as a ticket to a better life. Programs shifted to workforce development and preparation, and community colleges fit the bill. These institutions in particular were being geared toward those individuals not ready for traditional private or four-year schools. Prior to and until the 1940s community colleges were referred to as junior colleges, and some referred to them as an extension of the primary schools as the 13th and 14th grades (Cohen & Braw, 1987). Not all high school students were prepared to advance to college after 12th grade, and community colleges were driven to accept and educate any who desired to attend college. The general drive was for access to college regardless of the socio-economic, socio-educational, or socio-cultural barriers.

**Research Questions**

Over the past two to three decades, businesses and industry in America have focused on improving to meet customer needs. Higher education has not fully embraced these principles and ongoing continuous improvement. The increase in global market competition and the number of competitors have created a catalyst for improvement in industry. Continual decreases in state appropriations in higher education have forced institutions to reconsider the methods and processes used to meet student needs.
Therefore, in order to address the issue of the types of barriers internally created by community colleges, the following research questions guide this investigation:

1. What internal processes or experiences prevent students from persisting from application to enrollment, as identified by subject matter experts in:
   a. Admissions?
   b. Advising?
   c. Financial Aid?

2. What is currently being done that most positively and most negatively impacts student persistence?

3. What steps in the process from application to enrollment are most challenging and/or confusing for students?

**Population**

The setting for this qualitative study was a community college or community and technical college in a comprehensive system in the mid-south. Many have multiple campus locations for each home site. The participants for this study were drawn from those campus sites with the lion’s share of the enrollment to those with smaller enrollments that serve as satellite sites. This study seeks to obtain staff perceptions of both activities and processes that support and inhibit student persistence. The participants were selected from among any of the 16 colleges in the system. The corporate system office provided a list of Student Affairs Deans who identified the target population of subject matter experts in admissions, advising, and financial aid. Those experts were contacted to set up interviews to include three to four participants.
representing each of the three areas. To ensure a representative sample of college size, a matrix was created and used to balance the selection of participants.

**Methodology**

The purpose of this research is to better understand the situation, variation, and complexity of processes in community college admissions, financial aid, and advising departments and their positive and negative impact on student persistence from the perspective of those who work closely in those environments. Specifically, this research seeks to gather tacit knowledge and subjective understandings and interpretations of departments within student services, such as admissions, financial aid, and advising. In order to obtain staff perceptions, a phenomenological qualitative research design was utilized with a focus on the individual lived experiences of staff members working closely with community college students. They have firsthand experience and knowledge of policy, procedure, and practices that both support and inhibit student persistence. The overall qualitative genre was focused on individual lived experiences. The strategy to obtain these data were in-depth interviews with community college staff. Interviews aided in capturing experiences of community college staff members in admissions, financial aid, and advising in the participants’ words (Marshall & Rossman, 2011).

Interviews were utilized to collect the experiences of student services personnel who were considered to be subject matter experts in their disciplines. They were defined as subject matter experts, as they work closely with community college students on a daily basis. Insights can be gained that can add to the body of knowledge of best practices in higher education. The knowledge gained from these experts can help to
create interventions to streamline the process of admissions to enrollment. Interview responses were codified and analyzed for patterns and themes.

Community colleges in this region vary from rural locations to urban areas. Many of the colleges in the system cover multiple counties and have satellite campus sites to serve their students across the state. In order to maintain a sample representative of this factor, the 16 colleges were classified by size. Approximately 73% had enrollments of 5,200 or less. For this study small colleges were defined as those with enrollments of less than 5,200, and large colleges were defined as those with enrollments greater than 5,200. Therefore, the interview sample was chosen to represent both small and large colleges.

In smaller settings, staff in admissions, financial aid, and advising may perform responsibilities in all three areas, whereas larger schools have designated individuals for each role.

Limitations

The following limitations applied to this study. The individuals interviewed had a variety of experiences and backgrounds, as well as years of service in a higher education setting. These factors may have influenced the way in which they view and assess the process. Interviewees working in smaller colleges may have been classified as admissions but covered admissions, enrollment, and areas inside financial aid. Their experiences varied from interviewees working in a larger college with one specific job responsibility. Job history may have influenced the number and types of experiences participants brought to the study.
Delimitations

The population sample provided and inadequate picture of student services in community and technical colleges. Cost and time considerations prevented extending this study to include multiple student services personnel from each college in the system. While the findings represent a smaller and limited population, the rich descriptions should result in the ability to identify common concerns of subject matter experts in working with existing processes in higher education.

Definition of Terms

*Lean:* A systematic method for the reduction and elimination of waste within a process (Womack & Jones, 1996).

*Lean Thinking:* A business methodology that strives to create a new way to consider organizing process activities that optimize all inputs by reducing waste. Lean thinkers believe in continuous process improvement and strive for perfection (Womack & Jones, 1996).

*Subject Matter Experts (SMEs):* Those individuals who work closely with a particular process are thought to be the experts in that process. In lean, these individuals are of utmost importance in improving a process, as they can quickly identify improvements in their designated areas (Zarbo & D’Angelo, 2006).

*College Knowledge:* A student’s understanding of basic college processes such as registration, financial aid, and campus layout. This knowledge often is obtained through family and friend alliances (Conley, 2008).

*Continuous Improvement:* An ongoing effort to improve or make better a process, product, or service. In lean, continuous improvement is thought to be made in
incremental changes over time, although some changes result in breakthrough improvements (Bessant & Caffyn, 1997).

**Waste:** Non-value added, i.e., it does not add anything of value to the product or service, and the customer is unwilling to pay for waste. Traditionally, eight specific types of waste are identified in lean: defects, overproduction, waiting, confusion, transporting/transportation, inventory, motion, and excess processing (Wood, 2004).

**Gemba:** A Japanese term meaning “the real place.” The gemba is the place in which the work is done. In lean, continuous improvement teams work from the gemba in which the process exists, thus being able to better recognize the complexity and reality of the process (Liker & Hoseus, 2008).

**Standardization/Standard Work:** Work in which the sequence-of-job elements has been efficiently organized and is repeatable by other employees the current best practice for a particular process. Standardized work improves productivity, efficiency, and quality (Womack & Jones, 1996).

**Voice of the Customer (VOC):** Thoughts, opinions, and perspectives of the primary customer that may be internal or external to the process. In process improvement, the customer’s needs and voice must be at the forefront and must guide the process improvement (Hwarng & Teo, 2001).

**Summary**

This chapter presented the study relative to better understanding the situation and variation in processes and that which things community colleges do that positively or negatively impact student persistence. All the information was obtained through interviews with subject matter experts in admissions, financial aid, and advising. The
interviewees were individuals deemed to be subject matter experts in their areas. The conceptual framework for this investigation was lean principles. The foundation for lean is a belief that those working closely with a process(es) are best suited to analyze, evaluate, and improve those processes, which is a critical component in lean and continuous improvement (Melton, 2005). Chapter II consists of a review of the pertinent literature regarding the role community and technical college practices and procedures related to student persistence. Included in this review is a history of continuous improvement methodologies, barriers to persistence in higher education, and the manner in which these concepts can work together. Finally, the chapter includes a review of empirical studies that examine performance improvement in higher education using continuous improvement strategies. Chapter III consists of a detailed review of the methods utilized in this study, to include research design, data sources, data collection, and analysis methods. Chapter IV includes findings from the qualitative analysis as they relate to the research questions; and Chapter V presents a discussion of the key findings, recommendations, and implications.
CHAPTER II: REVIEW OF THE LITERATURE

Introduction

Community colleges comprise over 1,000 institutions in the United States (Provasnik & Planty, 2008). These institutions admit and serve almost one half of all higher education students. Less than one third of community college students complete a credential (Bailey & Alfonso, 2005). Community colleges serve a unique purpose and mission; they provide access and affordability to a large cohort of individuals (Bahr et al., 2015). Community college systems across the United States are failing to fully execute their mission. With dismal completion rates, a plethora of opportunities exist to improve outcomes across the board in these institutions.

Higher education is facing a growing and changing organizational environment (Deem, Hillyard & Reed, 2007). Increases in globalization, competition, and enrollment growth have created the need for these institutions to plan for capacity, expansion, and efficiency. To date, community colleges fail to show significant improvements. Historically, colleges and universities were able to rest on their laurels without worries about competition and quality (Hwarng & Teo, 2001). The dynamic has now changed, with private institutions experiencing rapid growth in conjunction with decreases in state appropriations. This duo of competition and revenue concerns has forced higher education institutions to examine their quality, productivity, and efficiency. Continuous improvement methodologies are numerous; each decade appears to produce the newest, latest, and greatest approach to process improvement. Methodologies include Quality Function Deployment (QFD), Total Quality Management (TQM), Six Sigma, Lean Principles/Manufacturing, Deming’s Plan, Do, Check, Act (PDCA) Cycle, and Statistical
Process Control (SPC) (Pepper & Spedding, 2010). Each is focused on improving processes by using an organized approach. Six Sigma and lean heavily emphasize the Voice of the Customer (VOC), ensuring process improvement is focused on the “right” processes. By listening to the customer needs and concerns, industries in general are better able to meet those needs. The primary customer in higher education is the student. In recent years students have used social media to publicize their voices and to be heard. Some of their concerns include cost, customer service, return on investment, and outcomes subsequent to graduation. Business and industry outside of higher education have embraced continuous improvement initiatives with great success. Higher education has dabbled with a few approaches over the years but by and large has avoided overall change to a culture of continuous improvement. The literature offered insight into the way in which continuous improvement approaches work and can be applied to higher education. The literature review includes a history of continuous improvement methodologies, a review of community colleges including barriers to persistence, a review of continuous improvement approaches in higher education, and empirical studies.

Historical Perspective

History of Continuous Improvement

Continuous improvement (CI) is a philosophy of fierce and continuous process improvement initiatives, to include the elimination of waste in all processes in an organization (Bhuiyan & Baghel, 2005). The involvement of everyone from the cleaning crew to the Chief Executive Officer is a key feature of CI. This level of involvement ensures that areas and processes across the organization are examined and improved. CI process improvements vary from small no cost improvements to capital required
improvements. CI typically is implemented by smaller and incremental changes which over time add up to large gains in productivity, quality, cost, delivery, safety, morale, or environment. Bhuiyan and Baghel (2005) described the need to use a variety of tools and techniques to identify problems and concerns. These tools are created by observing and collecting data and include control charts, frequency diagrams, histograms, scatter diagrams, process maps, run charts, and cause and effect diagrams. The outcome of each tool provides a visual representation of the current process, which serves as an avenue to better understand the current situation. With increased understanding, process improvement teams can create and implement solutions that reduce variation and improve the process.

Bok (2009) stated that successful organizations engage in ongoing process improvement, pilot and try solutions, measure impact, and incorporate the solutions that work. Bok further stated the type of work of organizations does not matter but, rather, that they become effective at learning. Organizations cannot succumb to complacency and accept the status quo; to be successful, they must implement a culture of continuous improvement.

In the late 1800s, scientific management was used to assist production managers in identifying and solving production woes (Bhuiyan & Baghel, 2005). Increasingly from the late 1800s to early 1900s organizations relied on employee driven improvements. In order to encourage participation, organizations offered rewards and incentives. Frontline employees were eager to make suggestions as they worked closely with operations. Post World War II, the United States government created Training Within Industry (TWI), to improve industrial outputs (Bhuiyan & Baghel, 2005). As a form of CI, TWI educated
supervisors on methods and techniques to identify quality and productivity concerns. CI techniques were brought to Japan in an effort to help the country rebuild. Deming and Juran brought CI techniques to Japan and, together, they created their own approach to process improvement that is currently known today as Lean Manufacturing. Efforts focused on reducing waste, standardizing and simplifying production, and improving quality. Quality circles were a key facet of CI in Japan. Taichi Ohno of Toyota was tasked with improving the production process in Japan and visited Toyota Motor Manufacturing to bring that which he learned back to Japan (Liker, 2004). Ohno customized a system that would meet the needs of the Japanese market and developed the Toyota Production System (TPS). TPS is world-renowned, and many industries in America attempt to emulate these CI processes perfected by Ohno (Liker, 2004). These processes are more widely known as Lean Manufacturing, and one of the key foundations of lean is Just in Time (JIT) production. JIT is focused on having raw materials and work in process in smaller quantities so as to reduce the waste of inventory. Industries have been focusing on reducing the eight specific types of waste as defined by lean, which include defects, overproduction, waiting, confusion, transporting/travel, inventory, motion, and excess processing (Wood, 2004).

Organizations have made attempts to integrate CI techniques into their company cultures. Each has its own processes in which to find ways to improve. While organizations are different in the products or services they deliver, the locations in which they are located, the machines and equipment they use, and the customers they serve, each has processes that can be improved. They have begun to realize the need to continuously improve, and various methodologies have been developed to achieve CI.
The best known CI programs are Lean Manufacturing, Six Sigma, Lean Six Sigma, and Total Quality Management (TQM). To date, many organizations have created hybrid CI programs that utilize the tools and techniques most appropriate to their industry.

**Deming**

W. Edwards Deming was born in 1900 in Sioux City, Iowa, and was raised in poor conditions. He worked in a hotel and held a job to light the town’s gasoline street lamps (Best & Neuhauser, 2005). Deming attended the University of Wyoming for his undergraduate degree in engineering, the University of Colorado for his master’s degree, and Yale for his doctorate in mathematical physics (Best & Neuhauser, 2005). Upon earning his master’s degree, Deming worked at the Western Electric Hawthorne Plant, made famous by productivity studies conducted by Elton Mayo. During his work at the Hawthorne plant, Deming met Walter Shewhart, who taught statistical process control and quality control tools to Deming. These tools helped him to better understand the relationship between variation in a process and the effects of variation on quality and productivity. His early experiences at the Hawthorne plant and his work for the United States Census formed the foundation of Deming’s quality philosophy. While involved with teaching Japanese techniques to rebuild production post Second World War, Deming implemented the Plan, Do, Check, Act (PDCA) cycle (Best & Neuhauser, 2005). During this time quality improvement techniques helped Japan improve their reputation from making poor quality products to one of world class quality and productivity.

Deming created his own philosophy of quality that included four key elements: appreciation for a system, understanding variation, theory of knowledge, and
understanding human behavior (Best & Neuhauser, 2005). Based on the four key elements Deming (1986, p. 23-24) created 14 points of quality management:

1. Create constancy of purpose toward improvement of product and service, with the aim to become competitive and to stay in business, and to provide jobs.

2. Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for change.

3. Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.

4. End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.

5. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.

6. Institute training on the job.

7. Institute leadership. The aim of supervision should be to help people and machines and gadgets to do a better job. Supervision of management is in need of overhaul, as well as supervision of production workers.

8. Drive out fear, so that everyone may work effectively for the company.

9. Break down barriers between departments. People in research, design, sales, and production must work as a team, to foresee problems of production and in use that may be encountered with the product or service.
10. Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity. Such exhortations only create adversarial relationships, as the bulk of the causes of low quality and low productivity belong to the system and thus lie beyond the power of the work force.

- Eliminate work standards (quotas) on the factory floor. Substitute leadership.
- Eliminate management by objective. Eliminate management by numbers, numerical goals. Substitute leadership.

11. Remove barriers that rob the hourly worker of his right to pride of workmanship. The responsibility of supervisors must be changed from sheer numbers to quality.

12. Remove barriers that rob people in management and in engineering of their right to pride of workmanship. This means, inter alia, abolishment of the annual or merit rating and of management by objective.

13. Institute a vigorous program of education and self-improvement.

14. Put everybody in the company to work to accomplish the transformation. The transformation is everybody's job.

While few people in the United States listened to Deming in the 1950s, the Japanese took notice. With Deming’s assistance, Japan transformed manufacturing and industry from the brink of destruction to world-renowned manufacturers. In the United States, increases in globalization and competition forced American manufacturers to replicate Deming’s principles of quality, who believed management transformation was
paramount for real transformation. Top management must be heavily involved in supporting process improvement. Ohno added specific elements to Deming’s principles, such as involvement of frontline employees in conjunction with top management. Collaboration with top management and frontline staff provides the multi-faceted insights needed to change a process. Collaboration in continuous improvement includes stakeholders from both leadership and frontline staff in talking, observing, critiquing, and planning together (Leithwood & Poplin, 1992). It is difficult to change existing processes and to acquire the needed resources to implement change when support of top management is lacking. Also, frontline staff are necessary in order to fully understand the current operating structure and intricacies seen daily by those working closely with an operation or process. Collaboration across levels increases effectiveness of problem solving and continuous improvement. This type of team formation combines the best of both worlds: leadership vision, insight, and control with that of the closeness and knowledge of the process as seen through the subject matter experts. In conjunction with the importance of top management and frontline staff Deming (1986) also emphasized the importance of connectedness with customer needs.

**Total Quality Management**

The evolution of quality follows a distinct road beginning with quality inspection, which was clearly an afterthought. Quality was not built into a product or service, but rather, checked after the fact to determine if standards were met (Dahlgaaard & Kristensen, 1998). This checking process was known as quality inspection and evolved into quality control that relied on data analysis such as control charts to measure for special and common cause variation. This was a first step to reducing variation and
improving quality by monitoring a process for increases in variation. Additionally, process improvement is inefficient when an understanding of the current variation is absent. The third stage in the quality evolution was quality assurance, which utilized inspection and quality control combined with increased training on quality systems and auditing. The last stage was Total Quality Management, signaling a fundamental change from detecting quality defects before receipt by the customer to preventing defects from occurring (Dahlgaard & Kristensen, 1998).

Much like Deming’s quality principles, TQM emphasized the combination of employee involvement, continuous improvement, and customer satisfaction (Baldwin, 2002). As leadership develops into an efficient TQM organization, more faith and confidence is placed in lower level employee decision making. TQM must be applied across the organization in all levels and departments, and its principles are attributed to Deming, Juran, and Crosby.

**Lean**

“Lean thinking can be summarized in five principles: precisely specify value by specific product, identify the value stream for each product, make value flow without interruptions, let the customer pull value from the producer, and pursue perfection” (Womack & Jones, 1996, p. 10). Doing more with less and reducing muda, the Japanese word for waste, is the foundation of lean. Lean thinkers often refer to the value of goods or services. In lean principles, steps in a process are considered value added or non-value added. Value, according to Womack and Jones (1996), can be defined only by the customer. Value added processes change the product in some way, and value added
activities are those for which the customer is willing to pay. Non-value added activities can be defined as waste in the process for which the customer is unwilling to pay.

Lean Principles are a combination of several continuous improvement methodologies and the experiences of Tachi Ohno. Ohno was tasked by Toyota to utilize the principles of Deming, Juran, and Crosby and to apply them to the Japanese manufacturing culture which, at the time, was very different than Deming’s observations in the United States (Womack & Jones, 1996). Ohno was focused on waste reduction, creating value, and creating product flow (Womack & Jones, 1996). Based on Ohno’s experiences, the lean system was created.

Ohno spent a great deal of time observing supermarkets, which represented the culmination of numerous value streams into one location ready for the customer to pull the products. Value streams are those activities necessary to create, order, process, and produce a product or service. Supermarkets with aisles of products represent many value streams working to provide those goods to consumers. Considering the department, it is typically located at the back of the grocery, with product placement geared to reduce product waste through spoilage. Supermarkets place the milk into the corrals in a specific date order, with those set to expire first at the front of the queue. Supermarket customers often search further back in the queue, even moving multiple containers to locate the milk with a later expiration date. Supermarkets strive to reduce waste by utilizing first in first out (FIFO) inventory control. The invention of a bar coding system was utilized to automate the checkout process, successfully improving efficiency. Self-checkout lanes represent more recent efforts to increase supermarket efficiency.
The Toyota Production System (TPS) is a much heralded system of continuous process improvement that many industries are attempting to replicate. Liker and Hoseus (2008) described TPS as a simple set of principles that thousands of companies throughout the world have worked to implement. Each of these companies has experienced varying levels of success. According to Liker and Hoseus, the difference between successful and unsuccessful implementations is the use of human resource philosophies related to lean. In the forward to the Toyota Culture book, Pete Gritton Vice President of Human Resources for Toyota Engineering and Manufacturing of North America, described the culture change required for a successful implementation of lean principles. A thorough understanding of quality principles is lacking in higher education provides an explanation of implementation difficulties (Asif & Raouf, 2013). Recent research on continuous improvement in higher education has not focused on the culture change needed for successful implementation. This lack of knowledge of the core principles needed for successful implementation has caused difficulties with long-term sustainability. The Japanese taught the importance of respecting individuals and developing them to continuously improve. The key to successful continuous improvement through lean and that which makes Ohno’s approach successful is teaching employees to think lean, being patient and not jumping to conclusions (Womack & Jones, 1996). It is about observing the process and not using a Band-Aid fix that does not address the root cause of the problem. This is the Toyota Culture created by Ohno—a culture in which managers and supervisors do not fight fires all day every day and make progress by slowing down and following lean principles.
The Toyota Way is about culture and includes four management principles: philosophy (long-term thinking); process (eliminate waste); people and partners (respect, challenge, and grow them); and problem solving (continuous improvement and learning).

TPS is based on the 14 principles of the Toyota Way (Liker, 2004):

1. Base your management decisions on a long-term philosophy even at the expense of short-term goals.
2. Create a continuous process “flow” to bring problems to the surface.
3. Use “pull” systems to avoid overproduction.
4. Level out the workload (Heijunka) like the Tortoise, not the Hare.
5. Build a culture of stopping to fix problems, to get quality right the first time.
6. Standardized tasks and processes are the foundation for continuous improvement and employee empowerment.
7. Use visual controls so no problems are hidden.
8. Use only reliable, thoroughly tested technology that serves your people and processes.
9. Grow leaders who thoroughly understand the work, live the philosophy and teach it to others.
10. Develop exceptional people and teams who follow your company’s philosophy.
11. Respect your suppliers by challenging them and helping them improve.
12. Go and see for yourself to thoroughly understand the situation (Genchi Gemutsu).
13. Make decisions slowly by consensus, thoroughly considering all options; implement decisions rapidly.

14. Become a learning organization through relentless reflection and continuous improvement (kaizen).

Lean principles provide a framework for approaching continuous improvement. “Quite often we try to improve a process in isolation when problems occur. In fact this approach can sub-optimize the overall performance of a process unless we have a good understanding of the impact of adjusting or improving a sub-process within a process” (Antony, Krishan, Cullen, & Kumar, 2012, p. 941). Higher education institutions, as other industries, operate in silos with poor communication between departments. This functionality, or lack thereof, presents a barrier to long-term implementation success of process improvement strategies. Lean principles provide a foundation that seeks to map the entire current state, including all processes followed by strategic process improvement. Lean seeks 100% involvement and engagement across the board. In higher education process improvement is siloed and facilitated by select groups. For optimal continuous improvement through lean, continuous improvement must be ongoing and must involve cross-functional teams.

**Six Sigma**

Six Sigma is one of the world’s most established and respected business management concepts. It is a structured problem-solving methodology that allows businesses to drastically improve their bottom lines while increasing customer satisfaction (Harry & Schroeder, 2000). Companies that implement Six Sigma can expect improvements in quality, productivity, customer satisfaction, and increased
profits. The Six Sigma methodology is metrics driven to allow for quantifiable, measureable results. The model is based on a structured approach to problem solving that includes five steps: Define, Measure, Analyze, Improve, Control (DMAIC). According to Harry and Schroeder (2000), the definition of quality has changed with Six Sigma. Historically companies defined quality when standards and performance were met; the way in which those standards were met was unimportant, as well as whether rework was needed to obtain end product quality. Six Sigma defined quality as work performed, products created, and services offered correctly the first time with zero rework needed.

Pande and Neuman (2000) listed the first step in the DMAIC model as Define, which consists of project charters, process maps, and identification of the customer’s voice. Project charters used in Six Sigma are shorter than those in other disciplines such as project management. The charter often is one page that includes descriptions of the problem, baseline data, team members, goals, milestones, purpose, and scope. The object of the charter is to provide focus for the team tasked with solving the problem. Team members also map the process using a variety of tools but primarily the SIPOC method (Suppliers, Inputs, Process, Outputs, and Customers). The SIPOC method is high-level and serves to provide a basic understanding of the process from supplier to customer. A critical step in DMAIC is to understand the critical inputs or Xs (Pande & Neuman, 2000). In addition to mapping and to creating a project, charter team members must focus on the voice of the customer to ensure the project is aligned with the customer’s needs. This step checks the importance of the project being considered.
The second step in the DMAIC model is Measure (Pande & Neuman, 2000), which involves data collection and analysis. While many organizations operate on “gut feelings”, Six Sigma relies on data-driven problem solving. If data are to be used to make decisions, the data must be representative, have a sufficient sample size, be relevant, and take into consideration any contextual factors. Operational definitions of the metric of question must be defined and data collection systems validated. Once these parameters have been checked, project teams can use basic and high-level statistics to analyze the data. Tools such as control charts, multi-vari charts, design of experiments, frequency diagrams, regression, and anova are used to uncover the factors that are critical.

Pande and Neuman (2000) indicated the third step in the DMAIC model is Analyze (2000). Team members work through the Analyze step to identify and verify all potential root cause(s). Root cause identification is improved through a thorough understanding of the situation after considerable time has been spent collecting and analyzing data. Six Sigma utilizes fishbone diagrams, is/is not sheets, the five whys, and brainstorming to identify root cause. Six Sigma takes root cause analysis one step further by conducting root cause verification, which involves further testing and analysis to show the relationship between the root cause factor and the output.

Once a root cause(s) has been verified, the fourth step in DMAIC is Improve. During this step team members generate potential solutions that will address improvement of the root cause. Solution ideas are weighted and selected based on cost, benefits, and feasibility. Prior to full-scale implementation, Six Sigma teams often pilot solutions to allow for tweaking and further improvement (Pande & Neuman, 2000).
this point in the problem-solving methodology, teams recalculate data from Measure to show before and after findings. These findings illustrate that improvements had a positive impact. If a positive impact was not found, team members go back through the process until improvements can be verified.

The fifth and final step in DMAIC is Control. While many problem-solving teams finish their work after implementation, Six Sigma projects involve ongoing monitoring to ensure key process input variables are maintained. All needed documentation captures and shares findings from the project. At this point, all work is standardized and employees are trained on new processes. The DMAIC model is a thorough problem-solving model. It is successful because the structured approach helps make sure problem-solving teams do not skip steps and jump to conclusions based on gut feelings alone (Pande & Neuman, 2000).

The DMAIC model was created by Motorola in the 1980s. During which American manufacturers were taking notice of industrial progress in Japan. Businesses were making efforts to improve quality and productivity. Mikel Harry, a senior staff member for Motorola, created a detailed plan that would improve product design, increase productivity, and reduce costs (Harry & Schroeder, 2000). Harry used statistical analysis to improve processes and problem solving. Upon leaving Motorola, Harry opened the Six Sigma Academy, and General Electric and Allied Signal were the first two clients.

Lean, Six Sigma, and TQM are three examples of the most widely known continuous improvement philosophies. While the principles originated in manufacturing, the past decades have shown a dramatic increase in application to industries such as
service, banking, healthcare, and education. The foundational belief in the ability to continuously improve a process does not solely reside in manufacturing. Every industry operates with processes that can be improved if one believes in continuous process improvement. “The successful track record of Six Sigma in business environments warrants the investigation of applying the methodology to academic operations such as student retention efforts” (Jenicke, Holmes, & Pisani, 2013, p. 210)

**Barriers to Persistence**

Historically, community colleges have had lower completion rates than four-year institutions, and have offered open access to all students who apply. Open access is a key component of the community college mission (Dowd, 2007). They are at the center of the country’s commitment to providing “universal higher education” (Vaughan, 2006, p. 3). Vaughan (2006) noted that access is not just about open admissions; access includes location as well as the colleges’ responsibility to provide support services like counseling, advising, and financial aid. Access ensures that students have every opportunity to succeed.

Open access often results in students who present with a variety of barriers to admission and enrollment, which has prevented them from attending a four-year institution. Bolge (1994) described six categories of access barriers that students face: socioeconomic, socio-educational, institutional organization and culture, personal access barriers, socio-cultural, and federal and state regulations. Socioeconomic barriers include access and availability of childcare options and lack of transportation. Socio-educational barriers include academic college readiness and lack thereof. Lack of information, low self-esteem, lack of organization skills, and low college knowledge are classified as
personal access barriers. Often a lack of familial support, language barriers, and cultural barriers present challenges for students. Bolge classified these as socio-cultural barriers. Financial aid requirements, affirmative action policies, and lack of funding support are grouped into federal and state regulation barriers. Last, Bolge discussed institutional organization and culture barriers that include restrictive policies, admissions requirements, lack of personalized counseling, and lack of sensitivity among staff and faculty members. Community college students clearly have a number of barriers that prevent them from admissions, enrollment, and re-enrollment.

Existing research has heavily emphasized those barriers that students bring to the table, such as academic preparation, lack of financing, familial support, transportation, childcare arrangements, and college knowledge. In the university setting, first-time freshmen often enter straight from high school. Lack of academic preparation is a barrier to student persistence. The United States Department of Education found that 43% of students entering two-year institutions in 2000 needed at least one remedial course (Parsad & Lewis, 2003). Some estimates are upwards of 75% who need at least some remediation. Another barrier is a lack of college knowledge. A large portion of community college students are first-generation college students and lack the knowledge to navigate through the complex processes and have no family or friend alliances to provide tips and tricks. First-generation students have low levels of familial support (Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). Terenzini et al. (1996) cited parental educational level as a significant factor in first-generation student expectations. Low levels of familial support coupled with low college knowledge lead to persistence
issues with first generation students. First generation students struggle with social and academic integration compared to their second-generation counterparts.

Fowler and Boylan (2010) recommended providing clear student guidelines that clearly explain expectations, including attendance policies, grading, advising, classroom behavior, and tutoring. Community colleges are moving toward required orientation sessions and/or first-year experience courses. These sessions provide opportunities for students, particularly those with low college knowledge to increase their understanding of navigating college processes, as well as setting clear expectations.

While these factors are important, little research has been conducted on institutional practices and policies created internally by colleges that make it difficult for students to apply, gain acceptance, and enroll. According to the National Center for Education Statistics (NCES, 2011), 80% of all community college students are employed. Nearly 20% of those work 20 or more hours per week. This statistic would indicate that community colleges should offer admission, records, financial aid, and other student services that fit the working student’s needs. Community colleges have made some attempts at expanded hours, but an opportunity exists to examine current state operations and determine whether they fit the needs of the student.

The amount of time spent working, whether full or part time, hinders the available time for class and homework activities. Working 30 hours or more has a negative effect on academic progress (Furr & Elling, 2000). In addition to the high percentage of working students, 70% of community college students are enrolled part time, slightly over 30% have dependents, 15% are single parents, and 40% have delayed enrollment
(NCES, 2011). While these factors present as barriers to success institutions must look examine that which institutions created to offer optimal circumstances for these students.

Lucas and Meltesen (1994) suggested barriers to persistence are due to personal factors, to include work demands, academic preparedness, familial responsibilities, and part-time enrollment. With open access missions, community colleges must work with each student and the barriers with which they present. Schwartz (2010) found that community college graduation rates and persistence vary greatly across institutions, from 9% to 60%. Schwartz indicated the variation in student persistence is due to institutional characteristics. Tinto’s (1993) model of student departure described the reasons that students leave an institution, as they need both social and academic integration. Of particular interest is departure during the first year of college. “The character of one’s experience in that year does much to shape subsequent persistence” (Tinto, p. 14). “If a student is going to leave the likelihood of leaving is greater during the first year and before the second year representing 67.7% of all students who depart” (Tinto, p. 15).

Institutional practices and strategies represent an opportunity within the control of the institutions to improve student persistence. Both social and academic integration can be established through college practices such as group work, faculty availability before and after class, increased customized advising, personal attention, and having a college contact.

Deil-Amen and Rosenbaum (2003) found seven obstacles for students who lack the college knowledge needed to succeed, to include bureaucratic hurdles, confusing choices, student-initiated guidance, limited counselor availability, poor advice from staff, slow detection of costly mistakes, and poor handling of conflicting demands. Deil-Amen
and Rosenbaum suggested setting high expectations for students to be familiar with the bureaucratic structure. In many cases the student does not understand the processes of enrollment, registration, financial aid, navigating the system, and asking for needed information. Without this knowledge, student success is negatively impacted. Institutional mechanisms can positively and negatively impact student persistence.

Deil-Amen and Rosenbaum (2003) studied the impact of college knowledge and low socioeconomic status on student persistence, at seven community colleges and seven private occupational colleges in large Midwestern cities. They found that community colleges serve a wide variety of educational needs from transfer options from two-year to four-year schools, adult education, lifelong learning, customized contract training, English as a second language, diploma preparation, and remedial classes. The capacity to deliver on these broad educational options is difficult for community colleges. They find it difficult to facilitate these processes, which also complicate students’ decisions on their best options. The high number of options increases the need for students to understand them, which often is an expectation that students with low socioeconomic status and low college knowledge cannot meet. This causes difficulty for students in acquiring the information and understanding regarding specific programs and courses, which leads to mistakes and setbacks for them.

Institutionally created complexity creates barriers to student persistence. Deil-Amen and Rosenbaum (2003) cited college size and lack of customized advising as factors impacting persistence. Complexity in course schedules and lack of guidance also impact student persistence. Students encounter barriers in financial aid, registration, completing forms, and obtaining specific and accurate program requirements. Deil-
Amen and Rosenbaum found that students had “unpleasant and even hostile encounters with financial aid staff” (p. 125). Students perceived that they are given the runaround in searching across campus to find answers to their questions and to acquire information. Often they visit multiple departments in seeking information and receive inaccurate information, which is a possible explanation for the extension of time in college (Deil-Amen & Rosenbaum).

Community colleges do not use a proactive approach for outreach activities. If guidance is needed the student must initiate the process. Deil-Amen and Rosenbaum (2003) described student-initiated guidance as a burden and obstacle. “The consequences of this situation for at-risk students are fourfold. First, students must be aware of what kind of help they need and when they need it. Second, they must be informed about how and where to get this help. Third, they must actually go get it. Finally, students must seek information well in advance” (p. 127). Student-initiated assistance puts the burden on students requiring them to take action when often they lack the knowledge to do so. Community colleges lack the practices to combat this barrier, which is a problem that should be addressed.

Barriers to persistence originate from the student and from the institution. Brock (2010) reported on three low hanging fruit reform areas for higher education: developmental education, student support services, and financial aid. It is estimated that over 70% of all community college students need financial aid. While many need it, only some apply. A 2006 study by De La Rosa suggested that over 50% of students who could have filed the Free Application for Student Aid (FAFSA) did not. Del La Rosa found that low income and minority groups were unable to identify any source of
financial aid programs. The bulk of admissions and enrollment occurs within student services departments, as well as advising and financial aid counseling. According to Brock (2010) these areas need reform in order for community colleges to improve persistence.

The K-12 system has received much of the blame for underprepared students. Lack of academic preparation primarily falls on the shoulders of secondary schools; however, colleges and universities are left with the responsibility of working with these students. Open access missions result in community colleges bearing the bulk of the responsibility in helping these students. Some educators feel change is possible and needed in remedial education citing the need to update outmoded teaching methods (Brock, 2010). Brock (2010) found that many students arrive with a need for guidance on courses to take, adding and dropping courses, applying for financial aid, and obtaining help when needed. Although first-time students need help, students require assistance with advising and degree requirements as they progress through their coursework. Counselor to student ratios often represent a lack of availability to provide customized and ongoing counseling. Financial aid counseling represents an institutional barrier to student persistence, as some are uncertain about handling the cost of college, which prevents them from enrolling.

Braxton and Mundy (2001) identified institutional levers that impact student persistence. Particularly in student affairs, staff members have a responsibility to develop the student both academically and co-curricular. Braxton and Mundy recommended that these staff members promote growth and learning, as well as possess an awareness of the various student supports such as peer mentoring and support groups. The student affairs
office should serve as an advocate for the student, and should examine the student experience to seek ways to improve the student’s experience both within and outside the classroom.

Institutional practices are equal barriers to student persistence as personal student barriers. Researchers have found that institutional policies and practices also play a role in persistence. A magic bullet cannot solve retention issues; institutions must improve persistence by “organized programs supported by adequate funding, administrative oversight, and favorable campus policies” (Hossler, Ziskin, & Gross, 2009, p. 2). Hossler et al. (2009) further emphasized the importance of a positive campus culture created by top leadership, which includes a value for learning and holistic efforts from various departments. Hossler et al. provided an example of holistic continuous improvement by student affairs and academic affairs working together.

Tinto (1993) described social and academic student needs which are within the control of the institution, and noted that some student departure is good for both the student and the institution. Conversely, departure can be harmful for the student and the institution; this type of departure is classified as voluntary and can be prevented by implementing best practices. Braxton and McClendon (2002) identified eight domains of institutional practice that can positively and negatively influence student departure. The eight domains are defined as: academic advising, administrative policies and practices, enrollment management, faculty development, faculty reward system, student orientation, residential life, and student affairs.

Braxton and McClendon (2002) listed 20 implementation activities across the eight domains that impact retention. One of their recommendations for advising involved
expanding advisor roles beyond solely recommending and registering students for courses. This includes discussing social integration and encouraging students to identify communities or groups in which they would be interested in participating. For commuter colleges, student affairs should develop social environments that create engagement and connection. Recruitment documents should represent the actual college community through accurate descriptions, and students should be encouraged to visit campus early.

Advising, counseling, financial aid, support groups, learning communities, active learning, and student points of contact are institutional levers that can positively impact student success. Ziskin, Hossler, and Kim (2010) highlighted persistence as a combination of interactions between the student and the institution. Both student and institutional barriers play a role in persistence. “If there is one overarching lesson, it is that changes in higher education policies and practices can lead to improvements in college attendance, persistence, and completion” (Brock, 2010, p. 124).

**Continuous Improvement in Higher Education**

“Revolutions in business practice don’t just happen. There must be an action plan that real managers in real companies can deploy” (Womack & Jones, 2003, p. 313). Womack and Jones (1996) recommended an action plan for effective continuous improvement implementation that included the following elements: find a change agent, obtain the knowledge, find a lever, map your value stream, reorganize by product or value stream, create a lean function department, fix and fix again, and utilize policy deployment. Although these steps apply to higher education, at first glance they appear to be foreign. Every initiative needs a driver or change agent who can remain neutral yet focused on continuous improvement. Obtaining the knowledge refers to fully
understanding a process from the eyes of the customer and the subject matter experts; e.g., fixing a car without any mechanical or automotive repair background. Without a thorough understanding of the current state, effective changes are difficult, particularly making appropriate changes. Finding a lever is the catalyst to change. In times of economic recession, industries often are forced to change, which is their lever or motivation. Relative to higher education, increased accountability in conjunction with decreased funding has created a need for change and can serve as the lever for many institutions. Womack and Jones described a lean function department that serves as the key driver of the lean process across the organization. While these departments are small in scale, they are mighty in action and leadership responsibility. Fix and fix again refers to the process of continuous improvement, building a culture of change, and removing the old “no” culture. The “culture of no” has been coined as a phrase in some organizations that are opposed to change or continuous improvement; these organizations are comfortable with the status quo. According to Womack and Jones, utilizing policy deployment is likely the hardest stage, as it forces “senior managers to make painful choices about what is really most important for the organization” (p. 326).

While lean in higher education is not widespread, it has been deployed with some success, although researchers have noted the lack of long-term deployment (Thalner, 2005). According to Thalner (2005), individual departmental initiatives have been more successful than institution-wide implementation. Institutional buy-in and acceptance of the need for continuous improvement is a barrier to long-term success.

Total Quality Management (TQM) has been adopted in higher education as Continuous Quality Improvement (CQI). According to Xue (1998), business and
industry has found success with continuous improvement, as seen by improvements in quality, productivity, and profits. Higher education success has been limited by the academic culture that is dramatically different from business and industry. The ever-increasing age of accountability in higher education has resulted in policymakers and the general public calling for improvements. According to Waterbury (2008), higher education students are the end customer and demand improvements to academic and administrative student support processes.

Higher education institutions have utilized continuous improvement methodologies since the 1980s. Deming worked with Oregon State University to implement TQM. Students, faculty, and staff were unhappy at that time with university practices (Waterbury, 2008). The University facilitated improvement projects that led to improvements in overall satisfaction. A key milestone that accelerated continuous improvement was acceptance of the value of viewing students as customers (Coate, 1990). Higher education institutions invest in TQM and continuous improvement methodologies such as lean for a variety of reasons, including external pressure, desire to improve student outcomes, reductions in funding, and quality improvement. A 2012 study by Mattis surveyed administrators and staff at Michigan community colleges and found administrators and staff were aware of the need for continuous improvement in higher education. Barriers to acceptance included unwillingness to change, lack of competition, attitudes, and egos. Mattis found that the need for these methodologies has been recognized in order for significant quality improvements.
Empirical Studies

Froehlich (2011) conducted a phenomenological study to examine organizational performance improvement in higher education student affairs. Froehlich sought to improve overall understanding of the experiences of student services staff during implementation of quality practices and principles. To obtain a thorough understanding, Froehlich interviewed nine staff members in student services with at least three years of experience and who had participated in continuous improvement activities. A key factor impacting performance improvement in higher education was the change management process. Additionally, while some participants initially felt as though continuous improvement added work responsibilities to an already full load, they also noted reductions in job tasks due to process streamlining. Clear communication on expectations and roles was found to be necessary, as some participants were unclear in their roles.

Continuous improvement strategies should ultimately result in process changes. Individuals respond to change in a variety of ways. Leadership support is a key driver for change and individuals often observe leadership reaction and support to determine the way in which they react. Leadership commitment, approach, and readiness to change influence individuals’ reactions to the change. Continuous improvement is unlikely to succeed without leadership’s support and influence.

Discomfort relative to change can occur from the large amount of uncertainty in the circumstances the change will bring. Process changes in higher education were described as infrequent by Froehlich (2011). Acceptance of the status quo becomes a culture in which individuals are reluctant to question current processes or procedures.
Complacency prevents a culture of continuous improvement in which change is not valued. Participants in Froehlich’s 2011 study emphasized the need for communication throughout the change process. In order to lessen uncertainty about the changes that will occur, communication can increase awareness and participation in the process, and is seen as an aide in increasing support and buy-in. The lack of participation and leadership effort to seek out involvement can be a barrier to successful implementation.

Continuous improvement methodologies such as lean, Six Sigma, and TQM have been successfully implemented in various industries throughout the world. Some institutions of higher education have dabbled in continuous improvement over the last several decades. Bartell (1996) compared implementation of TQM in industry to one in higher education, with a focus on examining the differences, comparing implementations, examining facilitator role, and identifying implementation barriers. Bartell found organizational context and facilitator role to be key factors in implementing continuous improvement practices. TQM and continuous improvement are thought to be applicable to all industries, including education. Continuous improvement includes an extensive focus on the customer and creating value for the customer. Project selection often is prioritized by customer needs and desires. In business and industry, an increased comfort level exists in being aware of their customers, both internal and external. Participants in Bartell’s study found great difficulty with thinking in terms of the student being considered the customer of the university, which impeded the process. These differences in organizational context between industry and education must be understood in order to improve implementation of continuous improvement within higher education.
Bartell (1996) identified the facilitator as a key factor in TQM implementation, to include characteristics of patience, high levels of empathy, self-awareness, and credibility are key facilitator characteristics. Effective facilitators should to be able to accurately read the group and access group needs. Based on assessment, the facilitator should tailor the group work to fit the group’s current position. Patience is needed to guide and coach process improvement teams through barriers and blocks. Bartell also described an additional skill as the ability to quickly gain knowledge of key acronyms, verbiage, and processes specific to the area in which individuals work. For this case study, outside facilitators were utilized in the higher education setting due to a lack of current TQM and continuous improvement knowledge. In order to be effective, outside facilitators must be able to quickly understand the organizational climate and context. Facilitators in higher education must be carefully selected to fit these qualities.

Business and industry such as Ford, IBM, and Xerox selected TQM as a methodology to improve quality and productivity. These industry partners felt the need for higher education institutions to be involved in researching TQM and preparing students in its approaches and methodology. As colleges and universities became engaged in TQM, a push was observed to use the term of Continuous Quality Improvement (CQI).

Xue (1998) examined the optimal implementation characteristics of CQI in higher education, by conducting field studies of institutions that had implemented the system. In both industry and education, organizations have experienced a variety of successes and failures. Through field studies and surveys, Xue discovered key elements for successful implementation and reasons for failure. Brown, Hitchcock, and Willard (1994) found
success or failure in TQM is not a problem of philosophy but of implementation. TQM failures were found to be caused by lack of management commitment, poor pacing and education, lack of bottom-line results, failure to empower, and leadership issues. The role of leadership is critical in influencing the success or failure of CQI implementation. In some cases, leadership expressed commitment but was not closely involved with implementation. Leadership involvement at both the top and middle management levels is crucial. In higher education, CQI implementation middle managers were omitted which led to decreased success. Factors leading to successful implementation include sustained leadership commitment, strong customer focus, employee training and engagement, and an emphasis on continuous improvement. Leadership commitment across all levels is necessary for successful implementation. Trained and skilled problem-solving teams are seen as the foundation for successful implementation, particularly when empowered to make decisions. Successful CQI implementation results in improvements in employee morale and customer satisfaction (Xue, 1998).

Xue (1998) described specific strengths exhibited by institutions that promoted successful CQI implementation. Senior leadership involvement and support is demonstrated by promoting and participating in CQI. Strong data analysis and information systems are developed and maintained, which track and monitor key process metrics. Successful institutions also develop strategic plans and goals. Training is offered and all levels of the organization are included. A clear process focus is needed for successful implementation. In order for TQM/CQI to be successful, administrators must acknowledge that higher education institutions are not a manufacturing plant floor. Fundamental differences exist in culture that must be clearly understood, such as the
definition of a customer. Faculty involvement was found to be minimal and often occurred because TQM was not invented in academia. This caused a lack of support and participation from faculty, who were concerned with academic freedom as well as classifying the student as a customer.

Administrator participation, in the form of commitment and action, improves the implementation of CQI in higher education. Mattis (2011) surveyed community college administrators in Michigan to gauge acceptance and assessment of the appropriateness of CQI tools in higher education, and found that administrators possessed a positive opinion of its usefulness. Participants viewed academic areas as definable processes that can be improved using process mapping, benchmarking, and Six Sigma tools. Although these tools and technologies were developed in manufacturing, Michigan community college administrators affirmed their value and applicability in higher education.

While TQM implementation has been successful in business and industry, higher education institutions question the applicability. Thalner (2005) noted that institutions in Michigan had adopted CQI practices; however, rather than focusing on institution-wide implementation, they focused on departmental initiatives particularly in Financial Services, Facilities Management, Auxiliary Services, and Corporate Training. Thalner’s (2005) survey found that 68.8% of the respondents had initiated CQI methods at some point within their departments. The respondents indicated they used most of the CQI tools, including defining the customer, data-driven processes, active engagement of administrators and employees, and benchmarking. Performance was not tied to evaluations or rewards, and specific continuous improvement training for employees was lacking. Continuous improvement teams and benchmarking were the two most valuable
methods cited by the respondents. Drivers to implementation were listed as improvements to product and service quality as well as improvements to efficiency. In addition, the commitment of the immediate supervisor and institutional leadership was seen as a key driver. The most common obstacle was the lack of time needed to commit to implementation.

Much of the existing resistance to continuous improvement and lean implementation in higher education is due to the development of lean principles in manufacturing as opposed to higher education. Waterbury (2008) sought to develop an Educational Lean Improvement Model (ELIM) that could use a process of improvement that has been successful in industry and adjust it to fit the needs of higher education. Waterbury conducted a Delphi study utilizing lean and continuous improvement experts in both public and private four-year and two-year institutions, and defined key tools, core lean principles, key lean processes, as well as metrics to measure success. The Delphi study was used to build the ELIM and to identify the key required elements for successful implementation.

Shewhart and Deming created a continual improvement process known as the PDCA or PDSA cycle. Plan, Do, Check, Act or Plan, Do, Study, Act is a four-step process for continuous improvement. Based on the input from the Delphi study, the basis of the ELIM model is on the PDSA cycle. In the planning stage, institutions must prepare for change and identify selected processes for improvement. Top level leaders such as the president/vice president, chancellor, or deans make the initial call to action (Waterbury, 2008). For optimal implementation, top leaders select highly visible projects, and also identify incentives for participants and reward and recognize them for
their efforts in process improvement. Waterbury emphasized the importance of identifying the key value stream, mapping the process, and using kaizen events to facilitate change.

The second step in the ELIM is the do phase in which participants identify the current state of the process and develop a future state model. Focus is placed on the customer’s point of view; and participants identify project scope, objectives, process maps, metrics, as well as conduct data review during this phase (Waterbury, 2008). Key metrics should focus on customer satisfaction, amount of rework, wait time, number of steps in the process, cycle time, and cost. The third step is the study phase in which the future state has been implemented and teams focus on assessing that which works in order to make adjustments. The fourth and final phase is the act phase in which improvements are again reviewed and standardized, if applicable. Revisions can be made and successes are celebrated and recognized. During the act phase, Delphi study participants recommend standardizing processes, document improvements, communicating results, celebrating, reflecting, and repeat.

Fundamental to lean principles is the focus on the customer and reliance on the subject matter experts. Continuous improvement projects focus on increasing customer satisfaction and creating processes with as few non-value added steps as possible. In addition to a focus on customer needs, subject matter experts at any level are highly valued in developing the current state and future state maps. These experts often possess significant insights to daily operations. In higher education, the student as consumer should be included in assessing value and driving process improvement.
Dunlop (1970) studied student perceptions of student personnel services at the University of Wyoming. The purpose of this study was to examine student perceptions in critical areas of student personnel services such as the registrar, student activities, student discipline, student orientation, financial aid, advising, counseling, housing, and others. The researcher sought to examine students’ views of services offered by the university as far as effectiveness, awareness of the services, importance, and recommendations they improvement. A student perception questionnaire was created to obtain this information.

Statistical analysis was conducted on the returned items to include frequency counts and hypothesis testing. The hypothesis testing was completed to examine the significance of results by gender, on-campus or off-campus housing, and in-state and out-of-state status. No significant differences in responses were noted based on the three hypotheses. Students rated admissions and the registrar services as very important, having awareness of the key functions, and having positive interactions with the departments. Respondents also indicated significant positive interactions with counseling and placement. The area of financial aid was rated as important, and respondents were aware of the services in this area but had negative responses for the department. Student health and housing also was rated as unsatisfactory. Student orientation received a mixed review, with on-campus students rating higher on effectiveness. Effectiveness of transfer orientation was listed as low. Students were generally aware of the services offered in student personnel services and rated these services as important. In terms of effectiveness, some areas were rated as satisfactory while others were unsatisfactory. None of the student service areas were rated excellent.
The study conducted by Dunlop (1970) was limited in scope, as the respondents were from only the University of Wyoming. The research focused primarily on student awareness of activities and functions in student services, perceived importance, and effectiveness. While no significant differences were noted in commuter and on-campus students, a few sections highlighted different perceptions in some key areas. This type of research is critical for community colleges, as the majority of students are commuters.

Byrts (1983) conducted a similar study to Dunlop’s 1970 research on student perceptions of student personnel services. The purpose of Byrts’ research was to examine the effectiveness of orientation and new students on boarding, the health center, resident development, university student development, judicial affairs, student government, career services, student activities, and minority affairs. Byrts sought to understand the differences, if any, between the perceptions of male and female students by race and by class standing. A student services survey was sent to 381 students at The Florida State University. Byrts suggested that regular assessment of both faculty and students is necessary to better understand the needs of the student and whether the institution is meeting those needs. The researcher sought to gain insight in regarding strengths and weaknesses and to ultimately suggest possible modifications that would serve the student. Students are the primary consumer of student personnel services. With this in mind, the student should be heavily involved in the assessment and planning of student personnel programs. The student is closest to the process and the activities that comprise the student services department. Byrts suggested that “the primary product that can be attributed to programs is the development of students” (p. 32). In an effort to meet program goals, the first step should be to document and understand the current state. In
order to accomplish this, data on student perceptions should be collected. Byrts adapted two existing student personnel services questionnaires created by Fitzgerald (1959) and Dunlop (1970). A hybrid survey was constructed using questions from each and adapting them to fit the specific programs in place at The Florida State University.

Findings from the 1983 Byrts research indicated no significant differences in perceptions of student personnel services by gender regarding importance, while a significant difference was seen in the frequency of use. Females reported using several of the services more than males, to include student development, career services, and minority affairs. Significant differences also were found in male and female perceptions of satisfaction with student personnel services; females were more satisfied than males. Additionally, significant differences were noted by race and class standing on perceptions of importance, frequency of use, and satisfaction. Part four of the questionnaire asked students to comment and/or give suggestions on any and all of the student personnel services. All 11 student personnel services received both positive and negative comments. Orientation and new student programs received both positive and negative comments, which Byrts suggested was due to positive feedback on the transfer orientation geared toward those students transferring from other institutions. The basic orientation for first-time freshmen elicited negative feedback. In addition to the negative comments on orientation, students made recommendations to improve advising, housing, the health center, the student union, judicial affairs, student government, career services, student activities, and minority affairs. Many of the negative comments focused on awareness of such services, effectiveness of services offered, and associated cost of services. Findings from this study indicate a need to further assess each of the 11
departments in student personnel services. The student comments did not highlight glaring problems, but rather, a need for overall improvement to these departments. Byrts suggested further studies of student perceptions using personal interviews for a more thorough and comprehensive investigation.

To ensure student personnel services effectiveness, Shigley (1958) believed that ongoing evaluation is necessary. The researcher suggested that previous research focused more heavily on quantitative measures and did not highlight in detail the opportunities for student services improvement. Shigley sought to answer the question: “How well is our program functioning?” (p. 2), and stated that evaluation is essential and a prerequisite to improvement. The purpose of Shigley’s research was to evaluate with both quantitative and qualitative data consumer perceptions of effectiveness to be used to improve the total student personnel services program. Personal interviews were utilized to collect data from 95 students and 27 faculty members. Similar to Byrts (1983) and Dunlop (1970), Shigley chose to study 12 areas in student personnel services that included recruitment and admissions, new student orientation, counseling, health services, housing, food services, extra-curricular activities, adjustment of the institutional program to student needs, student financial aid, records, and student guidance and support. The Inventory of Student Reaction to Student Personnel Services questionnaire was chosen for the interviews. Shigley found that student services as a whole was inadequate, and certain areas in student aid, placement, and guidance needed improvement. A need was seen to improve communication about information and available services that resulted from a lack of knowledge of services offered. Faculty spoke about and rated student personnel services more positively than the student body. Faculty members with the most control
and influence over student personnel services for the most part were the most satisfied with programming.

The literature has shown a consensus confirming the need for student services evaluation. All three studies included students and utilized survey questionnaires, one using personal interviews. Evaluation is essential to document and understand the current state of student services programming. All three studies examined only one college that was a four-year institution with services such as housing, health services, and food services that are unavailable at many community and technical colleges. Shigley (1958) illustrated a need for evaluation in particular, as the colleges were in a growth period. Over the last decade many colleges have increased enrollments and have stalled or regressed during the last two years. A lack of student services research was noted at community and technical colleges over the last decade. Student services are the entrance to the college experience and position students to be successful. Community colleges serve as the access point for many individuals who could not attend higher education without open access opportunities. If barriers are being created by internal policy, practice, and procedure, they must be uncovered and supports put in place to ensure that community colleges provide the access they publicize. Each of the studies agreed on the overall importance of student services. With the criticality of student services and the overall state of student success outcomes, a study is needed to examine the performance of community and technical colleges.

Summary

The review of literature focused on (a) the fundamental mission of community colleges to serve a wide population, (b) continuous improvement both within and outside
higher education, and (c) barriers to persistence. Community colleges offer open access to all who apply, and serve a population of underprepared and under resourced individuals. Community college students arrive with a variety of challenges and barriers to persistence, to include financial limits, familial responsibilities, poor preparation, lack of support, lack of transportation, and lack of college knowledge. While existing research has focused on student barriers, less research exists on institutionally created barriers to persistence.

Continuous improvement methodologies such as lean, Six Sigma, Deming’s PDCA, TQM, and CQI are approaches to improving and streamlining processes while creating gains in quality and efficiency. The specific foundation in lean continuous improvement is focus and trust in the subject matter expert (SME). SMEs are considered to be valuable assets, as they work closely with a process. As process improvement initiatives are explored, SMEs can provide insight on the current state of operation and ideas for improving and creating a better future state. When SMEs are coupled with fresh eyes beyond the process, breakthrough interventions can occur.

Continuous improvement has been widely accepted in business and industry, but only a fraction in higher education have accepted the concept. With increased pressure and accountability, higher education institutions can capitalize on continuous improvement techniques that have been shown to be successful in higher education. Researchers have identified best practices for continuous improvement in higher education, with leadership support as an integral component.
CHAPTER III: METHODOLOGY

Introduction

Community college students arrive with a variety of barriers that inhibit persistence to receiving a credential. Access to higher education has increased to include more women and minorities, although student success has not kept up (Brock, 2010). Past research has focused on student centered barriers such as job status and the number of hours worked, dependent children, financial concerns, and lack of academic preparation. In addition to barriers to persistence, a category of institution created barriers exists. These are the processes, procedures, and actions by institutions that cause difficulty for students to persist. An increasing number of researchers have examined the programs and interventions institutions have implemented to reduce institution created barriers. Research has focused on those processes internal to the college, such as student support services to include advising and financial aid that impact student success. These barriers are within the control of the institutions to directly impact the student experience and persistence.

Continuous improvement efforts that focus on student success and persistence have been implemented at a variety of higher education institutions. The existing research has indicated that these projects have been top down driven and have not included the experiences and perceptions of subject matter experts working within the targeted areas. The purpose of this research was to better understand the situation, variation, and complexity of processes in community college admissions, financial aid, and advising departments and their impact on student persistence from the perspective of those who work closely in those environments.
This chapter provides a description of the research methods utilized in the study, including type of study (basic qualitative interpretive investigation and the role of the researcher in the study), description of the sample and population, procedures for data collection, as well as the issues of trustworthiness and validity. Finally, the section on ethical considerations addresses fundamental treatment of respondents, particularly for human subjects protection, followed by a brief summary of the chapter.

**Research Design**

Patton (2002) suggested that research question(s) should guide the direction of the research design. When a topic needs further exploration into experiences and when too little is known about the phenomenon, a qualitative approach is most appropriate. Qualitative research is best suited to examine the context and complexities of personal experiences. These experiences allow the researcher to understand and conceptualize the situation and obtain meaning from those experiences. According to Patton, one of the best ways to learn and fully understand the complexities of a situation is “direct participation in and observation of the phenomenon of interest” (p. 21). The researcher paints a picture using the words and descriptions provided by the participants.

For this study specifically, a qualitative research design was used to collect interview data from community college staff members working in financial aid, admissions, or advising. The interviews provide rich descriptions of perceptions, thoughts, experiences, and reflections on the manner in which internal community college processes impact student persistence and success. Interviews were conducted in the field of study in which participants were most at home and in their normal workplace setting.
The goal of this study was to increase knowledge and understanding with a secondary purpose of action. The primary focus was to add to the body of knowledge related to both continuous improvement in higher education and institution created barriers to student success. Patton (2002) described basic research as that which seeks “knowledge for the sake of knowledge” (p. 215). On the other side of the theory-to-action continuum of qualitative research is action-oriented research that seeks to solve specific problems. This research sought to understand the internal barriers, as well as solicit best practices and solutions that minimize the effects of internal barriers to student success.

The research genre was focused on the individual lived experience. The concentration of the inquiry was on the experiences of those working closely with community college students in the processes of admissions, financial aid, and advising. These three areas in student services have a significant impact on the student experience. Frontline employees in these areas are considered the subject matter experts. As the experts, they have numerous experiences and observations of the operation of the current processes, as well as discovering bottlenecks and inefficiencies. Close and personal in-depth interviews provided rich and detailed data, as qualitative research involves emersion into the field of study to enable closeness to the participants.

Interviews are used in qualitative research to produce emotions, reflections, and observations in the participants’ words. “The purpose of interviewing, then, is to allow us to enter into the other person’s perspective” (Patton, 2002, p. 341). Interviews carry the assumption that the interviewee has knowledge about the topic that can be made explicit. Qualitative researchers use the experiences and stories to extrapolate themes
and obtain meaning from the data. The interviews presented an opportunity for participants to recall specific instances in which a process or action provided support or presented a barrier for the student. The three qualitative interview styles include structured, semi-structured, and unstructured. Semi-structured interviews were utilized for this research. An interview guide (Appendix C) was used to lead the discussion but was open to allow for flexibility and a naturalistic approach. An outline assisted in standardizing the interview somewhat across locations and interviewees and allowed for a conversational and situational interview style. While interviews can be time consuming they provided much more rich detail than a survey or questionnaire and better served the purpose of this research.

**Types of Qualitative Research**

Patton (2002) described three types of qualitative data: interviews, observations, and document analysis. Interviews included open-ended questions that provided in-depth descriptions about perceptions, experiences, and knowledge on the subject. Interviews provided verbatim quotes for analysis. Observations involved fieldwork descriptions of processes, behaviors, interactions, activities, etc. that lead to detailed field notes. The third type of qualitative data is document analysis in which the researcher examines written materials including records, correspondence, publications, diaries, letters, memos, and pictures.

Some of the most common qualitative research approaches include phenomenology, ethnography, case study, grounded theory, and biographical. Ethnographers study culture, groups, communities, and organizations, often by way of total immersion to capture patterns, roles, and daily interactions of life (Marshall &
Rossman, 2011). Phenomenological studies seek to “explore, describe, and analyze the meaning of individual-lived experiences” (Marshall & Rossman, 2011, p. 19). Phenomenological research seeks to make meaning of participants’ descriptions, judgments, and feelings about the subject. Interviews provide the data needed in phenomenological studies. Grounded theory focuses on the generation and development of a theory, and brings the researcher into the real world using comparative studies to build on theory development. Cases studies involve in-depth analysis of a single case or example or can include multiple cases using document analysis, interviews, and observation for data collection. Case studies describe various sites and settings and can include critical incidents.

The approach to this research was a phenomenological study to collect in-depth information about individual lived experiences of community college staff particularly those working in admissions, financial aid, and advising. Interviews were employed to gather data, including the thoughts, judgments, and analysis of current processes and procedures by those staff members. These detailed descriptions by interviewees will contribute to the body of knowledge of best practices in student services in an attempt to improve student persistence in community colleges by identifying internal barriers.

The Role of the Researcher

The role of the researcher in qualitative research is that of observer, who seeks to understand the participants’ views while filtering observations through his or her personal lens. The researcher attempted to remain neutral while conceptualizing the data, as researchers must be open to the participants’ personal perceptions and must avoid adding personal interpretations of the experience. Patton (2002) described the process of
qualitative research as “all-encompassing and ultimately personal nature of qualitative inquiry” (p. 47). Researchers must balance closeness with the participants with their own observer judgments. Patton described this as “empathic neutrality”. “It suggests that there is a middle ground between becoming too involved, which can cloud judgment, and remaining too distant, which can reduce understanding” (p. 50). The researcher was submerged in the environment of the participants and served as the instrument of observation. Researcher presence is fundamental to qualitative methodology (Marshall & Rossman, 2011), with the role of interpreting observations. Qualitative researchers must not bias the data based on personal interest; positionality should not influence the findings (Marshall & Rossman, 2011).

**Population and Sample**

For this study, the target population included all staff working in advising, financial aid, or admissions in the selected community and technical college system. This population represented both small and large community colleges in both urban and rural settings. The first step in obtaining a list of potential participants was to identify the Dean of Student Services/Affairs at each college. Those individuals identified frontline staff in admissions, advising, and financial aid. An email invitation was sent to the distribution list of frontline staff. The sample of participants was stratified by department and selected to include individuals from small, medium, and large enrollment sites. Interviews were offered onsite on a date and time of participant choosing, and follow-up phone calls were made to recruit subjects as needed, to interview frontline staff members in each area to include admissions, advising, and financial aid.
Calculating sample size in qualitative research is different than in quantitative research. According to Patton (2002), a tradeoff exists between breadth and depth: “qualitative methods permit inquiry into selected issues in great depth with careful attention to detail, context, and nuance” (p. 227). The breadth and depth is best determined by the purpose of the study. For this study, the purpose was to better understand the situation, variation, and complexity of processes in community college admissions, financial aid, and advising departments their impact on student persistence from the perspective of those who work closely in those environments. To serve this purpose, detailed narratives were collected from individuals working closely with community college students who had firsthand knowledge of the challenges and supports created internally by a community college systems. The level of detail needed to analyze this process required rich descriptions and stories. The sample was representative of the population, described contextual impacts, was sufficient to provide the needed information, and was relevant to the purpose of the research.

The sampling strategy was a purposeful sampling method. Patton (2002) stated that purposeful sampling is “information rich” (p. 40) and intended to gain insight about the phenomenon. While quantitative sampling has a purpose of generalization, qualitative sampling allows for smaller sample sizes yet creates information-rich and in-depth understanding of a particular phenomenon. The interview candidates were selected to represent a balance between small and large colleges, with small colleges defined as those with enrollments less than 5,200 and large defined as those with enrollments greater than 5,200.
Research Questions

The research questions guiding this study were introduced in Chapter I and are included in this section for convenience of the reader. The questions guided the development of the semi-structured interview.

1. What internal processes or experiences prevent students from persisting from application to enrollment as identified by subject matter experts in:
   a. Admissions?
   b. Advising?
   c. Financial Aid?

2. What is currently being done that most positively and most negatively impacts student persistence?

3. What steps in the process from application to enrollment are most challenging and/or confusing for students?

Procedures

The purpose of this research was to better understand the situation, variation, and complexity of processes in community college admissions, financial aid, and advising departments and their impact on student persistence from the perspective of those who work closely in those environments. To meet the study purpose, and understanding was needed of staff perceptions in student services in community and technical colleges. Specifically, this research sought to gather tacit knowledge and subjective understandings and interpretations of departments within student services, such as admissions, financial aid, and advising. In order to obtain staff perceptions, a phenomenological qualitative research design was utilized with a focus on the individual lived experiences of staff
members working closely with community college students. Frontline staff have firsthand experiences and knowledge of policy, procedures, and practices employed that support and inhibit student persistence. The overall qualitative genre was focused on individual lived experiences, and the strategy to obtain these data was in-depth interviews with community college staff. Interviews aided in capturing experiences of community college staff members in admissions, financial aid, and advising in the participants’ words (Marshall & Rossman, 2011).

The setting for this qualitative study was a community college or community and technical college. Many community colleges have multiple campus locations for each home site. For each of the colleges in the study, the site varied from those with the bulk of the enrollment to those with smaller enrollments that serve as satellite sites. The population included staff members working for this community and technical college system in admissions, financial aid, or advising. The participants were selected from the 16 colleges in the community and technical college system. The data collection method was informal, unstructured in-depth interviews with a focus on the interviewees’ personal experiences. The interviews were recorded, with participant consent, and transcribed.

According to Marshall and Rossman (2011), qualitative data analysis involves organizing the data, immersion, generating themes, coding the data, offering interpretation, searching for alternative understanding, and writing the report. Throughout the data collection and analysis, data were segmented into categories and interpretations were made. The interviews were logged and edited with information on those who were interviewed, location, dates, and times. As this study involved multiple sites, human subjects clearance was requested and approved by both Western Kentucky
University and the comprehensive community college system. The researcher gained access to the names of staff members working in admissions, financial aid, and advising through the central system office email database. An email was sent to staff members working in one of the 16 community and technical colleges requesting their participation in the study. Those interested were contacted to set up an interview date and time. Follow-up phone calls were made to increase participation, sample size, and representation.

**Data Analysis**

In-depth, open-ended and semi-structured interviews were utilized to collect data. Taped interviews with each participant were transcribed, read, and reread for understanding and then coded. Coding or categorizing data was an important step in data analysis and involved subdividing the data and creating categories or codes (Basit, 2003). Codes were used to assign meaning and to help in data distillation when working with large amounts of data. By creating a category or code, the researcher grouped the data in ways to help organize the information to serve the research purpose of explaining and describing the phenomena. Coding occurred after data collection with no pre-coding, although it is best when a predefined starter list is created before data collection. For this study, a starter list of codes was developed before data was collected. The anticipated categories included: operating hours, lack of staff, frequency of policy updates, unclear policies, confusing processes, student runaround, federal guidelines, and system guidelines.

In qualitative studies complete and accurate descriptions are the outcome of clear purpose and vision of that which is being observed. Interpretations can be made of those
items that can be clearly described and understood through closely examining the process. Qualitative data analysis is the process of transforming the data into findings (Patton, 2002). During qualitative analysis, the researcher searches for commonalities, differences, patterns, trends, themes, and historical perspective.

Patton (2002) asserted that qualitative analysis involves taking bits and parts from a variety of sources and combining them to make sense and understanding. Patton compared qualitative data analysis to story writing in which researchers transform interviews, observations, and field notes into findings. The key challenge involved taking massive amounts of verbatim comments, transcribing, sifting, and analyzing them to identify the essence of the data. Qualitative studies are similar to snowflakes, in that each is different; therefore, the data analysis approach was varied. In qualitative research, weight is placed clearly on the skills, abilities, and style of the researcher. Researchers bring to the analysis stage understandings and conventions from previous work experiences, work disciplines, and outside experiences that are internalized during data analysis (Basit, 2003).

The data analysis framework for this research was based on building cases for each interviewee. Patton (2002) noted that qualitative studies utilizing interviews to gather data can be analyzed by case analysis or cross-case analysis. This research was begun with case analysis by building a case story for each interviewee. After cases were complete, cross-case analysis compared different perspectives on central issues. Each case was constructed using a three-step process outlined by Patton. Patton’s process included assembling the raw case data, including all information collected during the interview including site, program, and organizational information. Second, the case
record was condensed and organized, edited, and classified into a manageable data file. Finally, a case study narrative was written and detailed into a description and readable format that created a picture or story of the data collected.

Content analysis was utilized to examine each case for patterns and themes. “Content analysis is used to refer to any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings” (Patton, 2002, p. 453). Patton (2002) stated that content analysis is an appropriate data analysis strategy for case studies. Thematic and pattern analysis occurred as the researcher was immersed in the data. Qualitative analysis is either deductive or inductive; deductive analysis utilizes an existing framework, whereas inductive analysis involves discovering patterns, themes, and categories.

**Trustworthiness and Validity Considerations**

Trustworthiness was defined by Patton (2002) as a term parallel to rigor. Rigor in qualitative studies applies to both data collection and analysis and reflects the overall quality of the research. In qualitative research, trustworthiness is akin to credibility and accuracy of representation. Quantitative research quality is assessed through reliability and validity of the work. Qualitative research must apply the same attention to quality and merit. Qualitative research is the study of the world from the viewpoint of the subject. Naturalistic inquiry affords the researcher the ability to observe behaviors in the physical setting. Qualitative researchers also must access the subjective meanings beyond the behaviors (Krefting, 1991).

The various purposes and approaches to qualitative research dictated the way in which trustworthiness was measured. The purpose of this research was to better
understand the situation, variation, and complexity of processes in community college admissions, financial aid, and advising departments and their impact on student persistence from the perspective of those who work closely in those environments. To meet the research purpose, data collected included individual lived experiences of individuals working closely with students in a community college setting in admissions, advising, or financial aid. Data collected from a phenomenological approach was not generalized to a larger population, but rather, the goal was to accurately capture and describe the experience.

Guba (1981) identified a four-aspect model of trustworthiness that included: (a) Truth value, (b) Applicability, (c) Consistency, and (d) Neutrality. Guba described truth value in qualitative research as credibility and replication or confirmation with similar groups. Applicability in quantitative research was described by Guba as generalizability. Guba argued that generalizability weakens over time as context, processes, people, and realities change. In qualitative research, generalizability is termed transferability. If the context and setting have similarity, transferability may exist. Consistency in qualitative research is described as dependability. The human is the instrument and some variance is expected; however, according to Guba, the variance is trackable. Neutrality is comparable to objectivity. In qualitative studies, the researcher must be aware of predispositions and personal background, particularly during data collection and analysis. To increase rigor, quality, and trustworthiness of qualitative data, this study implemented prolonged and persistent engagement during the interview process, obtained rich and thick descriptions, sought maximum variation, monitored researcher positionality, conducted member checks, utilized peer review, and performed data triangulation.
Triangulation involved the use of multiple data sources and strategies to analyze a research question, examining the question from a variety of perspectives to increase understanding. Member checks were used to assess the data for a deeper and robust analysis.

**Anonymity and Confidentiality**

It is critical that research findings cannot be linked to the participant. All participants were assured of the confidentiality and anonymity of their responses both in writing and verbally. Each participant was provided with a consent form in writing and verbally informed prior to data collection explaining rights to confidentiality and anonymity. For this study, data was coded and maintained on a password protected file and computer with limited access. Data were coded in such a way that no information was identifiable by participant name.

**Ethical Considerations**

Federal guidelines were followed for research involving human subjects. The Human Subjects Review Board (HSRB) from both Western Kentucky University and the comprehensive community college system approved the study. Online training for certification in human subject research was completed by both the researcher and the dissertation chair.

**Summary**

Chapter III presented the methodology of the study, including the research design, population and sample, review of the research questions, procedures, data analysis strategies, trustworthiness, anonymity and confidentiality, and ethical considerations.
Data were collected utilizing in-depth, open-ended, and semi-structured interviews of staff members working in admissions, financial aid, and advising in a community college.

Case study development and cross-case analysis were utilized to organize and distill the information. Immersion in the data resulted in clearly defined codes and categories. Inductive content analysis was conducted to categorize, classify, and label the patterns in the data. The researcher synthesized the data to create a set of data findings. All IRB procedures were followed, and anonymity and confidentiality were offered to participants to the extent required by law.
CHAPTER IV: RESULTS

Overview of the Study

Community college students present with a variety of student centered barriers that hinder persistence. Hours worked, dependent children, secondary school preparation, transportation, and family support are common barriers. In addition to student centered barriers, institutional barriers also exist. Research has emphasized barriers that are student centered while minimizing the effect of institutions on persistence. Institutional barriers are defined as procedures, policies, and practices that cause difficulty for students to persist. Internal procedures, policies, and practices also impact a student’s ability to maintain and move through the process from application to enrollment to completion. Student success outcomes are at the forefront of discussions regarding higher education; community colleges in particular have dismal completion rates. This study focused on barriers that occurred on the front end of the college experience beginning with completing the college application and ending with successful enrollment.

In thinking about continuous improvement, higher education institutions must focus on internal processes in order to improve student outcomes. The purpose of this research was to better understand the situation, variation, and complexity of processes in community college admissions, financial aid, and advising departments and their impact on student persistence from the perspective of those who work closely in those environments. When given the opportunity to participate and possibly lead continuous process improvement initiatives, subject matter experts possess great insight into delivering positive results. This research sought to identify process inefficiency,
complexity, and concerns created by the institutions, as seen by the subject matter experts, that impact student persistence. Lean principles served as the theoretical framework for this research. These principles are founded on continuous process improvement and a belief that subject matter experts are best suited to identify process improvement opportunities. The results of this study provided a record of those experts’ insights and experiences. The data was gleaned from the researcher’s semi-structured interviews with frontline employees in admissions, advising, and financial aid. The results provided a record of the experiences and insights, thus reflecting the institutional barriers faced by community college students when applying and enrolling.

The remainder of this chapter details the results of this study. Specific sections include Procedures, followed by Findings, which are organized according to the Research Questions. The chapter concludes with a Summary.

**Research Design**

Upon receipt of approval from the Human Subjects Committees at both the comprehensive community college and Western Kentucky University, the research instrument, the Interview Guide (Appendix C), was examined for content and clarity. A review by the researcher’s dissertation chair, as well as the WKU methodologist, resulted in minor revisions. The interview guide was stratified by classification into questions for admissions, advising, and financial aid personnel. The guide for each subgroup served as a tool to collect the rich data related to the research questions. The goal of the interview was to provide insight into the experiences of subject matter experts working in admissions, financial aid, or advising. Through this qualitative process, an understanding
was gained about institutional barriers to persistence as seen through the lens of the subject expert. Upon final revisions, the research study began.

The findings of the study were based directly on the interviews. The analysis and synthesis for the data formed the basis for the Discussion section and Conclusions in Chapter V. The study addressed the overall central research question, “What are the internal institutional barriers to persistence?” The framework for this study was the theoretical framework of lean principles. The results from the interviews constituted the data from which analyses were drawn. The three research questions guided the organization and synthesis of the data within the theoretical framework.

Interviews served as the primary data collection tool to gather detailed information in relation to the research questions. The goal of the interview was to gather insight into the individual lived experiences, perceptions, and opinions of subject matter experts in relation to institutional barriers. The interviews provided rich descriptions of barriers faced by students while attempting to apply and enroll.

The research study began with an email contact to the corporate office Dean of Student Affairs for the system in question in order to obtain permission to utilize an email distribution list that included all 16 Student Affairs Deans. The researcher then contacted the Student Affairs Deans requesting that they identify frontline staff in admissions, advising, and financial aid. The researcher's home college was excluded. Each of the deans provided a list of subject matter experts who were contacted and asked to participate. Interested individuals were selected based on a purposeful sampling grid, which considered participants’ department and their home college enrollment. Interview selection ensured a representative sample across institutional size, which was defined by
enrollment, as well as a representative mixture of individuals from admissions, advising, and financial aid. Once participants had been identified for each section of the sampling grid, they were contacted to arrange interviews. A letter of Notification of Nonparticipation (Appendix B) was sent to the other interested individuals not selected for the study.

All participants were interviewed at their home college within their department. Each was given the Letter of Informed Consent (Appendix A) to sign, and the researcher answered any questions if necessary. Once the interview began, the researcher attempted to avoid interruptions in an effort to focus on the responses. The 10 subjects who agreed to participate were cooperative, thoughtful, and passionate about their responses. Interviews were audio-taped while the researcher recorded notes in a folder created for each participant.

The Findings

The interview data provided specific, rich, and detailed descriptions that are described in the following sections. However, several major themes emerged from the individual data elements and have been placed into thematic categories.

Lack of Cross Training

Many of the colleges were organized in such a way that employees in student affairs were not cross trained; each had an area of responsibility and stayed within that realm. Employees often possessed a wealth of background in other student affairs departments, which they had obtained through a dynamic career in higher education; however, they were limited to serve students within their own assigned area. Cross training was limited and created a fragmented experience for the students. The
admissions, advising, and financial aid departments were organized for ease of the institution rather than the student. Students are the end customer and users, but these processes have been structured to serve the institution, as opposed to the student. This functional structure may provide ease of management for the institution but creates a disjointed experience for the student.

**Convenience Barriers**

As customers for these institutions, students flow through the existing processes. Lack of evening and weekend hours serve the organizational needs but not the needs of the customer. Student convenience and ease of working through the process from application to enrollment is impacted by the existing operating hours. Multiple trips to complete the process were indicative of this situation. In addition, the lack of students’ college knowledge affected the way in which they navigate the system. The challenging and complex elements result in extreme difficulty for first-generation students.

**Lack of Standardized Work**

While each college appeared to have individual standard, a lack of an overall standard existed for many key college processes. This was true for transcripts, college and high school policies, as well as residency policies. At times rules and policies appeared to be arbitrarily assigned and varied among colleges within the system. This lack of standardization created confusion and frustration for students enrolled at multiple campuses.

**Territorial Behaviors**

Departments did not intermingle with other departments’ processes or cross over into their functions. They also did not venture into other department functions. This type
of territorial behavior negatively impacted the student experience, as they were sent from
department to department to navigate a process that should be seamless rather than
chopped and broken. Employees with extensive backgrounds and experience were
discouraged from helping students regardless of their knowledge of that which the
student needed.

Customer Service Barriers

Admissions, financial aid, and advising are organized in such a way as to
maximize organizational ease yet in a way that does not maximize the total student
experience. Participants described many situations in which staff discouraged “hand
holding” and walking a student through difficult processes. It was the expectation that
students who are college material should learn to do this on their own. If staff could walk
a mile in the students’ shoes, they may better understand the situation and the reason it is
difficult to navigate a foreign system. While instances occurred in which staff went
above and beyond to meet the students’ needs, participants clearly identified a need for
increased focus on the customer.

The findings are directly based on the interviews and presented by research
question.

Research Question 1

What internal processes or experiences prevent students from persisting from
application to enrollment, as identified by subject matter experts in:

a. Admissions?

b. Advising?

c. Financial Aid?
Admissions

The findings are summarized in outline format below. Discussion of each finding will follow the outline.

a. Admissions

- Application Barriers
  - Not user friendly and difficult to complete
  - Residency issues from “tricky” questions
  - Suspended applications
  - Readmit application inefficiency

- Convenience Barriers
  - Difficulty accessing high school transcript
  - Placement testing by appointment only
  - Limited evening and weekend hours
  - Long lines and wait times
  - Multiple trips to campus
  - Lack of college standardization

- Communication Barriers
  - Contacting the student
  - Institutional over reliance on student self-service account to communicate with the student
  - Lack of clarity for next steps
  - Lack of institution driven student follow up

- Customer Service Barriers
- Lack of a point person
- Discouraging hand holding

Each subject matter expert from admissions had over three years of experience working in the field. While participants self-classified as admissions, they had varying roles and responsibilities across sites; e.g., one participant was responsible for administering and proctoring the placement test (COMPASS), while others did not carry that responsibility. A variety of internal processes were identified as well as experiences that prevented students from persisting from application to enrollment. In some cases the processes or experiences prevented students from enrolling, while other examples illustrated the challenges that made it difficult to move further in the process. For this research, scope was defined as the beginning point of application to the ending point of successful enrollment.

**Application barriers.** Completing the application is the first step to begin the process. Of the schools interviewed, both paper and online applications were offered. Some offered an online application only, while others offered both the online and paper versions. The online application prompts the student to complete specific information followed by clicking to the next series of questions, ultimately resulting in submitting the application. The paper application can be completed and sent through the mail or submitted in person. When the researcher attempted to complete the online application using Internet Explorer version 9, difficulty was encountered in locating the next button on some pages, forcing the user to adjust screen sizing or be unable to complete the application.
The process of completing the application, particularly the online version, was cited as a barrier to persistence. Participants indicated they worked with a number of students who come to campus inquiring about their application status and next steps. As they have not heard anything from the college, they are unaware of the next step. In many cases the student began the application but failed to hit the submit button. These students received no communication from the college because their application was incomplete. These applications can be tracked but, in many cases, are left untouched until the student makes an inquiry. One college had over 300 incomplete applications at one time. Based on the researcher’s experience in completing the application, an issue may exist when using Internet Explorer version 9.

The questions on the application can be confusing and can lead to issues later in the process, such as determining residency status and financial aid eligibility. Interviewees noted that the question on receiving money from outside the state was confusing and, if the answer was yes, the student was flagged as a non-resident. During the application process students are prompted to answer five questions to determine residency status. One question in particular was considered to be “tricky”. The process of proving residency status was a barrier to those students flagged for residency. Interviewees felt this question was confusing and flagged a number of students as non-residents when, in fact, they were residents. One participant shared, “We overturn the majority of our residency appeals. A lot of them are accidentals.” Once flagged, the student must provide documentation to prove residency. Across the various institutions in the system, a lack of standardization was seen in interpreting the policy, which resulted
in varying processes for proving residency. Five questions are included in the Residency Determination section:

1. Have you lived in Kentucky for the past 12 months?
2. Have you received financial support for basic living expenses or tuition and fees from a person outside of KY during the last 12 months? Financial support does not include federal financial aid, federal income, or gifts from family or friends.
3. Does either living parent or legal guardian live in Kentucky?
4. Are you a family member with a valid dependent ID of an active duty military member?
5. Do you consider yourself a Kentucky resident?

Participants indicated that the second question was “tricky” and confusing for students; most were flagged for further review in the process. The section in which applicants selected the program of study also was problematic. If they selected a certificate program, additional steps were required when the student applied for financial aid.

Participants reported on issues with suspended applications, which are those flagged for an issue or concern. Reasons for suspending an application included items such as unmatched date of birth and social security number, gender not matching a previous record, multiple attempts to apply, student applied as a first-time student with a previous record, or transfer students who were ineligible to return to their previous school. When an application was suspended, the forward motion of the process was halted, and it remained in a type of pending queue awaiting correction by an admissions
representative. Those particular students were required to wait for action to be taken prior to taking the next step.

Admissions personnel also indicated that the process of reapplying to a college was a barrier to persistence; these were classified as readmit issues. When a student sat out for a specified time, which varied among colleges, another application was necessary. Upon entering the social security number, the system matches it to the student, who enters the username and password. Participants indicated that students forget this information and get “stuck” in the process. During an interview, one participant phoned the individual responsible for correcting suspended applications to quantify the frequency of this situation. Approximately 50% of all applications to that school were suspended and needed attention. Applications were suspended when another record was on file for the student. Several of the colleges required completion of another application if a student sat out for one term. The process of reapplying and the policy relative to the number of time a student must reapply was determined by the individual college. This varied across colleges and often caused the student’s application to be suspended, thus stalling the process.

**Convenience barriers.** The application is only one component of the overall admissions file for a student. In addition, students must present their high school transcript. A number of students attempted to move forward without a transcript but were unable to do so; a hold was placed on the student’s record. If the student arrived in the advising office for an appointment and to select a course schedule, the process went no further until receipt of the high school transcript. Students found it difficult to obtain a copy of their transcript.
An additional finding indicated by admissions personnel was the necessity for students to make an appointment to take the placement exam. Those students who did not meet ACT/SAT benchmarks were required complete the COMPASS placement exam to assess their placement. This was a critical next step in progressing to enrollment. Students were restricted from enrolling without placement scores when they did not meet ACT/SAT benchmarks.

Participants reported that students wished to accomplish as much as possible during their visits to campus, and the lack of walk-in appointment availability was a barrier. Their students often needed special transportation accommodations to travel to campus; being unable to accomplish certain tasks could be a barrier or point of frustration. The current processes in admissions resulted in students making multiple trips to campus to accomplish all tasks.

Limited evening and weekend hours also were a barrier for students. Traditional operating hours of 8:00 a.m. to 5:00 p.m. were the norm across interview sites. During peak times students were faced with long lines and wait times. During these times students observed leaving without being served. In addition to limited evening and weekend hours, students experienced long wait lines and times during peak enrollment phases. During these times students became frustrated and left.

The community and technical college system is comprised of 16 schools. When a student with previous college experience attends one of the 16, official transcripts must be provided. Some students attended multiple sites across the system. For each site, they were required to provide another official copy to that institution as well. Participants identified this as a barrier and point of frustration; students perceived each college as a
part of a system and were unhappy with ordering and providing an additional copy. Lack of standardization across colleges in the system was increasingly more confusing for students, as they attended multiple sites through online courses.

**Communication barriers.** According to interviews, the way in which colleges communicated with students was a barrier. One individual discussed the value in sending an admissions packet with the welcome letter. That institution had moved away from sending this information and the participant felt this created a communication breakdown. However, the institution had recently decided to reinstate the admissions packet and welcome letter. Colleges communicate in two ways with their students: student self-service accounts and email. This was identified as problematic, as students frequently admitted failing to check their email and were unaware of the process to access student self-service, particularly early in the process. Emails to students were described as lengthy and confusing; they often began with a statement such as, “If this does not apply to you please delete or if you have already done XYZ then please disregard.” These statements caused many students to delete and ignore them.

Student self-service is an online account in which students can check progress, access a to-do checklist, and enroll. Students are directed to this account in admissions, advising, and financial aid. Some departments directed students more frequently than others to the self-service account. It was identified as one of the primary ways in which the colleges communicated with students. Participants reported that students were unfamiliar with logging in or accessing this account, particularly first-time students attempting to navigate the admissions process. Some functionality of student self-service was unavailable until after the student had enrolled. Students without access to the self-
service account missed communication and next steps. While the colleges relied heavily on this method for communication, they spent little effort in helping students with access and with logging in early in the process.

Participants frequently described that students phoned or arrived in the office to ask about their next steps in the process. Ambiguity about next steps can stall student progress; they are unsure of that which is needed to move forward. Walk-in students were served and helped through the process. Many simply waited to hear from the college about next steps. When they heard nothing, they stalled in the process and faced persistence issues.

A lack of institution driven follow up with the student existed. Subsequent to the initial welcome email, minimal contact occurred with the student. Follow up was the responsibility of the student, according to the interviewees. This presented a barrier to persistence, as many applicants waited to hear from the institution as to next steps.

**Customer service barriers.** In addition to specific processes, students were required to navigate, experiences in admissions were identified as barriers. Students attempted to make a connection with an individual who could serve as a point of contact to answer questions and help them through an unfamiliar process. None of the schools assigned such as individual to the student. Students often were referred to the call center that answers calls across the community and technical college system; however, students desired a local point of contact. For those who visited campus, the first person with whom they met became a pseudo point of contact, particularly when that individual was helpful.
Another identified experience was that of customer service. A difference of opinion was noted across staff members working in student affairs regarding the level of “hand holding” that should occur. Some felt “hand holding” was an added level of high touch-high customer service delivery, while others viewed it in a negative way similar to babying the student. An example of hand holding included walking a student through the self-service account and showing them the way in which to navigate it. One interviewee was glad to do this; if a student asked for help, it indicated they needed it. She described individuals in student affairs who would simply refer the student to the self-service account, knowing full well they had no knowledge on accessing or utilizing it. The participant further stated that students who were knowledgeable about doing so would not have asked for help. Poor customer service and the lack of going above and beyond were described as barriers to persistence. Students became frustrated with an unfamiliar process and needed a high level of customer service to increase their comfort with and success in navigating the system. “Half the time it is about the way the student perceives how you are talking to them and the way you ask questions. If they see judgment in your eyes they are already on the defensive. It’s all in the way you present information.”

Individuals reported on several processes and experiences that occurred during application but prior to advising, enrollment, and financial aid. These processes became lengthy, complicated, and frustrating for students and presented barriers to persistence.

**Advising**

The findings are summarized in outline format below. Discussion of each finding will follow the outline.
b. Advising

- Faculty Advisor Barriers
  - Students do not know who their advises them
  - Lack of access during summer term
  - Difficult to reach
  - Advising changes from student center to faculty advisor, and this transition is difficult for the student

- Convenience Barriers
  - Limited evening and weekend hours
  - Registration through PeopleSoft is difficult
  - Inaccurate information from call center
  - Lack of standardized process for granting access to self-enroll
  - Incomplete admission file stalls advising

- Communication Barriers
  - Lack of follow up with the student

- Customer Service Barriers
  - Lack of a point person

All personnel in advising possessed over three years of work experience in advising. They identified several institutional barriers to persistence. Each of the subject matter experts who were interviewed was responsible for advising students. While some standards are basic in advising, each school approaches advising in its own way; a lack was noted of standardized work. As a general rule advising was categorized by two approaches, one for students with less than 12 credit hours, and second, students with
more than 12 credit hours. For those in the first category, they worked with an advisor in the advising center within student affairs. For those with more than 12 hours, they were assigned an academic advisor classified as a faculty advisor.

**Faculty advisor barriers.** The process of contacting an advisor was listed as a barrier to persistence. When students were ready to enroll, they were required to contact their advisor to select and enroll in courses. For first-year students, the process of meeting with an advisor was easier than for those working with a faculty advisor. In some cases the students did not know who was assigned to them or how to contact them. Others knew their advisor but were unable to reach them. Making contact was particularly difficult during the summer when academic advisors were unavailable and difficult to reach. One participant stated, “We have individuals that work with the first time student, but if you are a third semester student and you don’t get signed up before faculty leave you are in trouble.” During these times students returned to their original advisor in student affairs for assistance. Students often attached individuals they met early in the process. Their first advisor became a point of contact, and the student preferred to return to that individual semester after semester. Student affairs advisors served students when they returned but encouraged them to visit their assigned academic advisor. Student affairs advisors identified this as a barrier when students could not reach their academic advisor to enroll.

Students began with one advisor in student affairs for the first semester and were then transitioned to an academic advisor when they had earned 12 credits. They created a relationship with their first advisor and communicated their personal goals, objectives, hopes, and wishes. One semester later they were required to determine their new
academic advisor and begin again. A variety of ways existed in which the change in advisor was communicated. During this change the students do not know who was assigned to them or how to contact them. Advising interviewees described students who returned to them seeking a familiar friendly face and original point of contact, only to be referred to the academic advisor. As described earlier, this is a barrier due to limited access to the advisor and difficulty in scheduling an appointment with the academic advisor.

**Convenience barriers.** Operating hours did not extend beyond the traditional 8 to 5 workweek. Limited evening and weekend hours were a barrier to students.

The process of registering through PeopleSoft was difficult and described as not user friendly. “Students only use it twice a year and forget how to work it.” If they were unable to register, they became stuck in the process.

Students were directed to the call center, which provided inaccurate information regarding advising. When students visited the office or contacted a local advisor, they were frustrated with the inaccurate information that was given via the call center. One participant shared, “The call center gives out some of the craziest stuff you have ever heard of. Where did they get that information?”

Each student at some point was granted access to the self-service account, which provided a variety of information including course schedules, enrollment action, financial aid information, and checklist items. Enrollment access was a barrier to persistence for students, and participants indicated that students desired to self-enroll but at times were not granted permission. Some schools allowed the student to self-enroll from the point of acceptance and a complete admissions file. This system did not automatically grant
enrollment access. No standardized process was in place as to the time at which a student was granted self-service enrollment access. This varied among colleges and often from one academic advisor to the next. For some students the lack of self-service enrollment was a barrier.

Advising fell under different categories based on the school organizational chart; some classified advising as academic affairs, while others classified it as student affairs. For all students including first-year, transfer, and visiting, advising was very much a part of the front door process and led to successful enrollment. Advising and admissions are closely linked, as advising cannot enroll without a complete admissions file for the student. Interviewees in advising described students who were sent to advising with incomplete admissions files, to include missing high school or college transcripts, missing scores, or lack of an application altogether. When a student arrived in advising and was ready to enroll but could not progress further, they could become frustrated, which was considered a barrier to persistence.

**Communication barriers.** One individual described the lack of follow up with students in advising as a barrier. When students could not progress to enrollment during their first visit due to incomplete information or an incomplete admissions file, they were required to return at a later time. No follow up occurred with that student; no attempts were made to reconnect with a student who presented to advising but was unable to register.

Changes in assigned advisors often were not communicated. Students were unaware of the individual assigned to them or where to go. They needed to contact the college to identify their assigned advisor.
Customer service barriers. Participants described instances of poor customer service as a barrier to persistence. Lack of a standardized message to students from advisor to advisor created frustration for the students. Those who walked in received better customer service than online students. Advisors described the lack of ability to advise “outside our four walls” as a customer service issue. Some advisors focused solely on that which was offered within their own institutions. This could become a problem for transfer students when they took classes that would not transfer or satisfy a particular program need. “Advisors don’t want to advise beyond here.”

Financial Aid

The findings are summarized in outline format below. Discussion of each finding will follow the outline.

c. Financial Aid

• Convenience Barriers
  o Financial aid verification process is difficult
  o Lack of standardization in SAP process
  o Some served by appointment only
  o Some departments with no direct phone access for students to call directed students to call center

• Communication Barriers
  o Rely heavily on student self-service account to communicate
  o Burden of follow up placed heavily on the student
  o Changing and unclear transcript policies not communicated
Convenience barriers. Financial aid often was identified as the most challenging process that students navigated. “Students that fall out, drop out of the process in financial aid.” The number of students requiring financial aid verification was substantial. Those students aid verification were required to present additional documentation to move forward, which was a federal financial aid process rather than an institutional process. “We see a lot of people fall out and get frustrated with the verification process in financial aid.” With this confusing and challenging process, some institutional factors deepened the issue, such as lack of a published direct phone line to many of the colleges’ financial aid departments. Students who desired to speak to someone locally needed to visit the campus. They were directed to the call center; if the center was unable to answer a specific question, the student had no local phone number to contact. One individual said, “If they call me and they want to talk to someone in financial aid, I explain they have to call the helpdesk. If they can’t help and you can’t find it on self-service then you need to come in.”

Another barrier identified by participants was the Satisfactory Academic Progress (SAP) appeal process. SAP ensured that students were able to complete their program in a timely manner while achieving minimal academic standards. Federal regulations mandate this process as a way in which to maintain satisfactory academic progress for students receiving financial aid under Title IV programs. The SAP process involves three criteria: meeting a 2.0 grade point average, completing 67% of all attempted credit hours and doing so within a maximum time frame. Students who fell into those criteria were required to appeal to continue to receive financial aid. The appeal process was described as tedious and somewhat subjective. The committees responsible for reviewing appeals
varied in their interpretations of policy and the way in which they approved appeals. Participants identified an opportunity to preemptively identify students on the cusp of failing to meet satisfactory academic progress. In one case during the summer term, financial aid representatives ran a query to identify those on the cusp and contacted them proactively. When students were notified of SAP suspension, it typically was late in the term and gave them inadequate time to appeal and to make further arrangements. This also became a barrier to persistence.

Interviewees identified appointment-only financial aid departments as institutional barriers. Areas throughout student affairs varied on the need to make appointments. No single standard was found across sites. Some offered walk-ins, while others required appointments. Lack of walk-in availability was a barrier to student persistence.

One participant described the financial aid process as having no direct call-in number. Students had no phone access to reach an individual in financial aid. One individual shared, “Financial aid doesn’t have a direct phone number. I think for productivity, so they rely on student to check self-service. If they call me and they want to talk to someone in financial aid, I explain they have to call the call center.”

**Communication barriers.** Financial aid information was communicated in a variety of ways including in person when the student walked in, by email, or through self-service. Participants described that the majority of information for financial aid was communicated through the student self-service account, which was a barrier, as students had no knowledge for accessing self-service accounts. Checklists for financial aid were provided through self-service, which described each step in order to move forward.
Without knowledge of accessing the checklist and no direct phone line, students were required to visit campus for further guidance. Colleges relied heavily on self-service usage when students were unfamiliar or had access issues.

The burden of follow up in the financial aid department was placed squarely on the shoulders of the student. When students completed the FAFSA application, financial aid counselors emphasized the need to follow up with the department in the next week or so. One individual stated, “It is not getting the student to fill out the FAFSA. We help them and we can have them in and out with the FAFSA. The problem usually occurs after the FAFSA is processed. Students don’t follow up on the FAFSA. Limited proactive behaviors existed to reach out to the student to follow up. One individual noted, “I would like for us to be more proactive when it comes to student communication.” The financial aid process was identified as the most confusing and challenging step in the process from application to enrollment. Minimal if any outreach activities existed in the area that had the greatest need for those types of activities.

During the data collection period, the community colleges in the system experiences a policy change that affected the handling of incoming transcripts, both high school and college, for transfer. Prior to the change students were conditionally admitted for one semester and allowed to enroll and present official transcripts during the first semester. In early spring 2015 the colleges removed conditional status and required students to present all official transcripts before enrolling. This change was enacted as a financial aid guideline. Participants felt this change was a barrier to persistence. In the fall of 2015 conditional enrollment status was reinstated for high school transcripts.
Additional Institutional Barriers

In addition to specific barriers found in admissions, advising, and financial aid, other barriers were identified that affected student persistence.

d. Other Non-departmentally Specific Barriers

- Lack of cross training
- “Not my job attitude”
- Push to online learning
- Lack of local switchboard
- Information overload

For the smaller colleges with enrollments less than 5,200, student affairs representatives were highly crossed trained with the ability to facilitate nearly all student affairs tasks. This was both a burden and a benefit. The high level of cross training facilitated a different and higher level of customer service at these locations. Students were able to accomplish more through one individual than students at larger institutions, at which student affairs was larger, more segmented, and had less cross training. The net result was that students were required to visit various individuals across departments to progress further toward enrollment. One participant described this dynamic as a “not my job attitude.” If the task was outside their department, they passed the student to the next department. Staff became territorial to the point that they wanted no one to “touch” their area, even to the detriment of the student experience. One interviewee stated, “I feel like there needs to be more conversations between the different departments and talk about how we can better work together.”
The increased push toward online learning was highlighted by one individual. Some remedial classes were offered in an online format only. For students in rural areas, internet access was unreliable or unavailable. One individual noted, “We just stick them in classes. Online is not good for every student. I have so many students sit in front of me that they don’t even have a computer or they don’t have very good internet. If we don’t give them a good start they don’t make it.” That individual also felt students needing remedial classes were better suited to in-person courses that offered more hands-on and group learning. When a student was directed toward an online class and the advisor knew internet access was unavailable, this was identified as an institutional barrier to persistence.

While the system for this study has changed to the call center model, participants disliked the lack of a local switchboard for students to call. Students found it difficult to speak with a local person. Local personnel were more efficient at connecting students with the correct individual. The call center was described as an excellent resource for basic questions, but the process for escalating issues, particularly when a student desired to speak directly to an individual, was inefficient and in some cases near impossible. One participant added, “Students should be able to call a college and talk to a person. They should be able to call this campus and talk to someone here.” Another problem involved students being unable to find answers to their questions.

Student affairs staff identified the process of disseminating information as an institutional barrier. They were aware that students wanted to make as few trips to campus as possible while progressing from application to enrollment. Their desire was to provide the student with accurate and detailed information regarding next steps and
possible barriers. In an attempt to provide all the information a student may need, the result often was an overwhelmed student facing information overload. One individual described the process of student orientation in which a student broke down into tears. When asked specifically what was wrong, the student described feeling overwhelmed.

**Research Question 2**

What is currently being done that most positively impacts student persistence and most negatively impacts student persistence?

**Positive Impacts**

- Convenience
  - START one-stop shop centers
  - Admissions navigators who walk students through the process
  - Some extended hours during the week
  - Offering walk-in appointments
  - Offering phone advising for strictly online students or those living far away
  - Instant admission days
  - Offering late registration

- Customer Service
  - Making personal phone calls to students “stuck” in the process
  - Researching the student before the appointment
  - Looking outside direct role to remove barriers or identify barriers in other departments
  - Removing holds even if outside their area
  - Walking students through requesting a transcript or calling their high school
• Sit and walk student through application
• Giving students their contact card for a future contact person

• Communication
• Sending admissions welcome packets

Convenience. Participants identified a variety of processes that positively affected student persistence, such as student affairs START centers. START centers served as one-stop shops for nearly all front door processes including applying, completing the COMPASS placement test, registering for classes, ordering books, and requesting academic records. In many cases the centers were located within close proximity to the financial aid department and helped to alleviate the “pin ball” effect of sending students from one department and building to the next. Some of the colleges had admissions navigators that walked students through the application to enrollment process and were able to act as a point person for questions.

Interviewees noted limited evening and weekend hours; however, many of the sites offered some limited extended hours also indicated staying late for a student when requested. Several participants indicated staff would on occasion stay after to serve these students. Some areas offered walk-in service to serve the student on the same day. This allowed students to move through the process without requiring another appointment to return. One advising center offered phone advising for the online student population. They also offered this service to a small population of students who lived further away from campus.

Many of the colleges in the system offered Instant Admissions, days on which a student could come in and walk through the process in one day from application to
enrollment. All services were available and efforts made to facilitate the process in a
closer, more efficient manner. “Students know they can come in late and we will serve
them.” While participants indicated these days were difficult for staff, they were a great
service to the student, particularly near the beginning of the semester.

While some schools have moved to a model with earlier cutoff deadlines for
applications and registration, some have extended their deadline to apply and offer late
registration. Extended deadlines provided for community and technical college students
provided them the opportunity to finish checklist items and complete enrollment. “The
student is not always a procrastinator. Their life is not that predictable and they don’t
know what their job schedule will be.” Late registration allowed them to plan and
arrange their schedules.

Customer service. All representatives in admissions, financial aid, and advising
described situations in which teams made personal phone calls to students in attempts to
be proactive and student friendly. One participant said, “We try to be proactive, for
instance in October if I know a student has 85 credits going in and they are taking 12 that
is a guaranteed suspension. So we check and try to notify them early so they can start
doing stuff.” In one financial aid department a team of staff utilized the summer to call
students from a query that identified those who were not meeting SAP guidelines, those
with missing information, as well as those requiring further financial aid verification.
These personal phone calls were positively received by students, and financial aid staff
noted a decrease in the number of students who showed up and waited at the beginning of
the fall term. They attributed this decreased traffic to the actions taken in the summer.
One of the subject matter experts in admissions described a query that could identify
students who began the college application but did not complete it by clicking on submit. Once they identified the large number of students who were “stalled” during the application process, they chose to call them as a proactive means of follow up. Proactive attempts to contact the student in order to help them progress through the system had a positive impact on persistence.

Student affairs personnel in several departments described researching students before their scheduled appointment. During this research the individuals were able to identify any concerns, create sample schedules, print needed information, customize checklists, and prepare for the students before they arrived. This left time during the appointment for a more customized and efficient experience.

Similarly, staff examined students’ accounts, as well as areas outside of their scope, to proactively identify potential barriers or blocks. These proactive measures helped to identify issues and to facilitate correction to enable the student to move forward in the process; e.g., if a staff member noticed a hold on the student account for COMPASS scores but realized the student had completed testing. They could then take action to remove the hold, and were empowered, as well as cross trained, in such a way as to remove that barrier to enrollment and move the student forward.

Subject matter experts identified the process of requesting transcripts, both college and high school, as a challenging task for students. When the need for a transcript was discovered, some staff walked the students through the process of requesting, called their high school, or made arrangements to obtain a copy while the students waited. Contrast that behavior with simply telling the student they need a transcript, the extra touch and added customer service helped to remove one more item
from the students’ checklists and allowed them to persist further in the process. Personnel went above and beyond to find a phone number and identify individual with whom they the student needed to speak to expedite a process.

Admissions staff identified the application as a difficult and confusing process for students. Staff sat with and walked through the application process with a student to answer any questions during completion of the application. Admissions, financial aid, and advising personnel described the process of providing the students with their business card that included direct phone numbers. This gave the student a point of contact for any future questions or concerns. Staff were aware that these students would encounter barriers along the process from application to enrollment, and they wanted them to have a familiar face with whom to connect for answers or assistance. These individuals became a pseudo point of contact for the student.

**Communication.** Each of the 16 colleges had varying processes for notifying students of admission to the college and next steps. Some sent a welcome letter or postcard describing next steps. One no longer sent student admissions packets and felt negative impacts from doing so; student traffic and phone calls about next steps increased. Sending a basic welcome letter and simplified next steps checklist served as one institutional practice that affected student persistence.

**Negative Impacts**

- Application
  - Application not user friendly
  - Readmit application difficult
  - Residency process tied to specific “tricky” questions on application
• Convenience
  o Unclear transcript policies both high school and college
  o Unclear SAP appeal policies
  o Lack of cross training and standardization
  o Lack of an assigned point of contact
  o Limited extended evening and weekend hours
  o Appointment only departments
  o Too early application cutoff deadlines
  o Giving students the runaround because departments are siloed
  o Campus layout-pinball effect giving the student the runaround
  o Overload of information

• Customer service
  o Attitude of “not my area” passing off tasks to others ends up giving the
    student a poor experience

• Communication
  o Pushing communication through email and student self-service account

**Application.** Some institutional practices were identified as having a negative
impact on student persistence. These steps or experiences were frustrating for students
and created an opportunity for them to drop out. The application was not user friendly
and was challenging to complete. The application for readmit students was even more
difficult and required students to remember their username and password.

**Convenience.** Unclear transcript policies for both high school and college
transcripts negatively affected persistence. Various colleges have interpreted this policy
in different ways, creating an inconsistent experience for students attending multiple sites. Some colleges interpreted the policy that a student could not enroll until after the transcript was received, while others conditionally admitted the student and allowed enrollment with a hold for the transcript. Those students were allowed to enroll but some were prevented from enrolling until the transcript was received.

The SAP appeal was another example of a lack of standardization across the system. One individual described a student denied for SAP appeal, but it was overturned by the Dean of Student Affairs. The employee followed the policy when the initial decision was made. This policy was revised shortly after. One participant shared, “That policy probably didn’t have to be there.” Another described the committee for SAP appeal as being lenient, while another described it as rigid. Unclear policies and subjective committees caused difficulty for the student to have knowledge of the real policy. “There is a lot of grey area.”

The clear lack of cross training among many of the schools had a negative impact on student persistence, as they were forced to visit multiple buildings, campus locations, and departments to move from application to enrollment. Even in areas in which employees were cross trained, they worked in silos, which prevented them from serving the student. While some were able to remove holds and handle student barriers outside of their department, many were not empowered to do so.

Walk-in students were able to connect with staff and to identify a self-assigned point of contact; for those who applied online and offsite from the campus, they had no point of contact. Participants described those students as the ones who slipped through the cracks and never showed up. One interviewee said, “We are responsible for making
sure the student has a contact.” None of the sites offered an assigned point of contact for new students. Individuals described a large population of students who applied and waited to hear from them. These students applied but would not walk in and did not make the in-person connections needed to move forward. Another participant indicated, “We need to make a personal connection with students, they need an advocate.”

Limited evening and weekend hours had a negative effect on persistence, particularly for the working population. The primary communication channels included student self-service and email. Both methods presented potential barriers, as students could not access their self-service accounts and did not check emails. One participant stated, “We put the message out there but it’s not reaching them. At the end of the day they aren’t getting the messages.”

Additionally, two front door processes were highlighted that were operated by appointment only. Some financial aid departments and assessment centers were offered by appointment only. The assessment center proctored the COMPASS placement exam required by the majority of students before being advised and enrolled. Appointment-only departments presented a barrier for students to progress and increased the number of trips to campus.

An additional factor that negatively impacted student persistence was early application deadlines. An interviewee passionately indicated that not all last-minute students were procrastinators. Some had little control over their life and were not given their work schedules or other responsibilities in time to meet early deadlines, presenting a barrier to many potential students.
The student affairs campus layout had a negative impact on student persistence, as students were required to visit multiple departments across various buildings. Students experienced a pinball effect bouncing from one department to the next. Siloed departments and inadequate cross training created a feeling of receiving the runaround. Staff identified the process of disseminating information as an additional barrier, as students wanted to make as few trips to campus as possible while moving from application to enrollment. The staff wanted to provide students with accurate and detailed information regarding next steps and possible barriers. In an attempt to provide all the information a student may need, the result often was an overwhelmed student facing information overload. One participant described the process of student orientation with a student who broke down into tears. When asked specifically what was wrong, the student described feeling overwhelmed.

**Customer service.** Poor customer service was identified as a negatively impacting on student persistence. One individual described a scenario in which a student sat in the car waiting to get the nerve to walk in and begin the process. The student had low self-confidence and was unsure as to whether he or she was meant to be a college student. “It only takes one rude or mean person and the student is out of there.”

**Research Question 3**

What steps in the process from application to enrollment are most challenging and or confusing for students:

**Challenging**

- Finding advisor
- Waiting in long lines
Knowing what to do next

- Needing to go to various departments to get things done

Students found it challenging to identify and locate their advisor. First-semester students utilized a separate process for advising than returning students. First-semester students were offered a more comprehensive advising session with individuals who had a plethora of experience including transfer and program options. Upon completing their first semester, students were assigned an academic advisor. Communication of this change was inconsistent, limited, and confusing. When ready to enroll for the next semester, students had no information on their advisor or where to go. This was illustrated by their return to the first semester student advising center. If they had a faculty advisor, they encountered difficulty in locating that person during the summer months.

Colleges operate with the same number of employees and under the same processes during peak times. This often resulted in long lines and wait times for students needing help with admissions, financial aid, and advising. A few departments instituted different processes during peak times that varied from the standard. One individual shared, “I work differently during the beginning, middle, and end of the semester.” In some cases outside departments that had less traffic during this time came in to serve as backups and extra hands, but this was very limited across the board. Participants cited many instances in which students left and likely did not return. Long wait times were challenging for students and led to some not returning. One individual stated, “I just watched a boy walk out. He stood around for a few minutes and just walked out, he just left.”
Moving from application to enrollment involved multiple steps and processes. The process of navigating these steps was described as very challenging. Students often got “stuck” or “stalled” in the process. Students most commonly were unaware of the process beyond application. Once the applicant clicked submit on the online application, a popup message was seen, that message congratulated the student, and provided an ID number and application reference number. Students were told they would receive an email with important information about next steps. In addition to the confirmation and email messages, some schools sent a welcome letter and packet to the student. During a test run of the application process, the researcher received the popup message and accompanying email. Links inside the email were broken and did not work. The steps made sense to the researcher as an individual working in higher education, but students found them unclear and did not know how to accomplish the next steps.

When navigating the application to enrollment process, students were required to visit multiple personnel across departments in order to complete steps. During this time students were frustrated with going back and forth. They were sent to the wrong department and then sent to another office, only to be told they were unable to help them. While interviewing one individual, the session was interrupted by a student requiring assistance. This student had experienced the back and forth motion of going to multiple departments after being told to do so, only to be sent to yet another department that could not provide assistance. The student decided to return to his self-appointed point person for help, who was able to make a few phone calls and move the student along in the process, although becoming personally frustrated with the lack of willingness to help the student and subsequent passing off of the student.
Confusing

- Financial aid
- Completing the application
- Obtaining transcript copies

Participants across the board identified financial aid as the most confusing process. While federal financial aid guidelines served as constraints, a variety of institutional practices made navigating this challenging area difficult for students. The burden of follow up was placed on the student, with little to no contact from the financial aid department. Financial aid was an area that was identified as having no direct phone line and some served students by appointment only. In addition to financial aid, the college application was confusing and difficult to complete. It was difficult for first-time students, and the readmit application was described as “awful.” One participant said, “There has to be better ways to handle readmit students.”

The process of obtaining transcripts was confusing and difficult. Students assumed the college would automatically receive a copy of their high school transcript. They could not find a copy and did not know how to request it. Some colleges also required the high school transcript for students over age 25, while others did not. Students over 25 were unaware of the reason it was needed or the process to request a copy. Obtaining official college transcripts also was confusing. Colleges varied in their interpretations of policy regarding that which was considered official. Some schools allowed the student to personally bring the transcript, as long as it was in a sealed envelope. Other schools allowed only walk-in transcripts if the transcript was issued to the institution rather than the individual. Participants described a situation in which a
student was told an official transcript was needed from a previously attended college. The student left and went to the other school to request the transcript and brought it back to the college. When the student arrived, staff indicated they did not accept walk-in transcripts for any reason. Some colleges would not accept walk-in transcripts for any reason. This process was confusing and frustrating for the students.

Summary

Each of the 10 participants from admissions, advising, and financial aid shared their experiences and insights about institutional barriers to persistence. They provided rich descriptions of student experiences from application to enrollment that presented barriers to moving forward. Their passion for the student experience was clear in all interviews. Their descriptions of current processes and their concerns were evident regarding their impact on the student experience.

The interview data were synthesized to processes and experiences that caused difficulty for the student to move forward. The rich descriptions of these provided many examples of institutional processes that were challenging and confusing for students and resulted in the student stalling or dropping out altogether. In addition to institutional barriers, the participants provided examples of practices that positively affected student persistence.

This chapter presented a list and discussion of the findings from the interviews. In working with the subject matter experts, a variety of institutional barriers were determined that made it difficult for students to persist from the point of application to enrollment. The data presented described situations and variations in the processes and their impact on the student experience.
CHAPTER V: DISCUSSION AND CONCLUSIONS

The Study in Brief

Higher education is facing a growing and changing organizational environment (Deem et al., 2007). Changes to funding, market competition, and enrollment trends are creating the perfect storm for institutional change. Community colleges provide access and affordability to a large cohort of individuals; historically, less than one third of their students complete a credential (Bailey & Alfonso, 2005). Competition and revenue concerns have caused higher education institutions to examine their productivity and efficiency outcomes from current operating processes and procedures. Public outcry against tuition hikes combined with cuts to funding has pushed the need to examine processes for possible improvements.

Continuous improvement methodologies such as lean, Six Sigma, and TQM are staples in business and industry, while higher education has only dabbled with process improvement methodologies. Institutions have experienced some success with these methodologies, but full-scale implementation has been difficult. Lean thinking is a continuous improvement approach widely accepted in industry due to the success and improvements that have been demonstrated by adopters. Higher education is not exempt from process improvement. Every industry including healthcare, logistics, distribution, higher education, and manufacturing has processes that can be improved if one believes in continuous process improvement. Continuous process improvement is critical for higher education institutions to remain relevant.

Lean thinking is based on the fundamental belief that frontline staff must be involved in process improvement. They are defined as the subject matter experts, as they
work closely with process. Over the last several decades organizations outside education have reaped great rewards in quality, productivity, and efficiency by empowering frontline subject matter experts to evaluate the processes with which they work. Business and industry have come to see the value in trusting and empowering those individuals who work closely with a process and have termed these individuals “subject matter experts.”

Subject matter experts are best suited at evaluating the processes in which they work. When changes are made from the top down, the results often are increased complexity and decreased efficiency due to the lack of close and personal knowledge of the “real” process. Top down changes are not meant to be blatant and deliberate attacks by leadership to complicate the process. In many cases leadership is unable to spend sufficient time with institutional practices to fully understand them; leaders do not facilitate the college application, process transcripts, or advise students.

The purpose of this research was to better understand the situation, variation, and complexity of processes in community college admissions, financial aid, and advising departments and how their impact on student persistence from the perspective of those who work closely in those environments. When given the opportunity to participate and even lead continuous process improvement initiatives, subject matter experts possess great insight in ways to deliver positive results.

The methodology for this qualitative research was a phenomenological study of the individual lived experiences of subject matter experts working in admissions, advising, and financial aid. Their experiences and insights helped to define institutional barriers that make it difficult for community college students to progress from application
to successful enrollment, thus answering the central research question for this investigation: “What are the internal institutional barriers to persistence?”

The target population included all student affairs employees working in one of 16 community colleges in the comprehensive community and technical college system. Using a purposeful sampling method, representatives were selected by enrollment size of their institution and their department. The population included individuals working in either admissions, financial aid, or advising. The sampling matrix was developed to include representation across the three department categories: (a) Admissions, (b) Advising, and (c) Financial Aid. The second sampling category was enrollment size: (a) small was defined as enrollment less than 5,200 students, and (b) large was defined as enrollment greater than 5,200 students.

Development of the Interview Guide was based on questions written by the researcher with assistance from the dissertation advisor and were derived from the research questions guiding the study. The Interview Guide was reviewed for clarity and content by both the researcher’s chair and the research methodologists. Minor revisions were made and approval gained from the Institutional Review Boards for human subjects at both Western Kentucky University and the comprehensive community and technical college system. After revisions and approval, the research study began.

The sample included 10 individuals working in either admissions, financial aid, or advising. They were contacted by the researcher and interviews scheduled. Each interview session was approximately one hour in length. Participants signed the Informed Consent prior to the interview. All sessions were audio-taped and transcribed
by the researcher. The participants’ insights and individual experiences helped the researcher to identify institutional processes that affected student persistence.

**Discussion**

The discussion section is broken down into three sections: an overview of the findings by research question, discussion of the findings by research question, and the researcher’s themes.

**Overview of Findings**

This summary provides findings identified by frontline staff experts in admissions, advising, and financial aid.

**Research question 1.** What internal processes or experiences prevent students from persisting from application to enrollment as identified by subject matter experts in:

a. Admissions

- Application Barriers
  - Not user friendly and difficult to complete
  - Residency issues from “tricky” questions
  - Suspended applications
  - Readmit application inefficiency

- Convenience Barriers
  - Difficulty accessing high school transcript
  - Placement testing by appointment only
  - Limited evening and weekend hours
  - Long lines and wait times
  - Multiple Trips to Campus
- Lack of college standardization

- Communication Barriers
  - Contacting the student
  - Institutional over reliance on student self-service account to communicate with the student
  - Lack of clarity for next steps
  - Lack of institution driven student follow up

- Customer Service Barriers
  - Lack of a point person
  - Discouraging hand holding

b. Advising

- Faculty Advisor Barriers
  - Student does not know who their advisor is
  - Lack of access during summer term
  - Difficult to reach
  - Advising changes from student center to faculty advisor and this transition is difficult for the student

- Convenience Barriers
  - Limited evening and weekend hours
  - Registration through PeopleSoft is difficult
  - Inaccurate information from call center
  - Lack of standardized process for granting access to self-enroll
  - Incomplete admission file stalls advising
• Communication Barriers
  o Lack of follow up with the student

• Customer Service Barriers
  o Lack of a point person

c. Financial Aid

• Convenience Barriers
  o Financial aid verification process is difficult
  o Lack of standardization in SAP process
  o Some served by appointment only
  o Some departments with no direct phone access for students to call
directed students to call center

• Communication Barriers
  o Rely heavily on student self-service account to communicate
  o Burden of follow up placed heavily on the student
  o Changing and unclear transcript policies not communicated

d. Other Non-departmentally Specific Barriers

• Lack of cross training
• “Not my job attitude”
• Push to online learning
• Lack of local switchboard
• Information Overload
Research question 2. What is currently being done that most positively and most negatively impacts student persistence?

Positive impact.

- Convenience
  - START one-stop shop centers
  - Admissions navigators who walk students through the process
  - Some extended hours during the week
  - Offering walk-in appointments
  - Offering phone advising for strictly online students or those living far away
  - Instant admission days
  - Offering late registration

- Customer Service
  - Making personal phone calls to students “stuck” in the process
  - Researching the student before the appointment
  - Looking outside direct role to remove barriers or identify barriers in other departments
  - Removing holds even if outside their area
  - Walking students through requesting a transcript or calling their high school
  - Sit and walk student through application
  - Giving the student their contact card for a future contact person
- Communication
  - Sending admissions welcome packets

*Negative impact.*

- Application
  - Application not user friendly
  - Readmit application difficult
  - Residency process tied to specific “tricky” questions on application

- Convenience
  - Unclear transcript policies both high school and college
  - Unclear SAP appeal policies
  - Lack of cross training and standardization
  - Lack of an assigned point of contact
  - Limited extended evening and weekend hours
  - Appointment only departments
  - Too early application cutoff deadlines
  - Giving students the runaround because departments are siloed
  - Campus layout-pinball effect giving the student the run around
  - Overload of information

- Customer service
  - Attitude of “not my area” passing off to others ends up giving the student a poor experience

- Communication
  - Pushing communication through email and student self-service account
**Research question 3.** What steps in the process from application to enrollment are most challenging and or confusing for students:

*Confusing.*

- Financial aid
- Completing the application
- Obtaining transcript copies

*Challenging.*

- Finding advisor
- Waiting in long lines
- Knowing what to do next
- Needing to go to various departments to get things done

**Discussion of the Findings**

**Research question 1.** What internal processes or experiences prevent students from persisting from application to enrollment as identified by subject matter experts in:

a. Admissions?

b. Advising?

c. Financial Aid?

*Admissions.* All participants in admissions, advising, and financial aid identified institutional barriers that existed in admissions and made it difficult for students to progress. Their experiences in student affairs and with students in various stages of the process provided a depth of experience in identifying process barriers, which facilitated deep and information rich interviews.
The admissions department is considered the front door of the college and the beginning point for college students. From the very first step taken, students are faced with barriers. The first step in the process is to complete the application, which is confusing and difficult. Students who previously attended the college but sat out for one or more terms were classified as readmit students. The readmit application requires users to remember their username and password in order to complete the application. Students frequently forgot this information while not attending; therefore, at that point readmit students stop out of the application and must seek outside help to move forward. The high number of applications that are begun but never completed was indicative of a problem with submitting it. At this point students question their ability to be a college student. If they are unable to complete the application, they wonder whether they can complete a class. The application itself needs improvement and simplification, which is an example of needed continuous process improvement. The application underwent improvements in 2014 and needs further revisions to improve completion rates and to reduce suspended applications.

Suspended applications are placed in a queue requiring additional processing by the institution. A variety of reasons and actions occur that can suspend an application, to include items such as mismatched date of birth and social security number, gender not matching a previous record, multiple attempts to apply, student applies as a first-time college student yet has a previous record, or transfer students who indicated they were ineligible to return to their previous school. Suspended applications are placed in a separate queue requiring additional handling by student affairs personnel. While the application is in this queue, the student received no directions on next steps.
The application includes five questions to assess residency status. The high number of applications flagged for residency review compared to the actual number of non-residents indicated a high number of false positives. These students must appeal their residency determination in order to receive in-state tuition. In most cases the student must present documentation proving residency status before the residency assessment can be reversed. Participants described certain “tricky” questions that, when answered a certain way, flagged the student for residency verification. Initially this does not stall the student, as they likely are unaware of the issue until they receive their tuition bill or the amount of financial aid needed. Once the problem has been identified, a separate path is taken for residency verification. Students become frustrated with this process.

Once a student successfully completes the application, steps must be taken to complete the admissions file and begin other processes such as applying for financial aid and taking the placement test. Students often are uncertain about next steps or accomplishing the tasks needed to move forward. Obtaining high school or college transcripts is confusing and challenging for the student. They assume the college has access to this information; when asked to provide a copy, they are unfamiliar with the process to do so. They also must schedule an appointment to take their placement exam. Many locations do not offer walk-in placement exam slots, and students must make an appointment and another trip to campus to accomplish this task. Those who do not meet ACT benchmarks must complete the placement test prior to being advised and enrolled in classes. Students, particularly those directly out of high school, are accustomed to teachers, parents, and counselors walking them through the process. When they begin the
admissions process they are in a new and unfamiliar situation and find it difficult to know the steps needed. The lack of a point person or admissions navigator at most colleges results in students being on their own. Colleges send information via email and post checklist items for students on their self-service accounts, but they neglect to realize that students are unaware that a self-service account exists or how to login and access that information. In addition, many students readily admit to failing to checking email regularly. The communication gap presents a problem and exit point for students. When they are unfamiliar with the process or and individual to contact for help they give up. Couple this with the lack of a local switchboard and students’ only recourse is to come to campus for help.

For most industries, when a customer arrives they take immeasurable steps to maintain that customer. Continuous contact and customer follow up is required to obtain and keep a customer; multiple emails, mailings, and personal phone calls are used to reach out to the customer in order to capture them. Higher education institutions are not proactive and intense with customer follow up. The thought process is that, students who are college material should be able to figure it out. This creates a low conversion rate of students who apply compared to those who actually enroll in class.

Advising. Students who successfully navigate the application and placement assessment must then move to advising. New students with less than 12 hours of college credit visit the advising center in student affairs, which typically offers a small number of advisors for a comprehensive advising session. They discuss goals and objectives and place the student in appropriate courses. These advisors are well-versed in a variety of programs and transfer options. After a student has completed the first semester, a faculty
advisor is assigned. Communication of this change to students is limited, and they are left wondering what to do and where to go after their first semester. Student affairs advisors also are concerned with the outside knowledge of academic advisors. They feel they are well-versed at advising students in their own program, but some did not keep up with outside institution requirements and resulted in inaccurate academic advice.

Students found it difficult to both identify their advisor and connect with them. Communication of advisor changes is limited and inconsistent. Self-enrollment could be a potential solution; however, self-enrollment can occur only through the student self-service account and with special permission. The individual who granted permission to enroll varied among colleges. At one college, the faculty advisor had full authority to grant permission to self-enroll; at another, they rarely granted self-service enrollment access. This presented a marked opportunity for students to drop out when unable to access an individual to help them enroll. This was a clear institutional barrier to persistence.

Student affairs advising centers employ a limited number of full-time advisors who primarily serve first-semester students or those with less than 12 credit hours. During peak time the small number of advisors is overwhelming and long lines quickly formed. Students left when the wait was too long. At this point near the beginning of the semester students found it difficult to be placed in classes. In addition, limited weekend and evening hours caused difficulty for working students to be advised and enrolled.

Student affairs advisors spend approximately one hour working with new students to discuss objectives and plan their first semester. Students often establish a bond or connection with this individual and frequently return for assistance. The current advising
process is structured in such a way that students who complete their first semester are assigned an academic advisor. The change from one point of contact to another is difficult for students to navigate.

**Financial Aid.** Several institutionally created barriers to persistence exist in the Financial Aid department. This function is challenging and confusing for students to navigate, and the institutions do not help to make this process easier. Students have numerous questions about financial aid and find it difficult to contact a financial aid officer via the telephone. They are referred to a call center for assistance, but the level of detail needed to answer their questions typically requires a local expert. Some financial aid departments do not serve walk-in students; students experience long wait times for service in departments that serve walk-ins. Communication is limited and proactive measures have not been taken to communicate with the student. Heavy reliance on the student’s self-service account for communication results in many students who are unaware that a message was delivered.

In addition to institutional barriers in admissions, advising, and financial aid, an overall lack of cross training exists. Silos are evident in nearly every key process in student affairs and result in a negative experience for students. They complain of feeling they have received the runaround; they bounce from one department to the next and often end up where they began. Students look for a seamless experience and expect college personnel to be knowledgeable about the process. The lack of cross training and departmentalized silos appears to have fostered a “not my job attitude.” The descriptions from subject experts reveal that staff tell students they are unable to help them and send them to another department, when in fact, the issue usually is small and easy to fix.
Students look for someone to facilitate removing barriers and to help them navigate a complex and unfamiliar process, but rather, they are passed around and fall through the cracks.

**Research question 2.** What is currently being done that most positively and most negatively impacts student persistence?

A variety of institutional practices positively impact student persistence. These factors are limited in scope and are not standardized across colleges; rather they are implemented by individuals on a local level. Limited extended and weekend hours were cited as a barrier to students. All staff in admissions, advising, and financial aid cited staying late for students when the need was evident. These extended hours were offered on a case-by-case basis and were not published operating hours. Permanent extended and published hours would offer a much needed service to the larger student population.

Student affairs staff also reported making personal phone calls to follow up with students who appeared to be stuck in the process. Some proactive phone calls were made in financial aid to identify students on the cusp of being suspended for not meeting SAP guidelines. Admissions staff at one college utilized student workers to call students who had completed applications but had not yet scheduled the placement exam. These personalized measures were characterized as going above and beyond to connect with the student and positively affected the student’s experience and success rate.

Many of the research participants had worked in other departments in student affairs over the duration of their careers in academia. This experience gave them a wider perspective of the way in which different departments in student affairs are connected. Their experiences allowed them to serve the student in a more complete fashion. They
were able to easily remove barriers for students and help them flow through the process. Some were empowered to do this type of work; others felt they would be reprimanded or step on toes if they worked outside their area. Some student affairs staff go above and beyond to deliver excellent customer service. They walk a student through the online application, help them request transcripts, make them personalized written checklists, and offer to stay with them until they are successfully enrolled. They provide their direct phone line and email address and encourage the student to stop by any time assistance is needed.

On the institutional level, some colleges offer START, one-stop shop centers that enable students to walk through the process from application to enrollment at one location with specialized admissions navigators. They do not consider it to be “hand holding,” but rather, teaching students the ins and outs of the process so they can successfully navigate in the future. Additionally, several colleges offer late registration and instant admissions days, which difficult for staff because the student need is high on these days. This system offers a great service that caters to the needs of students to enable them to accomplish all that is needed to successfully enroll.

Last, the admissions welcome packet is an institutional practice that positively supports persistence. Admissions letters and packets provide a way to notify the student of next steps. While community colleges are open admissions, students often are unaware of this process and anxiously await further communication from the institution.

A variety of institutional practices also negatively impact student persistence. Difficulty in navigating and completing the application creates a problem for students from the beginning. The application layout and questions result in difficulty for students
to persist. Particular questions on the application flag students as non-residents and present potential delays later in the process. Suspended applications place the student in a queue that creates a delay and excess processing. Some colleges offer only the online application and have moved away from a paper application. Returning students are faced with the readmit application that many, if not most, are unable to finish. These students must visit campus to have an admissions representative walk them through the process.

Customer service includes providing assistance to individuals who buy or use the organization’s products or services. Understanding the voice of the customer, the student’s needs, is the first step in providing excellent customer service. Participants shared examples of poor customer service including rude staff who were not helpful to the student. Students faced with poor customer service become frustrated and disgruntled. Similar to a customer outside of higher education who is unhappy with a customer service experience, students often seek other options.

Some colleges have instituted earlier application deadlines. Recent research has examined the success rates of students who wait to the last minute to apply and enroll. A portion of last minute students may not be successful. Some thoughts concerning this include students being rushed and then unable to obtain their books in time, resulting in negative outcomes. Earlier deadlines or cutoffs are a barrier for some students. One participant passionately noted that not all last minute students are procrastinators. They may not have sufficient control over their life to know their work schedule or other responsibilities in time to meet early deadlines.

The lack of standardized processes across institutions in the system in student affairs generally has a negative effect on persistence. Students encounter various student
affairs experiences, depending upon the campus they visit. Many colleges in the system are within driving distance of another institution. Increased online enrollment results in students increasingly working with multiple colleges in the same system, and finding different policies and procedures at each location. Even within the same college, multiple satellite locations are not standardized to the main campus procedures. Lack of standardization impacts the type of service the student receives. One college may allow walk-in placement testing, while another may require an appointment. Transcript policies vary across the system as well; some allow walk-in sealed transcripts, while others do not. Some allow conditional enrollment for one semester while students turn in their transcripts, but many do not.

Lastly campus layout is a concern and has a negative impact on students experience and persistence. Students must navigate multiple buildings and departments to walk through the process from application to enrollment. Limited signage with academic verbiage translates to the student not knowing where they need to be next and frustration ensues. While some campuses have tried to consolidate all front door student affairs departments into one building many have not.

Another institutional practice is to provide the student with as much information as possible in one visit, as personnel fear they not see them again and want to share any information they may need. This can occur during the first visit to campus and has occurred during orientation as well. Inundating students with information can be problematic, in that they may not remember the information when they need it and they can quickly become overwhelmed. When students feel overwhelmed and/or frustrated,
their experience is affected in a negative way. Without adequate coping skills, they may face persistence issues.

**Research question 3.** What steps in the process from application to enrollment are most challenging and or confusing for students?

Beginning college is a confusing time for many students, particularly for first-generation students with limited college knowledge. The process from application to enrollment includes some of the first experiences the individual may encounter with the college. Regrettably, some of those front door experiences are cumbersome and challenging to navigate. These steps are within the control of the institution and can be altered for a more streamlined experience.

The application was identified as a major barrier for students and both challenging and confusing to complete. A number of students continue to apply while they await further communication. Those students become suspended and require additional processing on the college side. The layout of the application can make it difficult to complete. From the early stages students face process issues within the application.

Lack of thorough communication with the student regarding next steps was one of the most frequently cited concerns from subject matter experts. Students are unfamiliar with the application and enrollment process and often wait for guidance on next steps. Communication occurs in limited forms; a popup confirmation is displayed once the application is submitted and an email including next steps is sent after the application is completed. Each college is different in that which is required next; follow up involves an admissions welcome letter or postcard. From that point the student is responsible for navigating the system.
Participants felt strongly that students needed a local point of contact to help navigate the process. They also mentioned students’ desire to call the college and speak with a local person. The current process is to refer students to the call center for assistance. While the call center has significantly cut down on colleges’ call volume, the inaccuracy of information from the call center created other problems.

**Researcher’s Themes**

Subject matter expert in lean thinking is the individual working closely with a specific process. Higher education improvements appear to have originated from within top management, when top management is not closely involved with the day-to-day operations and decisions are made that impact the process without thorough understanding that subject matter experts possess. This research sought to better understand the situation, variation, and complexity of processes in community college admissions, financial aid, and advising departments and their impact on student persistence from the perspective of those who work closely in those environments. Several key themes were extrapolated from the findings and are presented below.

First, many convenience barriers make it difficult for students to navigate the process from application to enrollment. The overall perception was that the burden of navigation was clearly on the shoulders of the student, and the institutions assume little responsibility. Convenience barriers include limited evening and weekend hours, appointment-only departments, and no direct phone lines to certain departments. These barriers present challenges that can be frustrating and difficult to navigate and create persistence problems.
Second, several communication barriers also make it difficult to navigate the process. Again, the responsibility of communication was placed on the student, and institutions assumed inadequate active and persistent communication. Communication barriers include communication through tools that are not used by current students. Email and student self-service accounts are the primary modes for communication from the institution to the student. Participants highlighted that students readily admit to not using email and often have incomplete access to their self-service account or do not know how to use it. Many stall in the process because they are unfamiliar with next steps. Limited institutional attempts are made to proactively contact the student.

Third, the lack of cross training in student affairs negatively affects the student experience and persistence. Staff in student affairs possess the experience to help the student but are stymied because the task is outside of their domain. Territorial behaviors from leadership prevent staff from helping students on demand, resulting in a referral to other departments and bouncing from one department to another to accomplish a task. Students become frustrated with the “runaround.” Cross training was limited and created a fragmented experience for the student. The admissions, advising, and financial aid departments are organized for ease of the institution rather than the student. Although, the student is the end customer and user of these processes, departments have been structured to serve the institution. This functional organizational structure may be easy for the institutions to manage in this way but creates a disjointed experience for the student.

Fourth, customer service barriers negatively impact the student experience and persistence, to include lack of a point person, discouraging hand holding, and a “not my
job attitude.” Students often attach themselves the first person who is helpful during the application to enrollment process. They continue to return to an individual who is helpful even when their need is outside that person’s domain. While individuals such as those exist across institutions, a large cohort of staff attempt to prepare students for four-year institutions by discouraging hand holding and high touch customer service. Leadership has created an environment in which processes outside of their areas cannot be touched. These territorial behaviors negatively affect the customer service.

Recommendations

Recommendations offered in this section address two areas: (a) policy and practice and (b) future research. Policy and practice recommendations provide an opportunity to identify discussion points for future actions.

Policy and Practice Recommendations

The application should be simplified and reformatted, as it is the first experience for a student and should be user friendly. The application should perform with no errors when using the most frequently used web browsers. Additionally, the five questions related to residency should be revised to minimize the number of students falsely flagged as non-residents. The suggestion was made to add comments section below each residency question for further explanation. Further clarification is needed for the second question regarding financial support from and individual outside the state; the applicant could provide a description of the source as a point of clarification. Students who are flagged erroneously should not be required to complete the long form for residency appeal. Some schools have moved to a short form for these individuals or accept documentation and reverse the decision. Others continue to make the student complete
the long form appeal process. The policy for readmission for students who have previously attended a college in the system is to reapply after sitting out for one term, excluding summer. This policy creates a high number of suspended applications due to readmission. It also is a difficult process for students and creates a suspected high number of readmit applications remain incomplete. The current policy is difficult for those students who sit out for one semester, and should be reevaluated and possibly changing the term to one full year versus one month.

Second, a process is needed for communicating next steps and expanding on the current system. Some colleges send out admissions welcome packets with next steps clearly delineated, while others do not. This was noted to be an effective process but should be standardized across colleges. A college that had a particularly effective admissions packet could share it across the system. Some colleges implement a phone call process for all first-time freshmen who applied but did not appear for further processing. The applicants were divided into small sections and distributed out to groups for follow up with a phone call. When a large number of calls are needed, additional mailings or emails could be sent to reach out to those applicants. Efforts should be made to contact and connect with them.

Third, evening hours extending beyond 5:00 p.m. should be offered as well as some Saturdays, and should be published. While they may not be needed year round, they would be especially helpful during peak application and enrollment periods. In addition to extended hours, student affairs departments should clearly publish their phone numbers and offer call-in options for students.
Fourth, walk-in availability should be instituted for all financial aid departments and placement exam testing centers. First come first served centers could be implemented and available for those who want to test on the same day.

Fifth, student self-service accounts should not be the primary communication tool. The account was described as an excellent resource for information; unfortunately, the student body is unaware of how to access and utilize this resource. In some cases full functionality is available only after enrollment. For students in the early phases of the front door experience, they are unaware of this resource. Communication should occur through the email, home address, and phone number provided by the applicant. In addition, as the self-service account can provide a wealth of knowledge, short duration training sessions could be made available to increase knowledge and usage. Several participants mentioned walking their students through self-service accounts, with the key takeaway to teach students the way in which to set up their username and password and familiarize them with the key functions.

Sixth, an advising center should be created for all students. First-time freshmen typically received a highly customized advising session, after which they are referred to academic advisors. The transition and communication from the advising center to faculty advising is limited and creates a breakdown between the student and successful enrollment to the next term. Improved collaboration is needed between faculty and staff advisors. Students become familiarized and comfortable with their first advising experience, although it does not continue for the following semesters. Advising centers should provide one location for students to transition to the next semester.
Seventh, students should be assigned a point of contact, to serve as an academic coach. The point of contact responsibilities could include availability to answer questions and to remove institutional barriers for the student, and could be assigned to faculty, staff, or student ambassadors.

Eighth, student affairs personnel should be cross trained, and able to provide a wide variety of assistance on front door experience functions such as the application, transcripts, placement testing, advising, and financial aid. Although this appears to be a panacea, all interviewees possessed considerable student affairs experience. Many, if not all, had sufficient experience to satisfy the students’ needs and move them forward in the process. It is unnecessary that the subject matter experts be well versed in all things student affairs, but they should have knowledge and be empowered to assist the student.

Ninth, student affairs should move to the START center model. Some colleges in the system already utilize this model, and provide a one-stop shop experience for students. All requirements from application to enrollment are included in one location with the goal of providing a seamless admissions process. They offer a simplified process that is easier for students to navigate. These centers reduce the number of students who feel they get the runaround; they are able to obtain in one location the help they need without bouncing from one department to another.

Tenth, residency information should be communicated to students as early as possible. In addition to the popup notification received after they submit their application, colleges should follow up via email, phone, or by mail. Colleges with a particularly effective follow-up letter perhaps could share it with other colleges. The
appeal process requires some time and students who receive no correspondence find out only when their tuition responsibility is communicated near the beginning of the term.

Eleventh, instant admissions best practices should be shared and implemented at each college. Only some offer instant admissions days, although all colleges could offer at least one per semester. These provide a great service to the student population. In conjunction with instant admissions, colleges should reassess application deadlines and extend them to the start of the semester.

Twelfth, the transcript acceptance policy and the policy on conditional acceptance should be standardized. A great deal of variation exists in each college’s handling of transcript acceptance. A best practice should be established and implemented across the system. Walk-in transcripts in a sealed envelope addressed to the college should be accepted, as the majority of colleges currently do so. This also could occur for conditionally accepting students while waiting for transcript copies. If the best practice allows for one semester to turn in the high school transcript, all colleges in the system should follow suit.

Last, colleges should create a plan for peak volume periods. Long lines and wait times result in enrollment loss. Students leave and do not return, as they feel they are unable to accomplish their tasks in the time remaining. High volume periods can be forecast based on historical norms. An “all-hands-on-deck” mentality must be created to improve the student experience and enrollment numbers.

**Future Research Recommendations**

This qualitative research study provided in-depth, rich descriptions of subject matter experts in student affairs regarding institutional barriers to persistence. As more
Institutions identify practices that support persistence and improve the negative practices, students are more likely to be successful, which improves persistence.

This study focused only on subject matter experts in admissions, advising, and financial aid in community colleges. Certainly, other individuals in higher education possess experiences that could be shared. Student affairs staff at four-year institutions may report different institutional barriers to student persistence. Additionally, faculties at community colleges have opinions of student affairs and internal practices. By interviewing those individuals outside of student affairs, additional themes and ideas may be identified. Community college leadership both locally and at the system office level undoubtedly has an impact on the policies and procedures that impact student affairs. By interviewing leaders, a different perspective could be gained, which would provide a larger, more systems-oriented viewpoint.

Students are the end customers who must navigate the student affairs process. By interviewing students, a closer firsthand experience can be obtained. This population could include those who successfully moved from admissions to enrollment, as well as those who applied but slipped through the cracks and did not enroll.

Summary

This qualitative study provided insights into the thoughts, feelings, and experiences of subject matter experts in a community college in admissions, advising, or financial aid. The participants shared their experiences and concerns about the current state processes in student affairs that affect the student’s experience and persistence. A variety of institutional practices were identified that both negatively and positively impact student persistence.
The current state assessment of higher education institutions includes ongoing reductions in state appropriations combined with enrollment decreases. Revenue decreases have highlighted the need to reevaluate the procedures, processes, practices, and policies utilized at the college level. Student success outcomes are being examined as the effectiveness of current processes are being questioned. Particularly, outside influences such as business and industry question the ability of these institutions to provide a pipeline of skilled workers. With low completion rates, institutions face increased pressure, scrutiny, and accountability.

Lean principles served as the theoretical framework for this research. Lean has been successfully implemented in nearly every type of business or industry. Hospitals, distribution centers, manufacturers, logistics providers, and some educational institutions have reaped improvements to quality, productivity, and efficiency by utilizing and implementing these principles. Reliance on the knowledge and experience of subject matter experts is the foundation for process improvement under lean principles. Lean specialists recognize the closeness and knowledge possessed by the subject matter experts. This knowledge can be used to identify gaps and concerns in the process and to develop appropriate and effective solutions. These principles were applied to this study utilizing subject matter experts in higher education.

Subject matter experts in admissions, advising, and financial aid shared their experiences with processes that impact the student experience. They identified numerous processes, procedures, policies, and practices that are institutional barriers and negatively affect student persistence. From the findings of this study, process improvement clearly is needed for a variety of front door operations such as the application, placement testing,
financial aid, advising, and records. Many of the needed improvements involve basic process standardization, which is a key lean principle.

Community colleges serve a unique purpose and mission. They provide access and affordability to a large number of individuals. Community college systems across the United States are failing to fully execute their mission. Many community college students are under resourced academically, financially, and socially. First-generation students are not afforded the luxury of family members with previous experience when navigating the higher education system. These students are unaware of the processes and procedures needed and have insufficient college knowledge to navigate the system.

Fundamentally, community colleges were created to serve this unique population. The results of this study indicate a movement away from high touch customer service and that which some participants described as “hand holding.” Community and technical colleges must remember their unique mission and establish systems that help to facilitate student success through robust institutional processes.

Higher education institutions are experiencing increased accountability and external pressures. Continuous process improvement can be applied to any industry and any process. These institutions can reap improvements to the student experience including enhanced student success measures that focus on revising internal institutional practices. Lean principles is a proven continuous improvement philosophy that places high value on frontline subject matter experts’ knowledge in order to make positive changes. With the increased pressure to deliver results and to increase revenues, colleges must apply continuous process improvement techniques to their practices to improve overall outcomes.
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APPENDIX A: Consent Letter

Nicole R. Cobb
601 Scioto Drive
Louisville, KY 40223

Dear Participant:

You are being invited to participate in a qualitative research project entitled, Overcoming Barriers to Admission in a Community College. This is a research study in partial fulfillment of doctoral dissertation requirements. Dr. Barbara G. Burch, Department of Educational Leadership at Western Kentucky University, is the chair for this research study.

The purpose of this research study is to provide insight into the perceptions and experiences of Kentucky Community and Technical College System (KCTCS) staff regarding barriers to admission. It is designed to collect data from front line staff members working in admissions, advising, and financial aid. To accommodate each participant, the researcher will travel to each campus site to conduct the interviews independent of each other. The interview session per participant is designed not to exceed one hour.

Be assured that there are no physical, psychological, financial, or legal risks to your or any of the other participants associated with this study. The benefits gained from your participation may provide information about what prevents KCTCS applicants from persisting and help to remove those barriers for our students.

Absolute confidentiality cannot be guaranteed; however, data will be held in confidence to the extent permitted by law. All information collected may be reviewed by Dr. Burch. Your identity will not be revealed should this study be published.

Your participation in this research study is voluntary. You are free to withdraw your consent at any time without any penalty. You are free to decline to answer any particular question that may make you uncomfortable.

With your permission, I will audiotape and take notes during the interview. The recording is to accurately record the information you provide, and will be used for transcription purposes only [if accurate]. If you choose not to be audiotaped, I will take notes instead. If you agree to being audiotaped but feel uncomfortable at any time during the interview, I can turn off the recorder at your request. Or if you don't wish to continue, you can stop the interview at any time.

If you have questions about this research study, you may contact me (home, 502 295-0869; work, 502 213-2480) or e-mail (Nicole.cobb@kctcs.edu) or Dr. Burch (270-745-8996) or email
(Barbara.burch@wku.edu) and you will be given an opportunity to discuss any question about your rights as a research subject, in confidence, with a member of the Committee.

(Consent continued on next page)

Sincerely,

Nicole R. Cobb

I agree to participate in the study.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

__________________________________________  ______________
Signature of Participant                     Date

__________________________________________  ______________
Witness                                      Date

THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Paul Mooney, Human Protections Administrator
TELEPHONE: (270) 745-2129
APPENDIX B: Letter of Notification of Nonparticipation

Dear:

This letter is to thank you for volunteering to participate in the research study, “Overcoming Barriers to Admission in a Community College.” More than one staff member from your department met the criteria and agreed to participate. To assure diversity in the collection of data, informal factors such as college enrollment, and length of employment were also considered. Based on those criteria, another individual from your program was selected.

I appreciate your willingness to provide insight into this important subject and if you wish, I will provide you a summary of the results. Thank you again for your interest in the research study.

Sincerely,

Nickie R. Cobb
APPENDIX C: Interview Guide

General Interview Questions (Admissions):

1. Describe your role in admissions?

2. Describe the process new student’s encounter to enroll in this college.

3. What steps in the process from application to enrollment are most challenging /confusing for students?

4. What strategies do you use to assist students through the application to enrollment process?

5. What strategies do you use to identify students before they slip through the cracks?

6. Why do you think some students make it part way through the process but never enroll?

7. What are the keys to successful enrollment?

8. What barriers are created internally that prevent enrollment? How are they overcome?

9. If you could make recommendations for change that would improve the student experience what would you suggest?

10. How are ideas for process improvement communicated, evaluated, and implemented at your college?

General Interview Questions (Financial Aid):

1. Describe your role in financial aid?

2. Describe the process new student’s encounter to apply for financial aid in this college.

3. What steps in the financial aid process are most challenging /confusing for students?

4. What strategies do you use to assist students through the financial aid process?
5. What strategies do you use to identify students before they slip through the cracks?

6. Why do you think some students make it part way through the process but never enroll?

7. What are the keys to successful enrollment?

8. What barriers are created internally that prevent successful progression through the financial aid process? How are they overcome?

9. If you could make recommendations for change that would improve the student experience what would you suggest?

10. How are ideas for process improvement communicated, evaluated, and implemented at your college?

**General Interview Questions (Advising):**

1. Describe your role in advising?

2. Describe the process new student’s encounter to be advised in this college.

3. What steps in the process from application to being advised are most challenging/confusing for students?

4. What strategies do you use to assist students through the advising process?

5. What strategies do you use to identify students before they slip through the cracks?

6. Why do you think some students make it part way through the process but never enroll?

7. What are the keys to successful advising and then enrollment?

8. What barriers are created internally that prevents a student from being advised? How are they overcome?

9. If you could make recommendations for change that would improve the student experience what would you suggest?

10. How are ideas for process improvement communicated, evaluated, and implemented at your college?
APPENDIX D: Screen Shot of Application
(where the sizing does not allow the student to click Next)
APPENDIX E: Screen Shot of Application Residency Questions

Residency Determination

*Have you lived in Kentucky for the past 12 Months?
*Have you received financial support for basic living expenses or tuition and fees from a person outside of KY during the last 12 months? Financial support does not include federal financial aid, federal income, or gifts from family or friends.
*Does either living parent or legal guardian live in Kentucky?
*Are you a family member with a valid dependent ID of an active duty military member?
*Do you consider yourself a Kentucky resident?