ABSTRACT

MITCHELL, PATRICE BLACK. Perceived Quality of Service and Behavioral Intentions of First-time Students Enrolled at The University of North Carolina Asheville. (Under the direction of Dr. James Bartlett, II.)

The purpose of this study was to use the SERVQUAL (Service Quality Instrument) to examine the perceptions of first-time enrolled students at University of North Carolina Asheville regarding the services they receive from a selected group of departments in the university’s One Stop area. In addition, the study examined whether a relationship existed between the selected independent variables (gender, race, on-campus residency status, residency status for tuition purpose, estimated family contribution, SAT Total, high school weighted grade point average, UNC Asheville grade point average, assurance, empathy, reliability, responsiveness, and tangibles) and perceived service quality. The study also explored the relationship between selected variables and the potential positive and negative behavioral intentions of the students. Three research questions were used to guide the study.

The population consisted of all of the students enrolled at the university during the spring 2010 semester that had enrolled for the first time at any college fall 2009. The study revealed a positive perceived quality of services for the One Stop departments. The research also demonstrated that there is a very strong association between service quality and the five dimensions measured on the SERVQUAL instrument. The results revealed also that positive and negative behavioral intentions have a significant relationship between one another. The study also confirmed for the university that one of the areas for improvement in
the One Stop area is the overall physical look of its offices and brochures (tangibles dimension of the SERVQUAL instrument).

These results will assist the university in their efforts to enhance the quality of services provided to its students. The results of the research also support the institution’s decision to relocate the One Stop department areas and provide centralized services. The findings of this study are significant because in a time where institutions face limited resources and increased competition for students, the results provide inform the administration regarding potential issues and best practices. How students perceive the quality of services they receive has been shown to influence how students intend to behave (Ham, 2003; Kerlin, 2000; Christy; 1997). In today’s competitive market, institutions are well-served by examining how and why their students may respond to these perceptions. And just as importantly, what expectations the students have for these services.
Perceived Quality of Service and Behavioral Intentions of First-Time Students Enrolled at
The University of North Carolina Asheville

by
Patrice Black Mitchell

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DEDICATION

This dissertation is dedicated to my family and friends whose patience, prayers, and encouragement sustained me throughout this doctoral process. I especially dedicate this dissertation to the memory of my father, Willis E. Black, Jr., who believed strongly in both the value of an education and my ability to achieve my dreams.

This dissertation is also dedicated to my mother, Gloria S. Black, who models the true meaning of mother and friend. To my sisters, Lisa and Sonya, for allowing me to take the lead on our many adventures together, but always being there to share in the joy of the experience and add to its delight. To my daughter Ryanne, who endured her mom being away throughout the years for school, work, and dissertation writing. To my beautiful nieces Layla and Lexus who inspire me every day. To Franklin, Sonny, Sean, and Nazir, thank you for being a part of our family. And to Van, thank you for always reminding me to enjoy each step of the journey.
BIOGRAPHY

Patrice Black Mitchell is the oldest daughter of Gloria and the late Willis Black, Jr. Patrice graduated from Parkland High School located in Winston-Salem, North Carolina and went on to complete her undergraduate degree in Communication from Salem College in Winston-Salem, North Carolina. She earned her master’s degree in Public Affairs from the University of North Carolina Greensboro in North Carolina. Her professional career in higher education spans over twenty years. She has worked at five North Carolina higher education institutions. Currently, Patrice is employed at the University of North Carolina Asheville as the Dean of Admissions and Financial Aid. Patrice has a daughter, Ryanne, two sisters Lisa and Sonya, and two nieces Lexus and Layla. Patrice is also a proud member of Alpha Kappa Alpha Sorority, Incorporated.

Patrice’s dedication to providing the highest level of service to students and a passion for assisting students achieve their own dream of higher education led her to this dissertation.
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tired, but did not want you worrying even more than you already were. I pray that my sacrifice inspires you to pursue your dreams no matter how out of reach they may seem. This especially is my hope for my daughter Ryanne and my nieces Lexus and Layla, beautiful and smart young women with the potential to change the world.

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CHAPTER ONE:

INTRODUCTION

Colleges and universities face increasing demands to continually evaluate their services and academic offerings. There is an expectation to demonstrate accountability in all areas of the institution (Srikanthan & Dalrymple, 2002; Cheng & Tam, 1997; Pascarella & Chapman, 1983; Chapman, 1981). In addition to the pressure to be more accountable to internal and external constituents, today’s economic environment has resulted in a pressure for colleges and universities to be more mindful of the increased commercial competition for limited resources (Abdullah, 2006; Winston, 1997).

One area in which institutions can focus their limited resources and influence the behavioral intention of their students is understanding how students perceive the quality of services being provided by that institution (Zeithaml, 2000; Zeithmal, Parasuraman & Berry, 1996). It is critical for educational institutions to monitor the quality of their services so that they may provide continuous improvement (Brochado, 2009). Given that continued student dissatisfaction with enrollment services has a negative impact on attracting new students to their institutions, the avoidance of the perception of poor service is important to institutions of higher education (Zammuto, Keaveney, & O’Connor, 1996).

One of the difficulties institutions face when assessing their service quality is that both the service provider’s personnel and the consumer (student) are involved in the process (Hill, 1995). The staff members of the offices providing the service may need to rely on the student for information. If that information is incorrect, or if the student fails to ask pertinent questions, that particular experience could influence the behavior intentions of the student.
According to some researchers, the difficulty in having students play a role in the perceived service quality should not deter institutions from pursuing efforts to assess the perceived quality of services provided by their employees. “Whether servicing the needs of academic or general staff or students, there is no reason why, in the present environment, service-minded organizations should not be trying to add value to the service experience in this way” (O’Neill & Palmer, 2005, p. 40).

Hill (1995) proposes several options for addressing the issue of the student’s role in the service delivery process: formal and detailed induction programs for new undergraduates; brochures that clearly define the behavior required on the part of the student in order to maximize the benefits of the services provided by the college; curriculum guides that explain to students the skills and attitude required for effective study; clear direction regarding where required course assignments can be located; and where completed assignments should be left for the professor.

Several studies have examined the relationship between how a student perceived the quality of services provided and retention (behavioral intentions) of that student. Much of the literature surrounding the discussion of service quality, and service quality in higher education, is based on the research conducted by Parasuraman, Zeithaml, and Berry. (1996, 1994, 1988, 1985). Parasuraman et al. (1985) developed a framework for service quality that defined quality as the comparison between expectations and performance. The authors would later develop the SERVQUAL scale as the instrument for measuring the perception of service quality. “The main thesis of the service quality model is that consumers’ quality
perceptions are influenced by a series of distinct gaps occurring on the marketers’ side” (p. 49).

In their initial research Parasuraman et al. (1985) argued that service quality could be characterized by the 10 dimensions that customers use to evaluate service quality. According to Parasuraman et al. (1985), the dimensions are reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing the customer, and tangibles.

Parasuraman et al. (1988) created the SERVQUAL scale to measure the customer’s perception of service quality. The 22-item measurement scale includes five distinct dimensions that capture facets of the original 10 dimensions. The five dimensions include tangibles, responsiveness, reliability, assurance, and empathy. According to the authors, the SERVQUAL scale has the potential for many applications such as assessing customer expectations and perceptions regarding service quality, and has been used in several different contexts. Service quality was then defined by the authors as “a form of attitude, related but not the same as satisfaction, and results from a comparison of expectations with perceptions of performance” (p. 15).

Administering the SERVQUAL to students is one way an institution can assess the services that it provides its students. The student’s assessment of services and other components of the organization contribute to the establishment of a student as customer relationship. This relationship draws criticism from those who do not believe in the validity of this type of relationship in higher education. In distinguishing between customers of a college or university and customers as it relates to the business industry, Pitman (2000) cites
a policy created by Curtain University of Technology in Australia. The new policy established a Student Charter. “The Student Charter is a two-way agreement between the University and students that clearly spells out the expectations that each group has upon the other” (p. 167). The result is a formal understanding that both the university and the student play a role in producing outstanding customer service.

Having a formal agreement also places pressure on the university to live up to an agreement in which the service provider does not have total control over the process since the school cannot guarantee the coproduction efforts (McCollough & Gremler, 1999). As students continue to pay more of a significant portion of their college tuition and expenses, the pressure to view students as customers will likely continue (McCollough & Gremler, 1999).

Whether or not colleges and universities view their students as customers, the need for assessment of student services exists. According to Stodnick and Rodgers (2008), assessing service quality in a higher education setting is important because it allows the institution to evaluate behavioral aspects and other components of the educational experience. The authors specifically argue that colleges “can learn more about improving their service delivery when they incorporate…tacit customer-centric ideas into their assessment paradigms than by focusing on traditional scales that heavily emphasize very specific structural components of service delivery” (p. 128).

Statement of the Problem

One area that has surfaced in the literature as a venue for impacting the behavioral intentions of students is how students perceive the quality of services they receive while
attending a college or university. The literature has focused on the issue of service quality and impacting behavior from a retail industry perspective. Thus, the problem is that extensive research is still needed to determine the appropriate use, and benefits of, perceived quality of services on the behavioral intentions of college students. The behavioral intentions of college students continue to be a major concern and interest for colleges and universities. The average U.S. college experiences a 25% departure rate for their first-year students (Braxton, 2000). Despite decades of studying factors that impact student behavior, student retention, behavioral intentions, and persistence still remains a much debated and important issue for college administrators and researchers (Jacobs & Archie, 2008).

There is also the issue of the cost of recruitment. As the cost of recruiting students continue to rise (Lau, 2003; Noel, Levitz, & Saluri, 1985), it becomes increasingly important for institutions of higher education to be able influence the retention of those students they have already recruited to their campuses. According to Ackerman and Schibrowsky (2007), for each additional student retained, the university gains $10, 647 in revenue.

Many colleges speak of the quality and successes of their academic programs. Persistence is one of the best indicators that the college is meeting its goal of student success and satisfaction and that the institution is addressing the needs of the student and the expectations of those students (Leviz, Noel, & Richter, 1999). One mechanism to address the issue of persistence, or in the case of this study, behavioral intentions of first-year students, is to examine the quality of student services provided by the institution.

There is dissent among higher education scholars, administrators, and policy makers regarding whether students should be viewed as customers (McCollough & Gremler,
1999; Eagle & Brennan, 2007). Thus, there is also much discussion regarding how much importance and resources should be given to student customer service initiatives on college campuses. As the cost of tuition and other college expenses continue to increase, and as more students pay their own expenses, the more an emphasis on customer service will continue to increase. There are many lessons regarding customer service that higher education can learn by approaching how they provide a service from a marketing perspective. Customers have a service expectation when they interact with an organization (Berry, Wall, & Carbone, 2006).

In an increasingly competitive environment, colleges are no longer evaluated on academic reputation alone. Students are asked to pay higher tuition and fees, and as result, have higher expectations for their overall college experience. The more successful colleges and universities will be those that respond to this new expectation. “Students perceive themselves to be the customers of higher education and institutions are quickly acknowledging that colleges are service providers, needing to be proactive and responsive to student expectations and needs to thrive in this marketplace” (p. 24).

Given the cost of recruiting students, colleges and universities are served better by retaining the students they have versus losing them due to poor perceived customer service. In order to avoid having a negative impact on the quality of education, universities must approach the decision to view students as customers very strategically. To avoid this from happening, some colleges have implemented a total quality management approach to service quality (Eagle & Brennan, 2007).

Failure for an institution to assess service quality and failure of that institution to
implement strategies that improve perceived service quality could result in that college experiencing a decrease in the number of students that exhibit favorable behavioral intentions. This decrease in favorable intention could lead to lower enrollment, fewer resources, and low campus morale. Institutions that pay close attention to the perception of their service quality ratings gain valuable insights related to the early warning signs of unfavorable behavioral intentions on the part of their students. Finally, there are financial implications for organizations that do not invest in evaluating their quality of services provided. These organizations risk experiencing a decline in revenue (Zeithaml et al., 1996), which in today’s economic environment is a high risk.

**Purpose of the Study**

The purpose of this quantitative research study was to examine the impact of perceived quality of student services on the first to second semester behavioral intentions of first-time students enrolled at University of North Carolina Asheville, a four-year North Carolina public university. The study utilized a quantitative study utilizing the SERVQUAL survey instrument to gather data from 641 first-time students that entered the college fall 2009. For purposes of this study, the student services offices located under the auspices of One Stop Student Services were examined. Those offices include Registrar’s Office, Advising & Learning Support, Disability Services, Cashiers & Billing Office, and Financial Aid. Also for purposes of this study, the participants were limited to the University of North Carolina Asheville students seeking a degree at an institution for the first time during the fall 2009 semester.
The university is located in Asheville, North Carolina and is one of the 16 constituent universities in the University of North Carolina System. The college has the designation of being the University of North Carolina system’s only liberal arts institution. The study describes the perceived service quality and whether those perceptions impact the students’ decision to perform favorable or unfavorable behavioral intentions. The SERVQUAL scale will be used to measure the service quality perceived by first-time students. Additionally, the study was able to examine the potential relationship between the perceived service quality and specific socioeconomic variables.

This study contributes to the research literature regarding service quality and behavioral intentions by demonstrating to administrators how to assess and evaluate their services through a utilizing the modified SERVQUAL, and how the information gathered can enhance the services provided to their students and possibly influence the expectations and behavioral intentions of those students.

**Research Questions**

In addition to academic and classroom offerings, colleges provide important student services that complement, and in some cases, lead to the degree completion for the student. An online survey was used to examine how students perceive the quality of student services as perceived by first-year freshmen enrolled at University of North Carolina Asheville. Additionally, the survey sought to explore the amount of variance in the student’s behavioral intentions. Perceived service quality is explained by the results of a modified SERVQUAL instrument. The following research questions guided the study:
Research Question 1

What is the perceived quality of services provided by the offices located in the One Stop Student Services area for first-time students at this particular four-year public university?

Research Question 2

Is there a relationship among perceived quality of services of the offices located in the One Stop Student services area as measured by the SERVQUAL scale developed by Zeithaml, Parasuraman, and Berry (1988) and selected demographic variables?

Research Question 3

Does perceived quality of services for the student services and the demographic characteristics of the first-time students explain a significant proportion of the variance in positive and negative behavioral intentions of first-time students?

Theoretical Frameworks for the Study

The frameworks that guide this dissertation are Zeithaml, Berry, & Parasuraman’s (1985, 1990) Consumer Perception of Service Quality and Oliver’s (1980) Post-Purchase Model. The study is also guided by the research of Zeithaml, Berry, and Parasuraman (1996) and Ham (2003) regarding the impact of an institution or agency’s revenue as it relates to perceived service quality.

Zeithaml, Parasuraman and Berry

Zeithaml, Berry, and Parasuraman (1996) offer a conceptual framework for a study of how the perception of the quality of the service received can impact consumer responses. The authors provide empirical findings in their 1996 study that indicate that improving
service quality can increase favorable behavioral intentions on the part of the consumer. The researchers also cite several examples of companies that are rated high on service quality being rewarded with higher profits.

Zeithaml et al. (1996) argue that there are consequences to service quality perceptions that influence the behavior intentions of the customer and these intentions can be seen as a signal to the organization that the customer will be retained or the customer plans to leave (defect) for another company. The ability to increase the number of customers that are retained by the agency can have a positive influence on the profits for the company.

Colleges, including the University of North Carolina Asheville, that continue to be inhibited by economic woes cannot afford to ignore where the opportunities exist to influence favorable behavior intentions. Just as companies find it more expensive to attract new customers rather than retain current ones, colleges with limited resources should also study the implications of not paying close enough attention to perceived service quality. It remains more costly for universities to recruit new students than to retain those already enrolled on campus (Gaskell, 2009; Wetzel, O’Toole, & Peterson, 1999).

*Fishbein-Ajzen*

The Fishbein-Ajzen (1974) behavioral intentions model represents the effect of attitudes and subjective norms on behavioral intentions. The model has been used in a variety of contexts. The authors argue that their model can account for behavior of various kinds. However, the authors indicate that theory may not apply to every individual and there may be some social behavior that the theory can not predict. Aside from this, the theory has a strong track record in the prediction of intentions.
Oliver

Oliver (1980) provides the foundation for a discussion on consumer, and in this case, student decisions to continue the relationship with the agency providing the service. According to the researcher, consumers (students) form expectancies prior to the service transaction and rate the overall service quality based on the observed performance and the previous expectation. The student will then formulate a judgment regarding satisfaction or dissatisfaction with the quality of service.

The theories of Oliver (1980), Zeithmahl, Paramusuran, and Berry (1985, 1998, 1990) together with the concept of the behavioral consequences of service quality (Zeithaml et al., 1996) provide a strong theoretical foundation on which to develop this study.

Figure 1 provides a visual illustration of the theoretical frameworks that guide this study.
Figure 1.

Theoretical Frameworks for the Study

Additional Framework for Behavioral Intentions

Berry

Berry (1983, 2002) was the first to use the term “relationship marketing” to describe the importance of retaining existing customers to be equally important as attracting new ones. Specifically, Berry (1983) defines relationship marketing as “attracting, maintaining and – in multi-service organizations – enhancing customer relationships. Servicing and selling existing customers is viewed to be just as important to long-term marketing success as acquiring new customers. Good service is necessary to retain the relationship” (p. 61)

The figure below (Figure 2) represents the Model of Behavioral Consequences of Perceived Service Quality and illustrates the implications for the institution if students perceive service quality to be inferior.
Ham (2003) adds to the literature regarding the consequences of perceived service quality in a higher education setting by examining the student’s expectations and perceptions as a measure of satisfaction. Ham concludes that institutions must understand what their students expect in order to be able to provide what is perceived as superior quality of services. The study is also relevant because it addresses one of the significances of this study, which is to demonstrate to administrators the importance of service quality to the institution. “Southern Wesleyan University (SWU) and South Carolina State University (SCSU) should be able to utilize the research results to create a superior service quality experience for its students, and to develop processes for continuous improvement” (p. 136).
This study extends the discussion of service quality and higher education by providing additional research on modifying the SERVQUAL to address a specific aspect of the campus, while at the same time providing students with a venue to provide general feedback about the college or the specific student services being evaluated.

**Conceptual Models for This Study**

The SERVQUAL instrument developed and refined by Zeithaml, Parasuraman, and Berry (1996, 1991, 1986) has been utilized extensively in higher education settings to study the perceived service quality of these institutions (Zeithaml, Parasuraman, & Berry, 1993). Further research on the consequences of perceived service quality (Zeithaml et al., 1996; Ham, 2003) formulate the conceptual framework for this study.

The first conceptual framework for this study illustrated in Figure 2 demonstrates the hypothesis how the perceived service quality for the student services departments can have an impact on the institution’s revenue depending on the unfavorable or favorable behavioral intentions of the student.

The independent and dependent variables examined in this study to answer the research question two. *Is there a relationship among the perceived service quality and the selected variables?*
INDEPENDENT VARIABLES

Positive Behavioral Intentions
- Say positive things about university
- Plan to remain enrolled at university
- Plan to graduate from the university

Negative Behavioral Intentions
- Say negative things about the university
- Plan to transfer from the university
- Complain about the university

INDEPENDENT VARIABLES

Demographic Variables
- Race
- Gender
- Estimated Family Contribution
- On-Campus Residency
- High School Weighed Grade Point Average
- UNC Asheville grade point average
- Campus Housing Status
- SAT Total

DEPENDENT VARIABLE

Perceived Service Quality

Figure 3.
Conceptual Framework for Research Question Two
Figure 4 illustrates the independent and dependent variables examined in this study to answer the research question three. *Do the selected demographic variables or the five dimensions of the SERVQUAL scale explain the amount of variance in the perceived service quality?*

**INDEPENDENT VARIABLES**

- Perceived Service Quality
- Demographic Variables
  - Race
  - Gender
  - Estimated Family Contribution
  - On-Campus Residency
  - High School Weighed Grade Point Average
  - UNC Asheville grade point average
  - Campus Housing Status
  - SAT Total

**DEPENDENT VARIABLE**

- Positive Behavioral Intentions
  - Say positive things about university
  - Plan to remain enrolled at university
  - Plan to graduate from the university

- Negative Behavioral Intentions
  - Say negative things about the university
  - Plan to transfer from the university
  - Complain about the university

*Figure 4.*

*Conceptual Framework for Research Question Three.*
An additional conceptual framework outlined in Figure 5 visualizes how the first-time student’s perceived service quality for the selected student services departments can impact potential behavioral intentions of currently enrolled students. Figure 4 includes the visual illustration of the potential impact of perceived service quality for universities.

![Conceptual Framework](image)

**Figure 5.**

**UNC Asheville One Stop Services and Service Quality**

**Significance of the Study**

In an era of decreasing state budgets and increasing competition for resources, this study will allow University of North Carolina Asheville to assess the potential impact the gap in the service quality of student services areas may have on the student’s enrollment intentions; and therefore, implement changes or processes that influence favorable intentions.

In their study of the effects of quality, value and customer satisfaction, Cronin, Brady, and
Hult (2000) conclude that perceptions of quality have a direct impact on behavioral intentions. Understanding how students perceive the quality of services at the University of North Carolina Asheville will provide administrators with information regarding how to influence a student’s decision to remain enrolled at the institution. As budgets at public universities become increasingly reduced due to the economic downturn, it has become increasingly important for these institutions to continue to retain the students that are currently enrolled.

This study provides the University of North Carolina Asheville with an opportunity to analyze perceived service quality. This differs from the college’s current approach of examining a student’s perception of a specific transaction or activity that the student has encountered. Traditional methods of feedback do not reveal a potential overall problem with the quality of service provided, whereas this study provides a mechanism for students to report specific issues as well as overall perceptions of a specific student services department.

The results of this study also provide the University of North Carolina Asheville with findings specific to the One Stop Student Services initiative that involved the relocation of selected student services offices in 2008 from various locations across the campus to one central location. Campus administrators will be able to evaluate the perceived service quality and whether or not additional work is needed to address student perceptions related to these areas. Additionally, the findings from these student services offices could serve as a model for other offices on campus to follow.

This research study is significant because the findings present an opportunity to potentially influence how individuals that work in One Stop Student Services areas perceive
the importance of service delivery. In their study of the relationship between the customers’ service perceptions toward their service-related duties and their customers’ perceptions of satisfaction with their service experiences, Susskind, Kacmar, and Borchgrevink (2003), concluded that, in general, companies where employees perceive that their organization had high level of standards for service delivery, also had customers that reported a higher level of customer satisfaction. Although their study took place outside of a higher education setting, the results suggest an opportunity for an organization to influence the perception of the quality of service provided by demonstrating the importance of a high level of standards to those that provide the service. This study would be one component of achieving the goal of elevating the importance of the perceived service quality provided by student services. Finally, this study provides evidence of continued assessment and evaluation of the services at the university, which continues to be a focus of the university.

**Limitations of the Study**

This study examines perceived student services quality from first-time students enrolled at one public university. The survey was administered to first-time students from the University of North Carolina Asheville enrolled during the 2009-2010 academic year. The study will be further restricted to those who were willing to participate.

This study sets forth to add to literature that examined perceived service quality at four-year institutions and any correlation it may have to retention. Therefore, the study focuses on a public, liberal arts, four-year university and may not be applicable to larger or private institutions. Given the university considers the One Stop Office as one cohesive unit,
students were asked to evaluate the services of the One Stop areas as one survey instead of developing the survey for each individual office.

The study’s findings may not be applicable to large public institutions, large private institutions, and/or small private institutions. The findings may also not be applicable to institutions that do not have a liberal arts mission.

The study is also limited by the self-reporting of the respondents; and therefore, assumes that the students were truthful in their responses. Also, given the survey is obtaining individual perceptions of certain services, personal experiences and/or previous unresolved issues may have biased some responses.

**Delimitations of the Study**

This study examines perceived student services quality through the use of the SERVQUAL instrument and does not utilize any other form of assessment. The research is limited to five departments that operate under the auspices of One Stop Student Services (Registrars Office, Advising & Learning Support, Disability Services, Cashiers & Billing Office, and Financial Aid). Other student support services outside of One Stop Student Services were omitted.

The study will be administered to first-time students at a public, liberal arts university with approximately 3700 students. The study focuses on first-time students because first-time students would have recently participated in a Freshmen Orientation and would have been encouraged to take advantage of the student services offered by the university to assist with their academic success. Also, the University of North Carolina Asheville requires first-time students to live on campus. Research on student development and retention indicate
that these students are more likely to be engaged if they reside on campus (Astin, 1977; Chickering, 1974; Dey & Astin, 1993; Thomas, 2006; Tinto, 2006). This may lead to those students being more likely to take advantage of student services offered by the institution.

**Definition of Terms**

The definitions of terms that follow are used throughout the study and are major contributors to the framework of the study.

*Definition of Service Quality*

The extensive research of Oliver (1980, 1989, 1993, 1994, 1996; Zeithaml, Berry, & Parasuraman, 1988, 1993, 1996) on consumer satisfaction establish a definition of service quality as the difference between the perception of the services offered and the expectations of those services rendered. Zeithaml, Berry, & Parasuraman (1988) make a distinction between service quality and satisfaction. “Perceived service quality is a global judgment, or attitude, relating to the superiority of the service, whereas satisfaction is related to a specific transaction” (p. 16). Both Oliver (1980) and Zeithaml, Berry, and Parasuraman (1988) agree that satisfaction can ultimately impact a consumer’s attitude and perception of the quality of the organization.

*Definition of first-time student*

For purposes of this study, first-time student is defined as a student who matriculated to University of North Carolina Asheville Fall 2009 with a high school graduation date of May 2009 or June 2009. The students also had not enrolled at another college or university seeking a degree prior to their enrollment at UNC Asheville.

*Definition of favorable behavioral intentions*
In their 1996 study of the behavioral consequences of customer behaviors and how service quality correlates to the future intentions of the customer, Parasuraman et al. define favorable intentions occurring when the customer “say positive things, recommend company, remain loyal to company, spend more with the company, pay premium price” (p. 36). For purposes of this study, favorable behavioral intentions are generally defined as the student indicating an intention to enroll for their sophomore year and the student indicating an intention to recommended University of North Carolina Asheville to prospective students. The four specific questions on the SERVQUAL instrument that are used to examine the research questions are described in Chapters 3 and 4.

*Definition of unfavorable behavioral intentions*

In the same Parasuraman et al. study (1996), the researchers define unfavorable behavioral intentions as “say negative things, switch to another company, complain to external agencies, do less business with company” (p. 36). For purposes of this study, unfavorable behavioral intentions are generally defined as the student indicating an intention not to enroll for their sophomore year and the student indicating an intention not to recommend the University of North Carolina Asheville to prospective students. The three specific questions on the SERVQUAL instrument used in this study to examine the research questions are described in Chapters 3 and 4.

*Definition of perceived service quality*

Perceived service quality is the result of the consumer’s comparison of the expected level of service with the consumer’s assessment of the perceived service (Parasuraman et al., 1985). Boulding et al. (1993) define perceived service quality as “the gap between
expectations and perceptions, and does not discriminate among types of expectations” (p. 24). For purposes of this study perceived service quality will be defined using both of these definitions.

**Definition of student services offices**

The offices that fall under the umbrella of the One Stop Student Services area at University of North Carolina Asheville will be included in this definition. Those offices include Financial Aid, Registrars Office, Cashiers & Billing Office, Advising and Learning Support, and Disability Services.

**Definition of disconfirmation**

Disconfirmation occurs when the consumer compares their expectations prior to purchasing the product with the level of perceived product performance after the purchase (Westbrook & Oliver, 1985).

**Underrepresented Students**

For purposes of this study, underrepresented students describes students that responded to their ethnic origin on their application for admission to the university as African-American, Asian American, Native American, Hispanic or multiracial.

**Assurance**

Assurance is one of the five dimensions of the SERVQUAL and refers to conveyance of trust and confidence. It also addresses the courtesy of the employees (Parasuraman et al., 1998).
Empathy

Empathy is one of the five dimensions of the SERVQUAL and describes the attributes of caring, understanding, and individualized attention provided to the customer, or in the case of this study, student (Parasuraman et al., 1998).

Reliability

Reliability is one of the five dimensions of the SERVQUAL and refers to promised service and the dependability and accuracy of the service provided (Parasuraman et al., 1998).

Responsiveness

Responsiveness is one of the five dimension of the SERVQUAL and describes the perception of helpful and prompt service (Parasuraman et al., 1998).

Tangibles

Tangibles is one of the five dimensions of the SERVQUAL and refer to physical attributes of the service provider such as appearance, equipment and communication materials (Parasuraman et al., 1998).
CHAPTER TWO:
REVIEW OF LITERATURE

Introduction

This chapter provides the theoretical foundation that guided this study. The review of literature for this study focused on service quality in higher education. More specifically, the review focused on how students’ perceptions of service quality and their expectations impact the institution. The literature review also closely examines the use of the SERVQUAL as a valid and reliable instrument for measuring service quality in higher education.

Chapter two starts with a review of service quality and higher education. The question of whether or not students should be treated as customers is also included in this chapter. Because this study will be conducted utilizing the results of student perceptions of service quality, there is an extensive discussion of SERVQUAL and other instruments that have been developed to evaluate service quality. The importance and implications of treating students as customers is also addressed in this chapter along with specific strategies of how to align student expectations with their perceptions.

The literature concludes by addressing the important terms associated with the theoretical framework that guides the study. Favorable behavioral intentions and unfavorable behavioral intentions are defined as they will be used in the study.

For this study, the focus from the literature review on the topics of service quality in higher education and student retention (behavioral intentions). There are many studies that examine the issue of customer satisfaction and customer service (Zeithaml et al., 1996, 1985; Cronin & Taylor, 1994, 1992; Berry, Wall, & Carbone, 2006). More pertinent to this study,
there are also studies that address service quality and higher education (Tan & Sek, 1996; Srikanthan & Dalrymple, 2002).

The line of research focusing on service quality in student services areas is limited. Most of the literature on service quality focuses on industries outside of higher education (Zeithaml, Parasuraman, & Berry, 1996; Cronin & Taylor, 1994; Grover, Cheon, & Teng, 1996; Ackerman & Schibrowsky, 2007) or quality as it relates to academic offerings (Brochado, 2009; Srikanthan & Dalrymple, 2002; Cheng & Tam, 1997). However, the use of a modified version of the SERVQUAL as resulted in more studies being conducted that demonstrate the use of the instrument to be an important tool in assesses the impact of perceived service quality and a student’s potential behavioral intentions (Douglas, McClelland, and Davies 2008; Harris 2004; Engelland, Workman and Singh 2000; Hill 1995; Kerlin 2000; Christy 1997; and Rodgers 1999).

These studies provide important results regarding the use of the SERVQUAL instrument to measure the perceptions of service quality in a higher education setting. Engelland, Workman, and Singh (2000) used the SERVQUAL to measure the perceptions of quality of service at several campus career services centers. The study identified a standardized method for the institution to uncover potential areas in which the universities needed to improve in order to meet the organization’s strategic outcomes. In her study of services factors at a college campus, and the role of the customer in service delivery, Hill (1995) employed the SERVQUAL instrument to conclude that there is a need for higher education organizations to manage student expectations. She adds that these expectations have an impact on the students’ perception of the service they received.
Christy (1997) also examines student perceptions of service quality in a higher education setting as measured by the SERVQUAL. In his study, the SERVQUAL revealed the perceptions of service quality at University of Iowa did not compare favorably to institutions characterized as being excellent colleges. Harris (2004) examines the gap analysis of expectations versus the performance perceptions of juniors, seniors, and graduate students at a particular university in the southeast. Harris found that responsive, knowledgeable, and caring services were the most important factors that students expected from the School of Education. Harris (2004) also concluded that knowledge of a student’s gender, ethnicity, classification, or degree program does not predict the student’s assessment of the quality of service provided.

In their study of student satisfaction, Douglas, McClelland, and Davies (2008), the researchers use the SERVQUAL to conclude that responsive, knowledgeable, and caring services to be the most important factors that students expected from the School of Education at a university located in the United Kingdom. Additionally their study found knowledge of a student’s gender, ethnicity, classification, or degree program does not predict the student’s assessment of the quality of service provided.

Kerlin’s (2000) study on student satisfaction with the service processes of student services at Everett Community College provides research data from a community college setting. The study revealed that students at the college did have a gap in how they perceived the quality of services provided and their expectations. The biggest gap occurred in the Financial Aid area. The college decided to use Kerlin’s findings to improve the quality of services provided. “Given the data from the SERVQUAL survey, interest in improving
student satisfaction, and belief that high quality employees support high quality services, some of the first steps being discussed at Everett Community College are:

1) Improved communication between management and line staff;
2) Streamlining procedures;
3) Supporting training and empowerment;
4) Revitalizing of the strategic plan, with employee input, that enables departments and staff to work together toward goals, instead of separately” (p. 101).

In addition to the overview of how the SERVQUAL has been utilized to measure the impact of perceived service quality in higher education on student behavior, this chapter also addresses other factors that influence student behavior. Although this study does not research persistence as theoretical framework for student behavior, this chapter addresses the areas of the research that examines what other factors could contribute to or influence student behavior. These areas include human and social capital, finances, and (insert from additional articles).

**Service Quality and Customer Satisfaction**

Although conceptually related, service quality and customer satisfaction are consistently viewed in the literature as being two completely different constructs (Taylor & Baker, 2001; Zeithaml et al., 1996, 1990, 1986; Taylor & Cronin, 1994; and Boulding, Kalra, Staelin, & Zeithaml, 1993). Rust and Oliver (1994) identify key elements that distinguish customer satisfaction from service quality.
Dimensions underlying quality judgments are specific whereas satisfaction can result any dimension whether or not it is quality related. Expectations for quality are based on the perceptions of excellence whereas nonquality issues such as needs and equity and form satisfaction judgments. Quality perceptions do not require the consumer to have an experience with the service provider whereas satisfaction judgments do. Quality perceptions are said to have more antecedents that are conceptual than satisfaction does (cited in Taylor & Oliver, 1994).

The reported satisfaction reported by the consumer and perceived service quality has been established as being interrelated to one another (Cronin, Brady, & Hult, 2000; Boulding et al., 1993). Boulding et al. (1993) concluded “that both service quality and service value lead to satisfaction” (p.209). These findings underscore the need for organizations to develop strategies for addressing all components of variables related to quality, satisfaction, and behavioral intentions rather than focusing resources on one variable.

Oliver (1980, 1993) stresses the importance of distinguishing between satisfaction and meeting one’s expectations. According to Oliver, the distinction is demonstrated in examining disconfirmation as a process that is undertaken by the consumer. If a negative perception of the results of the services received occurs, then negative disconfirmation is the outcome. Therefore, when the expectations meet the perceived outcome, there is little or no impact on satisfaction. Bolton and Drew (1991) contribute to the literature by concluding that pointing out that the role of expectation further complicates satisfaction when the consumer possesses low or high expectations prior to the interaction or if the service involves multi layers of encounters. Therefore, according to the authors, service providers should be flexible and take into account the taste and expectations of the different clientele.
Service Quality and Higher Education

With the increased competition to recruit and retain students, there is increasing pressure on colleges and universities to be accountable in all areas of the institution. In addition, today’s economic environment has resulted in increased commercial competition for resources (Abdullah, 2006). The literature surrounding service quality in higher education suggests it is important for educational institutions to monitor the quality of their services so they may provide continuous improvement (Brochado, 2009). The avoidance of the perception of poor service is important to institutions of higher education given that continued student dissatisfaction with enrollment services has a negative impact on attracting new students to their institutions (Zammuto et al., 1996).

Colleges and universities will continue to be accountable to both their external and internal constituents for services provided outside of the classroom as well as inside the academic settings of the campus. Student services offices interact with students prior to their enrollment until graduation and beyond. The impact these offices can have on the institution is addressed in the literature.

Canel and Fletcher (2000) analyzed service quality received at the University of North Carolina Wilmington student health center. The SERVQUAL was administered to 500 students and the Student Heath Center employees. The study revealed that students did not perceive the center employees to be knowledgeable and the students did not feel safe in their interactions with the center staff. Several recommendations were made to address the concerns raised by the study and given University of North Carolina Wilmington administrators.
Walters (2007) analyzed the quality of services provided by 10 student services areas at Tomball College using the SERVQUAL and focus groups. The study found that the more familiar students are with student services areas, the more likely they are to be satisfied with the service. The study involved students, faculty, deans, and all campus employees. The results provide the college with feedback from all levels of the institution and identified recommendations from each perspective, with enhanced communication being the most consistent recommendation cited.

Tyran and Ross (2006) measured service quality using the SERVQUAL to address academic advising concerns at Western Washington University. A total of 142 students were surveyed. The results revealed Knowledge/Empathy to have the largest gap in expectation of service quality and the assessed level of service quality. The university plans to use the findings for continued evaluation of their advising system and to assist with the establishment of the advising system’s priorities.

**Service Quality and Student Behavioral Intentions**

Given the cost of recruiting students, colleges and universities are served better by retaining the students they have versus losing them due to poor perceived customer service. One way in which colleges have addressed service quality is a total quality management approach to service quality that focuses on treating the student as a customer of the institution (Eagle & Brennan, 2007).

Some critics argue that viewing students as customers leads to the delusion of the student-faculty relationship. “This notion of students as customers, we contend, has caused a misinterpretation of the relationship between universities and students” (Swensson & Wood,
According to some scholars, this relationship is inappropriate because the student is not just purchasing a product from the faculty member, but there is also a level of interaction that differs from the traditional marketing consumer relationship. They further argue that erroneously using marketing terminology to describe the student-faculty relationship aids in the misunderstanding. “These frameworks tend to be illusory if used in a non-marketing context, such as in respect to universities and their recruitment strategies for adults (Svensson & Wood, 2007, p. 18).

According to Svensson and Wood (2007) the university serves as the authority over the student (customer) and uses this authority to force the student into compliance. This could, some argue, eliminate the ability of the university and the student to develop a traditional customer-client relationship. Winston (1997) points out another significant difference in a college and a business. Universities are more interested in educational excellence while for-profit entities are interested in increasing their profit margins.

Measuring service quality in higher education presents a unique challenge because the student (customer) must meet certain criteria through the admission process before engaging in the service provided by the institution. These same students must also show through satisfactory academic progress they can continue as customers. The continuation of the assessment of the student can be one of the major sources of dissatisfaction (Rowley, 1997).

One challenge that higher education institutions face in measuring service quality is that assessment occurs from several different sources. According to Rowley (1997), when seeking to design instruments to measure the quality of education or the service provided, it
is important to take into consideration the complexity of the process and the influence of the different types of customers associated with the evaluation.

There are advantages to treating students as customers. Schwartzman (1995) asserts that treating students as customers provides a sense of accountability to educational institutions, and specifically, academic departments. “If an emphasis on quality is geared to improving cooperation among all stakeholders in education, from trustees to faculty to students, its objective is certainly worthwhile” (Schwartzman, 1995, p. 216).

D’Eon and Harris (2000) argue if you consider that students, including medical students, are individuals in search of specialized service and are people who need faculty assistance any order to accomplish a task, then students should be viewed as customers. The authors go further and assert that students are in fact the “primary customers” (p. 1174).

Before measuring the perceptions of students regarding the perceived service quality, colleges and universities, as well as the individual service provider, have an opportunity to influence the student’s expectations, which in turn, impacts how the service is rated. Hill (1995) examined service quality in higher education from the context of the British educational system and found it to be just as important for the institution to manage the expectations during to the student’s arrival on campus as it is the point of arrival and before. The study suggests several strategies for colleges to use to align expectations with the student’s perceptions:

1. Make greater use of currently enrolled students during prospective student visits
2. Obtain more in-depth information regarding the needs of students throughout their enrollment
3. Eliminate false or misleading promoting of services in brochures and other university brochures and publications

4. Exhibit professional, clean, organized and neat appearance to students

5. Exhibit sensitive and behavior towards students when required

6. Solicit student input when possible

Hill (1995) states student expectations can be unrealistic and without a strong reference point for comparison. However, this should not prevent the institution from trying to influence their perceptions. Instead, Hill argues, the student evaluation process should be managed “from enrollment to graduation” with a detailed and multi-faced way than is currently being utilized.

**Other Factors that Influence Student Behavioral Intentions**

In addition to examining the impact of service quality on the behavioral intentions of students, the literature also reveals other factors that can impact student behavior. The following section addresses a small number of these factors that have been demonstrated to influence student intentions, and thus have the potential for positively or negatively impacting the institution.

**Human, Social, and Cultural Capital**

Human capital theory provides the foundation for most discussions of college enrollment decisions. A student’s decision to enroll or not to enroll in college is based on that student’s perceived benefit of attending a university and what is lost by not attending. Human capital has also been defined as the knowledge, skills, and abilities acquired by an
individual (Paulsen & Smart, 2001). Human capital theory posits a rational-based thought process on the part of students (Perna & Thomas, 2006).

Several factors influence a student’s decision to attend college. One of these factors is the perceived costs of attending (Callendar & Jackson, 2008; Paulsen & Smart, 2001). Paulsen and Smart (2001) argue that students make a series of choices and that these choices are made within different contexts. In their 2002 report, the Advisory Committee on Student Financial Assistance concluded that more than 400,000, or nearly half, of all qualified low and moderate income high school graduates will be unable to attend a four-year college due to financial barriers. According to the authors, “this loss in human capital on the country as it relates to economic and social gains is enormous” (p. 25). Others have taken the discussion on lack of human capital further by arguing this loss in potential college students will also impact the country’s ability to compete internationally (Slaughter, 2009).

Another theory associated with a student’s decision to attend college is social capital. Social capital is the social networks, relationships, and cultural values obtained by the student (Gordon, 2004). Hobbs (1995) describes this relationship as having a significant role in determining the student’s ability to achieve in school and eventually produce human capital. Minority students are much more likely to have their educational goals influenced by family members than their non-minority counterparts (Hobbs, 1995).

Cultural capital has also been shown to influence the enrollment behavior of college students (Walpole, 2003). Portes (1998) distinguishes cultural capital from social capital by explaining “Through social capital, actors can gain direct access to economic resources…they can increase their cultural capital through contacts with experts or
individuals of refinement; or, alternatively, they can affiliate with institutions that confer valued credentials [i.e. institutionalized cultural capital] (p.4).

Walpole (2003) used the longitudinal data on college students sponsored by the Higher Education Research Institute to study the impact of socioeconomic status (SES) on student experiences and outcomes. Walpole concluded that students from lower SES have lower levels of aspirations of degree attainment. The study also found nine years after their graduation; students with lower SES engaged in different types of college activities and had a lower rate of degree attainment than their counterparts with higher SES. Walpole’s research highlights the different challenges students with a lower SES face.

Although previous research on persistence indicates students that are more engaged on campus have a higher probability of remaining enrolled at the college, a recent study found otherwise. Walpole (2003) studied traditional aged, low socio-economic college students and found that more research is needed on how social class influences college student and whether these students have different degree aspirations. The study also found that a more longitudinal examination of low socio-economic students might reveal different results regarding degree attainment.

Finances

Strongly related to human, social and cultural capital issues, financial concerns also continue to influence the decision of minority and low income students disproportionally when compared to their more affluent counterparts (Paulsen & Smart, 2001). “Poor students tended to choose their colleges so they would have low living costs and could work while attending” (p. 432). Financial issues play far more of role for lower social class students than
that of students from other social classes. The fear of debt, as well as the opportunity for employment, influences their enrollment decisions (Callender & Jackson, 2008).

Low-income students continue to respond differently to changes in prices for college tuition than high-income students (Paulsen, 2001). Minority students are also more sensitive to these changes in tuition. Because of this relationship, it is not surprising that the gap in the college going rates for low-income and minority students as compared to white students has not narrowed. Higher education administrators have clear evidence that this difference in elasticity for both groups has negatively impacted their efforts to increase their enrollments of minority students.

A low-income and minority student’s concern regarding their ability to repay the financial debt they may occur as a result of attending college is reinforced by the parent’s apprehension. “Like their student counterparts, a primary concern about loans for parents at the low-resource schools is their uncertainty about whether the benefits of borrowing will exceed the costs” (Perna, 2007, p. 598). Families that are more economically advantaged are able to make the connection that there is potential for the student’s salary over their employment lifecycle to compensate for the initial costs of attending college.

Knowledge of the loan process derived from social capital also impacts the college enrollment process for low-income and minority students. A parent quoted in a study conducted by Laura Perna (2007) put it bluntly. “I’m saving. I just plan on working until he’s through it to pay for his education. So he comes out of college without debt” (p. 599). Other parents in the study indicate that cultural backgrounds highly influence their beliefs regarding borrowing money in order to finance their college education.
Students are faced with making college enrollment decisions every year. Low-income and minority students are making this decision based on their perception that college will lead to a burden of debt versus seeing it as an investment in their future. Unless the higher education community and state governments do more to equip these students to acquire the capital and awareness they need to make a more informed decision, this disparity will continue.

In a study of the influence of financial context of institutions on student persistence at four-year colleges and universities, Titus (2006) found that, after accounting for student predictors, “the percent of an institution’s revenue derived from tuition positively influences college student persistence while the percent of an institution’s expenditures on administration negatively influences it” (p. 353).

Cabrera, Nora, and Castaneda (1992) add to the literature on the role of finances on student persistence through a theoretical model that examines the direct and indirect effects of finances on persistence. The authors found that financial aid policies can influence academic and social participation by the student, which are factors that have been proven to influence whether the student remains enrolled or drops out. The researchers further argue that institutions should take the potential that student aid can have on student behavior into consideration when drafting financial aid policies.

Academic and Social Integration

The impact of social integration on college student persistence has been studied extensively (Terenzini & Pascarella, 1978; Pascarella & Terenzini, 1983; Cabrera, Castaneda, Nora, & Hengstler, 1992; Cabrera, Nora, & Castaneda, 1993; Braxton,
McKinney, & Reynolds, 2006; Tinto, 2006; Astin 1967, 1972; Peltier, Laden, & Matranga, 1999; Tinto, 1987; Pascarella & Terenzini, 1983). These researchers determined that more participation and involvement on campus by the student, the more likely the student is to persist. Cabrera, Nora, and Castenda (1993) compare the Student Attrition Model and the Student Integration Model. According to the study, both models posit that student persistence is impacted by the “successful match” of the student and the institution. The study demonstrates how enrollment management administrators can influence a student’s intention to enroll by addressing intervention strategies that involve multiple student support services offices and include an institution-specific plan.

According to Cabrera, Nora and Castneda (1993), the impact of enrollment management as an institution-wide approach to enhancing the quality of student services can be critical. However, according to the results, it is not that the enrollment management offices themselves can impact retention. Rather, “a concerted effort on the part of the institution in bringing together the different student support services to address student attrition is needed” (p. 136).

In their study of 763 residential university freshmen, Pascarella and Terenzini (1983) found that social integration had a more significant effect on persistence for women than academic integration; however, the reverse was true for the men in the study. Their research also revealed other critical factors pertaining to student behavior. “Academic integration was most important for students with low levels of social integration, and vice versa” (p. 215). Additional Pascarella and Terenzina (1983) conclude that persistence or a student’s intent to
remain enrolled at the institution is more dependent upon the student’s quality of interactions with the college environment after enrollment more so than the student’s characteristics.

Although the previous discussion addresses various ways in which a student’s behavioral intentions (retention and withdrawal) can be impacted, this study focuses on the behavioral intentions of first-time freshmen at UNC Asheville and if these intentions are impacted by perceived service quality.

**Behavioral Intentions and Potential Revenue**

Researchers have found a relationship between customer retention and an increase in profits (Cronin, Brady, & Hult, 2000; Parasuraman et al., 1996). In their empirical study, the relationship between service quality and behavioral intentions, Cronin, Brady, and Hult (2000) concluded that consumers place more importance on the quality of service than they do on the costs associated with acquiring the service. Cronin, Brady, and Hult (2000) conclude “Not only does quality affect perceptions of value and satisfaction, it also influences behavioral intentions” (p. 211).

For purposes of this study, the potential impact of service quality on the behavioral intentions of first-time students as it relates to behavior such as enrollment intentions and positive or negative word-of-mouth about the university were examined. Additionally, the theoretical framework provides a foundation for examining whether or not this behavior could have on the institution’s revenue.

The behavioral intentions of these students are critical because a college’s ability to retain a student has a tremendous impact financially for that institution (Ackerman & Schibrowsky, 2007).
Positive Behavioral Intentions

Cronin and Taylor (1992) found a positive correlation between service quality and purchase intentions. This has implementations for institutions because the research findings indicate institutions can influence the favorable behavioral intentions. There is also evidence in the research suggests that an organization can increase its financial standing by having its consumers perceive service quality to be positive (Hendricks, K.B. & Singhal, V.R., 1997; Rust, Zahorik, & Keiningham, 1995; Zeithaml, 2000).

In the case of a university, the implications are that students will remain at the institution and speak favorably about the college if they perceive service quality to be positive. Zeithaml et al. (1996) conclude favorable behavioral intentions are linked to the service provider’s ability to influence the consumer to say positive things about the organization and recommend it to others.

Negative Behavioral Intentions

Just as a positive perception of service quality can lead to favorable behavioral intentions, a negative perception of service quality can lead to negative behavioral intentions. “Customers perceiving service performance to be inferior are likely to exhibit behaviors signaling they are poised to leave the company or spend less with the company” (Zeithaml et al., 1996, p.34). Unfavorable behavior intentions such a student complaining about the university or encouraging friends and family not to attend the university, can have an impact on the financial resources of the institution.

In the research of service-related problems, Zeithaml et al. (1996) also examined the impact of resolution of the consumer’s problem on the behavioral intentions of the customer.
They concluded that those customers that did not receive a satisfactory resolution to their issue were more likely to perform unfavorable behavior intentions. “However…the improvements do not restore the intentions to the levels expressed by customers not experiencing service problem” (Zeithaml et al., 1996, p.43).

**Measures of Service Quality**

The following discussion focuses on the various measurements of service quality that are cited extensively in the literature. This section also addresses the critiques and criticisms associated with each of the instruments.

*SERVQUAL Instrument*

Much of the literature surrounding the discussion of service quality in higher education is based on the research conducted by Parasuraman, Zeithaml, and Berry (1985) that developed a conceptual framework for service quality that defined quality as the comparison between expectations and performance. This research includes the establishment of the SERVQUAL scale as the instrument for measuring the perception of service quality. “The main thesis of the service quality model is that consumers’ quality perceptions are influenced by a series of distinct gaps occurring on the marketers’ side” (p. 49). In their initial research they argued that service quality could be characterized by the 10 dimensions that customers use to evaluate service quality. According to Parasuraman, Zeithaml, and Berry (1985), the dimensions are reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing the customer, and tangibles.

Parasuraman, Zeithaml, and Berry (1988) created the SERVQUAL scale to measure the customer’s perception of service quality. The 22-item measurement scale includes five
distinct dimensions that capture facets of the original 10 dimensions. The five dimensions include tangibles, responsiveness, reliability, assurance, and empathy. According to the authors, the SERVQUAL scale has the potential for many applications such as assessing customer expectations and perceptions regarding service quality, and has been used in several different contexts. Service quality was then defined by the authors as “a form of attitude, related but not the same as satisfaction, and results from a comparison of expectations with perceptions of performance” (p. 15). In addition to the authors of the SERVQUAL providing evidence to support the validity and reliability of the instrument, Carrillat, Jaramillo, and Mulki (2007) use data from 17 research studies to support the validity of the SERVQUAL. The study also concludes that “Adapting the SERVQUAL scale to the measurement context improves its predictive validity” (p. 472).

The SERVQUAL is not without its critics. There is dissention in the literature regarding the linkage between satisfaction and quality (Brady & Cronin, 2001; Asubonteng, McCleary & Swan, 1996; Cronin & Taylor, 1994). Brady and Cronin (2001) challenge the concept of measuring an intangible. They posit that the SERVQUAL scale is measuring the reliability, responsiveness, empathy, assuredness, and tangibles of “something”; and it is critical to the literature for that “something” to be identified. “Such a framework is needed if the true effects of service quality are to be better understood by both marketing researchers and practitioners” (Brady & Cronin, 2001, p. 36).

Instead of satisfaction leading to perceived service quality, the study suggests service quality is an antecedent of customer satisfaction and customer satisfaction has a stronger influence on the purchase intention than service quality (Lee, Lee, & Yoo, 2000). These
results suggest service providers and administrators should pay as much attention to managing factors impact satisfaction as they do service quality. For higher education institutions, it would mean introducing services and programs that students view positively and retaining that student versus prioritizing assessment instruments that evaluate service quality. Another critique of the SERVQUAL scale is that assessment of service quality should be solely based on performance (Cronin & Taylor, 1992).

Brochado (2009) highlights the measures of service quality in higher education and examines the correlation among the dimensions of each of the most popular service quality scales. According to the author, the most popular scales used to measure service quality are service quality (SERVQUAL) (Parasuraman, Zeithaml, & Berry, 1988), importance-weighted (SERVQUAL), service performance (SERVPERF) (Cronin and Taylor, 1992), importance-weighted performance, and higher education performance (HEdPERF) (Abdullah, 2006).

Despite this dissention in the literature, service providers, including colleges and universities, continue to use SERVQUAL scale to assess service quality (Christy, 1997; Canel & Fletcher, 2001; Harris, 2004; Tyran & Ross, 2006; Waters, 2007)

**Instrumentation and the SERVQUAL**

The discussion of instrumentation will include studies that address the validity and reliability of the SERVQUAL. This section also provides an overview of the five dimensions of the SERVQUAL instrument. The SERVQUAL was developed and refined by Parasuraman, Zeithaml, and Berry (1985; 1988; 1993; 1996) to provide a standard measurement of service quality perceptions.
The survey instrument used in this study was a modified version of the SERVQUAL. According to Parasuraman, Zeithaml and Berry (1988; 1991), it is appropriate to adapt the SERVQUAL to the setting that is being evaluated.

Several studies on service quality in higher education have utilized the SERVQUAL instrument for data collection purposes (Harris, 2004; Christy, 1997; Hill 1995; Ham, 2003; Tan & Sek, 2004; Rodgers, 1999). Zeithaml et al. (1985) established the SERVQUAL instrument as a way of measuring and comparing the difference between satisfaction and perceived quality of service. Their 1985 study extensively tested both the validity and reliability of the scale. The authors tested construct validity, scale validity, and content validity through a one-way ANOVA process to conclude the instrument’s validity in these areas as well as convergent validity. Zeithaml et al. (1985) also establish the instrument’s reliability. “A few items with relatively low item-to-item correlations were deleted” (p. 23).

**Reliability and Validity of the SERVQUAL**

In establishing the validity and reliability of the SERVQUAL, Zeithaml et al. (1985) also recognize its limitations and offer recommendations for future research. While SERVQUAL can be used in its present form to assess and compare service quality across a wide variety of firms or units within a firm…items under each of the five dimensions can be suitably reworded and/or augmented to make them more germane to the context in which the instrument is being used” (p. 28).
Through a multi-stage process that utilized empirical criteria, Zeithaml et al. (1985, 1990) developed the current SERVQUAL scale encompassing the five dimensions described below.

**Tangibles:** Physical facilities, equipment and appearance of personnel and communication materials.

**Reliability:** Ability of personnel to perform the promised service dependably and accurately.

**Responsiveness:** Willingness to help customers and provide prompt service.

**Assurance:** Knowledge and courtesy of employees and their ability to convey trust and confidence.

**Empathy:** Caring, individualized attention the firm provides its customers.

**HEdPERF Instrument**

The HEdPERF scale is another service quality scale proposed for use in measuring service quality in higher education (Abdullah, 2006). The recent adoption of the HEdPERF model has meant that it is not as widely used in the research as the SERVQUAL scale or the SERVPERF scale. Abdullah (2006) states there are five components of the model that comprise the measurement scale. The items are non-academic aspects, academic aspects, and reputation, access, and program issues. Brochado (2009) found that the HEdPERF scale overall scores represent a high correlation degree with overall satisfaction, future visits, and intentions to recommend the institution to a friend. These results suggest that further research on the HEdPERF should prove beneficial to higher education officials hoping to influence the intentions of prospective students, and once enrolled, continuing students.
SERVPERF Instrument

The other widely-used tool designed to measure service quality is the SERVPERF scale. According to Cronin and Taylor (1994, 1992), service quality should be measured in terms of attitude; and therefore, is a more appropriate scale of measurement than the SERVQUAL. Other scholars have supported Cronin and Taylor’s claim that the expectation component of SERVQUAL should be discarded.

“Methodologically, the SERVPERF scale represents marked improvement over the SERVQUAL scale. Not only is the scale more efficient in reducing the number of items to be measured by 50 per cent, it has also been empirically found superior to the SERVQUAL scale for being able to explain greater variance in the overall service quality measured through the use of single-item scale” (Jain and Gupta, 2004, p. 28).

In their study of the applicability of using the SERVPERF scale to assess service quality in the rental industry, Burch, Rogers, and Underwood (2004) found the SERVPERF to be a valid instrument to assess service quality. The study found customer satisfaction appeared to be more directly related to purchase intentions rather than what the SERVPERF scale or the single-item service quality measure. Although further study is needed to determine the applicability of SERVPERF scale to other industries such as higher education, the study does provide empirical support for utilizing the results of the SERVPERF scale, along with attribute importance, to determine an appropriate marketing strategy for institutions.

Another benefit of using the SERVPERF scale to measure service quality is its efficiency. The SERVPERF scale reduces the number of items measured by the SERVQUAL scale from 44 to 22 (Cronin and Taylor, 1992). The authors also report that the SERVPERF scale has “theoretical superiority” (p. 64). “The performance-based measures of
service quality captured by the SERVPERF scale can provide a longitudinal index of the service quality perceptions of a service firm’s constituencies” (Cronin & Taylor, 1992, p. 130).

Brochado’s (2009) research on the alternative measures of service quality for higher education adds to the literature by examining the correlation among the dimensions of each of the most popular service quality scales. According to the author, the scales used most often to measure the perceived quality of the service are service quality (SERVQUAL) (Parasuraman et. al, 1988), service performance (SERVPERF) (Cronin and Taylor, 1992), importance-weighted performance, and higher education performance (HEdPERF) (Abdullah, 2006). The results of the study of Portuguese students at a technology school reveal that all of the scales provide data where an institution of higher education is unsatisfactory in service quality and thus needs to implement a way to improve quality and remove the shortfalls of the service delivery. Brochado (2009) found that all of the scales present good results in general; however, the researcher would probably have difficulty identifying the scale with the best measurement capability.

Two extensive studies that examine student decisions regarding persistence were used to determine which variables would be utilized in this study. In her study using a financial nexus model, Carter (2006), fifteen variables were included related to student background. Ethnicity, low tuition cost (operationalized by Estimated Family Contribution), college grade point average, gender, and campus housing status were some of the variables used to examine student persistence.
The second study that influences this study is Bean and Bradley’s (1986) study of student grade performance on student attrition. Variables included the authors’ study that were also included in this study were memberships, GPA at the institution, and high school performance (SAT Total and high school grade point average).

**Summary of the Literature Review**

As the cost of recruitment continues to rise and the competition for attracting and retaining highly qualified students increases, colleges will be well-served to assess the perception their students have of the quality of services they receive. Consequences to a college that does not meet the expectations of the student are unfavorable behavioral intentions such as departure from the institution or complaints made about the university. These types of unfavorable behavioral intentions negatively impact the revenue generated by the institution.

The literature regarding higher education institutions and student satisfaction with student services supports the importance of continuous evaluation of these initiatives. Many studies confirm that the university can influence the student behavior and lead to more favorable behavior intentions.

The modified SERVQUAL offers higher education a valuable assessment tool to evaluate the effectiveness of their student services. There are several aspects of higher education that influence student behavior. The SERVQUAL instrument, which has until recently been exclusively been used in the business sector, provides an important avenue for institution to improve and understanding student satisfaction, and thus, influence student behavior. This chapter has provided examples of previous studies that modified the
SERVQUAL for use in a higher education setting. Table 2.1 provides a sampling overview and justification for utilizing the SERVQUAL in a higher education setting to examine a student’s perceived service quality, as well as if there is a relationship between those perceptions and the student’s behavioral intentions.

Table 2.1

Prior Studies in Higher Education that Utilized the SERVQUAL Instrument

<table>
<thead>
<tr>
<th>Author</th>
<th>Date</th>
<th>Purpose</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harris</td>
<td>2004</td>
<td>Investigate undergraduate and graduate students’ perception of service quality of School of Education</td>
<td>Ethnicity, gender, classification or degree program do not predict evaluation of service quality.</td>
</tr>
<tr>
<td>Tan &amp; Kek</td>
<td>2004</td>
<td>Examine the factors concerning student services that compared first- to final-year students from two local universities</td>
<td>Found the approach of stepwise regression to be useful in determining the significant attributes to overall student satisfaction.</td>
</tr>
<tr>
<td>Ham</td>
<td>2003</td>
<td>Examine the perception students at both a private and public university have of overall service quality</td>
<td>A positive, but weak, relationship existed between academic and service quality and behavioral intentions.</td>
</tr>
<tr>
<td>Kerlin</td>
<td>2000</td>
<td>Examine the expectations and perceptions students have of the Registration, Financial Aid, Counseling, Career Center and Library services</td>
<td>Study found discernible patterns in student satisfaction and dissatisfaction. Financial Aid specifically demonstrated area of concern.</td>
</tr>
<tr>
<td>Englland, Workman, &amp; Singh</td>
<td>2000</td>
<td>Determine benchmarks for good service quality in Career Centers</td>
<td>Established benchmarks and assessment tracking tools</td>
</tr>
<tr>
<td>Rodgers</td>
<td>1999</td>
<td>Assess how students evaluate service quality of the Financial Aid Office by examining the office operations versus office policies</td>
<td>Determined adequate information and a more informed student and parent had positive impact on perceived service quality.</td>
</tr>
<tr>
<td>Christy</td>
<td>1997</td>
<td>Examine students’ perceptions of institutional quality at a large research university</td>
<td>Perceptions did not compare favorably with expectations.</td>
</tr>
<tr>
<td>Hill</td>
<td>1995</td>
<td>Investigate institution’s ability to influence and manage perceived service quality</td>
<td>Determined that managing student expectations has a positive impact on perceived service quality.</td>
</tr>
</tbody>
</table>
CHAPTER THREE:

METHODOLOGY

Introduction

The purpose of this chapter is to describe the research methods, research design, participants, instrumentation, data collection, and preliminary data analysis utilized in this study. The specific UNC Asheville student services offices examined in the study are: Financial Aid, Advising and Learning Support, Cashier’s, Disability Services, and the Registrar’s Office. The chapter begins with a discussion of the research design and the methodology used for the study. The chapter then describes the three research questions used to guide the study and the specific variables included in the study. The chapter continues with a discussion of the data collection, preliminary data analysis, and demographic profile of the survey participants. The preliminary data analysis section describes the handling of non-response bias, confirmatory factor analysis, reliability and validity procedures undertaken prior to proceeding with the final data analysis.

The quantitative approach to the research questions allowed for obtaining additional findings regarding the participants and their responses. This approach also provides a foundation for further research. The study contributes to the literature because the information gathered from the study will not only provide important information regarding the support services of the university; it also supports the university’s efforts in continuous assessment evaluation.
Research Design

The research design section will cover the introduction, participants, census description, instrumentation, data collection, and data analysis. The online survey was designed to gather data that evaluates the student’s perception of the quality of service received and the student’s behavioral intentions. The survey also included comment boxes that allowed each respondent the opportunity to provide general feedback and/or additional information that had not been addressed by the survey questions. As addressed by the literature (Zeithaml, Berry, & Parasurman, 1996; Parasuraman, Zeithaml, & Berry, 1996; Oliver, 1980, 1996), service quality has been found to be an antecedent to favorable or unfavorable behavioral intentions on the part of the consumer (student).

This study utilizes a nonexperimental research design. A nonexperimental design is defined by Sproull (2002) as a design that does not have an experimental variable included as a part of the study. Sproull (2002) also states that the purpose of a nonexperimental design is to evaluate the relationship among the variables, which is the case for this specific study. One disadvantage, according to Sproull (2002), of this type of research design is that the researcher cannot predict cause and effect, but only associations. Another aspect of nonexperimental design is that the researcher can determine who or what to measure (Sproull, 2002). “This type of research design is used in order to predict the degree of probability that something might happen in the future” (p. 154). This specific study attempted to examine behavioral intentions of future students based on several predictor variables. It also examined perceived service quality. Given the researcher had an interest in studying a large number of participants, a quantitative research design was chosen. More
importantly, the research objectives being measured are best examined through a quantitative research approach. Using a survey research design for the study provided data collection within an academic semester with reasonable cost. According to Dilman (2007), survey research is conducted to estimate the distribution of characteristics in a specific population. The purpose of this survey research was consistent with Dillman’s (2007) statement in that the results of the present study provide estimation of the distribution of characteristics related to first-time freshmen enrolled at UNC Asheville. Therefore, the research design for this study is appropriate design given the study sought to describe a specific population and measure relationships among several variables.

**Research Methods**

Prior to utilizing the SERVQUAL instrument for this study, the appropriateness of the reliability and validity of the study for use in a higher education was examined. In their 1988 article, Parasurman, Zeithaml, and Berry provide evidence of the SERVQUAL’s reliability and validity through four independent samples. The article includes a discussion of both the conceptualization and operationalization of the service quality construct. Tan and Kek (2004) conducted reliability and validity procedures to compare the factors concerning service quality for two local universities. Similar to this study, they also looked at individual attributes that could contribute to student satisfaction and perceived service quality. Several studies on service quality in higher education have utilized the SERVQUAL instrument for data collection purposes (Harris, 2004; Christy, 1997; Hill 1995; Ham, 2003; Tan & Sek, 2004; Rodgers, 1999). Zeithaml et al. (1985) established the SERVQUAL instrument as a way of measuring and comparing the difference between satisfaction and perceived quality of
service. These studies provide evidence of the appropriateness of utilizing the modified SERVQUAL instrument for this study.

In addition to the reliability and validity found in these higher education studies, the reliability and validity of the modified SERVQUAL instrument used in this study was examined. The specifics results that demonstrated both the reliability and validity of the instrument are addressed later in this chapter in the preliminary data analysis section.

First-time students enrolled at the University of North Carolina Asheville were surveyed regarding their experiences with specific student services areas. The survey instrument (modified SERVQUAL) was administered via an online survey emailed to each eligible student. The data was analyzed using SPSS version 19.0, a statistical software program. Descriptive statistics, correlations, and regression analysis were calculated for the collected data. Lastly, the findings were interpreted as they relate to the research questions. Participants included first-time students enrolled at University of North Carolina Asheville during the fall 2009 semester. The population size is 601 (students with a valid UNC Asheville email address). The Office of Institutional Research at UNC Asheville was responsible for identifying and contacting the potential participants. This study’s author provided the email invitation and incentives for the survey.

The data collected from the survey provide important feedback for the university’s efforts to more effectively manage enrollment and continuous assessment of its services. The University of North Carolina system has recently placed more emphasis on retention and graduation rates as a budget model for the UNC system institutions. This benefits UNC Asheville because the university has experienced an increase in the freshmen to sophomore
retention rates during the past three years. The college offers 33 majors and a general studies curriculum that emphasizes a writing component. The college has recently experienced a steady and mild increase in enrollment. However, the college is not positioned to grow significantly. Instead, the university has placed more emphasis on recruiting a highly academically talented freshmen profile and retaining those students.

In addition, the university is preparing for its reaccreditation process. Therefore, this study demonstrates how the university periodically and systemically assesses its programs and services. The open-ended questions that were also a component of the survey provide additional feedback for the university to determine if there are other areas of concern that should be addressed.

The survey was developed by the University of North Carolina Asheville’s Office of Institutional Research to ensure consistency of format and delivery with other surveys administered by the university. In addition, the survey questions were reviewed by the Assistant Provost for Administration who supervises the majority of the offices that comprise the One Stop Academic Services area.

Research Questions

A quantitative design was utilized to examine the perception that first-time freshmen have of the quality of services received from the One Stop student services areas. The research questions that guide the study are as follows:

Research Question One - What is the perceived service quality with One Stop student services for first-time students at this particular four-year public university as measured by the modified SERVQUAL instrument?
Research Question Two - Is there a relationship among selected independent variables and perceived service quality of One Stop student services for first-time students at University of North Carolina Asheville as measured by the SERVQUAL scale developed by Zeithaml, Parasuraman, and Berry (1988)?

Research Question Three – Do the selected demographic variables and the five dimensions of the SERVQUAL instrument explain a significant proportion of the variance in positive and negative behavioral intentions of first-time students?

Variables Selected for the Study

The variables selected for this study were classified as dependent or independent. In reference to Research Question 2, the dependent variable is perceived service quality with the independent variables being: race, gender, high school weighted grade point average, UNC Asheville cumulative grade point average, SAT Total, Estimated Family Contribution, on-campus residency status, residency status for tuition purposes, and the five dimensions of the SERVQUAL survey instrument. The dependent variable for Research Question 3 is behavioral intentions with the independent variables being: race, gender, high school weighted grade point average, UNC Asheville cumulative grade point average, SAT Total, Estimated Family Contribution, on-campus residency status, residency status for tuition purposes, and the five dimensions of the SERVQUAL survey instrument. The conceptual framework for this study, which is illustrated in Chapter One, provides a visual of how the study plans to measure the potential impact of these variables on the behavioral intentions of first-time students enrolled at UNC Asheville. Table 3.1 also provides a list of the selected demographic variables.
Table 3.1

**Demographic Variables Used in Study**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Institution Research Coding</th>
<th>Variable Name – Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female = F</td>
<td>Gender (Female) = 0</td>
</tr>
<tr>
<td></td>
<td>Male = M</td>
<td>Male = 1</td>
</tr>
<tr>
<td>Race</td>
<td>White = W</td>
<td>White = 0</td>
</tr>
<tr>
<td></td>
<td>Black = B</td>
<td>Non-white = 1</td>
</tr>
<tr>
<td></td>
<td>Asian = A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hispanic = S</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multiracial = M</td>
<td></td>
</tr>
<tr>
<td></td>
<td>American Indian = I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unknown = U</td>
<td></td>
</tr>
<tr>
<td>Campus Housing Status</td>
<td>Dorm = 1</td>
<td>Dorm = 0</td>
</tr>
<tr>
<td></td>
<td>Commuter = 2</td>
<td>Commuter = 1</td>
</tr>
<tr>
<td>Residency Status For Tuition Purposes</td>
<td>In-state = R</td>
<td>Resident = 0</td>
</tr>
<tr>
<td></td>
<td>Out-of-state = O</td>
<td>Non-resident = 1</td>
</tr>
<tr>
<td>High School Grade Point Average</td>
<td>hsgpa_w</td>
<td>hsgpa_w</td>
</tr>
<tr>
<td>UNC Asheville Cumulative Grade Point Average</td>
<td>cumgpa</td>
<td>cumgpa</td>
</tr>
<tr>
<td>Estimated Family Contribution</td>
<td>efc_amount</td>
<td>efc_amount</td>
</tr>
<tr>
<td>SAT Total (Critical Reading + Math)</td>
<td>satttotal</td>
<td>satttotal</td>
</tr>
</tbody>
</table>

The researcher also examined the impact of perceived service quality on the behavioral intentions of first-time freshmen at UNC Asheville. Table 3.2 displays the description of positive and negative behavioral intentions.

Perceived Serviced Quality was determined by the student responses to questions 1-21 on the modified SERVQUAL instrument, which are represented by a Likert scale online survey. The five dimensions addresses include tangibles (survey questions 1, 2, 3, 4, 9), reliability (survey questions 6, 8, 10, 11), responsiveness (survey questions 12, 13, 14), assurance (survey questions 5, 15, 17, 19), and empathy (questions 7, 16, 18). Survey
question 20 was omitted because it was later determined by researcher that it was a repeated question. Student expectation of the quality of services they receive from the One Stop Student Services areas was operationalized by their response to question 21 on the modified SERVQUAL survey.

The demographic variables selected for the study were based on the student behavior and persistence research conducted by Carter (2006) and Bean and Bradley (1996) examining student persistence and retention in higher education. The previous studies in higher education illustrated in Chapter 2 utilizing the SERVQUAL to measure student expectations and service quality also guided the selection of variables.

Table 3.2

*Description of Positive and Negative Behavioral Intentions*

<table>
<thead>
<tr>
<th><strong>Favorable Behavioral Intentions</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Say positive things about the institution</td>
</tr>
<tr>
<td>Plan to remain enrolled at the institution</td>
</tr>
<tr>
<td>Plan to graduate from the institution</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Unfavorable Behavioral Intentions</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Say negative things about the institution</td>
</tr>
<tr>
<td>Plan to transfer out of the institution</td>
</tr>
<tr>
<td>Complain to others about the institution</td>
</tr>
</tbody>
</table>
The first research question is a descriptive question that examines the perceived service quality reported by first-time enrolled students. Frequencies, means, standard deviations, and percentages were computed for the data analysis.

The second research question seeks to determine if there is a significant relationship among the selected demographic variables and the perceived service quality. Correlations were reported on each of the selected variables to determine which variables, if any, demonstrated a significant relationship with perceived service quality.

The third research question sought to explain if the amount of variance in the perceived service quality that can be explained by the independent variables. The variables in Table 3.3 describe the independent and dependent variable used to examine this question.
The independent variables for research question three were high school weighted grade point average, UNC Asheville cumulative grade point average, gender, race, on-campus residency status, residency status for tuition purposes, estimated family contribution, SAT Total, and the five dimensions of the SERVQUAL instrument. The dependent variables

<table>
<thead>
<tr>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variables</strong></td>
</tr>
<tr>
<td>High school weighted grade point average</td>
</tr>
<tr>
<td>UNC Asheville cumulative grade point average</td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Race</td>
</tr>
<tr>
<td>On-Campus Residency Status</td>
</tr>
<tr>
<td>Residency Status for Tuition Purposes</td>
</tr>
<tr>
<td>Estimated Family Contribution</td>
</tr>
<tr>
<td>SAT Total</td>
</tr>
<tr>
<td>Perceived Service Quality</td>
</tr>
<tr>
<td>Five dimensions of the SERVQUAL instrument (Assurance, Empathy, Reliability, Responsiveness, Tangibles)</td>
</tr>
<tr>
<td><strong>Dependent Variable</strong></td>
</tr>
<tr>
<td>Favorable Behavioral Intentions</td>
</tr>
<tr>
<td>Unfavorable Behavioral Intentions</td>
</tr>
</tbody>
</table>
for this research question are sum totals of the positive behavioral intention questions and the second dependent variable is the sum total of the negative intentions questions.

*Population*

Table 3.4 provides general demographic information on UNC Asheville’s first-time students who entered in fall 2009.

*Table 3.4*

*University of North Carolina Asheville 2009 Fall First-Time (Freshmen) Profile*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-state</td>
<td>531</td>
</tr>
<tr>
<td>Out-of-state</td>
<td>110</td>
</tr>
<tr>
<td>White</td>
<td>560</td>
</tr>
<tr>
<td>Non-White</td>
<td>81</td>
</tr>
<tr>
<td>Male</td>
<td>277</td>
</tr>
<tr>
<td>Female</td>
<td>364</td>
</tr>
<tr>
<td>Average Weighted High School GPA</td>
<td>3.92</td>
</tr>
<tr>
<td>Average SAT Total (Critical Reading and Math)</td>
<td>1175</td>
</tr>
</tbody>
</table>

Source: UNC Asheville Office of Institutional Research
Census

For this study the census unit was the entire University of North Carolina Asheville freshmen class enrolled during the fall 2009 semester. The university collects demographic data, including contact information, on all students enrolled at the college. All eligible students were

The University of North Carolina Asheville is a constituent institution of the University of North Carolina system. The system consists of sixteen colleges and one high school. The University is the only designated public liberal arts institution in the system.

Instrumentation

This study utilized an online survey to assess student perceptions of the quality of service received in selected offices in the One Stop departmental area. As the literature demonstrates (Zeithaml, Parasuraman, & Berry, 1985, 1990; Kerlin, 2000; Ham, 2003), the quality of services can have both a favorable or unfavorable impact on a student’s behavioral intentions, which can impact the resources of the university.

Reliability and Validity

Prior to commencing any study, the reliability and validity of that proposed measure should be assessed (Sproull, 2002). Reliability is defined as “the degree in which the instrument measures the same way each time it is used” (Sproull, 2002, p. 74). As a part of the preliminary data analysis, all of the scales were assessed and the internal consistency evaluated. The measure met the requirement of the .70 (Hair, Black, Babin, Anderson, & Tatham, 2006). Following the data collection procedures, Cronbach’s Alpha was calculated to determine appropriateness of the measure.
According to Sproull (2002), validity is more important than reliability. Validity of a measure refers to the instrument’s ability to measure what it says it is measuring. “A typical reliability coefficient is .70 or higher” (p. 76). The researcher conducted a confirmatory factor analysis to examine the construct validity of the instrument. Table 3.5 provides an illustration of the factor analysis that determined the appropriate construct validity of the instrument. In addition, the internal consistency of the instrument was confirmed by each scale producing a Cronbach’s alpha of at least .70. The specific results are described later in this section in the Preliminary Data Section.

Data Collection

The data collection discussion that follows describes how the study followed the guidelines addressed in the literature regarding appropriate data collection procedures.

Data collection was conducted in accordance with Christian and Dillman (2004), Schaefer and Dillman (1998) and Dillman, Tortora, and Bowker’s (2001) studies on research design method and recent literature on web-based survey techniques. According to Dillman et al. (2001), there are critical elements needed for an effective web-based survey. Those elements are a respondent-friendly questionnaire, and four contacts with an additional special contact (pre-notice letter, questionnaire with cover letter, thank you follow-up, including a follow-up requesting participation. To control for non-response bias, early and late respondents were conducted in accordance with guidelines from the literature (Miller & Smith, 1983; Linder, Murphy & Biers, 2001). Specific findings regarding the results are described in chapter four.
Dillman et al. (2001) also provide principles for how the web survey itself should be designed. The following guidelines were followed:

**Principle 1:** The survey should be respondent-friendly and not require advanced programming features.

**Principle 2:** The survey should incorporate the logic of how the respondent’s computer operates and how the respondent expects the questionnaire to operate.

**Principle 3:** The survey should take into account that many questionnaires are administered in mixed modes and should take into account how the questions would be asked in a different survey mode.

**Principle 4:** The survey should limit line length to ensure that each respondent is receiving the same word stimulus.

**Principle 5:** The survey should be very specific about how to complete the survey.

**Principle 6:** The survey’s computer operating instructions should be located as a part of each question, not in the beginning of the questionnaire.

**Principle 7:** The survey should not require the respondent to answer a question before they can move to the subsequent question.

**Principle 8:** The survey should scroll down from question to question unless order is factor.

**Principle 9:** The survey should use double-banking to squeeze questions into a limited amount of space.
Principle 10: The survey should use graphics that allow respondents to monitor their progress.

Principle 11: The survey should avoid using questions with no measurement problems.

The survey utilized for this study incorporated each of the 11 principles. A copy of the survey is provided in Appendix A. The ease and limited number of dropouts confirm the appropriateness of the design of the survey. Of the 228 students that started the survey, 222 were useable, representing 97% of those that began the survey. In addition, the average time to completion was five minutes.

Once the survey was completed, the steps below describe the formal process for collection of the specific data.

Data collection for this study followed the process as outlined below:

1. Obtained IRB exemption from UNC Asheville IRB committee to access student information data file (See Appendix B)
2. Obtained approved from the authors of the SERVQUAL to use the survey instrument (See Appendix C)
3. Obtained IRB approval from North Carolina State University
4. Obtained University of North Carolina Asheville data set for fall 2009 cohort (recoded by Institutional Research Office to keep student id confidential)
5. Sent out email invitation to students with survey link
6. Sent out email reminder and survey link to prospective study participants
7. Compared early and late respondents to control for non-response bias

Since the researcher had full access to the student information system, the research associate in the Office of Institutional Research submitted the invitation to the students and
administered the survey to avoid the appearance of bias in data collection and analysis. This approach ensured students maintained their anonymity in the process and surveys could not be linked to existing student information records. The study benefited from having the Office of Institutional Research facilitate the administration of the survey. Because of this, important demographic and academic data could be collected for additional analysis of the responses.

Each first-time freshmen received an email explaining the study and inviting them to participate. The email also included an incentive of a drawing for a $50 Visa gift card. The initial data collection period began in May, 2010. The second round of data collection occurred between September 1, 2010 and September 30, 2010. The UNC Asheville Office of Institutional Researched utilized QuestionsPro software to capture the data and generate an excel spreadsheet. The study relied on the access of the UNC Asheville Office of Institutional Research to provide demographic and academic data regarding the participants. The Institutional Research Office matched the data to the individual survey submissions. This information remained confidential to the researcher.

The survey (a modified SERVQUAL instrument) also included additional questions that would provide the institution with critical information for follow-up or intervention, if warranted. Those open-ended questions have not been included in the final data analysis. However, the information is available for review.

Data was initially examined using a variety of techniques to insure assumptions are met for multivariate data analysis. A comparison of early and late respondents was conducted according to procedures outlined by Miller & Smith (1983) and Linder, Murphy, Biers,
(2001) outlined by and discovered there was no difference in responses for the 45 late responders as compared to the others. The results indicate non-response bias is not an issue. The specific findings are addressed in Chapter Four.

**Preliminary Data Analysis Procedures**

The preliminary data analysis section addresses the specific procedures used in the study such as descriptive analysis, which produced frequency data that described the survey respondents and their specific results. Correlation analysis was used to examine potential relationship among the variables and a stepwise regression analysis was used to explain the potential relationship between the selected independent variables and dependent variables. The study analyzed the data utilizing descriptive and inferential statistical SPSS 19.0 and AMOS procedures.

*Cronbach’s Alpha*

The Cronbach’s Alpha calculation for the SERVQUAL instrument is .79. The internal consistency reliability coefficients demonstrate high correlation among the items included in the scale. The scale included the summed scores of the five dimensions of the modified SERVQUAL. According to Hair et al. (2006) the Cronbach’s Alpha score should exceed .70 for each item. The .79 coefficient for the instrument demonstrates the reliability of the scale used in the study. Table 3.5 illustrates the Cronbach’s Alpha for both the five dimensions of the SERVQUAL. Among the items, assurance has a coefficient of .item has a Table 3.6 illustrates and the behavioral intention items.
**Reliability Analysis**

The Cronbach’s Alpha displayed in Table 3.5 was calculated to determine the internal consistency of the scale. The Cronbach’s Alpha coefficient for the positive behavioral intention questions was .842. The Cronbach’s Alpha coefficient for negative behavioral intentions was .737. According to Hair et al. (2006), the coefficient should exceed .70. Therefore, the instrument demonstrated an accurate outcome for internal consistency.

**Table 3.5**

*Reliability: Cronbach’s Alpha for Five Dimensions of SERVQUAL Instrument*

<table>
<thead>
<tr>
<th>Variable</th>
<th>α</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assurance</td>
<td>.89</td>
<td>4</td>
</tr>
<tr>
<td>Empathy</td>
<td>.79</td>
<td>3</td>
</tr>
<tr>
<td>Reliability</td>
<td>.89</td>
<td>4</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.88</td>
<td>3</td>
</tr>
<tr>
<td>Tangibles</td>
<td>.79</td>
<td>5</td>
</tr>
</tbody>
</table>

Note: A reliability coefficient of .70 is considered acceptable (Hair et al., 2006).

**Table 3.6**

*Reliability: Cronbach’s Alpha for Behavioral Intentions Survey Scales*

<table>
<thead>
<tr>
<th>Variable</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Behavioral Intentions</td>
<td>.84</td>
</tr>
<tr>
<td>Negative Behavioral Intentions</td>
<td>.73</td>
</tr>
</tbody>
</table>

Note: A reliability coefficient of .70 is considered acceptable (Hair et al., 2006).
Confirmatory Factor Analysis

The study included a completed a series of confirmatory factor analysis procedures for the proposed measurement instrument. According to Hair et al. (2006), confirmatory factor analysis is conducted in order to assess the construct validity of the proposed measurement theory. The other importance of confirmatory analysis, according to the authors, is that it “eliminates the need to summate scales because the SEM programs compute factor scores for each respondent…one of the biggest advantages to CFA/SEM is its ability to assess the construct validity of a proposed measurement theory” (p. 776). The factor analysis allowed the researcher to determine the appropriateness of the instrument. The study also utilized AMOS software to perform confirmatory analysis on the five dimensions of the SERVQUAL.

To determine the appropriateness of the model, a factor analysis using the AMOS software was conducted. Hair et al. (2006) indicate that with less than 250 occurrences and more than 12 variables but less than 30, the Root Mean Square Error of Approximation (RMSEA) should have a value of >.08 and the Comparative Fit Index (CFI) should equal .95 or higher.

Prior to conducting the data analysis required to answer Research Question Three, a series of confirmatory factor analysis procedures for each of the demographic variables selected for the study was performed. According to Hair et al. (2006), confirmatory analysis is conducted in order to assess the construct validity of the proposed measurement theory. The other importance of confirmatory analysis, according to the authors, is that it “eliminates
the need to summate scales because the SEM programs compute factor scores for each respondent” (p. 776).

The factor analysis allowed the researcher to determine which variables explained a significant amount of variance in the reported service quality by the survey respondents. The AMOS software was utilized to perform the analysis and determine a factor analysis of the variation among the variables was conducted. AMOS software was used to perform confirmatory analysis on the five dimensions of the SERVQUAL.

The RMSEA for this model equals .098. This result exceeds the recommended guideline of greater than .08 for 18 variables. The CFI for the model equals .917. This is just slightly lower than the desired .97 but close to the desired. The results of the factor analysis are summarized in Table 3.7.
Table 3.7

Factor Loading, Variance Extracted, and Reliability Estimates for SERVQUAL

<table>
<thead>
<tr>
<th>Scale Item</th>
<th>Tangibles</th>
<th>Assurance</th>
<th>Responsiveness</th>
<th>Reliability</th>
<th>Empathy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangibles Item 1</td>
<td>.776</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tangibles Item 2</td>
<td>.590</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tangibles Item 3</td>
<td>.390</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tangibles Item 4</td>
<td>.789</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tangibles Item 5</td>
<td>.694</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assurance Item 1</td>
<td></td>
<td>.802</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assurance Item 2</td>
<td></td>
<td>.852</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assurance Item 3</td>
<td></td>
<td>.795</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assurance Item 4</td>
<td></td>
<td>.854</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsiveness Item 1</td>
<td></td>
<td></td>
<td>.858</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsiveness Item 2</td>
<td></td>
<td></td>
<td>.887</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsiveness Item 3</td>
<td></td>
<td></td>
<td>.799</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reliability Item 1</td>
<td></td>
<td></td>
<td></td>
<td>.865</td>
<td></td>
</tr>
<tr>
<td>Reliability Item 2</td>
<td></td>
<td></td>
<td></td>
<td>.876</td>
<td></td>
</tr>
<tr>
<td>Reliability Item 3</td>
<td></td>
<td></td>
<td></td>
<td>.777</td>
<td></td>
</tr>
<tr>
<td>Reliability Item 4</td>
<td></td>
<td></td>
<td></td>
<td>.807</td>
<td></td>
</tr>
<tr>
<td>Empathy Item 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.822</td>
</tr>
</tbody>
</table>
Table 3.7 Continued

<table>
<thead>
<tr>
<th>Construct</th>
<th>Reliability</th>
<th>Variance Extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangibles</td>
<td>.79</td>
<td>38%</td>
</tr>
<tr>
<td>Assurance and Reliability</td>
<td>.89</td>
<td>45%</td>
</tr>
<tr>
<td>Empathy Item 2</td>
<td>.866</td>
<td>59%</td>
</tr>
<tr>
<td>Empathy Item 3</td>
<td>.607</td>
<td>49%</td>
</tr>
</tbody>
</table>

Tangibles items 2 and 3 fell below the preferred .7 standard (Hair et al., 2006). Empathy Item 3 also fell below the desired .7. Only Tangibles Item 3 falls below the .50 desired estimate. The results of the construct reliability ranged from .79 (Tangibles) to .89 (Assurance and Reliability). These results speak to the evidence being available that confirms the construct validity and reliability of the instrument.

Table 3.8

Confirmatory Factor Analysis for SERVQUAL Instrument
Non-Response Bias

According to Lindner, Murphy, and Briers (2001), it is appropriate to account for non-response error by comparing the results for early and late respondents. In addition to examining the results for early and respondents to determine if there was a difference based on demographics, a univariate analysis of variance was conducted to determine if there was a difference in the responses of early versus late respondents. As indicated by Table 3.9 and Table 3.10, there is not a significant difference in the responses in the two groups.

The independent t-test of means performed on the interval variables indicated no significant difference in the responses for early versus late survey participants. The chi-square performed on the categorical variables produced a significant p-value for the responses of male students compared to the female students. The specific findings are illustrated in the tables below. Overall, the data analysis indicated that non-response bias was not present.

Table 3.9

Test of Means Comparing Early versus Late Respondents for SERVQUAL Dimensions

<table>
<thead>
<tr>
<th>Variable</th>
<th>t</th>
<th>p</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assurance average scores</td>
<td>-1.061</td>
<td>.111</td>
<td>220</td>
</tr>
<tr>
<td>Empathy average scores</td>
<td>-1.252</td>
<td>.996</td>
<td>220</td>
</tr>
<tr>
<td>Reliability average scores</td>
<td>-.962</td>
<td>.991</td>
<td>220</td>
</tr>
<tr>
<td>Responsiveness average scores</td>
<td>-.1454</td>
<td>.831</td>
<td>220</td>
</tr>
<tr>
<td>Tangibles average scores</td>
<td>.224</td>
<td>.128</td>
<td>220</td>
</tr>
</tbody>
</table>

Note. No significance level reported for any of the variables.
In order to compare the results for the categorical variables of the two groups, a Chi-Square analysis was performed. The results demonstrate that there is a significant difference in the survey responses for one of the variables. The responses for gender demonstrate a significant difference ($x^2 = 5.861, p = .015$). The remaining variables do not indicate a significant difference.

Table 3.10

Chi-Square Results for Gender, On-Campus Residency, Race, Residency Comparing Early and Late Respondents

<table>
<thead>
<tr>
<th>Variable</th>
<th>df</th>
<th>n</th>
<th>$x^2$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1</td>
<td>222</td>
<td>5.861</td>
<td>.015*</td>
</tr>
<tr>
<td>On-Campus Residency</td>
<td>1</td>
<td>222</td>
<td>.284</td>
<td>.594</td>
</tr>
<tr>
<td>Race</td>
<td>1</td>
<td>222</td>
<td>2.623</td>
<td>.105</td>
</tr>
<tr>
<td>Residency</td>
<td>1</td>
<td>222</td>
<td>.622</td>
<td>.430</td>
</tr>
</tbody>
</table>

Note. *p<.05
Table 3.11

Mean and Standard Deviation of Early Versus Late Survey Respondents for Selected Demographic Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Early Respondents</th>
<th></th>
<th>Late Respondents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>High School GPA (Weighted)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early Respondents</td>
<td>4.06</td>
<td>.428</td>
<td>164</td>
<td></td>
</tr>
<tr>
<td>Late Respondents</td>
<td>4.02</td>
<td>.414</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>SAT Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early Respondents</td>
<td>1193</td>
<td>117</td>
<td>165</td>
<td></td>
</tr>
<tr>
<td>Late Respondents</td>
<td>1206</td>
<td>113</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>UNC Asheville GPA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early Respondents</td>
<td>3.20</td>
<td>.584</td>
<td>173</td>
<td></td>
</tr>
<tr>
<td>Late Respondents</td>
<td>3.20</td>
<td>.609</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>Estimated Family Contribution</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early Respondents</td>
<td>20465</td>
<td>20527</td>
<td>138</td>
<td></td>
</tr>
<tr>
<td>Late Respondents</td>
<td>15027</td>
<td>18569</td>
<td>41</td>
<td></td>
</tr>
</tbody>
</table>

Note: The total number of occurrences varies because not all students reported all items.

There was a significant difference in the responses for male students compared to the female students. Otherwise, no other significant differences were found between the
responses of early and late respondents. Therefore, the results can be generalized to all of the survey respondents.

In addition to comparing the difference in the demographics of the early versus late respondents, an independent test of means was used to determine if there is a significant difference in the responses to the survey questions for early versus late respondents. As indicated in Table 3.11, there was no significant difference found between the two groups.

Research Objective One

Describe the perceived quality of services for first-time freshmen enrolled at UNC Asheville during the fall 2009 semester as measured by a modified SERVQUAL. Means and standard deviations were used to report the responses to the questions on the LIKERT scale with responses ranging from 1 (strongly disagree) to 5 (strongly agree). Means, descriptive statistics, standard deviations, and standard error of measures were used to report the perceived service quality based on the selected independent variables. Additional demographic statistics were also produced utilizing descriptive and frequency analysis.

According to Barlow (1989), descriptive analysis is appropriate when the researcher is attempting to present data in graphic form or a meaningful way “without attempting any deeper analysis or inference”. Therefore, it was appropriate analysis to use to address Research Question One.

Research Objective Two

Explore the relationship among the perceived quality of services of One Stop Student services for first-time students at University of North Carolina Asheville as measured by the SERVQUAL. Correlation coefficients were produced for each of the independent variables
to determine the significance of the relationship to the dependent variable (perceived service
group). The correlations were analyzed using the Pearson’s Product Moment. Each of the
variables was converted into an interval variable. Miller (1998) indicates that correlation
analysis is used when determining the magnitude of the relationship between variables and if
the relationship is statistically significant. Therefore, it was appropriate for the researcher to
use this data analysis procedure to answer Research Question Two.

Research Objective Three

*Examine if the five dimensions of the SERVQUAL and selected demographic
variables explain a significant proportion of the variance in positive and negative
behavioral intentions of first-time students.* Step-wise multiple regression was used to
address this question. The probability was set at a .05 probability level. The selected
demographic variables and the five dimensions of the modified SERVQUAL served as
independent variables, while both positive and negative behavioral intentions served as the
dependent variable. A hierarchal regression analysis was used to further examine the
relationship. Variables were removed based on the impact on their impact on the amount of
variance and significance. The step-wise data analysis procedure is used when determining
if a set of variables can explain or predict the dependent variable (Hair et al., 2006). This
made the technique appropriate for this study.

*Stepwise Multiple Regression*

To examine research question three, a stepwise multiple regression analysis was
performed to determine the amount of variance in the student’s intended behavioral
intentions that is explained by selected variables.
The dependent variable in the study was both positive behavioral intentions and negative behavioral intentions. The independent variables were entered into the stepwise regression equation to maintain a significant level of $p < .05$ while achieving the highest level of variance. Discussion regarding the conclusions and recommendations that are derived as a result of the study are addressed in Chapter Five.

The following section summarizes the three research questions and the data analysis used to examine each question. Table 3.12 provides a summary of the data analysis procedures utilized in this study to examine the three research objectives.

Table 3.12

*Summary of Data Analysis Procedures*

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Statistical Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Descriptive (Means, SD, Frequencies)</td>
</tr>
<tr>
<td>2</td>
<td>Correlations</td>
</tr>
<tr>
<td>3</td>
<td>Stepwise Multiple Regression</td>
</tr>
</tbody>
</table>
Summary of Methodology

A modified SERVQUAL instrument was administered to first-time freshmen at UNC Asheville to determine the students’ level of satisfaction with the services provided by the One Stop Student Services areas, to examine the potential relationship between service quality and specific variables, and to examine how much variance in the perceived service quality can be explained by specific variables. The number of survey responses was sufficient to address each research question.

In order to address the three research objectives, the appropriate IRB approvals were obtained, support of the UNC Asheville Institutional Research Office to format and distribute the survey was received, and SPSS 19.0 and AMOS statistical software were used to perform the appropriate statistical analyses for each research objective. Prior to performing the data analysis, steps were taken by the researcher as a part of the preliminary data analysis steps to address non-response bias, reliability of the modified SERVQUAL survey, and the validity of the survey instrument. The findings of this analysis indicated it was appropriate to move forward with the final data analysis procedures.

This chapter has provided a description of the research methodology used to analyze and report the findings for the study. In addition, the processes for collecting the data, organizing the data, describing the population, and analyzing the data, were discussed. The study utilized factor constructs from past literature. The study design reflects findings from past literature related to service quality and higher education. The specific findings are reported in Chapter Four.
CHAPTER FOUR:

RESULTS

Introduction

This chapter provides a comprehensive examination of the results of the study on the services provided by the departments comprising the UNC Asheville One Stop area. This study utilized a modified SERVQUAL instrument to assess service quality in the One Stop departments (Financial Aid, Registrar’s Office, Cashier’s Office, Disability Services, and Advising and Learning Support) and the potential relationship that perceived service quality and demographic variables may have on the behavioral intentions of the first-time students.

This chapter discusses the results of the survey in three sections. Descriptive statistics were used to analyze the data and address Research Question One, a correlations procedure on selected independent variables was used to determine if there is a relationship to perceived service quality, Research Question Two. Finally, for Research Question Three, a stepwise regression analysis was used to determine if the selected independent variables explain a significant proportion of variance in the behavioral intentions of the first-time freshmen.

The chapter presents findings on the three research questions that guided the study.

Research Question 1 – What is the perceived quality of services for first-time students at UNC Asheville, as measured by the modified SERVQUAL instrument developed by Zeithaml, Parasuraman, and Berry (1988)?

Research Question 2 – Is there a significant relationship among the perceived quality of services for first-time students at this university, as measured by the modified SERVQUAL
Research Question 3 – Do the five dimensions of the SERVQUAL and the selected demographic variables explain a significant proportion of variance in positive and negative behavioral intentions of first-time students?

Data Collection

First-time Student Data Collection

The UNC Asheville Office of Institutional Research provided both socioeconomic and academic information for each respondent by generating the self-reported data from the student information system. Once appropriate IRB approval was obtained from both UNC Asheville and North Carolina State University, students were recruited to participate in the survey.

In order to encourage students to participate in the survey, students were offered a drawing for three $50 Visa gift cards as an incentive. The researcher kept the specific names and personal identifying variables of each survey participant confidential by relying on the Office of Institutional Research to collect and recode the data. The initial request for survey participants that was sent out May 2010 to 601 students yielded 173 respondents. A second survey request for additional participants provided an additional 49 participants, for a total of 222 usable surveys, which constitutes a 37% response rate.

The Institutional Research Office had full access to demographic and academic information. Table 4.1 provides demographic information on the respondents regarding their
residency status, race, gender, campus residency status, residency status, low tuition, and campus memberships.

Demographic Characteristics

To specifically describe the respondents in relationship to the demographic variables that would be utilized in the study, the variables were extracted for each respondent. Of the 222 survey participants, the average age is 18 (n=222). The average total SAT score is 1196 (n=212), the average current UNC Asheville grade point average is 3.2 (n=222) and the average estimated family contribution is $19,220 (179). The percentage of the respondents (n=222) that were in-state students was 83.8% or 186 students. In terms of gender, the number of respondents reporting female was 66.7% (n=148). Of the 222 students that responded to the race question, 89.6% (n=199) identified themselves as Caucasian. Students identifying themselves as multiracial made up the second largest percentage (2.7%), Black students followed at 2.3% (5) and Native Americans were next at 1.8% (n=4). Of the 222 students responding to the campus-residency questions, 91.9% (n=204), reported living on campus.

The residency percentages for the respondents are the exact same to the freshmen population. Eighty-four percent of the respondents were in-state students, while sixteen percent are out-of-state. The statistics for the survey respondents indicate the demographics are similar to those of the entire first-time, freshmen enrolled at UNC Asheville during the fall 2009 semester.

The following section provides findings related to the demographics of the survey respondents. As mentioned in Chapter 3, there were no significant differences in either the
demographics of the early versus late respondents, or their specific responses other than male responses compared to the female responses. Table 4.1 describes the demographic profile of the respondents.
Table 4.1

Frequencies and Percentages: Demographic Variables

<table>
<thead>
<tr>
<th>Category</th>
<th>All Survey Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>74</td>
</tr>
<tr>
<td>Female</td>
<td>144</td>
</tr>
<tr>
<td>Residency Status</td>
<td></td>
</tr>
<tr>
<td>In-state</td>
<td>186</td>
</tr>
<tr>
<td>Out-of-state</td>
<td>36</td>
</tr>
<tr>
<td>Race</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>199</td>
</tr>
<tr>
<td>Black or African American</td>
<td>5</td>
</tr>
<tr>
<td>Asian</td>
<td>2</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5</td>
</tr>
<tr>
<td>Multiracial</td>
<td>6</td>
</tr>
<tr>
<td>Unknown</td>
<td>1</td>
</tr>
<tr>
<td>Campus Housing Status</td>
<td></td>
</tr>
<tr>
<td>On-Campus</td>
<td>204</td>
</tr>
<tr>
<td>Off-Campus</td>
<td>18</td>
</tr>
</tbody>
</table>

N=222
Table 4.2 describes the results for the nominal demographic variables. The average age of the respondents is 18. The average weighted high school grade point average is 4.0 (n=222) with the average grade point average for their first semester at UNC Asheville being 3.2 (n=222). The average SAT total for the respondents of 1196 (n=212) is above the average SAT total of 1175 for all incoming first-time students entering in the fall of 2009. The average estimated family contribution of the respondents is $19,220 (n=179).

Table 4.2
*Minimum, Maximum, Mean, and Standard Deviation of Respondents’ Age, Weighted High School Grade Point Average, SAT Total, Estimated Family Contribution, UNC Asheville Grade Point Average*

<table>
<thead>
<tr>
<th></th>
<th>All Survey Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MIN</td>
</tr>
<tr>
<td>Age</td>
<td>17</td>
</tr>
<tr>
<td>High School Grade Point Average (Weighted)</td>
<td>3.06</td>
</tr>
<tr>
<td>SAT Total (Critical Reading and Math)</td>
<td>930</td>
</tr>
<tr>
<td>UNC Asheville Grade Point Average</td>
<td>1.3</td>
</tr>
<tr>
<td>Estimated Family Contribution</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: The N (number) varies depending upon data reported in the UNC Asheville student information system.
The survey was distributed to students in two separate email solicitations. The first survey results were collected May 2010. The second was collected September 2010. According to Lindner, Murphy, and Briers (2001), it is appropriate to account for non-response error by comparing early and late respondents.

**Descriptive Results**

In an effort to understand who specifically responded to the survey, the previous section provided demographic information on the students that responded to the survey. The next section describes how those that responded perceive the quality of student services received in the One Stop Student Services areas. Specifically, the next section answers

**Research Question 1: Describe the perceived service quality for the One Stop Student Services offices.**

Responses to perception questions were established by asking students to respond to the questions using a 5-point Likert Scale where (5) represented strongly agree and (1) represented Strongly Disagree. As the results in Table 4.3 demonstrate, students perceived the quality of services for assurance at a mean score of 4.18 out of 5.0 to be the highest. Empathy at 4.06, Reliability at 4.03, and Responsiveness at 4.07 followed. Tangibles rated the lowest, yet still in the positive, with a mean rating of 3.78.
Table 4.3

*Mean and Standard Deviation for All Respondents for Assurance, Empathy, Reliability, Responsiveness, and Tangibles Questions*

\((N = 222)\)

<table>
<thead>
<tr>
<th>SERVQUAL Dimension</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assurance</td>
<td>4.18</td>
<td>.728</td>
</tr>
<tr>
<td>Empathy</td>
<td>4.06</td>
<td>.756</td>
</tr>
<tr>
<td>Reliability</td>
<td>4.03</td>
<td>.749</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>4.07</td>
<td>.807</td>
</tr>
<tr>
<td>Tangibles</td>
<td>3.78</td>
<td>.649</td>
</tr>
</tbody>
</table>

The specific questions associated with the five questions on the modified SERVQUAL are described in Table 4.4 along with the specific mean score received for that question. In addition, Table 4.4 reports the mean score of 4.24 out of a possible 5.00 for the question of how well the One Stop departments are meeting student expectations. University administrators and individuals responsible for providing and assessing student services also have feedback that demonstrates the One Stop areas are meeting the students’ expectations when it comes to the quality of services.
**Table 4.4**

*Mean and Standard Deviation for Specific Questions on Modified SERVQUAL*

<table>
<thead>
<tr>
<th>Tangibles Questions</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offices utilize up-to-date technology &amp; facilities</td>
<td>3.91</td>
<td>.802</td>
</tr>
<tr>
<td>Offices are visually appealing</td>
<td>3.56</td>
<td>.913</td>
</tr>
<tr>
<td>Offices are located in a visually appealing part of campus</td>
<td>3.27</td>
<td>1.045</td>
</tr>
<tr>
<td>Personnel working in the One Stop offices are neat in their appearance</td>
<td>4.25</td>
<td>.730</td>
</tr>
<tr>
<td>Materials (brochures, website, etc.) used in One Stop office are visually appealing</td>
<td>3.38</td>
<td>.886</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assurance Questions</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel working in the offices are knowledgeable about policy/procedures</td>
<td>4.17</td>
<td>.839</td>
</tr>
<tr>
<td>The behavior in the One Stop offices show respect for students</td>
<td>4.00</td>
<td>.871</td>
</tr>
<tr>
<td>Students feel safe when interacting with personnel in the offices</td>
<td>4.35</td>
<td>.796</td>
</tr>
<tr>
<td>Personnel in the office are always courteous to students</td>
<td>4.21</td>
<td>.830</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reliability Questions</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel working in the offices provide services at the time they promise</td>
<td>4.18</td>
<td>.829</td>
</tr>
<tr>
<td>The offices provide services during the time they say the will</td>
<td>4.14</td>
<td>.840</td>
</tr>
<tr>
<td>The offices get things right the first time</td>
<td>3.88</td>
<td>.900</td>
</tr>
<tr>
<td>Personnel in the office depend on error-free records</td>
<td>3.89</td>
<td>.873</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Responsiveness Questions</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>The offices provide prompt services</td>
<td>4.06</td>
<td>.898</td>
</tr>
<tr>
<td>Personnel in the offices are always willing to help</td>
<td>4.23</td>
<td>.846</td>
</tr>
<tr>
<td>Personnel in the offices are never too busy to respond to a student’s question</td>
<td>3.92</td>
<td>.946</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Empathy Questions</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel working in offices show sincere interest in solving a student’s problem</td>
<td>4.13</td>
<td>.876</td>
</tr>
<tr>
<td>Personnel in the offices show respect for students</td>
<td>4.16</td>
<td>.870</td>
</tr>
<tr>
<td>The operating hours of the offices are convenient for students</td>
<td>3.84</td>
<td>.986</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expectation Question</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall, the offices provide the expected quality of services</td>
<td>4.24</td>
<td>.861</td>
</tr>
</tbody>
</table>

Note. 5-point scale: 5= Strongly Agree, 1=Strongly Disagree.
* Totals derived from completed surveys only. The maximum score for Tangible is 25. The maximum score for Assurance is 15. The maximum score for Reliability is 20. The maximum score for Responsiveness is 15. The maximum score for Empathy is 15.

Table 4.5 describes the responses to the behavioral intentions questions. Questions 1-4 were asked of each survey recipient as a way of directly assessing the student’s intentions.
to be positive about the university. Questions 5-7 were included to ascertain the student’s intention to perform negative actions regarding the university. The mean score of 4.329 for *I would recommend UNC Asheville to other students* was the highest for the positive behavioral intentions questions. The mean score of 1.690 for *I tend to say negative things about UNC Asheville to other students* was the least negative for the negative intentions questions.

According to the results, 85.4% (n=193) of the respondents agree or strongly agree they say positive things about the university. Additionally, 83.1% (n=187) agree or strongly agree they would recommend UNC Asheville to other students. In terms of commitment to UNC Asheville, 72.6% (n=162) agree or strongly agree they are committed to the institution. Students were also asked about their behavioral intentions if tuition increases. Out of the 222 completed surveys, 55.3% (n=125) agree or strongly agree that they would likely still enroll if tuition increases.

The next three questions represent responses for negative behavioral intentions. In regards to the students’ intentions to say negative things about the university, 5.3% (n=12) responded they agree or strongly agree. There were 15.9% (n=36) students that responded they agree or strongly agree with the statement they plan to transfer to another college. The final question describing a negative behavioral intention of the student asked if the student complained to others outside of the university about UNC Asheville. There were 8.97% (n=20) that agreed or strongly agreed with this statement.
Table 4.5

Minimum, Maximum, Mean, and Standard Deviations for Behavioral Intentions Questions

<table>
<thead>
<tr>
<th>Survey Responses</th>
<th>MIN</th>
<th>MAX</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Behavioral Intentions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I tend to say positive things about the university</td>
<td>1</td>
<td>5</td>
<td>4.32</td>
<td>.815</td>
</tr>
<tr>
<td>I would recommend UNC Asheville to other students</td>
<td>1</td>
<td>5</td>
<td>4.32</td>
<td>.910</td>
</tr>
<tr>
<td>I am committed to UNC Asheville</td>
<td>1</td>
<td>5</td>
<td>4.04</td>
<td>1.094</td>
</tr>
<tr>
<td>If tuition increases, I would likely still enroll</td>
<td>1</td>
<td>5</td>
<td>3.53</td>
<td>1.178</td>
</tr>
<tr>
<td>Average Total for Positive Behavioral Intentions</td>
<td>1.5</td>
<td>5</td>
<td>4.05</td>
<td>.831</td>
</tr>
<tr>
<td>Raw Total for Positive Behavioral Intentions</td>
<td>6</td>
<td>20</td>
<td>16.20</td>
<td>3.33</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative Behavioral Intentions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I tend to say negative things about UNC Asheville to other students</td>
<td>1</td>
<td>5</td>
<td>1.69</td>
<td>.948</td>
</tr>
<tr>
<td>I plan to transfer to another college</td>
<td>1</td>
<td>5</td>
<td>2.03</td>
<td>1.285</td>
</tr>
<tr>
<td>I tend to complain to individuals outside of campus about UNC Asheville</td>
<td>1</td>
<td>5</td>
<td>1.76</td>
<td>1.057</td>
</tr>
<tr>
<td>Average Total for Negative Behavioral Intentions</td>
<td>1</td>
<td>5</td>
<td>1.34</td>
<td>.895</td>
</tr>
<tr>
<td>Raw Total for Negative Behavioral Intentions</td>
<td>3</td>
<td>15</td>
<td>5.51</td>
<td>2.69</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note. 5-point scale. 1=Strongly Disagree, 5=Strongly agree,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Correlations for Research Question Two

In order to address Research Question Two: Is there a relationship between the selected variables and perceived service quality, a correlations bivariate analysis were performed to compare the correlation among all of the variables.

The correlation procedure conducted examined the association between the perceived service quality and the selected variables. A correlation coefficient for each variable was generated. The findings are listed in Table 4.6 and demonstrate the strongest relationship among the SERVQUAL dimension variables (summed totals) with the service quality.
variable. The dimension with the highest correlation is assurance. The correlation coefficient for this variable is .953. The next highest correlation is with the following variables: empathy (.939), reliability (.934), responsiveness (.931) and reliability (.927).
Table 4.6

Correlation Matrix for Perceived Service Quality

<table>
<thead>
<tr>
<th>Service Quality</th>
<th>Resident</th>
<th>Gender</th>
<th>Dorm</th>
<th>HSWGPA</th>
<th>SATTotal</th>
<th>CumGPA</th>
<th>EFC</th>
<th>Race</th>
<th>Assurance Average</th>
<th>Empathy Average</th>
<th>Reliability Average</th>
<th>Responsiveness Average</th>
<th>Tangibles Average</th>
<th>Positive Behavioral Intentions</th>
<th>Negative Behavioral Intentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident</td>
<td>.026</td>
<td>.052</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td>.777</td>
<td>.077</td>
<td>.067</td>
<td>.120</td>
<td>.031</td>
<td>.131*</td>
<td>.953**</td>
<td>.339**</td>
<td>.337**</td>
<td>.939**</td>
<td>.811**</td>
<td>.348**</td>
<td>.129</td>
</tr>
<tr>
<td>Dorm</td>
<td>.152*</td>
<td>.086</td>
<td>1.40*</td>
<td>.129</td>
<td>.168**</td>
<td>.063</td>
<td>.944</td>
<td>.342</td>
<td>.973</td>
<td>.384</td>
<td>.126</td>
<td>.981</td>
<td>.366</td>
<td>.096</td>
<td>.042</td>
</tr>
<tr>
<td>HSWGPA</td>
<td>1.76**</td>
<td>2.14**</td>
<td>0.99</td>
<td>.109</td>
<td>.014</td>
<td>.063</td>
<td>.353</td>
<td>.307</td>
<td>.934</td>
<td>.116</td>
<td>.121</td>
<td>.079</td>
<td>.308</td>
<td>.068</td>
<td>.011</td>
</tr>
<tr>
<td>SATTotal</td>
<td>.014</td>
<td>.99</td>
<td>4.54*</td>
<td>.063</td>
<td>.537**</td>
<td>3.15**</td>
<td>.64</td>
<td>.344</td>
<td>.158*</td>
<td>.067</td>
<td>.127</td>
<td>.013</td>
<td>.125</td>
<td>.035</td>
<td>.012</td>
</tr>
<tr>
<td>CumGPA</td>
<td>.063</td>
<td>.537**</td>
<td>3.15**</td>
<td>.063</td>
<td>.537**</td>
<td>3.15**</td>
<td>.64</td>
<td>.344</td>
<td>.158*</td>
<td>.067</td>
<td>.127</td>
<td>.013</td>
<td>.125</td>
<td>.035</td>
<td>.012</td>
</tr>
<tr>
<td>Race</td>
<td>.131</td>
<td>.131*</td>
<td>.131*</td>
<td>.131*</td>
<td>.131*</td>
<td>.131*</td>
<td>.131*</td>
<td>.131*</td>
<td>.131*</td>
<td>.131*</td>
<td>.131*</td>
<td>.131*</td>
<td>.131*</td>
<td>.131*</td>
<td>.131*</td>
</tr>
<tr>
<td>Assurance Average</td>
<td>.953**</td>
<td>.973</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
</tr>
<tr>
<td>Empathy Average</td>
<td>.339**</td>
<td>.973</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
</tr>
<tr>
<td>Reliability Average</td>
<td>.337**</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
</tr>
<tr>
<td>Responsiveness Average</td>
<td>.331**</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
</tr>
<tr>
<td>Tangibles Average</td>
<td>.811**</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
</tr>
<tr>
<td>Positive Behavioral Intentions</td>
<td>.348**</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
</tr>
<tr>
<td>Negative Behavioral Intentions</td>
<td>.129</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
<td>.934</td>
</tr>
</tbody>
</table>

Note:**Significant at .01 level. *Significant at .05 level.
Outside of the summated totals for the five dimensions of the SERVQUAL instrument, Positive Behavioral Intentions demonstrated the next highest association to service quality (Pearson Correlation = .35, p= .000). The association is also statistically significant. The other variables demonstrate low associations ranging from the lowest of North Carolina Resident status (Pearson correlation = -.026, p=.702) to on-campus housing status (Pearson’s correlation = -.152, p=.023), a statistically significant relationship. The specific results for the variables with the highest correlation to service quality are displayed in Table 4.7.

This research question sought to specifically examine the association of service quality to the selected independent variables. However, it should be noted that the correlation analysis indicates a substantial and statistically significant association between positive and negative behavioral intentions (Pearson’s correlation = -.630, p = .000).
Table 4.7

Relationship between Service Quality and Selected Variables as Measured by Pearson’s Product Moment Correlation

<table>
<thead>
<tr>
<th>Variable</th>
<th>$r$</th>
<th><strong>Magnitude</strong></th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assurance Average</td>
<td>.95</td>
<td>Very high</td>
<td>.000</td>
</tr>
<tr>
<td>Empathy Average</td>
<td>.94</td>
<td>Very high</td>
<td>.000</td>
</tr>
<tr>
<td>Reliability Average</td>
<td>.94</td>
<td>Very high</td>
<td>.000</td>
</tr>
<tr>
<td>Responsiveness Average</td>
<td>.93</td>
<td>Very high</td>
<td>.000</td>
</tr>
<tr>
<td>Tangibles Average</td>
<td>.81</td>
<td>Very high</td>
<td>.000</td>
</tr>
<tr>
<td>Positive Behavioral Intentions</td>
<td>.35</td>
<td>Moderate</td>
<td>.000</td>
</tr>
</tbody>
</table>

Note: n=222. Miller (1998) indicates .70 -.99 describes very high association, .50 -.69 describes substantial association, .30-.49 describes moderate association, and .10-.29 describes low association.

The variables displayed in Table 4.7 are those that demonstrate the strongest association to service quality, as well as a statistically significant relationship.
Regression Analysis for Research Question Three

The results of the regression analysis as presented in Table 4.12 were used to examine the amount of variance that selected demographic variables and the five dimensions of the modified SERVQUAL explained both negative and positive behavioral intentions. This section presents findings from a stepwise regression analysis that examines the amount of variance explained by the selected variables on potential behavioral intentions of first-time UNC Asheville students. Using multiple regression allows for the identification of certain variables of particular importance for a particular group, in this case being first-time students at a public, liberal arts university. This multiple regression analysis was conducted using the stepwise method, with probability set at .05 level. The dependent variable was both positive behavioral intentions and negative behavioral intentions.

As described earlier in this chapter, both the reliability and validity of the study were confirmed prior to the final data analysis. Specific to this research objective, the Cronbach’s Alpha for the Behavioral Intention scales were reported as .842 for the positive intentions and .737 for the negative behavioral intentions. The Cronbach’s Alpha coefficient for the five dimensions were assurance = .89, empathy = .79, reliability = .89, responsiveness = .88, and tangibles = .79. According to Hair et al. (2006), the acceptable reliability coefficient is .70. A stepwise regression analysis was performed in accordance to the guidelines outlined by Hair et al. (2006). According to the authors, an explanation of the impact of the independent variable on prediction is sometimes warranted rather than a prediction. “The most important interpretation of the regression variate is a determination of the relative importance of each independent variable in the prediction of the dependent variable” (Hair et
al., 2006, p. 190). The independent variables for both the positive behavioral intentions and the negative behavioral intentions were the eight demographic variables and the variables representing the five dimensions of the SERVQUAL.

*Positive Behavioral Intentions*

The researcher initially entered all of the demographic independent variables into the model. The model summary described the amount of variance that could be accounted for by the eight variables. The first model indicated 7% of the variance (adjusted $R^2 = .069$) was accounted for by the independent variables. In addition to accounting for only 7% of the variance, the model was also not statistically significant with a p value of .169. Only one of the variables, dorm student, entered the model as statistically significant with a p value of .033.

The second step of the analysis entered the additional variables representing the five dimensions of the SERVQUAL into the model. This addition accounted for 17% of the variance (adjusted $R^2 = .094$) and indicated that it was statistically significant with a p value of .012. Given that dorm student was the only variable to enter the model as significant in the first model and the variance increased to 17% with the addition of the SERVQUAL dimensions, six variables were entered into the final model. As a result, the variance reported out as 14% (adjusted $R^2 = .124$) being explained by dorm student status, assurance, empathy, reliability, responsiveness, and tangibles. While accounting for 14% variance, none of the six variables are statistically significant in explaining the amount of variance in a student’s positive behavioral intentions. The final entry model results are illustrated in Table 4.12.
Table 4.8

*Stepwise Multiple Regression Analysis to Explain Variance in Positive Behavioral Intentions*
(N=222)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>21.976</td>
<td>6</td>
<td>3.663</td>
<td>6.015</td>
<td>.000*</td>
</tr>
<tr>
<td>Residual</td>
<td>130.918</td>
<td>215</td>
<td>.609</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>152.894</td>
<td>221</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall R²</th>
<th>B</th>
<th>Beta</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant (2.610)</td>
<td>.144</td>
<td></td>
<td>6.428</td>
<td>.000*</td>
</tr>
<tr>
<td>Dorm Student</td>
<td>-.287</td>
<td>-.095</td>
<td>-1.470</td>
<td>.143</td>
</tr>
<tr>
<td>Tangibles</td>
<td>.034</td>
<td>.131</td>
<td>1.404</td>
<td>.162</td>
</tr>
<tr>
<td>Assurance</td>
<td>.050</td>
<td>.176</td>
<td>.977</td>
<td>.329</td>
</tr>
<tr>
<td>Reliability</td>
<td>-.044</td>
<td>-.158</td>
<td>-1.083</td>
<td>.280</td>
</tr>
<tr>
<td>Empathy</td>
<td>.004</td>
<td>.010</td>
<td>.063</td>
<td>.950</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.073</td>
<td>.212</td>
<td>1.468</td>
<td>.144</td>
</tr>
</tbody>
</table>

Note. *p<.05

The model did not indicate that any of the independent variables are statistically significant in explaining the amount of variance in positive behavioral intentions. The results do indicate that responsiveness (Beta = .212) demonstrates the strongest impact on positive behavioral intentions, albeit marginal. The positive Beta coefficient indicates that as the rating for responsiveness goes up, the more likely the student is to perform positive behavioral intentions. The remaining variables in order of Beta weights were: 1) Assurance...
(Beta = .176); 2) Reliability (Beta = -.158); 3) Tangibles (Beta = .131); 4) Dorm Student (Beta = -.095) and 5) Empathy (Beta = .010).

**Negative Behavioral Intentions**

In order to examine if the same independent variables explained any amount of variance in a student’s negative behavioral intentions, a regression analysis was performed that defined negative behavioral intentions as the dependent variable. As in the case with positive behavioral intentions, none of the demographic variables were found to be significant in the model. The model produced a very low amount of variance of 2% (adjusted $R^2 = -.025$) and indicated no variables were significant to explaining the variance in negative behavioral intentions. The second entry included the SERVQUAL dimensions assurance, empathy, reliability, responsiveness, and tangibles. This model increased the variance slightly to 6% (adjusted $R^2 = -.021$) but did not produce a significant model. It also still indicated none of the variables were significant. The variable SAT total produced the lowest p value of .284 of the insignificant variables. SAT Total was then entered into the model with assurance, empathy, reliability, responsiveness, and tangibles. This model lowered the variance to 4% (adjusted $R^2 = .017$) and still did not produce a significant model nor a variable with a p value with a significance level equal or greater to .05. Again, attempting to increase the variance level and significant level of the model, the variables with the highest p value were removed from the model. Reliability produced a p value of .404 and empathy produced a p value of .503. This model produced a variance level of 4% (adjusted $R^2 = .026$) and a significant model (p=.034). However, there were no variables that rated significant in the model.
The final model that produced both a significant model and a variable that indicated that it was significant included only assurance as the independent model. The variance for this model was only 2% (adjusted R2 = .021) and produced a significant model with a p value of .018 and a statistically significant variable, assurance (p = .018). Table 4.9 illustrates the results from the model that entered the demographic variables with the SERVQUAL dimensions.
Table 4.9

Stepwise Multiple Regression Analysis to Explain Variance in Negative Behavioral Intentions (N=222)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>7.987</td>
<td>6</td>
<td>1.331</td>
<td>1.331</td>
<td>.142</td>
</tr>
<tr>
<td>Residual</td>
<td>168.001</td>
<td>205</td>
<td>.820</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>175.988</td>
<td>211</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall $R^2$</th>
<th>B</th>
<th>Beta</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant (2.668)</td>
<td>.058</td>
<td></td>
<td></td>
<td>3.394</td>
</tr>
<tr>
<td>SAT Total</td>
<td>.000</td>
<td>-.029</td>
<td>-.416</td>
<td>.678</td>
</tr>
<tr>
<td>Tangibles</td>
<td>.034</td>
<td>.119</td>
<td>1.192</td>
<td>.235</td>
</tr>
<tr>
<td>Assurance</td>
<td>-.087</td>
<td>-.280</td>
<td>-1.411</td>
<td>.160</td>
</tr>
<tr>
<td>Reliability</td>
<td>.041</td>
<td>.133</td>
<td>.837</td>
<td>.404</td>
</tr>
<tr>
<td>Empathy</td>
<td>.046</td>
<td>.115</td>
<td>.671</td>
<td>.503</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>-.077</td>
<td>-.204</td>
<td>-1.310</td>
<td>.192</td>
</tr>
</tbody>
</table>

Note. *p<.05

The results of the multiple regression analysis performed to explain the amount of variable in positive and negative behavioral intentions indicate that none of the 13 independent variables are significant.
As with the case with positive behavioral intentions, while there is not a significant relationship with the dependent variable, the impact of the relationship can be observed. In the case of negative behavioral intentions, assurance demonstrates the strongest impact (Beta = -.280). The negative Beta coefficient for assurance indicates that the more assurance the student feels about the quality of services, the less likely the student is to perform negative behavioral intentions. The Beta coefficients for each of the variables entered in the model demonstrate very little impact. The Beta coefficients for the remaining variables were: 1) Responsiveness (Beta = -.204); 2) Reliability (Beta = .133); 3) Tangibles (Beta = .119); 4) Empathy (Beta = .115); and 5) SAT Total.

**Summary**

This chapter presented the findings for the three research questions. Prior to examining the research questions, the researcher found the modified SERVQUAL instrument to be both reliable and valid. The first research question was addressed in a series of descriptive and frequency analyses which also addressed non-response bias. Research question two examined the relationship among the selected independent variables to perceived service quality by performing correlation analysis to produce a Pearson Product Moment Coefficient. Research Question three was examined by conducting a confirmatory factor analysis, producing Cronbach’s alpha for the scale dimensions, and conducting a stepwise regression procedure on both positive and negative behavioral intentions.

The data analysis procedures used to examine the three research questions utilized descriptive statistics that produced frequency tables and cross tabulation results describing the respondents, exploratory factor analysis, and stepwise regression analysis. The stepwise
regression analysis procedure examined the relationship between the dependent variable, positive and negative behavioral intentions, and the independent variables of gender, race, campus housing status, high school performance, UNC Asheville grade point average, campus memberships, and low tuition cost.

The findings demonstrate that perceived quality of student services provided by the One Stop Student Services Offices among first-time freshmen enrolled at UNC Asheville for the Fall 2009 term are positive. The findings also indicate that the expectations of these first-time freshmen as they relate to the quality of services provided are also being exceeded. In terms of the selected variables that may contribute to a significant amount of variance in the perceived service, the regression analysis did not produce a variable that could be identified as significant in explaining the amount of variance in positive and negative behavioral intentions.
CHAPTER FIVE:
SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

Colleges today face increased competition to recruit and retain students. How students perceive the quality of services provided by the institution may influence the behaviors of a student to either continue their enrollment or leave the university (Zeithmahl, Parasuraman & Berry 1996; Kerlin 2000; Christy 1997). Both of these choices have financial implications for the institution (Zeithaml et. al, 1996).

The purpose of this study was to research the perceptions of University of North Carolina Asheville first-time students regarding the services they receive from the One Stop student services departments (Financial Aid, Registrar’s, Cashiers, Disability Services, Advising and Learning Support). The research questions examined in the study collected data on the perceptions of students regarding services received in these specific offices as well as potential behavioral intentions. The modified SERVQUAL was distributed to the entire fall 2009 freshmen cohort. Data was analyzed using descriptive statistics and one-way analysis of variance (ANOVA), correlations, and regression analyses to address the three research objectives. Non-response bias was addressed by comparing the output for early versus late responders. Preliminary data analysis was conducted to determine the reliability using Cronbach’s alpha and validity of the instrument using a Confirmatory Factor Analysis procedure. The final data analysis was conducted using SPPS software. The research questions were examined through descriptive, correlational, and regression analyses.
The findings from the research provide the college administrators with valuable information regarding the expectations and perceptions of students whose behavioral intentions could have an impact on the revenue of the institution.

This dissertation included a literature review of service quality, an overview of service quality in higher education, and a discussion of factors that have been documented in the literature to influence student behavioral intentions. There has also been an examination of any significant correlations that exist within the variables and potential behavioral intentions as it relates to perceived service quality.

This chapter provides a discussion of the summary of findings, significance of the study, the study’s implications for the university, limitations of the study, and future opportunities for additional research.

Summary of Findings

The results of the modified SERVQUAL administered to first-time freshmen at UNC Asheville indicate that the service quality provided in the One Stop areas is perceived at a high level by these students. The findings also support the conclusion that there are no systemic issues related to how the students perceive the quality of services they receive from the One Stop areas. The study builds upon the work of Parasuraman, Zeithaml, and Berry (1996) who studied the potential implications of perceived service quality on the behavioral intentions of the organization’s customer (student). However, the results indicate that the findings in this study did not reveal a significant relationship between the independent variables (gender, on-campus residency, residency for tuition purposes, high school weighted grade point average, UNC grade point average, estimated family contribution, race, SAT
total, assurance, empathy, reliability, responsiveness, and tangibles) and the dependent variables (positive and negative behavioral intentions.

This research study was conducted at UNC Asheville, the only public liberal arts institution in the University of North Carolina system. A total of 222 useable surveys were collected from the fall 2009 first-time freshmen class, which consisted originally of 641 students. A modified SERVQUAL instrument was the scale used for data collection. In addition to the questions related strictly to the five dimensions (assurance, empathy, reliability, responsiveness, tangibles), the survey also included open-ended questions regarding the services provided by the offices which provide the institution with additional information regarding the services provided in the One Stop areas. After confirming the reliability and validity of the SERVQUAL instrument, and confirming no existence of non-response bias, data analyses to address the three research questions were performed. The research questions selected for this study represent findings that would be helpful to the University’s assessment efforts and assist the administration in identifying potential issues related to the behavioral intentions of the 2009 fall first-time freshmen class.

The objectives of this final chapter is to summarize the findings, review the hypothesis of the research questions, and discuss the implications of the study, opportunities for future research, and present the study’s final conclusions.

*Research Question One*

Research Question One examined perceived service quality in the One Stop areas reported by first-time students at UNC Asheville using a modified version of the SERVQUAL instrument. The on-line survey asked each participant service quality
questions, behavioral intentions, and one question asking if the departments in the One Stop area were meeting the student’s expectations when it came to the quality of service provided. The respondents also had an opportunity to provide any general information about any of the offices by providing the information in the comment box.

**Conclusion One:** The results of the modified SERVQUAL survey indicate students overwhelmingly rate the quality of services at a high level. The data suggest that students are receiving high quality services early on in their UNC Asheville experience.

**Conclusion Two:** The results do not raise any potential concerns for administration in terms of potential issues that could lead students to complain about the university or decide to transfer out of the college. According to the responses from the 5-point Likert Scale survey where “5” equals “strongly agree”, the questions to the assurance dimension of the survey scored the highest. Each of the four questions scored an average of at least 4 out of the possible 5 on this section.

**Conclusion Three:** The 4.24 mean score (SD = .861) for the question of how the respondents feel the One Stop offices are meeting their expectations indicate that the departments are meeting or exceeding student expectations at a high level.

**Conclusion Four:** In addition to the descriptive information indicating positive results for how student rate the services of the One Stop areas defined by the SERVQUAL dimensions, the survey asked students directly about their positive and negative behavioral intentions. The results were again positive for the university. With a score of “5” being “strongly agree”, the mean score for the four positive behavioral intentions questions was 4.05 (SD = .831).
Conclusion Five: The very positive response to the Expectation question, along with the open-ended questions not yielding any specific issues, indicates the university is meeting the expectations of first-time students and that these same students are very satisfied with the service quality. A revised University website, consistent email communications, and an increased presence during Freshmen Orientation discussing the offices’ services has assisted in ensuring students at least know how the One Stop offices support their educational experience. The Assistant Provost for Administration has reviewed the results and determined that the SERVQUAL supports the decision to relocate the offices into one centralized operation, and along with that move.

Research Question Two

Research Question Two examined the association among the various independent variables to service quality using the Pearson’s Correlation test which produced a bi-variate between each of the independent variables and service quality (dependent variable). The analysis also provided data regarding the association each of the independent had with the other independent variables.

Conclusion One: The results of the data analysis for research question two support the findings of Parasuraman, Zeithaml, and Berry (1985, 1993, 1996) that posit that there is a significant relationship between behavioral intentions and service quality. The results for UNC Asheville first-time students indicate that there is significant relationship between service quality and both positive and negative behavioral intentions. This finding also reveals the potential for institutions to influence a student’s behavioral intentions through the
services provided outside of an academic setting, but also in the student services departments.

**Conclusion Two:** The findings also indicate that assurance (Pearson’s Correlation = .953, p=.000), empathy (Pearson’s Correlation = .939, p=.000), reliability (Pearson’s Correlation = .937, p=.000), responsiveness (Pearson’s Correlation = .931, p=.000), and tangibles (Pearson’s Correlation = .811, p=.000) have the strongest association to service quality. Each of these variables demonstrate a positive relationship to service quality. The only other independent variable used in the analysis that demonstrated at least a moderate relationship with service quality is positive behavioral intentions (Pearson’s Correlation = .35, p=.000). This is not surprising since past studies of service quality in higher education have demonstrated that service quality correlates with loyalty (Ham, 2003; Tan & Kek, 2004).

**Research Question Three**

Research Question Three examined the amount of variance in positive and negative behavioral intentions that could be explained by the selected demographic variables and the five dimensions of the SERVQUAL instrument (assurance, empathy, reliability, responsiveness, and tangibles) using a stepwise regression analysis. Each of the demographic variables and the five dimensions of the SERVQUAL variables were entered into the model.

**Conclusion:** The stepwise regression analysis performed for both positive and negative behavioral intentions did not yield any variable with a significant relationship to positive or negative behavioral intentions. None of the independent variables (gender, race,
on-campus residency, residency, SAT total, UNC Asheville grade point average, high school weighted grade point average, estimated family contribution, assurance, empathy, reliability, responsiveness, or tangibles) used in model for positive and negative behavioral intentions revealed a variable that could serve as a predictor variable for either positive or negative behavior intentions.

Implications

As the research of Parasuraman, Zeithaml, and Berry (1985; 1991; 1996) as well as more recently Ham (2003) demonstrates, student satisfaction directly correlates with student expectations and perceptions. The implications of this study indicate that the university will need to manage the expectations of its students in order to continue to benefit from positive behavioral intentions on the part of the student. In addition, Parasuraman et al. (1996) demonstrate that meeting or exceeding student expectations regarding service quality is critical to influencing the behavioral intentions of students. The study also reveals that students do not come to UNC Asheville with characteristics that would predetermine how they intend to behave. UNC Asheville has a “clean slate” in which to work from in order to influence both the positive and negative intentions of the students interacting with the One Stop student services areas.

Students and parents continue to expect more in a more timely fashion from their universities, particularly as college tuition continues to rise. (UNC Asheville instituted a 6.5% increase in 2010.) According to the study findings, the university is providing a high level of service quality and exceeding the expectations, with the tangibles of physical attractiveness, modern equipment, and physical appearance being rated the lowest.
Administrators we need to monitor these areas to determine if continued deficiencies in these areas begin to lead to negative behavioral intentions or a decrease in the perception of the student services provided. Due to the increased competition for students and the increased cost of educating these students once they matriculate, the findings for this study provide a foundation for the continued importance of emphasizing the delivery of quality student services.

While the score for the tangibles dimension of the survey instrument indicate students agreed with the statements affirming the positive state of the physical attributes of the One Stop offices, the scores from the surveys were lowest for this component of the survey. The University should examine the feasibility and need to modernize the area and the materials located in the offices. In addition, as a part of the college’s master planning process, serious consideration should be given to whether a change in location is needed that moves the offices from its current location beneath the University Dining Hall.

Limitations of the Study

This study is limited by its exclusion of students beyond the first-time enrolled student population. The study is also limited by the sample size. The perception of the service quality may vary depending upon the expanded size of the sample. The study is also limited by its examination of students at a public, liberal arts university with 3,500 students. Studies of universities with a different mission and size may vary. In addition, the survey was administered to students after they had been enrolled for almost one academic year and may have had limited experiences with the One Stop offices. The fact that the data is self-reported by these students is also a limitation.
Recommendations

The influence of expectations and perceived service quality on student behavioral intentions creates several recommendations from the researcher. Furthermore, student services areas have the potential for greater interaction with students, and thus, greater potential for impacting these behavioral intentions (Kerlin, 2000). The recommendations that follow are result of this impact and the specific findings of the study.

Recommendations

The first recommendation that the research in this study reveals is that the university should administer the survey again to students during their junior year. In addition, the institution should look at potential ways of influencing the perceived service quality through its Orientation sessions, pre-enrollment mailings, and consistent communication with students, including post-enrollment. In addition, there periodic administration of the modified SERVQUAL should be integrated into the standard operating procedures of the University. To not wait until student about to graduate to have influence.

Departments outside of the One Stop area would also benefit form utilizing the SERVQUAL instrument. As demonstrated by this study, it is an inexpensive and convenient method of gathering important information regarding service quality and student behavioral intentions. If the college does choose to utilize the SERVQUAL instrument in a more frequent and campus-wide approach, benchmarks for success should be established and used as a way for the University to determine improvement is being made in specific departments as well as whether or not challenges persist in specific departments as it relates to service quality. In addition, the benchmarks provide a clear baseline for those institutions concerned
with how to demonstrate institutional effectiveness, as UNC Asheville itself has as a high priority.

Finally, the university should conduct future research to examine if the potential behavioral intentions reported by the participants in this study actually match what the students ended up exerting. The data is currently available and could be easily obtained and studied by the university.

Conclusion

This study contributes to the research regarding the correlation between student satisfaction and future behavioral intentions of the student. It confirms the findings of other studies (Zeithaml, Parasuraman, & Berry, 1985, 1990, 1996; Nealon, 2005; Ham, 2003) that organizations can influence the perceived satisfaction with services by managing the expectations of their students, and thus influence the likelihood the student performs positive behaviors. Interestingly, Ham (2003) also found in her study exploring perceived service quality and student behavioral intentions, that demographic factors (variables) do not have a significant impact on the amount of variance explained in the potential positive and negative behavioral intentions of students.

The specific findings of this study validate the decisions by the university to relocate and clearly define the services provided by the One Stop area. The study also provides a cost-efficient and low-cost methodology to the University for evaluating the perceived quality of services provided to students.

By determining the strong correlation among the five dimensions of the SERVQUAL and service quality, this study provides a specific opportunity for the college to influence
how students perceive the quality of service being provided. The attributes of assurance, empathy, reliability, responsiveness, and tangibles strongly correlate to service quality. Therefore, the greater the ability of an office on campus to rate high in these areas, the greater the likelihood that students will indicate satisfaction with the services being provided.

This study was developed to assist the administration at the university in its ongoing efforts to evaluate the services provided to students. The student responses to the survey provides the university with positive feedback regarding how students feel about the services they are receiving from the One Stop, and just as importantly, their intentions regarding favorable and unfavorable behavioral intentions. Given the absence of specific findings to address the amount of variance in positive and negative behavioral intentions being found in the selected 13 variables, it is important for the university to further study what variables, if any, are having an impact so that the institution can respond accordingly.

While this researcher specific looked at the departments located in the One Stop area, the university would benefit from expanding the evaluation of services to other departments across the campus. The ease of reproducing a modified SERVQUAL instrument and the emphasis at the institution on institutional effectiveness and assessment, make additional evaluation in the following areas feasible: Business services, Orientation, Registration, and Administration responsiveness.

In addition to expanding the scope of the evaluation to include other areas outside of One Stop, the university would be well-served to expand the discussion of assessment beyond the evaluation of a specific service provide to a specific student during a specific exchange. Questions to be asked by the institution in order to expand the conversation:
• How will the institution use the results of the assessment to improve services?

• Is there a process in place that follows up on issues that are identified as having a positive influence on student behavioral intentions? Negative behavioral intentions?

• How does the institution monitor student and parent expectations in order to manage the expectations so that they do not negatively impact student behavioral intentions?

• What impact does the current budget and strain on financial resources have on student services? How is the institution managing these challenges to minimize the impact on student/parent expectations and behavioral intentions?

Administrators at UNC Asheville have already reviewed the initial results of the study as a way of affirming with the employees of the department that the changes and relocation appear to have had a positive impact on their efforts to deliver a positive experience for students that receive services from the offices. The Assistant Provost for Administration carefully examined the survey responses to determine if there were specific areas of concern and has incorporated the results in her assessment and evaluation reports. While the results of this study indicate the offices located in the One Stop areas are exceeding or meeting the expectations of first-time students, the university should expand the survey to include all students that utilize the services of the offices to ensure that it is not only newly enrolled students who may not have yet had an opportunity to understand how and what services are delivered to them.

Universities are under tremendous pressure to recruit, enroll, retain, and graduate their desired student population. Employees and the services they provide can influence the type of success or failure the institution has in these areas. The literature indicates the
importance quality of service plays in how employees can influence this perception (Bowen & Schneider, 1988; Kerlin, 2000; Ham; 2003). The institutions that position their student services personnel to be able to provide this high level of service will be well-served in the future.

Continuous assessment of the service areas at the University has already been identified as a priority. The relative ease of administering the modified SERVQUAL is an indication that this tool could be easily integrated into the current standard operating procedures of the university. Ongoing data that provides comparative results would allow the college to analyze potential problem areas. Parasuraman, Berry, and Zeithaml (1993) posit that if there is a significant difference in how students perceive the services, the longitudinal data provides critical information to assess whether or not it is due to higher expectations, lower perceptions, or perhaps both.
REFERENCES


continents.


York: Agathon Press.


APPENDIX
## APPENDIX A

### ONE STOP STUDENT SERVICES SURVEY

University of North Carolina at Asheville OneStop Student Services (Offices of Financial Aid, Registrars, Cashier & Billing Office, Advising & Learning Support and Disability Services) Student Questionnaire

A. Experiences with OneStop Student Services

Please rate your experiences with OneStop Student Services (Offices of Financial Aid, Registrars, Cashier & Billing Office, Advising & Learning Support and Disability Services)

<table>
<thead>
<tr>
<th></th>
<th>1-Strongly Disagree</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5-Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Offices in the OneStop Student Services utilize up-to-date technology and facilities.</td>
<td></td>
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</tr>
<tr>
<td>2. Offices in the OneStop Student Services are visually appealing.</td>
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<tr>
<td>3. The OneStop Student Services offices are located in a visually appealing part of campus.</td>
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<tr>
<td>4. Personnel working in the OneStop Student Services are neat in their appearance.</td>
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<tr>
<td>5. Personnel working in the OneStop Student Services offices are knowledgeable about policies and procedures.</td>
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<tr>
<td>6. Personnel working in the OneStop Student Services offices provide services at the time they promise to do so.</td>
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<tr>
<td>7. Personnel working in the OneStop Student Services offices show a sincere interest in solving a student’s problem.</td>
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<td></td>
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<tr>
<td>8. The OneStop Student Services offices provide services during the time they say they will.</td>
<td></td>
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</tr>
<tr>
<td>9. The materials (brochures, website, etc) used by the OneStop Student Services offices are visually appealing.</td>
<td></td>
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<tr>
<td>10. The OneStop Student Services offices get things right the first time.</td>
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<tr>
<td>11. Personnel in the OneStop Student Services offices depend on error-free records.</td>
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<tr>
<td>12. The OneStop Student Services offices provide prompt service.</td>
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<tr>
<td>13. Personnel in the OneStop Student Services offices are always willing to help students.</td>
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<tr>
<td>14. Personnel in the OneStop Student Services offices are never too busy to respond to a student’s question.</td>
<td></td>
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<tr>
<td>15. The behavior of the personnel in the OneStop Student Services offices instills confidence in students.</td>
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<tr>
<td>16. Personnel in the OneStop Student Services offices show respect for students.</td>
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<tr>
<td>17. Students feel safe when interacting with personnel in the OneStop Student Services offices.</td>
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<td>18. The operating hours of the OneStop Student Services offices are convenient for students.</td>
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<tr>
<td>19. Personnel in the OneStop Student Services offices are always courteous to students.</td>
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<tr>
<td>20. Personnel in the OneStop Student Services offices show respect for students.</td>
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<tr>
<td>21. Overall, the OneStop Student Services offices provide the expected quality of service.</td>
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</tr>
</tbody>
</table>

22. Have you encountered any problems with the OneStop Student Services Office during your enrollment at UNC Asheville? Was the issue resolved? Please explain.

23. Use the space below to provide any additional comments regarding how you perceive the quality of services provided by the OneStop Student Services offices at UNC Asheville.

B. Perceptions of UNC Asheville and future plans

Please rate your general perceptions about UNC Asheville and indicate your future plans and intentions.

<table>
<thead>
<tr>
<th></th>
<th>1 Strongly Disagree</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5 Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I tend to say positive things about the university.</td>
<td></td>
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<tr>
<td>2. I would recommend UNC Asheville to other students.</td>
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<tr>
<td>3. I am committed to UNC Asheville.</td>
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<tr>
<td>4. If tuition increases, I would likely still enroll at UNC Asheville.</td>
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<tr>
<td>5. I tend to say negative things about UNC Asheville to other students.</td>
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<tr>
<td>6. I plan to transfer to another college.</td>
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<tr>
<td>7. I tend to complain to individuals outside of campus about UNC Asheville.</td>
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</tr>
</tbody>
</table>
C. Tell us a little about yourself

1. When applying for college, was UNC Asheville your:
   1. 1st Choice
   2. 2nd Choice
   3. 3rd Choice
   4. 4th Choice

2. What is the highest level of degree you plan to earn?
   1. Bachelors
   2. Masters
   3. Doctorate or 1st Professional
   4. Other ________________________________

3. How many student organizations have you joined since enrolling at UNC Asheville?
   1. 1
   2. 2
   3. 3
   4. 4 or more
   5. N/A

4. How often during the semester do you meet with your adviser?
   1. Once
   2. Twice
   3. Three times
   4. Four times or more
   5. N/A

5. I have established personal relationships with other UNC Asheville students.
   1. 1 Strongly Disagree
   2. 2
   3. 3
   4. 4
   5. 5 Strongly Agree
APPENDIX B

Requests to use the SERVQUAL

From: pbmitche@ncsu.edu [mailto:pbmitche@ncsu.edu]
Sent: Tue 2/10/2009 7:10 PM
To: parsu@miami.edu
Subject: Permission to use SERVQUAL Instrument

Dr. Parasuraman,

This correspondence is to request your permission me to use the SERVQUAL instrument in my doctoral research.

My dissertation will study the impact of the perceived quality of student services on the retention of first-time students at a public university. The study is being conducted as a partial requirement for my Ed.D in Adult and Community College Education from North Carolina State University.

I look forward to hearing from you regarding my request.

Thank you for your consideration,
Patrice B. Mitchell

From: pbmitche@ncsu.edu [mailto:pbmitche@ncsu.edu]
Sent: Tuesday, February 10, 2009 5:54 PM
To: berryle@tamu.edu
Subject: Permission to use SERVQUAL Instrument

Dr. Berry,

This correspondence is to request your permission me to use the SERVQUAL instrument in my doctoral research.

My dissertation will study the impact of the perceived quality of student services on the retention of first-time students at a public university. The study is being conducted as a partial requirement for my Ed.D in Adult and Community College Education from North Carolina State University.

I look forward to hearing from you regarding my request.

Thank you for your consideration,
Patrice B. Mitchell
APPENDIX C

Permission to use the SERVQUAL

From: Parasuraman, A <aparasur@exchange.sba.miami.edu>
To: pbmitche@ncsu.edu
Date: Wed, Feb 11, 2009 10:41 pm

Dear Patrice,

Thanks for your email. I am hereby pleased to grant you permission to use the SERVQUAL instrument in your dissertation research as outlined in your email. The only condition for use is that you include an appropriate citation to the original source of the instrument in all written and oral presentations of your SERVQUAL-related findings. Very best wishes for success in your dissertation research and subsequent career.

Sincerely,
Parasuraman

A. "Parsu" Parasuraman
Professor & Holder of the James W. McLamore Chair
Vice Dean of Faculty
Editor, Journal of Service Research
P.O. Box 248147/Mktg. Dept.
University of Miami
Coral Gables, FL 33124-6554
Tel: 305-284-5743/Fax: 305-284-5326
parsu@miami.edu
Permission to use the SERVQUAL

Dear Patrice,

Thank you for your e-mail request. Yes, you have permission to use the SERVQUAL Instrument in your research. When you write up your research, please be sure you give proper attribution to the SERVQUAL source.

Best wishes to you as you complete your research and dissertation.

Len Berry

Dr. Leonard L. Berry
President Professor for Teaching Excellence
Distinguished Professor of Marketing
M.B. Zale Chair in Retailing and Marketing Leadership
Mays Business School
Professor of Humanities in Medicine
College of Medicine Health Science Center
Texas A&M University
4112 TAMU
College Station, TX 77843-4112
U.S.A.
TEL: 979-845-0804
FAX: 979-458-4183
E-mail: BERRYLE@TAMU.EDU

APPENDIX D

One Stop Survey General Comment Section Results

22. Have you encountered any problems with the OneStop Student Services Office during your enrollment at UNC Asheville? Was the issue resolved? Please explain.

13613323 no
13613357 No.
13613388 I
13613416 no
13613500 I have not experienced an issue with the OneStop Student Services office during any enrollment at UNC Asheville.
13613536 No
13613387 No, I haven’t encountered any problems.
13613388 No
13613820 No I have not encountered any problems.
13614073 no problems
13614275 No problems
13614339 No
13614354 No problems
13614404 No.
13614481 I had no major problems with OneStop.
13614527 no.
13614559 No.
13614594 I have had trouble with both the full-time faculty as well as the employed students giving me erroneous information just to get me to leave because they were busy.
13614597 No
13614602 My bill for both semesters was inaccurate the first time. After sending multiple emails to multiple people, the issue was finally resolved. It took longer than I desired to resolve.
13614657 no
13614722 No.
13614845 no
13615040 n/a
13615145 n/a
13615451 No
13615463 I was not sure which nursing prerequisite equivalent courses to take, I believe there was conflicting information in the UNCA and UNC Charlotte catalog.
13615485 No.
13615531 no
13615659 No.
13615643 no problems
13615884 Yes, I needed to put money on my OneCard and they did a wonderful job.
13616037 I have not encountered any problems with the OneStop Office.
13616402 No
13616444 No.
13616451 I haven’t encountered any problems.
APPENDIX E

IRB Waiver from UNIVERSITY OF NORTH CAROLINA Asheville IRB Committee

Patrice,

I am returning your proposal. The IRB has determined that this project is exempt. Should you require additional information, please feel free to contact me.

Theo's
Louis Toms
APPENDIX F

North Carolina State IRB Approval

From:  Debra Paxton, IRB Administrator
       North Carolina State University
       Institutional Review Board

Date:    May 10, 2010

Project Title:  Impact of Perceived Student Quality

IRB#:   1432-10

Dear Ms. Mitchell and Dr. Bartlett:

The research proposal named above has received administrative review and has been approved as exempt from the policy as outlined in the Code of Federal Regulations (Exemptions: 46.101. b. 2 and b.4). Provided that the only participation of the subjects is as described in the proposal narrative, this project is exempt from further review.

NOTE:

1. This committee complies with requirements found in Title 45 part 46 of The Code of Federal Regulations. For NCSU projects, the Assurance Number is: FWA00003420.

2. Any changes to the research must be submitted and approved by the IRB prior to implementation.

3. If any unanticipated problems occur, they must be reported to the IRB office within 5 business days.

Thank you.

Sincerely,

Debra Paxton
NCSU IRB
## APPENDIX G

Data Descriptions from Survey

### Spring 2010 One-Stop Survey

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>values/description</th>
</tr>
</thead>
<tbody>
<tr>
<td>resp_id</td>
<td>unique survey identifier</td>
</tr>
<tr>
<td>timestamp</td>
<td>date/time (pacific) that survey was submitted online</td>
</tr>
<tr>
<td>State_residency</td>
<td>R = Instate, O=Out of State</td>
</tr>
<tr>
<td>sex</td>
<td>F=Female, M=Male</td>
</tr>
<tr>
<td>race</td>
<td>W= White, B=Black, A=Asian, S=Hispanic, M=Multiracial, P=Pacific Islander, I=American, N=Non-resident, U=Unknown</td>
</tr>
<tr>
<td>age</td>
<td>Age during spring semester of freshman year</td>
</tr>
<tr>
<td>dorm_student</td>
<td>1=Dorm, 0=Commuter</td>
</tr>
<tr>
<td>hsgpa_w</td>
<td>Weighted HS GPA</td>
</tr>
<tr>
<td>hsgpa</td>
<td>Unweighted HS GPA</td>
</tr>
<tr>
<td>act</td>
<td>ACT Composite Score</td>
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<tr>
<td>sattotal</td>
<td>Total SAT (Critical Reading+Math)</td>
</tr>
<tr>
<td>cumpga</td>
<td>Cummulative GPA at end of Freshman Spring Semester</td>
</tr>
<tr>
<td>efc_amount</td>
<td>Expected Family Contribution from FAFSA</td>
</tr>
<tr>
<td>Mother_high_degree</td>
<td>Highest Degree of Mother (from FAFSA and New Student Survey)</td>
</tr>
<tr>
<td>Father_high_degree</td>
<td>Highest Degree of Father (from FAFSA and New Student Survey)</td>
</tr>
<tr>
<td>Parent_highest_degree</td>
<td>Highest Degree of Either Parent (from FAFSA and New Student Survey)</td>
</tr>
<tr>
<td>modify_svy</td>
<td>Before = Survey completed before N/A added to qc03 and qc04 options, After = Survey completed after N/A added to qc03 and qc04 options, Second = Followup survey sent to non-respondents at beginning of Fall 2010 semester</td>
</tr>
</tbody>
</table>