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Enrollment Management Administrators' Perceptions of Community College Student Retention Practices

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ABSTRACT

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The purpose of this study was three-fold: (a) to determine the retention practices most frequently used by community colleges to retain full-time, associate degree-seeking students from their first-to-second year of enrollment as perceived by enrollment management administrators; (b) to determine the level of importance placed on these practices as perceived by enrollment management administrators; and, (c) to determine if differences exist between those practices most frequently used and those considered to be the most important when the enrollment size and campus geographic setting of the institution are considered.

An online survey, developed by the researcher, was distributed to a sample of 269 community colleges that hold membership in the American Association of Community Colleges. Responses were received from 135 (51%) of those surveyed.

Descriptive statistics and ANOVA tests were used to address the six primary research questions, with significance noted at $p<.05$. Through ANOVA testing and the resulting analysis of data, six primary findings were established pertaining to the use of retention practices by community colleges and the rating of their importance by enrollment management administrators. The findings include: (a) there are certain retention practices used more frequently than others by community colleges to retain full-time, associate degree-seeking students from their first-to-second year of enrollment, (b) there are certain retention practices deemed to be 'very important' in retaining these students as perceived by enrollment management administrators, (c) there are no significant differences in the retention practices most frequently used when enrollment size is considered, (d) there are no significant differences in the retention practices most frequently used when the campus geographic setting is considered, (e) there are no significant differences in the retention practices considered to be 'very important' or 'somewhat important' when enrollment size is considered, and (f) there is a statistically significant difference in the retention practices considered to be 'very important' or 'somewhat important' when campus geographic setting is considered.

DEDICATION

This dissertation is dedicated to my loving and beautiful wife, Sherry, and to each of my children and their families: Gary, Juanita, Laney, and Griffin; Greg, Denise, Andrew, and Bryce; Jennifer, Eric, and Hayden; Jamie and Joshua. Their patience and support in helping me attain this doctoral degree is greatly appreciated. I thank each of them for their love and encouragement during this long and sometimes difficult process. I pray that my dedication to achieving this goal serves as a good example for them in their life's pursuits. I also dedicate this work to my mother, Shirlene, and to the memory of my father, Edward, for their love and support. Throughout my life, I have been able to rely on their encouragement in the difficult times.

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CHAPTER ONE: INTRODUCTION

Over the last forty years, colleges and universities have undergone major changes in demographics, including evolving from a traditional to a more non-traditional and diverse student body on most campuses (Harvey-Smith, 2002). With this evolution came rapid growth of community colleges, both in terms of the number of institutions and student enrollment (Witt, Wattenbarger, Gollattscheck, & Suppiger, 1994). Among institutions of higher education, concern from administrators and governing boards regarding student retention has continued to grow (Brawer, 1996; Foote, 1999; Rajasekhara & Hirsch, 2000; Summers, 2003; Wild & Ebbers, 2002). During this same period of change in higher education, a number of research studies were conducted related to student retention (Bean, 1982; Pascarella, 1980; Rootman, 1972; Tinto, 1975). However, the majority of this early research was focused on the traditional student enrolled in the four-year college or university (Brooks-Leonard, 1991; Noel, Levitz, & Saluri, 1985; Pascarella, Smart, & Ethington, 1986; Tinto, 1987). In recent years, more studies have addressed issues pertaining to two-year colleges and their students (Bailey & Alfonso, 2005; Bailey, Jenkins & Leinbach, 2005; Habley & McClanahan, 2004; Jenkins, 2003, 2006). However, a clear gap appears to exist in the research concentrating on student retention at community colleges.

According to the American Association of Community Colleges (AACC, 2006), nearly 1200 postsecondary institutions operate within the United States as two-year institutions of higher education and are referred to as community colleges, technical colleges, two-year branches or component colleges of four-year institutions, tribal colleges, and independent junior colleges. The AACC (2006) defines a community college as an institution that is accredited or undergoing accreditation by one of the six regional accrediting bodies and offers the associate degree as the highest degree. A community college may also be a campus that offers the associate degree as the highest award but is part of a regionally accredited, baccalaureate degree-granting institution. Community colleges generally have an access mission that involves low tuition, convenient locations, flexible scheduling, an open-door admissions policy, and programs and services that support students (Bailey, Alfonso, Calcagno, Jenkins, Kienzl, & Leinbach, 2004; Cohen & Brawer, 1996; Crawford, 1999).

Forty-two percent of all undergraduate students were enrolled at public two-year institutions in the academic year 1999-2000 (Horn, Peter, & Rooney 2002). The AACC (2006) website (http://www.aacc.nche.edu) reported that in the 2004-2005 academic year, community college students accounted for 45 percent of all undergraduate enrollment in the United States and 45 percent of first-time freshman enrollment in all of higher education.

Community colleges have grown significantly both in the number of institutions and in student enrollment since the beginning of the community college movement (Borglum & Kubala, 2000; Witt et al. 1994). The tremendous expansion in these

institutions has been prompted by a number of factors including the push for universal education, the GI Bill, the baby boom, the civil rights movement and the increasing demand for worker training (Coley, 2000; Theilin, 2004). These factors are consistent with the open-admissions philosophy and geographic accessibility of community colleges and made them a logical choice for many citizens impacted by these events.

Community colleges have been viewed as crucial points of access to higher education for at-risk students including low-income and minority students (Bailey, Calcagno, Jenkins, Kienzel, & Leinbach, 2005b). Harvey-Smith (2002) stated that many within the United States see community colleges as the only hope for students who are considered to be *at-risk* or who lack academic skills.

When considering student-type, community college students tend to be older, female, more racially and ethnically diverse as well as low income (Coley, 2000; Horn & Nevill, 2006). Based on his study, Coley determined that these students are far less likely than four-year college students to be dependent upon their parents for financial support. This author also stated that those attending community colleges are more likely to be low-income and first-generation higher education students; that is, neither parent has earned a bachelor's degree.

According to Coley (2000), students entering community colleges possess modest educational aspirations and, overall, are considered to be more educationally *at-risk* in terms of earning a college degree. Coley defined *at-risk* to mean that a student exhibits one or more of the characteristics of delayed entry, enrolled part-time, works full-time, considered to be financially independent, is a single parent, has dependents, or has no

high school diploma. In addition, community colleges also enroll the largest number of low-income and first-generation students which are factors that affect the retention and graduation rates of these students (Bailey et al., 2004; Burd, 2004).

Enrollment in undergraduate programs in higher education consists of both traditional and nontraditional learners. Traditional students are those recent high school graduates who enter directly into college; typically they range in age from 18 to 24 years old. Nontraditional learners are considered to be those enrolling for the first time in college who are 25 years of age and older (Aslanian, 2001). Nontraditional students make up an ever increasing percentage of the undergraduate enrollment in higher education. In 1970 approximately 2.4 million nontraditional students were enrolled in college; in 1980, 5.6 million; and in 1990 that number grew to over 6.5 million (Aslanian, 2001). With the growing number of adult students in undergraduate programs, particularly those enrolled in community colleges, concerns related to retention have only increased.

Adelman (2005) in a recent report, used data derived from 1992 high school graduates to develop "portraits" of six distinct populations who enroll in community colleges. This data helped him describe students likely to persist in earning college credits and completing degrees and/or certificates. The first two groups included students who were enrolled in traditional academic programs leading to transfer and a bachelor's degree and also included those registered in occupational credential paths leading to certificates or associate degrees awarded by the community college. The remaining four

populations identified by Adelman possessed one or more of the characteristics described by Coley (2000) as being *at-risk*.

Because of the increasing number of *at risk* students, and a number of other factors, concern from administrators and governing boards of institutions of higher education regarding student retention and attrition rates continues to increase (Cofer & Somers, 2001; Foote, 1999; Wyman, 1997). Bailey et al. (2005b) stated, " In recent years, policy makers, educators, accreditors, and scholars have increasingly turned their attention to student persistence and completion..." (p. 1).

Retention statistics among all institutions of higher education continue to be of concern. Nearly 50 percent of all freshmen enrolling in colleges and universities drop out before completing a degree (Price, 1993). Even though this rate differs between community colleges and four-year colleges and universities, it is considered to be too high across the entire spectrum of higher education (Bailey et al., 2005b). Two-year public community colleges have experienced the highest attrition rates. The American College Testing Service (ACT, 2006) measured the national dropout rate in 1994 for the freshman-to-sophomore year in two-year public colleges at 47.5 percent. In 2004, the drop out rate for first-time, full-time freshmen in community colleges improved slightly to 45.2 percent according to the United States Department of Education, National Center for Educational Statistics (NCES, 2003). Typically, at community colleges, only about one-third of all first-time, full-time students earn an associate degree or certificate (NCES, 2004; Tinto, Russo, & Kadel, 1994). Bailey, Calcagno, Jenkins, Kienzel, and Leinbach (2005a) reported that "42% of students who started college in a two-year public

institution left college within six years after initial enrollment with a degree or certificate" (p. 1).

A website news release by the University of Texas at Austin announced the results of a Community College Survey of Student Engagement [CCSSE] conducted by Dr. Kay McClenney (2004), Director of the Project. The news release stated:

> Results of a University of Texas at Austin survey of 92,000 community college students show that only about a quarter of students who intended to complete an associate degree or obtain a certificate at a community college did so in six years and that may be due to the fact that the student body is remarkably diverse, 'non-traditional', and multitasking.

These statistics were based on the results of the CCSSE survey of students in 152 community colleges in 30 states. The low degree completion rates among these institutions may be directly related to the low year-to-year retention rates of these same students.

In discussing student retention, one of the problems associated with the topic is how the term is defined and measured by each institution (Wild & Ebbers, 2002). Levitz and Noel (2000) in a whitepaper, *Tired of Moving Mountains? Getting Retention Results Really Easy* stated:

> [R]etention is an institutional performance indicator. It's a measure of how much student growth and learning takes place. It's a measure of how valued and respected students feel on your campus. It's a measure of how

effectively your campus delivers what students expect, need and want. In other words, retention is a measure of your overall product. (p.1)

More simply defined, retention is used to describe the number of students who persist with their education at the same institution or as *on-time* graduation within four to five years (Walleri, 1981). This definition, however, does not take into account the original goals and intentions of the student. This is particularly important at community colleges which serve many non-traditional, working adults (described as 25 years of age and older) who may not be seeking a degree. This definition for retention might also be confusing in that it uses the term *persist* and some may not consider retention and persistence to be synonymous.

Engleberg (1981) defined attrition as occurring when students stop short of their educational goals. Seidman (1996) stated that there is no standard definition of retention and until one is developed and applied nationally, there will continue to be conflicting and inaccurate results in studies of retention/attrition rates. Dropout rates are not considered meaningful when they include students who do not intend to graduate or complete a degree/certificate program from the first institution with which they are enrolled (Walleri, 1981). Bean and Metzner (1985) recommended that future research on attrition and retention be restricted to students specifically intending to obtain a certificate or degree.

As used in this study, the terms retention, attrition and persistence taken from Boyles (2000) and are defined as follows:

Retention - the continued attendance of an identified group of students at a single institution.

Attrition - a decline in the number of students attending a single institution.

Persistence - an individual student's continued attendance at a single institution.

There is a significant difference between the definition of persistence and the other two terms. Persistence applies to one individual, while attrition and retention are applicable to an entire group of students at a particular institution. Retention and attrition may be considered to be opposite concepts (one positive, the other negative). However, each of these terms refers to student attendance patterns that are institution wide (Boyles, 2000).

There is continued interest in understanding more accurately, the reasons associated with student decisions to persist or drop out of college at the undergraduate level (Harvey-Smith, 2002). The need to know why students choose to stay or leave has never been greater (Foote, 1999; Harvey-Smith, 2002). A number of student characteristics including academic preparedness, household income, parents' education level, gender, race/ethnicity, aspirations, motivation, personality and values have been determined to affect individual student success in college (Bailey et al., 2005b; Muraskin & Wilner, 2004; Zhai & Monzon, 2001). These authors also suggest that institutional characteristics such as enrollment size, minority composition, percentage of part-time faculty, instructional and student services expenditures, tuition levels, and geographic location all have been shown to affect student outcomes such as retention and graduation rates.

As previously stated, a number of student and institutional characteristics have been identified as having an effect on retention but there appears to be no clear consensus on a single set of factors that specifically affect community college students (Harvey-Smith, 2002; Muraskin & Wilner, 2004). Bean (1982) indicated that this may be attributed to differences among institutions with each having very distinctive characteristics including institutional mission, goals, enrollment size, demographic make-up of the student body, types of programs offered and campus geographic-setting. Because the majority of the research on retention has concentrated primarily on four-year institutions, a gap in the research exists for community colleges.

A report by Ellison (1987), conducted at Cuyahoga Community College in Ohio, attempted to provide an overview of the problems and some potential solutions associated with high dropout rates at community colleges. This study highlighted cost as one of the major causes of attrition in community colleges and further recommended that there be greater consistency in defining and measuring student retention and withdrawal at community colleges. Ellison's study also recommended that community colleges design and conduct useful retention evaluations, coordinate their efforts to facilitate high school-to-college transition, improve retention and achievement, and promote two-year to four-year college transfer.

Other studies investigating student retention and attrition in community colleges have gathered data on student demographics in order to identify the type of student who is likely to remain in school and those who are at risk of dropping out. Some studies in this area have attempted to discover and point out characteristics of persisters and non-

persisters (Brawer, 1996). Moore (1995) found that being a full-time student is the most prevalent characteristic of those who persist and earn a degree. The most common characteristic among studies of non-persisters is that they were most often part-time students (Feldman, 1993; Price, 1993). Evidence, however, shows that community colleges enrolling very similar types of students may have vastly different retention, persistence, and graduation rates (Bailey et al., 2005a; Cofer & Somers, 2001).

Student retention is a very important issue for all public colleges and universities, not just for educational reasons, but economic and political reasons as well (Umoh, Eddy, & Spaulding, 1994). In a fiscal environment of decreasing state funding, student retention has become a matter of economic survival (Bailey, 2003; Summers, 2003). Institutional administrators, faculty, legislators, state/local policy makers and the general taxpayer, all consider student retention to be significant in measuring institutional effectiveness in an environment of increasing accountability and budgetary concerns (Wild & Ebbers, 2002). The income from the retention of one full-time student at a four-year college or university can be measured in tens of thousands of dollars while the full-time community college student who leaves after one semester instead of four represents a significant financial loss in terms of tuition and state aid not received (Bailey et al., 2005 b).

Community colleges, like all institutions of higher education, have come to understand that retaining students already enrolled has greater potential than efforts to recruit more and more students. This is particularly true in states with declining populations and fewer high school graduates (Bean, 1990; Hossler, Bean, & Associates,

1990). Delworth, Hanson, and Associates (1991) suggested that it is more effective to retain a student once he or she enrolls than it is to replace that student in an environment of increasing competition for a decreasing number of potential applicants. A Noel-Levitz (2004) *National Enrollment Management Study* found that all sectors of higher education, including two-year colleges, have changed their approach to enrollment management to place additional importance on increasing retention of currently enrolled students.

In a time of increased need to promote higher levels of student success, continuing emphasis on state accountability measures, declining state resources and massive budget cuts to higher education in most states (Bailey, 2003; McClenney & Waiwaiole, 2005; Smith, 2000), retention of students is of major concern to state lawmakers, governing boards and institutional administrators, particularly those administrators charged with enrollment management. Retention and graduation rates are often used by state and local governing bodies, as well as state legislatures, to measure institutional effectiveness, efficiency, and success. In many states, allocation of state resources is based on such factors (Voorhees & Zhou, 2000). These authors reported that in 1997 it was estimated that 19 states either had or would have performance indicator systems utilizing student success measures such as persistence and degree attainment that were tied to funding mechanisms. According to Bailey et al., (2004):

> More than half of the states now engage in performance budgeting, under which state officials, in drafting annual budgets, take into account public colleges' performance, and 18 states have performance funding schemes in which public colleges gain or lose set amounts of money based on how

> well they meet certain standards. Further, under the Higher Education Amendments of 1998, to be eligible to receive federal financial aid, colleges are already required to report graduation rates for cohorts of first-time, full-time students in 150 percent of the traditional graduation period (three years for community colleges and six years for baccalaureate-granting institutions). (p.3)

With the increasing accountability measures such as degree completion and other success factors being applied, the responsibilities associated with retention of students continue to increase for enrollment management administrators at community colleges. The persons charged with developing, implementing, and coordinating enrollment management plans, which include strategies to improve student retention rates, must understand local retention issues and the theoretical models that explain student attrition (Grossett, 1989; Hossler et al.,1990). It is also essential that the enrollment manager be familiar with current programs, practices, and strategies and their potential for improving student retention (Levitz & Noel, 2000). However, few studies have been found relating to the perceptions of enrollment management administrators in community colleges regarding the effectiveness of these programs, practices, and strategies. There is a need for additional research to determine those student retention practices perceived to be most effective by enrollment management administrators based upon the institutional characteristics of enrollment size and campus geographic-setting within the community college sector.

Statement of the Problem

The literature on student retention in higher education is rather extensive for baccalaureate institutions. The majority of the available research has been directed toward traditional students ages 18 to 22 years of age, attending residential, four-year institutions (Brooks-Leonard, 1991; Noel et al., 1985; Pascarella et al.,1986; Romano, 1995; Tinto, 1993). The findings of these studies are almost always only applicable to a single, specific institution, thus not generalizable to the entire community college milieu. Bailey et al., (2004) reported that "There is a tremendous amount of research on persistence and completion in higher education but few concrete insights about the specific effects of institutional policies on community college retention and completion" (p. 4). Hayes (2005) stated that a gap exists between the community college retention data that is available and that which is needed for both formative and summative evaluation of retention efforts at the community college level. She goes on to say that despite attempts to collect data for this segment of higher education, "[T]he need for comprehensive retention data that can be placed within the context of comparable peers is unmet" (p. 6). More specifically, Hayes noted that national, state, and regional resources do not provide useful data to track year-to-year retention of entering cohorts of students.

The reasons for the paucity of research for community colleges in this area may be attributed, at least in part, to the heterogeneity of the student body and the differences in students' purposes for attending these schools (Hossler et al., 1990). Comparatively little is known about retention at community colleges even though retention rates at these institutions are much lower than at most four-year, residential colleges.

Morest and Bailey (2005) suggested that most community colleges need more information about why, and under what circumstances, their students leave without earning degrees or transferring to four-year institutions. More importantly, the authors also asserted that these institutions need to know what programs and practices are effective in improving student retention, completion, and transfer. Wild and Ebbers (2002) stated, "The nature of student retention in community colleges is much more diverse and complex than the current literature base would indicate...furthermore, research focused on pertinent student retention issues in community colleges will benefit all segments of education" (p. 514).

Regarding student persistence, retention and graduation rates of community college students, Bailey et al. (2004) wrote, "[T]wo fundamental problems with the research in this area compromise the usefulness of research findings; one is theoretical or conceptual and the other empirical" (pp. 4-5). The authors go on to explain that the conceptual problems result from efforts to apply models of four-year institutions to community colleges. As for the empirical problems, Bailey et al. (2004) contend that they result from several sources. First, research studies in this area vary greatly in the definitions for retention, persistence, and graduation (Burd, 2004; Cofer & Somers, 2000). Also, they purported that the current literature uses a wide-range of data sets including single institutions, state or system-wide data, and national samples which, depending upon the type used, has various implications for the interpretation of results (Bailey et.al, 2004).

No studies have been found relating to what enrollment managers in community colleges perceive to be the best practices in retaining students. Therefore, a more comprehensive study regarding the use of specific retention practices to retain full-time, associate degree-seeking students from their first-to-second year of enrollment by community colleges and the importance of these practices in improving student retention, as perceived by enrollment managers, is warranted. It is important to know if there are major differences in the practices employed by community colleges based upon the enrollment size of the institution and/or the campus setting.

Conceptual Framework

Chapter Two includes a general discussion of various theories and models of student retention, attrition, and persistence. In this discussion, it is posited that a number of models have been developed that can explain attrition and provide appropriate intervention strategies for students in the four-year, residential college setting. However, it is also noted that a recognized general theoretical model of student retention has not been developed for community colleges.

Several theories have evolved from the research in the area of student retention, attrition, and persistence (Bean, 1983; Grossett, 1989; Spady, 1970; Tinto, 1975, 1987, 1993). According to Bailey et al. (2005a), "The most widely used conceptual frameworks of persistence and completion developed by education researchers are based on Tinto's *Student Integration Model* (1993) and Bean's *Student Attrition Model* (1985)" (p. 4). These are the only theories that have incorporated a comprehensive framework on student decisions to continue enrollment or to leave college (Cabrera, Nora & Castendneda, 1993;

Tucker, 1999). Bean and Metzner's (1985) conceptual model of nontraditional undergraduate student attrition has also been considered to be an applicable model when viewing student retention and the community college. Several studies (Grossett, 1989, 1991; Simmons, 1995; Stahl & Pavel, 1992; Tharp, 1998; Webb, 1989) have utilized this model in conducting retention research pertaining to community colleges. Only one, Stahl and Pavel (1992), examined the appropriateness of the full model in a community college setting. Their findings determined that this model did not explain the retention process for their sample from a large, urban community college.

As can be seen in the review of the literature, Tinto's model has been utilized in a number of research studies that have validated the application of this model across different types of institutions and involving various student populations (Cabrera et al., 1993; Grosset, 1989,1991; Halpin, 1990; Mutter, 1992; Nora, 1987; Tucker, 1999; Umoh et al., 1994). Tinto (1975, 1987, 1993), and Bean (1983) purport that a student's decision to remain enrolled at the same institution or to drop out is the result of the student's interaction with the institution's systems both academically and socially. To enhance this interaction, Tinto (1987) developed a set of retention principles for institutions of higher education. These principles state that colleges should:

1. Ensure that new students enter with or have the opportunity to acquire the skills needed for academic success;
2. Reach out to make personal contact with students beyond the formal domains of academic life;
3. Promote systematic retention actions;

4. Start as early as possible to retain students;

5. Be committed to their students; and,

6. Ensure that education, not retention, is the goal of institutional retention programs (pp. 138-140).

The Tinto Student Integration Model (1975, 1987, 1993) has provided the theoretical and conceptual framework for various studies pertaining to retention in community colleges (Borglum & Kubala, 2000; Brooks-Leonard, 1991; Engleberg, 1981; Mohammadi, 1996; Moore, 1995; Phillips, 1982; Voorhees & Zhou, 2000; Wyman, 1997). According to Bailey et al. (2005b), the major implication from the research evolving from use of the Tinto model is that administrators and faculty should try to foster the academic and social engagement of their students in and with colleges. Similar findings in other research (Baird, 1990; Bers & Smith, 1991; Borglum & Kubala, 2000; Glover & Murrell, 1998; Halpin, 1990; Mutter, 1992; Noel & Levitz, 2000; Tucker, 1999) have led to the development of a number of institutional interventions (identified as *practice*s in this study) which are believed to have a positive effect on improving student retention.

The current study is based in the Tinto Student Integration Model and how it is applied in community colleges for improving student retention. This study focuses on the level of use and the degree of effectiveness of the practices that have evolved from the application of the principles of this model by community colleges in efforts to improve the retention rates of first-time, full-time, associate degree-seeking students as perceived by enrollment management administrators. Concurrently, this study will view the use and

level of importance placed on each these practices, and any differences that exist, based upon the enrollment size and campus geographic-setting of the institution.

Purpose of the Study

As shown in the introduction, community colleges experience the lowest retention rates among institutions of higher education and this issue is of major concern to administrators (Price, 1993). The existing literature regarding student retention is focused primarily on traditional-age students in the residential settings of four-year colleges and universities and not on community college students. These studies have provided benchmarks by which four-year institutions are able to evaluate their effectiveness in student retention (Wild & Ebbers, 2002). However, one cannot generalize the definitions and measures developed in the studies of four-year colleges with their residential students to the students attending community colleges (Mohammadi, 1996). Considering the lack of generalizability of these studies to community colleges and the lack of research providing insight as to the best practices used by community colleges in addressing the low retention rates of first-time, full-time, associate degree-seeking students, as perceived by those charged with enrollment management, additional study is essential if retention rates for this segment of higher education are to be improved. Research is needed to provide quantifiable ways for community colleges to evaluate retention policies and practices.

This study had a three-fold purpose: to determine the retention practices most frequently used by community colleges to retain full-time, associate degree-seeking students from their first-to-second year of enrollment; to determine the level of

importance placed on these practices as perceived by enrollment management administrators; and, to determine if differences exist between those practices most frequently used and those considered to be most important when the enrollment size and campus geographic setting of the institution are considered.

Research Questions

Through a review of the literature and recognition of the limited number of studies pertaining to best practices in retaining first-time, full-time, associate degree-seeking community college students, the following research questions were developed for this study:

1. What are the most frequently used practices for retaining full-time, associate degree-seeking students from their first-to-second year of enrollment as perceived by community college enrollment management administrators?
2. What is the level of importance (ranging from very important to not at all important) placed on each of these practices as perceived by community college enrollment management administrators?
3. Do differences in utilized retention practices exist with regard to institutional enrollment size–small, medium, large?
4. Do differences in utilized retention practices exist with regard to institutional campus setting–rural, suburban, urban?

5. Do differences in the perception of importance placed of certain retention practices exist with regard to institutional enrollment size–small, medium, large?

6. Do differences in the perception of importance of certain retention practices exist with regard to institutional campus setting–rural, suburban, urban?

Significance of the Study

According to Wild and Ebbers (2002), "It is important that new research initiatives be undertaken that are targeted directly at community colleges. These initiatives should include the development of theories and models related specifically to community college student retention" (p. 504). Pascarella (1999) contended that to have such a small proportion of retention studies focused on community college students is unfortunate. He also stated, "We cannot afford to operate in ignorance of the educational influence of a set of nearly 1300 postsecondary institutions that educate almost 40 percent of our students" (p. 13).

The results of this study of retention practices and their level of importance in improving student retention as perceived by enrollment management administrators at public community colleges could challenge the applicability of existing retention theories and models to community colleges. It is feasible that this study might contribute to the development of new models to explain student retention in the community college sector by incorporating variables related to enrollment size and campus geographic-setting. Although there are a number of retention models centered on four-year, residential

college students, no retention models currently exist that focus on the community college student and more particularly to community colleges that consider the enrollment size and/or geographic setting of these institutions.

Bailey et al. (2005a) state that more quantitative data on institutional activities and practices are needed. This study provides a contribution toward filling the existing void in the empirical research regarding student retention in community colleges and should be of value to administrators responsible for planning, organizing, staffing, developing, coordinating, and budgeting for enrollment management at the institutional level. State and local policymakers, commissions, councils, or boards might potentially utilize the findings and implications from this study in establishing appropriate and valid indicators of institutional effectiveness related to student retention within the community colleges they oversee.

This study has the potential for providing data that can be used in developing and implementing performance indicator systems for measuring institutional effectiveness, especially as these measures relate to funding mechanisms. These measures might include the evaluation of enrollment management plans and retention practices employed by these institutions. Staff development programs might use the data obtained from this study to revise training for enrollment management personnel to enhance their understanding of issues related to student attrition and retention in community colleges. Also, the data may be used to determine the most effective strategies for improving retention rates for first-time, full-time, associate degree-seeking, community college students based upon the enrollment size and campus setting of the institution.

This study may clarify perceptions held by either administrators or policy makers regarding the effectiveness of current strategies in addressing low student retention rates at similar institutions. Increasing awareness of current strategies used by community college administrators to improve student retention can significantly reduce student recruitment costs, redirect existing resources for greater effectiveness, and increase revenues generated through tuition and fees, as well as state appropriations. Information gained through this study might provide assistance to community college administrators in developing enrollment management plans that include effective retention strategies to help meet specific institutional enrollment goals.

"Even though community colleges are similar types of institutions on many levels, there is wide variation among colleges in various student outcome measures such as graduation, transfer, and ***retention*** [emphasis added]" (Bailey et al., 2005a, p.1). Due to the wide variation in retention rates among community colleges, an investigation into the most effective retention practices used by community colleges serves an important function in adding to the literature in this area.

The primary significance of this study was to expand the existing body of knowledge concerning the level of use of retention practices by publicly controlled community colleges and the level of importance placed on these practices by enrollment management administrators in retaining first time, associate-degree seeking students from their first-to-second year of enrollment. Within this study, ancillary discussion is provided that may assist community college administrators in identifying those retention practices that would be most effective for their institution based upon the enrollment size

and geographic setting of their specific institutions. It has also been suggested that evaluation of individual programs and particular retention strategies, such as those listed in this study, should play an important role in future research (Bailey et al., 2005a, Habley & McClanahan, 2004).

Limitations

The following were identified as the limitations for this study:

1. A non-experimental research study does not permit for random assignment to groups for manipulation of independent variables (Johnson & Christiansen, 2000).
2. Self-reporting questionnaires can be a limited by the responses of participants and are subject to contamination (Johnson & Christiansen, 2000). This study uses a self-designed questionnaire and, although tested for readability and content validity through a pilot test, is a new instrument.
3. Self-reported data from community college administrators was utilized and the data were limited by the accuracy of the responses provided by the participants (Kerlinger & Lee, 2000).
4. Data related to the institution's frequency of use of specific student retention strategies and perceptions as to the importance these strategies have on improving student retention, was collected through the use of single instrument.

5. The ability to determine the administrator primarily responsible for enrollment management at the institutional level was a limitation. Although a community college generally has a position designated for purposes of leadership in the development of enrollment management plans that include specific retention strategies, this responsibility may be shared among several administrative and/or quasi-administrative positions, thus making the identification of the administrator primarily responsible difficult to identify.
6. Factors uncontrollable by the researcher, such as the willingness of the identified administrator to participate and the level of interest in the research being conducted, may have resulted in a smaller response rate.
7. Administrators at institutions with lower retention rates might have been less likely to respond to the survey than those at institutions with higher retention rates.
8. There is no agreed upon national standard for determining institutional categories of enrollment size or campus setting for community colleges. The enrollment size categories (small, medium, large) and campus setting descriptors (rural, suburban, urban) used in this study were based on those defined in the *Size and Setting* information located on the Carnegie Foundation for the Advancement of Teaching website (http://www.carnegiefoundation.org/classification). Also, the Community College Survey of Student Engagement (2004) produced in a report titled

"Engaging Community Colleges: National Benchmarks of Quality" was consulted in providing background information related to these two descriptors.

9. This study provided a list of 25 practices currently used to address retention rates of first-time, full-time, associate degree-seeking students. However, there are other strategies which may have affected the retention rates of these students not included in this list. As examples, pedagogic strategies employed in the classroom, faculty culture and other institutional characteristics may also have an influence on retention rates.
10. It is recognized, as a limitation of this study, that state policies which impact tuition levels, financial aid programs, as well as incentive programs that encourage institutional performance, also are influential in affecting student outcomes and institutional practices. It has been suggested that evaluation of individual programs and particular strategies, such as those listed in this study, can play an important role in future research (Bailey et al., 2005a, Habley & McClanahan, 2004).

Delimitations of the Study

Certain delimitations were placed on this study by the researcher. The study was designed to focus only on the perceptions and perspective of the enrollment management administrator in community colleges. This study did not address retention from the student or faculty perspective but represents only the perceptions of enrollment

management administrators. Many research studies have been conducted investigating retention from the student and faculty perspective in higher education (Braxton, Milem, & Sullivan, 2000; Cabrera et al.,1993; Nora, Kraemer, & Itzen, 1997; Sandler, 2000; Straus, Volkwein, and Fredricks, 2001; Tinto, 1987, 1993). However, no research has been found concerning student retention in the community college as seen through the lens of the enrollment management professional. This study approached this subject from that single perspective.

Data were obtained from only those community colleges that are publicly controlled, therefore, the results may not be generalizable to community colleges that are tribal, private or proprietary in their control. These institutions were excluded based on such factors as their differences in governance, specialized missions, and, in some cases, the limitations placed on admission to the institution.

The research in this study was focused on strategies employed by community college to retain full-time, associate degree-seeking students and may not address issues pertaining to efforts to retain all community college students. Although these strategies might also prove effective in increasing the retention rate of part-time and non-degree community college students, these populations were not specifically addressed in this study.

It is understood that not all students enrolled in academic, credit-bearing courses in community colleges are seeking degrees. Students enroll in these institutions for a variety of reasons. These reasons may range from pursuing a course for personal interest or professional growth, improving job-related skills, earning a one-year college

certificate, transferring to a four-year institution in pursuit of a bachelor's degree, as well as earning an associate degree. This study did not address retention practices that might be applicable to assisting students in fulfilling each of these self-defined educational goals but focused only on those students who indicate their goal is to acquire the associate degree.

Operational Definitions

The following terms were utilized in this study and are operationally defined as follows:

Campus Setting: The geographic setting of an institution of higher education defined as rural, suburban, urban as reported by the Carnegie Foundation for the Advancement of Teaching and validated by responses to the survey by participants.

Enrollment Management: An organizational concept and a systematic set of activities designed to enable educational institutions to exert more influence over their student enrollments through strategic planning supported by institutional research including management activities such as student college choice, transition to college, student attrition, and retention.

Enrollment Management Administrator: The position designated as having primary responsibility for enrollment management planning. Specific institutional positions were determined through information contained in the American Association of Community College (AACC) membership directory.

Enrollment Size: The full-time equivalent (FTE) enrollment of a institution of higher education reported by each respondent based upon fall 2006 Integrated Postsecondary Education Data Systems (IPEDS) enrollment figures defined as:

- large = an FTE enrollment of 5000 students or greater;
- medium = 2000 to 4,999 FTE; and
- small = less than 2,000 FTE.

Level of Importance: The ranking of the importance of a retention practice as perceived by the enrollment management administrator in retaining students from their first-to-second year of enrollment with the same institution through use of the following anchored Likert Scale:

- 4 - *very important*
- 3 - *somewhat important*
- *2 - not very important*
- 1 - (*not at all important*).

Retention Practice: Strategies employed by community colleges to retain students from their first-to-second year of enrollment with the same institution defined by a *yes* or *no* response by each participant from the survey sample to each practice from the list of retention practices contained in the survey.

Organization of the Study

The first chapter provides an introduction to the study, the problem statement, conceptual framework, purpose of the study, research questions, significance, limitations, delimitations, and operational definitions. Chapter Two includes a review of related

literature concerning the development and growth of community colleges, the evolution of enrollment management as a profession, student attrition and persistence models, student attrition and retention data, as well as current retention practices, particularly those used in the community college environment. Chapter Three contains the research methods section and reiterates the purposes of the study. This chapter also describes the procedures utilized including the research questions, research design, population, sample, instrument, data collection and analysis of the data. The findings of the study are presented in Chapter Four while Chapter Five includes a discussion and summary of the study, conclusions and recommendations for further research.

CHAPTER TWO: REVIEW OF LITERATURE

Chapter One provided a brief overview of the growing importance of retention in community colleges and introduced the concept of enrollment management practices directed toward improving the retention rates within this growing sector of higher education. Chapter Two focused on the literature directly related to this study. First, an historical review of the origination and growth of community colleges leading to the current role these institutions play in providing higher education opportunities is presented. This is followed by a description of the evolution and development of enrollment management as a profession as it relates to student retention within the community college context. With the focus narrowed to student retention, a summary of student attrition/persistence models and current practices in student retention is discussed.

History of the Development of Community Colleges

The comprehensive community college with which the public is familiar today, had its beginning in the late 1800's. There is, however, considerable disagreement among educators about the actual starting date of the two-year college movement (Witt et al.,1994). Although several private, two-year colleges existed prior to the 1890's, there is a question as to whether these institutions were related to the "junior or community college" movement with which we are familiar today.

During the mid to late 1800s, several social forces encouraged the rise of these new institutions of higher education (Theilin, 2004). Among them were the need for trained workers for expanding industries; children who were kept at home longer and

required custodial care for a longer period of time; the drive for social equality; and most importantly, the increasing demands placed on education at all levels. The year 1892 saw the birth of the first junior college in Joliet, Illinois. Some, however, cite 1901 as the opening of this ground-breaking institution (Coley, 2000). William Raney Harper, President of the University of Chicago, developed a plan to create a two-year institution that would provide freshman and sophomore level courses required in the collegiate program and allowing the "senior" institution to concentrate on the upper level courses of instruction (Cohen & Brawer, 1996). This movement spread across the midwest and southern sections of the United States creating 13 free-standing, two-year colleges, many of which were affiliated with the University of Chicago. This growth continued in the early 1900's until the start of the first World War. With the war, enrollments declined in all of higher education but particularly in the newly formed junior college (Cohen & Brawer, 1996; Witt et al., 1994).

Witt et al. (1994) referred to the 1920's as the 'soaring twenties' (p. 43) in terms of the growth and spread of two-year colleges across the country. In his book *The Junior College* (1931), as quoted by Witt et al., (1994), Eell's observed that "going to college has become the great American habit" (p. 44). Much of the growth described by Witt et al., (1994), originated in the midwest and south but also moved westward with significant growth in California. As was the case in the early years of the junior or community college movement, much of this growth was attributed to developments in mass production of American industries, especially in the heavy industries such as steel and the automotive industry. During this same period, there was a continuing decline in the

number of family farms and a mass exodus from farming communities to the larger cities where jobs were available in these growing industries.

Along with the changing demographic, the American junior college movement was gaining national acceptance. Cohen and Brawer, in their book *The American Community College* (1996), made the distinction that the major mission of these institutions was to focus on university transfer. The typical junior college, whether public or private, of the 1920s usually offered a liberal arts curriculum representing the first two years of baccalaureate degree work; however, vocational education was gaining momentum within the two-year institution also (Bender, 1990).

During the 1930's, the Great Depression changed the face of American society and its economy. Staggering unemployment resulted from the collapse on Wall Street that rapidly spread to all sections of the country. In contrast, junior colleges experienced a period of rapid expansion during the Depression. The economic crisis brought new government aid programs, a flood of new students, and hundreds of new campuses (Witt et al., 1994).

Prior to the depression, college tuition charges were both stable and relatively inexpensive (Thelin, 2004). During and after the Great Depression, a university education became a real challenge for most families. Families that had saved for college saw their savings wiped out by bank failures. As a result, university enrollments declined every year from 1929 to 1935 (Witt et al., 1994), but public junior college enrollment steadily increased during this same period. With the election of Franklin Roosevelt, many 'emergency junior colleges' were established as evening programs in high school

buildings across America and existing college campuses benefitted from construction projects conducted as part of federal work-relief programs (Thelin, 2004). During this period, junior colleges became the best value in American higher education due to the demand for vocational education and traditional college degrees provided little assurance of getting a job. Instead of enrolling in four-year liberal arts institutions, many Americans opted for programs that trained them for immediate employment in existing local jobs. As a result, these institutions truly became America's community colleges (Witt et al., 1994).

World War II again changed the face of higher education in America and particularly so in the junior colleges. The military draft negatively impacted the junior college enrollments because exemptions applied only to four-year college and university students (Cohen & Brawer, 1996; Thelin, 2004). The number of public and private two-year colleges also declined drastically. For those two-year institutions that remained open, accelerated degree programs were initiated and additional emphasis was placed on expanding programs to meet the wartime needs (Witt et al., 1994).

According to Witt et al. (1994), the GI Bill provided tremendous expansion of college opportunities for those returning from the war as well as those defense workers who were now unemployed. For those that were not academically prepared for a university and for those who preferred career training, the local junior college was the best alternative (Witt et al., 1994). Because of the tremendous growth in enrollment, the number of junior colleges continued to increase as well. In 1946, President Truman appointed a commission to study the nation's two-year institutions and the resulting

report pushed these colleges into the forefront of American higher education and assisted in changing the name of these institutions to community college (Zook, 1947). Based upon recommendations in the Truman Commission Report, community colleges were encouraged to serve citizens living in poverty and those suffering from racism (Witt et al., 1994).

After emerging from World War II, the United States was a strong economic and military power. However, the threat of the Soviet Union and its communist dictatorships brought about the coining of the phrase "the iron curtain" by Winston Churchill (Witt et al.,1994). The perceived threat of communist regimes and the outbreak of the Korean Conflict resulted in community colleges training factory workers and technicians to serve U.S. needs for national defense employees. Because many veterans of WW II had fully utilized their GI benefits, community colleges and other institutions of higher education experienced a slump in enrollments (Cohen & Brawer, 1996). According to Witt et al. (1994), it was feared that the Korean War would also bring about enrollment declines. However, the increased need for nurses training and the space race provided opportunities for growth and further development of the community college movement during the 1950's.

The 1960's was a time of growth for American society and particularly community colleges. It was also during this period that the shift from the term junior to community colleges took place. From 1950 to 1960, enrollment in public two-year colleges more than tripled (Thelin, 2004). The dual mission for community colleges of university transfer and providing career-technical terminal degrees strengthened its image and

attracted record enrollments. Because of this expanding dual mission and other societal events, such the Civil Rights Movement, President Kennedy's *New Frontier*, and other social reforms, the late 50's and early 60's was a period of historic expansion for community colleges (Witt et al., 1994). This period opened the doors to higher education and enrollments grew at a pace equal to, if not greater, than the era of the WW II GI Bill (Thelin, 2004).

Funding for the Korean War GI Bill ended in 1965 (Witt et al., 1994) but this event did not diminish the enrollment demand for community colleges. During this same time, the first veterans from the Vietnam War were beginning to enroll in higher education. By the Fall of 1970 there were a total of 1,091 junior colleges nationwide; an increase of 413 colleges in a ten year period (Holt, 1969/1970). These institutions were built in many urban centers like Cleveland, Dallas, Denver, Detroit, Miami, Phoenix, Philadelphia, St. Louis, Pittsburgh, Los Angeles, Chicago, and New York. However, most states started two-year colleges with the idea of having an institution of higher education within a 25 mile commuting distance (Gernhart, 1981). Witt et al. (1994) stated,

> While colleges hurried to recruit faculty and build new campuses, the student boom continued unabated. By the fall of 1970 there were 1,091 junior [community] colleges nationwide, an increase of 413 colleges in ten years. After discounting for colleges that were dropped, America had built nearly one community or junior college per week for a decade. (p. 185)

It was during the 1960s that the open door concept of these colleges gained essential importance among community college leaders (Huther, 1971). These colleges continued to provide lenient admission requirements and lower tuition. Thornton (1972) noted that basically anyone with a high school diploma or those over age 18 with the capability of profiting from college instruction was eligible for admissions to these institutions.

By the end of the 1970s, most all states, including Hawaii, had adopted some form of community college system (Kintzer, 1980). During the decade that followed, two-year colleges gained increasing attention in Washington, DC with some of the attention garnered because of the sheer numbers of students enrolled.. President Reagan is quoted as saying, "Community colleges are a priceless treasure...close to our homes and work, providing open doors for millions of our fellow citizens...the original higher education melting pot" (Witt et al., 1994, p. 261).

Since the 1980s, community colleges have continued to hold to their comprehensive mission of university transfer, career and technical education, as well as providing continuing and community education opportunities. The various functions have continued to encompass academic transfer, vocational-technical education, continuing education, developmental (remedial) instruction, and community service activities (Cohen & Brawer, 1996).

Over the last 20 plus years, community college enrollment has continued to grow. However, the majority of this growth is mainly concentrated in specific regions of the nation such as Florida, California, Texas and Arizona. Most of the growth in these areas

is due, in large part, to growing Hispanic populations (Martinez & Martinez, 2006). One example of this growth in minority enrollment is Miami Dade College, a comprehensive community college in Florida. According to a report by Martinez and Martinez (2006), this institution ranked first in enrollment among all colleges and universities in the fall 2002. Of the top 100 colleges and universities ranked by enrollment for this same reporting period, 11 were community colleges. This enrollment trend is not the same in all other sectors of the nation. In states with overall declining populations, enrollment in higher education institutions is still increasing, particularly in community colleges, but at a much slower pace. Due to these significant differences in enrollment numbers and the demographic makeup of the student body, community colleges and other institutions of higher education had to examine their approach to enrollment management (Harvey-Smith, 2002; Levitz & Noel, 2000).

As stated in Chapter One, competition for students of both traditional and nontraditional age, has increased among all sectors of higher education (Adelman, 2005; Hossler et al., 1990). With the aging of the baby boomers and the declining population of high school graduates in many regions of the United States, institutions have increased efforts to recruit students. This fact was documented by the 2004 Noel-Levitz National Enrollment Management survey which showed increased expenditures by all segments of higher education in recruitment, including two-year, public community colleges. However, equal if not greater emphasis has been placed on retaining students. Community colleges have found themselves in similar circumstances and have created new, or revised existing, administrative positions to assist in the development,

implementation and coordination of *enrollment management* plans to address recruitment and retention. The next section provides a review of the literature on the expanding role of the enrollment management administrator in the community college.

Development and Evolution of Enrollment Management as a Profession

The term *enrollment management* is one that is familiar to higher education administrators and is defined by Hossler et al., (1990) as:

> An organizational concept and a systematic set of activities designed to enable educational institutions to exert more influence over their student enrollments. Organized by strategic planning and supported by institutional research, enrollment management activities concern student college choice, transition to college, student attrition and retention. (p. 5)

Additional definitions have evolved over the years that have incorporated the management of the ever increasing amount of student data made available through, and maintained by, electronic databases (Bryant & Crockett, 1993).

In the 1960's, institutions of higher education experienced the postwar baby boom. This, along with affirmative action programs and expanded financial aid opportunities, dramatically increased the demand for a college education (Dixon, 1995). As shown in the previous section, the extraordinary growth in community college enrollments during this period added greater emphasis to the premise that higher education was accessible to everyone. Advances in travel, communication, and technology improved recruitment activities and increased marketing opportunities. Each of these advances resulted in

increased college enrollments but also added to ever increasing pressures on institutions to manage enrollments (Dixon, 1995).

Around the mid-1970's, the rapid growth in enrollments in all of higher education started to decline (Hossler et al., 1990). In the decade that followed, federal and state funding also began to diminish (Wild & Ebbers, 2002). To counter these negative factors impacting enrollment, colleges and universities began to look more closely at how to "manage" enrollments. During the same period, the term enrollment management came into use among college administrators who were involved in student recruitment and who were well aware of trends that were leading to greater competition for students (Penn, 1999). Recognizing that recruitment and marketing costs were continuing to rise, institutions of higher education began to give greater emphasis to managing enrollments through formal plans rather than continuing to try to find more students (Dixon, 1995).

In the 1980s, the link between recruitment and retention was realized by practitioners and researchers and it became apparent there was a need to coordinate the two under the enrollment management umbrella (Hossler et al., 1990). Novak and Weiss, as well as Pollock, (both as cited in Hossler, et al., 1990) found that in the mid 1980s that upwards of 60 percent of colleges and universities surveyed had instituted some form of enrollment management. Over the last 20 plus years, the percentage of institutions with enrollment management plans has grown significantly (Penn, 1999). In an Executive Summary of a 2001-2002 *National Enrollment Management Survey* conducted by the Noel-Levitz, Centers, it is stated that about two-thirds of institutions had a formal, written enrollment management plan. Of those institutions with a written plan, about three-

fourths of them included goals for retention. The 2004 edition of this survey found that approximately 90 percent of all higher education institutions had some version of an enrollment management plan and that approximately 80 percent of community colleges had developed written plans.

Over the past thirty years, a body of work describing various models of enrollment management has developed (Penn, 1999). This author listed the primary goals of the enrollment management process as: (a) defining the institution's nature and characteristics for appropriate marketing; (b) incorporating all relevant campus constituencies into marketing plans and activities; (c) making strategic decisions about the role and amount of financial aid for students and the institution; and (d) making appropriate commitments of human, fiscal, and technical resources.

Enrollment management, as most other education-related theory and practice, has its roots in the four-year college environment (Hossler et al., 1990). This theory and practice has moved into the community college as increasing demands for accountability, declining state support and increased competition for students have developed (Bailey et al., 2005b; McClenney & Waiwaiole, 2005).

Enrollment management approaches vary widely in the way they are practiced, but the basic need to manage enrollment from the initial contact through program completion/graduation has become widely recognized (Penn, 1999). Specific enrollment management strategies vary based on the mission of the institution and a host of other variables (Hossler et al., 1990). Declining enrollments follow only declining state

appropriations as the primary reason for increased interest in managing higher education enrollments more efficiently (Penn, 1999).

The position in higher education that has traditionally been most concerned with enrollment management has been the director of admissions (Dixon, 1995; Hossler, 1984; Penn, 1999). Today, the responsibilities encompass much more than recruitment; therefore, the title of the position that directs or coordinates these responsibilities varies greatly among institutions. In many instances, the enrollment management administrator sits in a unique position of influence often reporting directly to the institutional president (Penn, 1999). According the Noel-Levitz Center *2004 National Enrollment Management Study*, most institutions were able to identify an individual that had direct responsibility for enrollment management; however, the exact responsibilities of these individuals varied greatly, as did their titles.

According to Penn (1999), there are four primary models of enrollment management in terms of organizational structure including: (a) Enrollment Management Committee, (b) Enrollment Management Coordinator, (c) Enrollment Management Matrix, and (d) Enrollment Management Division. These models as described by Penn are as follows:

1. The enrollment management committee is usually the first response to problems related to enrollment. It focuses on marketing and admissions, or student retention, or takes a holistic view of student enrollment. It typically involves a few key faculty members, middle-management administrators, and perhaps a senior officer. It is a good starting vehicle,

but the committee has no real authority and little chance at making a significant impact.

2. An enrollment management coordinator is typically a middle-level administrator with assigned responsibilities to coordinate and monitor the institution's enrollment management activities, primarily admissions and financial aid. The personal influence of the individual holding this type of position is the only indicator of impact. The position has little influence on policy and procedures, and thus the coordinator is held accountable for monitoring activities.

3. An enrollment management matrix links administrators directly responsible for enrollment of students with one senior-level administrator ultimately responsible for the process. This model provides a greater possibility of direct impact on policy and procedure but is still fairly dependent upon the senior administrator's communication skills and influence.

4. The enrollment management division provides the most centralized systems approach. All major offices within the institution report to a single senior-level administrator, usually with a direct link to the provost or president. Although this approach represents the most radical reorganization, it provides the most responsive system to significant change in the process. (pp. 17-18)

A wide range of application of these models exists and each application is as distinctive and unique as the institution to which it is applied (Penn, 1999). Penn contended that the division appears to be the most popular model and that external factors play a huge part in the ultimate success of any enrollment management plan.

Hossler et al., (1990) list a set of what they term "key attributes" of enrollment management. These attributes are: (a) using institutional research to position the campus in the marketplace and examining the correlates to student persistence; (b) developing appropriate marketing and pricing strategies through research; (c) monitoring student interests and academic program demand; (d) matching student demand with curricular offerings that are consistent with the institutional mission; and, (e) paying attention to academic, social, and institutional factors that can affect retention.

A comprehensive enrollment management program includes strategies for academic programming, institution-wide recruitment and retention programs, admissions, financial aid, advising, institutional research and a variety of other services (Hossler et al., 1990; Lotkowski, Robbins, & Noeth, 2005). Each of these functions is integral to a comprehensive enrollment management approach; the structure (personnel, offices, etc.) differs between the various types of institutions–two-year, four-year liberal arts, private, public, comprehensive university.

The 2004 National Enrollment Management Study by Noel-Levitz Centers also asked institutions if they had an "annual, comprehensive, written enrollment management plan addressing both recruitment and retention" (p.4). Forty-one percent of all two-year colleges responded that they had such a plan. This compares with 39.6 percent of all

institutions of higher education. Twenty-nine percent of community colleges responding to this survey, indicated they had an annual retention plan rather than a comprehensive plan that included both recruitment and retention. With this difference considered, over 70 percent of community colleges have a formal plan to improve student retention.

Tim Culver, Associate Vice President of Noel-Levitz (as cited in Dolan, 2006) is quoted as saying,

> When it comes to student success and satisfaction...colleges and universities need to focus their enrollment strategies as much on retaining students as on attracting them...High dropout rates continue to be a serious problem for many schools, and yet this is something that schools can take steps to address. (p. 40)

In this same article, Dolan (2006) cites 10 characteristics of a strong retention plan aimed at all students. These characteristics include: (a) research; (b) early alert; (c) front load retention activities; (d) sharp focus; (e) a deliberate strategy of study engagement; (f) time on task; (g) programs and services based on meeting students' individual needs; (h) student centeredness; (i) monitor student expectations and satisfaction; and (j) establish a permanent organization for retention.

As the previous data and information show, perhaps the most important aspect of enrollment management in the community college is the focus on student retention. With the open-door admissions policy that most comprehensive community colleges espouse, recruitment has not been a major focus. However, as the competition for a decreasing traditional-age student population base has increased, additional emphasis has been given

to recruitment. But, as has been shown in the literature, these institutions have the highest attrition rates and, as a result, must place an even greater emphasis on retaining currently enrolled students. With that premise in mind, a discussion of the most prominent theoretical student attrition and persistence models is provided.

Models of Student Attrition and Persistence

This section explores the literature on theories and resulting models of student attrition and persistence. Seven specific models are presented. Although the first five models were developed and are applicable to four-year traditional students, these models have served as the basis for research in community colleges. Also, presented are two models that have addressed retention of nontraditional students. The first of these, Bean and Metzner's (1985) Nontraditional Student Retention Model, is the most often used model in the community college setting. Stahl and Pavel's (1992) Community College Model of Retention, which addresses the fit of Bean and Metzner's model to a single community college, follows. Following the presentation of these models, a brief discussion of the research using these models is provided.

Several studies have developed theoretical models of student attrition and/or persistence to identify and analyze the multitude of variables that influence each student's decision to continue in college or to drop out (Bean, 1980; Bean & Metzner, 1985; Grossett, 1989, 1991; Spady, 1970, 1971; Tinto, 1975, 1993). Many of the variables contained in these models are complex and some are beyond the control of the institution (Cabrera et al.,1993). However, the most prominent models include variables that may be controlled or influenced by the institution. A review and analysis of each of these models

can prove to be valuable in determining what community college enrollment managers can do to affect student retention.

Spady's Explanatory Sociological Model of the Dropout Process

Spady's (1970, 1971) attrition model is one of the earliest developed to address student retention. Spady's work drew on the work of Durkheim (1951) on suicide for application in his attrition model. Durkheim stated that suicidal tendencies increased for persons who were not integrated into their social system, either socially or normatively. Spady drew a parallel process for students who dropped out of college and identified five independent variables that he included in his model which seeks to explain the dropout decision (Summers, 2003). The five variables of his model are:

1. Grade Performance
2. Intellectual Development
3. Normative Congruence
4. Friendship Support
5. Social Integration

The first four of these variables are theorized to have a direct effect on the last one, social integration.

Spady (1970) described grades and intellectual development as the academic rewards system for students and friendship support and normative congruence as the social system rewards in his model, all of which influence the dependent variable, the dropout decision. He also added two variables, Satisfaction and Institutional Commitment, between Social Integration and the Dropout Decision which then made

Social Integration an indirect effect on that decision. In his research on Spady's model, Summers (2003) pointed out, "Students who did not share similar values and orientations similar to other students, did not interact socially with other students, and generally did not feel compatible with the social system of college were more likely to drop out" (p. 66).

This model "implies a time sequence and depicts the assumed direct causal connections between pairs of variables" (Spady, 1970, p. 78). The variable *normative congruence* is critical to this model. As defined by Spady, "It represents not only all of the student goals, orientations, interests, and personality dispositions...but the consequences of the interaction between these attributes and various subsystems of the college environment as well" (p. 78). Spady first tested his model in 1965 with a sample of 683 first-year students at the University of Chicago. Over a four year period, longitudinal data were gathered for two groups based on gender. He concluded that there were differences in the applicability of his model based upon this variable. In 1971, Spady revised his model to include structural relations and a revision of the relationship among the components in the model. It should also be noted that Spady's model does not consider *chance variables* and the research in support of the model was done in four-year institutions of higher education, with students who do not possess the characteristics of a very high percentage of students enrolled in community colleges.

Tinto's Longitudinal Model of Individual Departure from Institutions of Higher Education / Student Integration Model

Another major model of student attrition was developed by Tinto (1975), who, like Spady, drew on the work of Durkheim (1951). Tinto's model is perhaps the most well known and researched in higher education retention studies (Cabrera, Castanada, Nora, & Hengstler, 1992; Grossett, 1989; Mallette, & Cabrera, 1991; Nora, 1987; Nora, Attinasi, & Matonak, 1990; Pascarella & Terenzini, 1979; Pascarella, Terenzini, & Wolfle, 1986; Stage, 1988). Tinto identified eight major causes for individuals leaving college. He stated that two of these causes, Intention and Commitment, are personal dispositions held when the student enters the institution. Finance and External Obligations are two external forces that have influence over the departure decision during enrollment with finances playing a minimal role. He defines the external obligations that contribute to the departure decision as work and family. The remaining four causes are considered to be internal forces and include Adjustment, Difficulty, Congruence and Isolation. Adjustment refers to making the social and academic setting changes required of college. Congruence is generally addressed from the negative (Incongruence) to describe a lack of "institutional fit." Difficulty is used to indicate academic hardship and Isolation depicts the lack of integration into the social and academic environment of the institution (Tinto, 1975).

Tinto (1987) stated that the students' academic integration and social integration are essential to reducing attrition. His theory purports that the degree to which students are successfully integrated determines the degree to which they are committed to their

career and educational goals and to the institution. In researching Tinto's model, Pascarella, et al. (1986) referred to "...person-environment fit as the model's conceptual core" (p. 156).

According to Wild and Ebbers (2002), Tinto's 1993 model of attrition has been widely examined and tested by the educational community. Tinto's revised model concluded that an individual's pre-entry college attributes (family background, skill and ability, prior schooling) form that individual's goals and commitments. The individual's goals and commitments interact over time with the institutional experiences (external forces). The extent to which the individual becomes academically and socially integrated into the formal and informal academic and social systems of an institution determines the individual's departure decision (Tinto, 1993). Tinto contended that, "When those external communities are strong, as they are for commuting students, their actions may serve to condition, if not counter, events within the college" (p. 116). For the majority of community colleges, this represents a special problem, given that the highest percentage of enrolled community college students are commuters, many with full-time employment, and have dependent families (Bailey & Alfonso, 2005). Given these additional commitments of community college students and the importance of student integration into the social and academic community of the college, Tinto's revised model suggests that community colleges must address these two issues (Summers, 2003).

Pascarella's Conceptual Model for Research on Student Faculty Informal Contact

Like Tinto, Pascarella's model (1980) was longitudinal and viewed informal interaction between students and faculty as being of primary importance to student

persistence. He asserted that along with Informal Contact, four other sets of variables for persistence or withdrawal were involved with student decisions in these areas: Student Background Characteristics; Institutional Factors; Other College Experiences; and Educational Outcomes. Pascarella contended that these factors contributed to an atmosphere that may or may not be supportive of informal contact between faculty and students.

As described in Pascarella's (1980) model, student background characteristics included family background; aptitudes; aspirations; personality orientations, goals, values, and interests; secondary school experiences; expectations of college; and openness to change. Institutional factors involved faculty culture; admission and academic standards; institutional size and image; and organizational structure and policies. Other college experiences refer to peer culture; extra curricular and leisure activities; and classroom experiences. Finally, educational outcome variables were academic performance; intellectual and personal development; career aspirations; college satisfaction; and institutional integration (Pascarella, 1980). These elements not only had an interactive relationship with each other but with educational outcomes which ultimately is the factor with a direct relationship with the decision to persist or drop out. Pascarella contended that the persistence or dropout decision is directly related to educational outcomes, which have been influenced by the additional four elements of the model.

Bean's Model of Student Departure

Bean's (1980) research is similar to Tinto and Spady but is not based in Durkheim's research on suicide. This model has also served as the conceptual/theoretical framework for a number of studies related to student persistence behavior in traditional colleges and universities (Bean, 1982; Bean & Eaton, 2001; Bean & Vesper, 1990; Cabrera, et al., 1992; Gillespie & Noble, 1992). Bean's new model purported that the decision by a student to leave was analogous to turnover in work organizations and used this comparison to explain the factors contributing to student attrition. This model suggested that the background characteristics of students must be taken into account in order to understand their interactions within the environment of the institutions of higher education. The student interacts with the institution perceiving objective measures, such as grade point average or belonging to campus organizations, as well as subjective measures such as the practical value of the education and the quality of the institution. These variables are in turn expected to influence the degree to which the student is satisfied with the institution. The level of satisfaction is expected to increase the level of institutional commitment. Institutional commitment is seen as leading to a degree or that a student will drop out of school (Bean, 1980).

Astin's Model of Student Involvement

In 1978, Astin framed persistence of students in terms of involvement rather than integration. Student involvement, according to his theory, could manifest itself through interaction with peers and/or faculty and a series of interactions with fellow students and instructors aided student retention. The interaction described in this model could take

place in the classroom or in other activities related to completing assignments, working on class projects, or participating in school activities. Astin (1984) presented a revised developmental theory of involvement that identified factors in the college environment that impact the persistence of students. This theory consisted of variables that linked teaching theory (subject matter, resources, individualization of approach) and learning outcomes desired by both the student and the instructor. Later, Astin (1993) conducted an empirical study of his model using longitudinal data collected from freshmen. In this study he found three forms of student involvement that were most prominent in increasing student persistence. These were academic involvement, involvement with faculty outside class, and student peer group involvement. The data derived from the 1993 comparison study of faculty, curriculum, institutional type, and peer group effect led to a primary finding that "the student's peer group is the single most potent source of influence on growth and development during the undergraduate years" (p. 398).

Bean and Metzner's Attrition Model for Nontraditional Students

Bean and Metzner's model was the first theoretical model to specifically address the non-traditional student experience in higher education (Bean & Metzner, 1985). The authors held that the other theoretical models relied on social integration into the college community and since most non-traditional students were not often socially integrated into the college, another model was needed. They asserted that "the chief difference between the attrition process of traditional students and non-traditional students is that non-traditional students are more affected by the external environment than by the social integration variables affecting traditional student attrition" (p. 485).

In view of the fact that, on a national level, a majority of community college students are non-traditional under Bean and Metzner's definition, this model is relevant to this segment of higher education enrollment (Summers, 2003). According to Summers, the elements that comprise the Bean and Metzner model resulted from a thorough review of the literature on non-traditional students and that the linkages between elements were derived from other models of traditional student attrition and behavioral theories. Bean and Metzner (1985) contended that the dropout decision for non-traditional students is based on four sets of variables: background and defining (primarily high school) performance; academic performance (measured by grade point average); the intent to leave (influenced primarily by psychological outcomes and academic variables); and environmental variables, which include commuting, family and employment. These environmental variables are expected to have a major impact on the decision of non-traditional students to dropout (Bean & Metzner, 1985; Summers, 2003; McGilvray, 2004).

According to Summers (2003), there were two critical interaction effects in this model. The first was the interaction between *academic* and *environmental* variables. In this interaction the environmental variables are the most significant. Positive environmental variables can result in a student with low values in academic variables persisting. The converse is also true. Negative environmental variables can result in a student with high positive academic variables dropping out of college.

The second critical interaction was the compensatory interaction between *academic outcomes* and *psychological outcomes*. In this relationship, the psychological

outcomes dominate: that is positive psychological outcomes can result in a student with negative academic outcomes persisting and, again conversely, negative psychological outcomes can influence a student with positive academic outcomes to drop out (Bean & Metzner, 1985; Summers 2003).

Bean and Metzner (1985) assumed that the non-traditional student will not be socially integrated into the college community because of the factors that define the student as non-traditional: commuter, full-time employment, and dependent family members.

Stahl and Pavel's Model

As was briefly described in Chapter One, the Stahl and Pavel (1992) model was based upon research involving the fit of Bean and Metzner's Model of Attrition of Nontradtional Students in its entirety in a community college setting. Their research was based upon a sample of students from a large, urban community college and had two purposes; to determine whether the Bean and Metzner model fit such a sample; and, if it did not fit, to develop a modified model appropriate for community college students.

Stahl and Pavel (1992) incorporated into their study three principles from Bean and Metzner: the reduced importance of Social Integration; the permission to make modifications in the models "paths"; and the ability to add variables. Social integration was removed along with ethnicity prior to examining the fit. Ethnicity was dropped because there was a lack of minority students in the sample. After making the described modifications, the researchers reported a goodness-of-fit (GFI) indicator of 0.838 of the Bean and Metzner model to their data. Based upon this statistical analysis, a value of 0.9

represents a good fit. Additionally, they reported a chi-square/df ratio 5.89 with a value of less than 3 for this ratio considered acceptable. Based upon these results, Stahl and Pavel determined the Bean and Metzner model did not fit their sample. Changes were made to identify a different model that was a better fit for the data obtained through their procedures. Two additional variables (age and gender) were dropped; variable groupings were changed and additional pathways were freed resulting in the development of a new model. This new model was titled "Conceptual Model for Retention of Community College Students."

After Stahl and Pavel (1992) developed their new model, they separated the data set based on gender and checked the model fit for each group. With the exception of dropping age and gender and the elimination of ethnicity due to the lack of minorities in the sample, all other modifications were based upon LISREL analysis. Questions have arisen as to the appropriateness of these decisions based upon the structural equation modeling literature (Boyles, 2000).

Summary of the Models

Persistence models based on traditional students, particularly those in four-year institutions tend to focus on student integration into the social and academic environment of the college. As previously described, the models developed by Spady (1970, 1971), Tinto (1975, 1993), and Pascarella (1980) each held that institutions should develop processes and activities that enhance an environment that address both aspects of social and academic integration (Bailey & Alfonso, 2005). Astin's (1978, 1984, 1993) model of Student Involvement was also premised on the integration of the student into the college

community through activities and programs associated with interaction with academics, faculty, and student peers. Although popular with four-year, residential college students of traditional age, these models have not proven to be appropriate for application to the community college in most instances (Adelman, 2005; Mohammadi, 1996). According to Wild and Ebbers (2002), "Experts recognize that the powerful models and research at the university level need to be adapted to community colleges" (p. 508).

The Bean and Metzner (1985) model of Attrition for Nontraditional Students did not place the same level of importance on the social integration component. Their contention was that social integration would play a much smaller role among nontraditional students and that outside, environmental variables, such as finances, work hours, family responsibilities, and outside encouragement would be more important (Bailey & Alfonso, 2005). Because of the emphasis on these "outside" environmental factors, most of which would be beyond influence by the institution, even this model has limited application to the community college. The Stahl and Pavel (1992), although based upon the appropriateness of the Bean and Metzner model in a single community college setting, found that it did not fit their sample and therefore, required modification.

Most research based upon the application of retention models utilizing multiple institutions or national samples has employed Tinto's model and involved primarily four-year institutions (Fetters, 1977; Munro, 1981; Pascarella & Chapman, 1983; Peng & Fetters, 1978; Stoecker, Pascarella, & Wolfe, 1988; Williamson & Creamer, 1988). Research studies applying the Bean and Metzner model or the Stahl and Pavel model to

community college students using multiple institutions or national databases have not been located.

There appears to be a consensus among researchers that measures of academic and social integration and institutional fit positively affect persistence, retention, and degree attainment at baccalaureate institutions (Bailey et al., 2005a). Although, many methodological problems exist with the available research, most of these studies do suggest that academic and social integration have positive effects on the persistence of four-year, residential college students (Braxton, Hirschy, & McClendon, 2004; Cabrera et al., 1993). However, important questions arise when trying to apply the existing models to studies of community college students because of the difference in the makeup of the student population of community colleges when compared to four-year institutions. Also, these models are most often applied to single institutions, such as the Stahl and Pavel (1992) model, and are not appropriate for system or national studies (Bailey et al., 2005a).

Wild and Ebbers (2002) concluded that "New perspectives need to be included in student retention models to work effectively in the community college setting" (p. 507). Others recommend that the research using the existing models developed in the four-year college environment be replicated especially in the two-year college to test the validity of the formulations in different environments (Elkins, Braxton, & James, 2000).

Student Attrition and Retention Research

The literature on student attrition and retention in higher education is rather extensive as this topic pertains to four-year colleges and universities. But, as has been

previously stated, the research on this subject for community colleges, although not as abundant, is continuing to grow due to increasing interest on the part of researchers, practitioners, and policy makers in higher education (Summers, 2003). Although student attrition may be considered an institutional effectiveness concern, a financial resource issue, or a concern from the enrollment management perspective, it is of considerable importance to all community colleges.

In efforts to add clarity to the issue of community college attrition, Sheldon (1982) identified three categories of attrition in a three-year longitudinal analysis of over 6500 students who entered California community colleges in fall 1978. The first category he identified was *positive attrition* and included students who dropped out after meeting their objective or who transferred to another institution. In this study, positive attrition accounted for approximately 21% of the vocational students who left the community college and an additional 14% of the non-vocational students. The second category was termed *neutral attrition* and included students who left because of a job conflict or because of scheduling difficulties. According to Sheldon(1982), these reasons did not signal either success or failure and they accounted for about 34% of the attrition of vocational students and 40% of non-vocational leavers The final category was classified as *negative attrition* because it included those students who were academically or otherwise unprepared for college work and, as a result, did not meet intended educational goals. In his study, Sheldon found that 16% of vocational students and 19% of non-vocational students left community college as a result of these negative attrition factors. He maintained that only negative attrition is influenced by the institution.

Attrition/Retention Data

Community college attrition data across several decades have been fairly consistent in showing that dropout rates have been very high. Early research by Clark (1960) and Thornton (1966) found that more than 40% of community college freshmen did not return for their second year. According to data gathered in a 1992 ACT Survey, institutional rates of first-year attrition for full-time students entering four-year public institutions were 28.3% while at four-year private institutions the rate was 24.0%. For public two-year colleges, the first-year attrition rate for full-time students was 47.9% as reported in the same survey. These survey data showed the departure of students most often occurred during the period between the first and second year of college. This period of enrollment is often used as the benchmark for retention/attrition rates because most of the attrition takes place during this time frame (Tinto, 1993).

When the data from the 1992 ACT survey were presented in an expanded time frame for completion of college degrees to include up to a six-year period for baccalaureate programs and up to three years for associate degree level, the data were more positive. The results of this expanded time frame indicated that for students entering four-year colleges in 1977, 52.6% graduated within six years. For those entering in 1980, 48.4% graduated by 1986; of those who entered in 1984, 47.9% graduated by 1990; and of those who entered in 1986, 46.7% graduated by 1992. For community college students, when the three year time frame was applied, the results of the 1992 ACT Survey showed that of students entering in 1980, 40.0% graduated by 1983; of those who entered in 1983, 37.9% graduated by 1986; for those who entered

in 1987, 38.6% graduated by 1990, and of those who entered in 1989, 38.7% graduated by 1992.

A study titled "Improving Student Attainment in Community Colleges: Institutional Characteristics and Policies" (Bailey et al., 2004), found that "only 36 percent of students who enrolled in a community college as their first postsecondary enrollment in the 1995-96 school year had completed a certificate, associate, or bachelor's degree within six years" (p. 1). This study also determined that low-income, minority, and first-generation college students all have lower completion rates.

Data from the Southern Regional Education Board [SREB] (2003) found that only 45% of community college first-time, full-time freshmen who intended to earn a degree or certificate graduated in the period from 1998 to 2001 and that 32% of students failed to return for their second year at a community college or to enroll at another institution of higher education. Bailey et al., (2005b) reported that for students enrolled in a community college as their first postsecondary institution in the 1995-96 academic year, only 36% had completed either a certificate, associate, or bachelor's degree within six years. Another 22% were still enrolled with about three-fifths of them enrolled in a four-year institution. This means about 42% of students who started college in a two-year public institution in that year dropped out without completing a degree or certificate.

Student Characteristics

As previously described, high attrition rates in community colleges are well documented with attrition rates of 50% or higher between the first and second year (Gates & Creamer, 1984; Zhai & Monzon, 2001). A large segment of the available research

regarding retention involves studies related to student characteristics. These studies often approach the subject in one or more of three categorized ways: (a) analysis of student demographics–gender, age, race, marital status, financial aid eligibility; (b) analysis of student academic data–high school grade point average; test scores such as ACT or SAT, placement test scores, developmental coursework; college grade point average; or (c) student non-cognitive factors–motivation, perceptions, and attitudes (Romano, 1995). Attempts have been made to link these categories in order to develop student retention models (Boylan, 2002; Brooks-Leonard, 1991; Voorhees & Zhou, 2000; Zhai & Monzon, 2001).

Some studies report that community colleges attract students with attributes associated with non-persistence (Astin, 1978; Zhai & Monzon, 2001). Other research investigating retention and attrition of students in community colleges have gathered data on student demographics in efforts to identify a "typology" of students who are likely to remain in school and those who are at risk of dropping out (Brooks-Leonard,1991; Moore, 1995; Windham,1994; Zhai & Monzon, 2001). These studies have shown that pre-enrollment variables, including gender, age, high school grade point average and enrollment goals of the student, are good predictors of attrition (Feldman, 1993). Additional studies have attempted to point out specific characteristics of persisters and non-persisters and each found full-time attendance as the most prevalent characteristic of persisters in college (Feldman, 1993; Price, 1993; Zhai & Monzon, 2001).

Age as a defining characteristic of persisters shows conflicting results in the research (Brawer, 1996). Typically, studies report persisters to be younger students and

conversely non-persisters to be older students (Windham, 1994; Price, 1993; Zhai & Monzon, 2001). An investigation of pre-enrollment variables as predictors of one-year retention of 1,140 first-time students at one community college found the risk of dropping out was associated with younger students between 20 and 24 years old (Feldman, 1993). Mohammadi (1996) in a study at Patrick Henry Community College found attrition rates after one year to be higher for those students in the age ranges of 23-35 and 45-50. Other attributes found to influence students' decision to leave college before completing their program or degree include: full time employment, low grade-point average, academic unpreparedness, being a member of an ethnic minority, family obligations, financial concerns, and female gender (Bonham & Luckie, 1993; Zhai & Monzon, 2001). Many of these characteristics are associated with first-generation college students; that is neither of the parents has earned a bachelor's degree (Hsiao, 1992; Thayer, 2000).

Research has shown that students tend not to be honest when pressed to give reasons for their choice to withdraw, especially if the reasons may be regarded by others as evidence of failure (Noel-Levitz Centers, 2006). Reasons cited by students in this research for withdrawing vary greatly and include examples such as the lack of financial resources; personal reasons such as health, divorce or other marital problems, death in the family; lack of time or energy; or some combination of these reasons (Noel-Levitz, Centers, 2006; Zhai & Monzon, 2001).

Academic reasons are sometimes given, but not as often, due to student aversion to having others attribute their withdrawal with failure. Price (1993) cited a study of 4,195 students in 46 institutions conducted by the ACE-UCLA Cooperative Institutional

Research Program (CIRP) which found that of 1,493 students who did not return, 20.1% had GPAs between 3.0 and 4.0, and 17.1% had GPAs between 2.5 and 3.0. It has been revealed in other studies that less than 15% of all student departures from college are a result of academic dismissal (Kalsner, 1991).

The Noel-Levitz Center (2006) reported that individual differences in motive, perceptions, and attitude are all key in determining a student's decision to persist. According to Heath, Skok, and McLaughlin (1991), the degree of certainty students have regarding their commitment to an academic major is also positively correlated to college persistence. Students who are highly committed to the goal of completing a program are more likely to persist, especially at two-year colleges (Cofer & Somers, 2001; Zhai & Monzon, 2001). It is a common practice for students to change their major several times throughout their college career and it is estimated that of all students entering college in any given academic year, approximately 17% will not enroll in a degree credit program (Cofer & Somers, 2001; Price, 1993). Kalsner (1991) stated that three out of four entering freshmen experience some form of uncertainty about their career choice.

Some research suggests that retention depends heavily on student involvement with campus/program activities (Glover & Murrell, 1998). The more time and effort students apply to college study and involvement with other college programs and/or activities, the more likely they will be to remain in college (Cofer & Somers, 2001; Friedlander & McDougall, 1991). This campus involvement includes work study and other campus employment activities. That is, the more hours students work in a campus job, the more likely students are to persist (Stern & Nakata, 1991).

Voluntary withdrawal is more dependent on the events that occur on campus after the students enroll rather than what took place before enrolling (Price, 1993). According to Price, students anticipating academic difficulties, experiencing social isolation, or feeling overwhelmed after enrolling in college may choose to drop out very early during the first semester. It is more difficult for older students to admit their fears and to seek assistance. Faculty actions within the classroom are very important to the persistence of these students. The more rewarding the interaction between faculty and student, the more likely the student is to remain and to develop socially and intellectually (Cofer & Somers, 2001; Price, 1993).

Many students choose to go to college without knowing what to expect. Kalsner (1991) stated, "Often students feel an implicit pressure to view college primarily as a place to obtain employment skills" (p. 1). This author went on to state that there has been a dramatic shift in the personal values of college students since 1967 from one of developing a meaningful philosophy of life to the goal of being very well off financially. This, she contended, has resulted in a higher attrition rate among all college students. Parental values and attitudes toward higher education also play an important role in the persistence and completion rates of traditional age college students according to Kalsner. She also questioned whether it is possible that parental values and attitudes toward higher education have any influence on the persistence rates of non-traditional students. Kalsner determined that other types of family support mechanisms -- spouse, child, brother, sister -- might also influence persistence. In addition, students from low socioeconomic backgrounds, whose parents are unfamiliar with higher education, may be

more prone to drop out because their college attendance interferes with their ability to contribute immediately to the family income (Kalsner, 1991).

In a 1994 study, Umoh et al. suggested that existing research on student retention has not been accepted without criticism. These authors believed the failure to use theoretical models to explain the withdrawal process, the use of univariate or bivariate statistical procedures, and the use of *ex post facto* research designs have been the cause of much of this criticism. These researchers contended that a failure to view college students' success as a "sequential process" places severe limitations on the usefulness of retention research. Their research indicated that many previous studies have viewed retention as a complex issue that seldom has a single cause but involves the interaction of a number of variables. Recognized variables in their research included factors related to student characteristics and student/ institutional interaction, academic aptitude and performance, level of aspiration and motivation, institutional type, student services offered, and student involvement or the development of a sense of belonging (Umoh et al., 1994).

Retention, student satisfaction, and student success appear to improve when retention efforts are directed toward integrating the student's total educational experience (Umoh et al., 1994). This study examined the relationship between several variables identified through retention research and applied this to students enrolled in two-year, developmental mathematics programs. Its purpose was to identify and describe factors relating to student retention in community college developmental mathematics courses. The study focused on the factors of age, gender, parents' education, grade point average,

academic goal commitment, institutional experience, student academic integration, placement grades, and student performance. The results were that no statistically significant differences were found among the variables defined for the study and these factors did not have a significant direct effect on student retention in two-year college developmental programs.

In response to state and federal legislation, many state higher education systems have initiated studies to address the issue of accountability (Coll & VonSeggern, 1991). During the 1990's accountability became the watchword in higher education. Demand for greater accountability in higher education brought about increased reliance by academic institutions, governing bodies and state and federal education agencies as well as the general public, on measures of institutional effectiveness. The educational effectiveness of community colleges continues to be closely examined as a result of both a federal government focus on accountability and increased competition for state allocations to higher education (Bailey, Jenkins, & Leinbach, January 2005). Retention rates are among the measures used in this accountability system.

The study by Bailey et al. (2005b) determined that student characteristics appear to be more important in determining retention and graduation than institutional variables. Other studies (Adelman, 1999; Burd, 2004; Cabrera, Burkum, & La Nasa, 2003; Zhai & Monzon, 2001) have identified several student-based factors associated with educational attainment at both two-year and four-year colleges to be academic preparation, race/ethnicity, socioeconomic status, gender, attendance patterns (i.e full-time, etc.), dependents, and other family oriented responsibilities.

Institutional Characteristics

In contrast to these findings, other studies have shown certain institutional characteristics to have influence on student outcomes such as persistence and graduation rates. Porter (2000), in a study of baccalaureate institutions, found that average SAT scores and the percent female students enrolled were associated with higher retention and graduations rates. This same study showed that institutions with a high percentage of students over age 25, were more likely to have lower graduation rates. Astin, Tsui, and Avalos (1996) conducted a national representative study of first-time, full-time students at baccalaureate colleges and compared the graduation rates. They found that highly selective institutions have higher graduation rates. The findings of each of these studies on student and institutional characteristics are consistent with Tinto's model of student integration. However, research on community colleges is much less likely to show a positive relationship between measures of integration and student persistence and degree completion (Bailey et al., 2005a; Cofer & Somers, 2001; Muraskin & Wilner, 2004).

Related to institutional characteristics that affect student outcomes such as retention and graduation, Bailey et al., (2005a) found that "in general, community colleges located in urban areas are predicted to have 3.5 percent lower graduation rates while rural colleges can expect nearly 4 percent higher completion rates" (p. 21). In this same study, it was determined that "size is an important predictor of an institution's degree completion rate. Larger community colleges...have a 9 to 14 percent lower graduation rate than do smaller colleges" (p. 21). Although these statistics address only graduation or degree completion rates, it is logical to state that retention rates run parallel

to graduation rates in that a student must be retained before he or she can complete a degree.

Additional data provided by the Bailey et al., (2005a) study pertaining to institutional size and location as variables to be considered when researching retention rates of community colleges, include the following: (a) enrollment of 2501 to 5000 Full Time Equivalent (FTE) students at a community college negatively impacts student outcome attainment; (b) students enrolled in large institutions are 20 percent less likely to achieve a successful outcome (degree attainment) than students at small colleges; (c) students enrolled in institutions with large minority populations are less likely to attain a degree or transfer; (d) a $1000 increase in–state tuition decreases the probability to graduate by 4 percent; and (e) associate degree-seeking students enrolled in rural institutions are 18 percent more likely to have a successful outcome than those enrolled in urban institutions (pp. 29-30). The substantive findings of this research that institutional size (enrollment) and campus location (urban, suburban, rural) are important factors when considering student outcomes such as retention and degree attainment, add further value to this study.

Retention Practices

Since the early to mid-1970s, when retention began receiving greater attention, institutions of higher education have been searching for policies, programs, strategies and practices that positively affect student retention rates (Levitz & Noel, 2000). Bailey et al., (2004) observed that,

> There is a tremendous amount of research on persistence and completion in higher education but few concrete insights about the specific effects of institutional policies on community college retention and completion. Moreover, two fundamental problems with the research literature in this area compromise the usefulness of research findings; one is theoretical or conceptual and the other empirical. Still, some useful approaches to increasing retention and completion have been found (pp. 4-5).

These authors also reported that the conceptual problems are a direct result of trying to apply to community colleges, models of student retention developed in the study of four-year institutions. This principle was illustrated in the current study in the review of existing retention models earlier in this chapter.

An additional problem with existing research concerns "the attribution of causality" in the evaluation of specific programs designed to improve retention (Bailey et al., 2004). According to these authors, most practices that have been studied generally do not involve all students; consist of a comparison between participants and non-participants; and do not randomly select students for each of these groups. Because the majority of such studies are based upon these "discrete programs" and involve a limited number of students, they are often difficult to implement on a college wide basis (Bailey et al., 2004). The results of such studies are not generalizable to the entire community college milieu. Some examples of community college research studies are now provided.

In 1994, the Colorado Community and Occupational Education System (CCCOES) provided leadership for the institutions within that system to collaboratively

plan a strategy aimed at improving student success and persistence on each of the two-year campuses in the state (Henry & Smith, 1994). This study reviewed the literature and found several other studies related to this topic (Spady, 1970; Tinto ,1975; Pascarella,1980; Pascarella, Duby, & Iverson, 1983; Bean & Metzner, 1985). Each of these studies resulted in the development of a theoretical model explaining factors that influence student success and persistence. The CCCCOES adopted the Bean and Metzner model because it included the nontraditional college student and the majority of the Colorado community college students were nontraditional.

As a result of the CCCOES effort, the participating colleges identified 10 major initiatives or retention practices for improving student success and persistence. Each of these practices was based on the major factors that the Bean and Metzner (1985) model had keyed as influencing the retention rate of community college students in Colorado (Henry & Smith, 1994). The factors and initiatives identified through this Colorado study were:

1. academic readiness - improve initial placement of students in courses that are consistent with entering abilities;
2. support structures - improve student services especially job placement, student activities, career planning and guidance, and course or program advising;
3. environmental barriers - improve financial aid counseling and assistance, as well as guidance in resolving job-study-home conflicts;
4. "at risk"- identify these students in a more timely manner;

5. "stopouts"- follow up with these students early and encourage them to return to school;
6. student diversity - increase student diversity on selected campuses;
7. faculty diversity - increase diversity among the faculty on selected campuses;
8. compensation - increase faculty compensation through salary increases, quality of life enhancements and professional development opportunities;
9. degree completion - increase certificate and/or degree completion and transfer rates; and
10. non-transfer - better prepare these students for the possibility of transfer later.

Pascarella and Terenzini (1991) investigated the effect of various types of advising and student services on retention, graduation, and transfer. They ascertained that "the most consistently effective program format appears to be a first-semester freshman seminar that meets as a regular class with an assigned instructor' (p. 403). The researchers found that this practice orients the student to the institution and its programs and services while also teaching important academic survival skills.

According to Summers (2003), studies on counseling and advising have been primarily focused on four-year colleges and research on these, as well as other institutional practices, is scarce. However, a study on the Community College of Denver (Roueche, Ely, & Roueche, 2001) suggests that their practices have been effective in

increasing retention. Counseling and academic support services at this community college are organized into a single, comprehensive, Academic Support Center.

Muraskin (1997) evaluated the federally funded Student Support Services (SSS) TRIO program and found that freshman participants increased their grade point averages and were retained from their first-to-second year of enrollment at higher rates than non-participants. This researcher identified peer tutoring, workshops, and cultural events as effective strategies.

Learning communities, as a retention strategy, have increased in both four-year and two-year colleges over the past 15 years (Knight, 2002). This strategy involves organizing instruction around themes, and students go through such programs in cohorts. These communities are designed to give students and faculty greater opportunity for intellectual interaction. A review of research on the effectiveness of learning communities by the National Learning Communities Project at Evergreen Community College (Taylor, Moore, McGregor, & Limblad, 2003) suggested that "a preponderance of studies indicate that learning communities strengthen student retention and academic achievement" (p. iii).

Summers (2003) asserted that the early identification of students likely to drop out and the implementation of intervention services for those students is the most prominent strategy employed by many institutions. Among the interventions most often used to assist academically underprepared students is developmental (remedial) education programs. Pascarella and Terenzini (1991) suggested that providing extensive instruction in basic academic skills can help poorly prepared students to overcome such weaknesses.

The National Center for Developmental Education conducted a study of developmental programs by Boylan, Bliss, and Bonham (1997). This study examined the effectiveness of centralized programs (those which teach developmental courses within a discrete and separate academic division) to decentralized programs (those taught within the traditional academic disciplines). This study produced significant amounts of information concerning developmental education and presented several recommendations as to the effectiveness of such programs.

A study by Habley and McClanahan (2004), analyzed the relationship between various institutional practices and student outcomes, including retention. This study was based upon data from approximately 386 community colleges and resulted in classifying institutions as *high performing* if their first-to-second year retention rates and their three-year graduation rates were both above the median for those rates. *Low performing* community colleges were those with rates below the median for retention and graduation. A list of the practices determined to be most successful in high performing community colleges in addressing low retention and graduation rates was developed by Habley and McClanahan (2004). The successful practices identified include: mathematics center, writing center, reading center, advising interventions, learning communities, foreign language center, and programs for ethnic/racial minorities. This study, however, made no distinction for institutional characteristics such as those addressed in this study–enrollment size and campus setting.

Based upon their November 2004 study, Bailey et al., attempted to identify institutional characteristics and policies that are related to improved persistence. To

analyze the potential influences on retention and graduation, the researchers created three models, each with "explanatory variables" that incorporate different institutional and student characteristics. These characteristics included urbanicity, enrollment size, the percent minority enrollment, part-time student population, federal aid per student, and various financial variables.

In addition to identifying the student and institutional variables, Bailey et al., (2004) provide a set of programmatic and policy implications for community colleges (pp. 9-12). Summarized, these implications include:

1. Colleges must recognize the need to improve retention, graduation, and transfer rates.
2. Current research does provide support for the effectiveness of learning communities.
3. Research on counseling, advising, and student orientation suggests that all can be effective for retaining students, but many questions about design and intensity remain.
4. Tuition levels, instructional expenditures, and institution size are related to graduation rates.
5. It is essential to promote a more thorough discussion of the determinants of student outcomes and the effects of programs and policies on those outcomes.
6. It is necessary to recognize that assessments of the effectiveness of practices are difficult and involve a continuum of activities and analyses

7. that range from simple descriptive comparisons to more time-consuming and expensive controlled analyses and experiments.
8. Studies must pay increased attention to college-wide changes and the institutionalization of promising practices.
9. Community colleges must recognize the resource needs of institutional research.
10. More systematic methods to publicize and disseminate useful research findings from state and institutional research must be developed.
11. Researchers must develop models designed specifically to study community colleges.
12. The wide variation in college performance must be exploited to develop insights about effective strategies and policies.
13. Collaboration between academic, institutional, and state-level researchers should be promoted.
14. It is crucial to act now, but question and measure.

In their conclusions, Bailey et al., (2004) stated that "While many programs are identified as 'best practices' and, in some cases, there appears to be a consensus about 'what works,' this report has argued that a rigorous look at the underlying research yields less than definitive conclusions" (p. 12).

Chapter Summary

Chapter Two presented a review of the literature involving the rapid expansion of community colleges that has provided a tremendous opportunity for many students to

access higher education. However, with the expansion of this opportunity, community colleges have experienced a challenge in retaining many students who have indicated their intent to earn an associate degree. The literature further illustrated that, in addressing this challenge, a number of theories have been developed from the research into this phenomenon. Based upon this research, models of student attrition and/or retention have resulted, and from these models strategies or practices for improving retention have been designed.

CHAPTER THREE: RESEARCH METHODS

Little research has been conducted that provides insight regarding the best practices employed by community colleges in addressing low retention rates. The purpose of this study was three-fold: to determine the retention practices most frequently used by community colleges to retain full-time, associate degree-seeking students from their first-to-second year of enrollment; to determine the level of importance placed on these practices as perceived by enrollment management administrators; and, to determine if differences exist between those practices most frequently used and those considered to be the most important when the enrollment size and campus geographic setting of the institution are considered.

Wild and Ebbers (2002) stated, "The nature of student retention in community colleges is much more diverse and complex than the current literature base would indicate . . . furthermore, research focused on pertinent student retention issues in community colleges will benefit all segments of education" (p. 514). Chapter Three discusses the research design and methods utilized in conducting this study. The chapter begins with a restatement of the purposes followed by the research questions and an explanation of the research design. A description of the population and sample is presented along with a discussion regarding the sampling method employed. Information pertaining to the development of the survey instrument and its components is then provided. The final sections of Chapter Three highlight the specific procedures employed by the researcher in collecting data as well as the methods used for data analysis.

Restatement of Research Questions

The research questions addressed by this study are:

1. What are the most frequently used practices for retaining full-time, associate degree-seeking students from their first-to-second year of enrollment as perceived by community college enrollment management administrators?
2. What is the level of importance (ranging from very important to not at all important) placed on each of these practices as perceived by community college enrollment management administrators?
3. Do differences in utilized retention practices exist with regard to institutional enrollment size–small, medium, large?
4. Do differences in utilized retention practices exist with regard to institutional campus setting–rural, suburban, urban?
5. Do differences in the perception of importance placed on certain retention practices exist with regard to institutional enrollment size–small, medium, large?
6. Do differences in the perception of importance placed on certain retention practices exist with regard to institutional campus setting–rural, suburban, urban?

Research Design

The research method employed in this study was quantitative, non-experimental and relied on the collection of data through the use of a survey. The formal definition of non-experimental research as applied in this study is:

> A systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable. Inferences about relations among variables are made, without direct intervention, from concomitant variation of independent and dependent variables (Kerlinger, 1986, p. 348).

Because there was no manipulation of either the independent or dependent variables and there was no random assignment of participants to groups, this study fulfilled the definition of this quantitative, non-experimental research.

Similarly, as defined by Johnson and Christensen (2000), the research conducted in this study is also considered to be causal-comparative. Causal-comparative research studies the relationship between one or more *categorical* independent variables and one or more *quantitative* dependent variables (Johnson & Christensen, 2000). However, despite the presence of the term *causal* included in this type of research, causal-comparative research is still non-experimental because there is no manipulation of variables. This study employed causal-comparative design in order to ascertain if a statistical difference existed between the independent variables (institutional enrollment size and geographic setting) and the institutions' use of particular retention practices and

the level of importance placed on these practices as perceived by enrollment management administrators (dependent variables). Causal-comparative research design does not provide for reaching strong conclusions concerning cause-and-effect. However, the statistical results obtained are typically easier to comprehend and interpret (Johnson & Christensen, 2000).

This study was not intended to determine cause-and-effect-relationships but was designed to determine the level of use of retention practices employed by community colleges and their perceived effectiveness, as reported by enrollment management administrators, when the variables of institutional enrollment size and campus geographic-setting were considered.

In survey research, an identified population is studied by drawing a sample (n) chosen from the greater population (N) to discover the relative incidence, distribution, and interrelations of sociological and/or psychological variables utilizing a survey or questionnaire (Kerlinger, 1986). In this study, a descriptive survey method was employed using a researcher-designed instrument. The descriptive method involves three basic steps:

1. randomly selecting a sample from a defined population,
2. determining the sample characteristics, and
3. inferring the characteristics to the population based on the sample (Johnson & Christensen, 2000).

Population and Sample

The population surveyed in this study consisted of two-year, publicly controlled community colleges within the United States. The population was represented by those administrators designated by these institutions as having primary responsibility for enrollment management that included a student retention component. The population was also limited to those institutions holding membership with the American Association of Community Colleges (AACC) as listed in the organization's 2007 membership directory. This directory included information used to identify two-year, public community colleges and to determine the individual considered to be the primary administrator responsible for enrollment management.

Based on the institutional membership information, it was determined the total population consisted of 910 institutions (N = 910) meeting the specified criteria and were members of AACC. Within the population, institutions were stratified by applying the independent variables of enrollment size and campus geographic-setting using the classifications established by the Carnegie Foundation for the Advancement of Teaching (http://www.carnegiefoundation.org). This organization applies data reported to the National Center for Education Statistics (NCES) through its Integrated Postsecondary Education Data System (IPEDS) in classifying institutions by degree level, enrollment profile, enrollment size and geographic setting. Using this information, only those institutions which were exclusively associate degree level, two-year undergraduate, public institutions were included in the population. Due to the small number of "very small" and "very large" community colleges, these categories were combined with the next level

(very small was combined with small and very large was consolidated with large) category. This resulted in three enrollment size categories applied in this study–small, medium, and large.

Utilizing the Carnegie classification system, large enrollment community colleges represent those with a full-time equivalent enrollment of greater than 5000 students, medium enrollment are those with an FTE of 2000 to 4999, while small enrollment is reported as 1999 FTE students or less. When the variable of campus geographic-setting was applied, this resulted in classifications consisting of 540 rural, 203 suburban, and 167 urban community colleges.

Sampling Technique

For purposes of this study, the technique of stratified random sampling was used. Stratified random sampling involves grouping the study population into strata and selecting a random sample within each stratum to ensure proportional representation from each of the strata (Johnson & Christensen, 2000). In employing this technique, the population was divided into mutually exclusive groups (as described above) by utilizing the full-time equivalent enrollment data (small, medium, large) and campus setting (rural, suburban, urban). From the Carnegie Foundation website (http://www.carnegiefoundation.org) a list of all community colleges fitting each category was electronically created. Based upon the population of 910 institutions, a sample (n) of 269 institutions was required for the study (Johnson & Christensen, 200, p. 178).

All institutions within each of the nine population strata were assigned a number. These numbers were placed into a container and numbers were drawn at random until the

correct sample size was selected. Using the number drawn, the specific institution was identified to be included in the survey sample. The researcher then consulted the American Association of Community Colleges (AACC) 2007 Directory to obtain the name of the individual and the email address to which the on-line survey would be sent. Table 3.1 provides data on the population and sample.

Table 3.1

Population and Sample by Enrollment Size and Geographic Setting

Category	Population	% of Population	Sample Size	% of Sample
small / rural (S / R)	273	30%	74	27.5%
medium / rural (M / R)	217	24%	64	23.8%
large / rural (L / R)	50	6%	15	5.6%
small / suburban (S / S)	34	4%	10	3.7%
medium / suburban (M / S)	94	10%	28	10.4%
large / suburban (L / S)	75	8%	22	.2%
small / urban (S / U)	*9	1%	*9	3.3%
medium / urban (M / U)	67	7%	20	7.4%
large / urban (L / U)	91	10%	27	10%
Total	**910**	**100**	**269**	**100**

Note. *Due to the small number of small / urban institutions all 9 were included in the sample.

Verification of Population

To accurately determine the population and sample for the study, the researcher consulted the 2007 Membership Directory for the American Association of Community Colleges (AACC) in order to verify those institutions considered to be two-year, public community colleges. This source was also used to identify the institutional administrator primarily responsible for enrollment management for each institution in the sample. In most cases, this administrator was identified through the position title of director, dean, or vice president for enrollment management. When institutions had no position identified through the use of enrollment management in the title, either the director of admissions or the vice president for student services was used. This decision was based on the review of the literature and finding that the position with which enrollment management is most often associated is that of student services (Hossler et al., 1990).

In order to validate the information needed to place institutions in the appropriate categories of enrollment size and geographic setting, the classification descriptions for size and setting from the Carnegie Foundation for the Advancement of Teaching organization's website (http://www.carnegiefoundation.org/classification) were used. To further validate the enrollment and geographic setting characteristics, respondents to the survey were asked to indicate the institutional enrollment size and geographic setting from among the nine categories established by the Carnegie system–small/rural, medium/rural, large/rural, small/suburban, medium/suburban, large/suburban, small/urban, medium/urban, or large/urban. Where personal perception differed from the Carnegie classification data, the respondent's response was applied.

Instrument

This section provides a discussion of the survey instrument designed for this study. An existing instrument was sought that would identify the retention practices that are currently in use by comprehensive, publicly controlled community colleges in the United States. In addition to the identification of current retention practices, the instrument would also need to elicit the perceptions of enrollment management administrators as to the level of importance they place on the effectiveness of these existing practices. No research instrument was located that provided this information, therefore, the Effective Retention Practices Questionnaire (ERPQ) was created (see Appendix A).

The instrument was developed using a variety of resources. The Community College Survey of Student Engagement (CCSSE, 2004), a survey of student perceptions, was consulted to assist with the identification of current institutional practices used to improve retention rates. This survey has been administered to community college students for the immediately preceding six years and is used by community colleges to assist in assessing student needs and to promote good educational practice focused on student learning and retention (McClenny, 2004). Although, CCSSE provided information for establishing retention practices used by community colleges to improve student retention, this survey is directed toward obtaining student opinion on this topic. Therefore, the instrument did not provide an opportunity to gain information as to the perceptions of enrollment management administrators concerning the retention practices

currently in use and the perceived effectiveness of each practice in retaining full-time, associate degree-seeking students.

To further assist in establishing specific retention practices contained in Section II of the ERPQ, the researcher consulted a study sponsored by the American College Testing (ACT) service conducted by Habley and McClanahan (2004). In this study, Chief Academic Officers at 2995 colleges were surveyed regarding their use of 82 distinct institutional interventions to improve student retention. The instrument employed by Habley and McClanahan proved to be useful in selecting from among existing retention strategies that are appropriate for community colleges from among the list of 82 interventions. The selection of a particular practice to include in the ERPQ was made based on the percentage of community college campuses utilizing a specific practice and those that were cited by respondents in the study as having the highest impact on retention. These practices were incorporated into the ERPQ. Neither CCSSE nor the ACT Habley/McClanahan survey instruments provided information pertaining to institutional enrollment size or geographic setting of the campus, both of which were variables important to this study.

Other resources consulted in the development of the ERPQ included the National and Priorities Report (Noel-Levitz Centers, Inc., 2006), Successful Retention Planning: A Step-by-Step Approach (Low, 1999) and comparative data from the ACT Surveys of Adult Learner Needs (2006). A review of the literature on college student persistence also yielded some information that was used to identify institutional student retention practices. Consultation with community college colleagues provided additional guidance

on the formulation of the instrument. The survey instrument consists of three sections. Section I asked respondents for information pertaining to their individual institution. The first data requested was enrollment size and geographic setting as previously described. The questionnaire then asked if the institution was single-campus or multi-campus and the retention rate for first time, full time, associate degree-seeking students from their first-to-second year of enrollment for the most recent academic year for which data were available. Also in Section I, respondents were asked to indicate if the institution had a written enrollment management plan that included practices for retaining the identified group of students. This section also asked each respondent for his/her job title and the approximate percentage of time he/she devoted to responsibilities related specifically to student retention.

In Section II, the participants were provided with a list of 25 specific retention practices and asked to provide a yes or no response as to whether, based upon their perception, that practice was used by their colleges to improve the retention rate of the identified student group (first time, full-time, associate degree-seeking students from the first-to-second year of enrollment). He/she was then asked to rank the importance of each practice in improving student retention. Respondents provided their rankings of importance for each retention practice through use of a fully anchored, Likert rating scale (Johnson & Christensen, 2000) ranging from 4 (*very important)* to 1 (*not at all important).* These rankings were "closed-ended" in that predetermined response categories were provided. However, the ranking of importance was based upon the perception of the respondent.

In Section III of the ERPQ, respondents to the survey were provided with space to list any other practices utilized by their institution that he/she perceived to be very important in improving the retention rate of full-time associate degree-seeking students from their first-to-second year of enrollment. This section of the survey was optional and was intended to gather data on any retention practices currently used by community colleges that were not addressed in Section II of the survey instrument.

A preliminary version of the ERPQ was developed and reviewed with a group of doctoral students, as well as with the Chair and members of the researcher's doctoral committee. The initial review resulted in a number of changes to the format of the questionnaire to insure its readability and content validity. The initial review also contributed to the verification of current retention practices.

After revisions were made based upon the initial review by the group of doctoral students, as well as the committee and Chair, the survey instrument was pilot tested with an ad hoc retention committee at Southern West Virginia Community and Technical College. Based upon the use of a "think-aloud technique" (Johnson & Christensen, 2000, p. 139), additional refinements were made to the questionnaire. The think-aloud technique involved asking participants to verbalize their perceptions while they were completing the survey. Through this technique it was determined which survey items were considered to be confusing, whether the items actually measure what is intended to measure, and if anything was omitted that should be included. Based upon the input provided by the pilot test, the instrument was further refined.

Participants responded to the items in Section I based upon existing information available to them concerning the institution they represent (i.e. identifying their campus setting and enrollment, listing the retention rate of first-time, full-time, associate degree-seeking students, etc.). The ERPQ does not measure ability; therefore, there were not right or wrong answers in Section II. Responses to the items in this section were solely based upon the participant's perceptions. Responses to Section III were optional.

Collection of Data

This section describes the data collection procedures employed by the researcher. Included in this description are the steps taken in preparing and administering the ERPQ in an on-line format, confidentiality procedures employed, and methods used to increase participation to ensure the validity of the data obtained.

On-line Survey Procedures

Early in the research design process it was determined the best method for administering the ERPQ was through an on-line format. After reviewing several options, the researcher selected *SurveyMonkey.com* (http://www.surveymonkey.com) as the platform for converting the survey to a format appropriate for on-line administration. This platform also provided a number of advantages in terms of survey design, collection methods, and data analysis.

After the survey was developed through *SurveyMonkey*, a first step in the collection of data was to create an email message with a link to the on-line survey. Email addresses were obtained through the AACC membership directory and the introductory email message (see Appendix B) was forwarded to each member of the sample. This

email correspondence provided an introduction to the purpose of the study and a request for participation along with instructions on how to complete and submit the survey electronically. A link to the electronic version of the ERPQ was included with the email message sent to the sample.

The initial cut-off date for completion of the survey was two weeks from the date of the first email message. A number of the first email messages were returned as undeliverable. The reasons provided varied with the majority stating there was an error in the email address. Other were returned because the person to whom the message was addressed was no longer employed by that institution or was no longer serving in a capacity with responsibilities for enrollment management. Those with errors in the email address were corrected and sent again. For those where the individual addressee was no longer with the institution, a new person at the same institution was sent the survey or another institution within the same enrollment and setting stratum was randomly selected.

When the initial two-week response period passed and a sufficient number of responses had not been received, a second request (see Appendix C) with a link to the electronic survey was forwarded to non-responders. Following the second two-week period (total of four weeks after initial contact) there was still an insufficient response rate within certain institutional categories. After reviewing the response rate for each category, additional institutions in low-responding categories were randomly selected utilizing the same the process for identifying the first group of recipients. This second group of participants was forwarded an email message with a link to the survey, as was provided for the first list of recipients, and they were given two weeks to respond. When

the additional two-week period (six weeks following the initial contact) had concluded, there remained two categories of institutions with a low response rate. For those categories, telephone contacts were made to the recipients asking for their participation in the survey. Those contacted expressed their desire to answer the survey questions orally during the phone call. The researcher manually entered those responses.

Confidentiality

Because there was no personally identifying information provided by the survey respondents nor was any data obtained through intervention with these individuals, confidentiality was not a concern. However, in order to reassure participants that confidentiality would be maintained, and to protect the rights and welfare of participants, the researcher complied with all requirements of the Institutional Review Board (IRB) of Marshall University Graduate College. As expected, the protocol involved in this research project met the "exempt criteria" of the IRB.

A statement regarding informed consent was included in the introductory email (see Appendix B) of the online survey instrument. The statement indicated that by completing and submitting the survey electronically, the participants understood they were granting informed consent and were willingly participating in the research being conducted.

Data Analysis

The on-line ERPQ was used to collect the data for this study. Completed ERPQ surveys were received through the on-line format provided by *SurveyMonkey*. A database was created as each completed survey was received. "Filters" were created utilizing tools

provided through *SurveyMonkey* to provide for separating the survey responses into the nine institutional categories (based on enrollment size and geographic setting) to provide for the disaggregation of the data for each stratum of the sample.

The information provided by the respondents in Section I determined the geographic setting and enrollment size of the institutions. This information was then used to categorize institutions into small, medium, and large for enrollment size. Small institutions were those with full time equivalent (FTE) student populations of 1999 or less. Medium institutions have a student enrollment between 2000 and 4999 while large institutions have student populations of 5000 FTE or greater. Geographic settings utilized were rural, suburban, and urban as determined by the Carnegie Foundation website (http://www.carnegiefoundation.org).

For Section II, responses to the question "Do you use this practice?" were recorded as *yes* or *no* and the frequency of these responses for each practice were calculated. Following the responses to the question in Section II, responses for the level of importance placed on the use of each practice in improving the retention rate of first-time, full-time, associate degree-seeking students, was recorded using a fully anchored Likert scale.

SPSS was used to analyze the data and to perform all statistical testing. Descriptive statistical analysis, inclusive of frequency tables, was used to address the first two research questions. Descriptive statistics were appropriate in that these questions did not require comparative analysis in terms of determining which of the practices for retaining full-time, associate degree-seeking students from their first-to-second year of

enrollment were the most frequently used. “In descriptive statistics, the goal is to describe, summarize, or make sense of a particular set of data” (Johnson & Christensen, 2000, p. 360). This is accomplished through the use of numerical indices or by graphic form. A frequency distribution is provided that establishes a systematic arrangement of values in which data are rank ordered and the frequencies of each unique data value are shown. Where appropriate, numerical indices or measures of central tendency, such as mean and mode, were also provided.

For research questions three through six, inferential non-parametric statistics inclusive of univariate analysis of variance (ANOVA) was incorporated. As defined by Frankel and Wallen (1993, p. 187), “inferential statistics refer to certain types of procedures that allow researchers to make inferences about a population based on findings from a sample.” This study employed a stratified random sample which was representative of the larger population of community colleges. According to these same authors, non-parametric inference techniques are appropriate when few, if any, assumptions are made about the population from which the sample is drawn.

ANOVA is a technique for testing the hypothesis that sample means of several groups derived from the same population (Frankel & Wallen, 1993). This test was selected because there were 25 factors associated with the dependent variable of retention practices, as well as the variables associated with each of the independent variables of enrollment size and campus setting. ANOVA testing provided for all 25 of the enrollment practices, and the community college enrollment management administrators use and perception of importance, to be tested for significant statistical differences. By

utilizing the ANOVA method, the possibility of encountering Type I errors was greatly diminished or reduced.

Chapter Summary

This chapter presented the research methods utilized for this study. A discussion of the questions researched, as well as the research design employed to answer the questions, was also provided. Information pertaining to the population and sample, instrumentation, data collection and confidentiality procedures, and statistical treatment was also presented. A discussion of the participation and response rate, results of the data analysis, and findings of the study are included in Chapter Three as well.

CHAPTER FOUR: PRESENTATION OF FINDINGS

The purpose of this study was three-fold: to determine the retention practices most frequently used by community colleges to retain full-time, associate degree-seeking students from their first-to-second year of enrollment; to determine the level of importance placed on these practices as perceived by enrollment management administrators; and, to determine if differences exist between those practices most frequently used and those considered to be the most important when the enrollment size and campus geographic setting of the institution are considered. This study served to expand the knowledge base of retention practice research in the community college.

This study, being descriptive in nature, was designed to answer the following six specific research questions:

1. What are the most frequently used practices for retaining full-time, associate degree-seeking students from their first-to-second year of enrollment as perceived by community college enrollment management administrators?
2. What is the level of importance (ranging from very important to not at all important) placed on each of these practices as perceived by community college enrollment management administrators?
3. Do differences in utilized retention practices exist with regard to institutional enrollment size–small, medium, large?

4. Do differences in utilized retention practices exist with regard to institutional campus setting–rural, suburban, urban?
5. Do differences in the perception of importance placed on certain retention practices exist with regard to institutional enrollment size–small, medium, large?
6. Do differences in the perception of importance placed on certain retention practices exist with regard to institutional campus setting–rural, suburban, urban?

This causal-comparative study was conducted utilizing quantitative research methods. A questionnaire designed by the researcher was used to collect all data. The information presented in Chapter Four details the statistical analyses of the data obtained through this study. The chapter is organized into three primary sections: (a) survey response, (b) research findings, and (c) chapter summary. Tables illustrating the data and a narrative section are presented to answer each of the research questions.

Survey Response

Chapter Three detailed the process employed for identifying the 910 community colleges serving as the population and the selection of the 269 institutions representing the sample used in the study. The process included the stratification of the population into nine institutional categories using the variables of enrollment size–small, medium, and large–and geographic setting–rural, suburban, urban–to establish the proportionate share of the sample represented by each category. Based on the sample size, 135 responses were needed to validate the data obtained.

Of the 269 online surveys administered in the initial request, six were returned as having an incorrect email address or as undeliverable for other reasons. Corrections were made for those with errors in the email address and were sent again. From the initial request, 65 responses were received within the two-week deadline provided for the initial administration. From the six surveys resubmitted with corrected email addresses, two responses were received. This brought the total responses at the close of the deadline for the first administration of the online survey to 67.

Following the close of the deadline for the first administration, a second email message, with the link to the online survey and an extended two-week deadline, was forwarded to the 202 non-responders from the initial sample. At the close of the extended deadline, an additional 26 responses had been received, bringing the total responses to 95. A third email message requesting participation was sent to the remaining 174 non-responders, and additional 18 responses were obtained resulting in a total of 113 responses to the survey.

A review of the number of responses from each stratum within the sample was conducted to determine if appropriate representation from each institutional category had been obtained. Based on the results of this review, a determination was made that 22 non-responding institutions were to be contacted by telephone in order to obtain the 135 responses needed with the proportionate number required from each of the nine institutional categories. Of the 22 institutions contacted, all agreed to participate by providing oral responses to the survey questions. These responses were manually entered into the online survey by the researcher. With these responses recorded, this brought the

total number of responses to the survey to 135, thereby attaining a total response rate of 51%. The rate of return from each of the nine sample strata were as follows: small/rural = 32 (43.24%), medium/rural = 28 (43.75%), large/rural = 8 (53.33%), small/suburban = 5 (50%), medium/suburban = 9 (32.14%), large/suburban = 19 (86.36%), small/urban = 8 (66.66%), medium/urban = 10 (50%), and large/urban = 18 (66.66%).

Additional demographic data derived from responses to the survey provided the following descriptive information of those responding:

- 54.8% of the responses came from multi-campus community colleges with 45.2% representing single-campus institutions;
- Retention rates (percentage retained) for first-time, full-time, associate degree-seeking students from fall 2006 to fall 2007 were reported as follows: 3% with a retention rate 0% to 25%; 47.4% reporting a retention rate of 26 to 50%; 48.9% reported a retention rate of 51 to 75%; and 0.7% (1 of 135) community colleges reported a retention rate of 76% or higher;
- 51.1% of responding institutions had a written enrollment management plan that includes strategies/practices to retain full-time, associate degree-seeking students; 48.9% had no written plan;
- the percent of work time spent on responsibilities directly related to retention by the individual responding to the survey was as follows:

0% of work time	=	2.2% (3)
1 to 25% of work time	=	60.7% (82)
26 to 50% of work time	=	20.7% (28)

51 to 75% of work time = 13.3% (18)

76% or more of work time = 3.0% (4)

A breakdown of the overall response rate as well as each of the nine institutional categories are shown in Table 4.1.

Table 4.1

Response Rate of Sample by Institutional Category

Category	Sample Size	Responses	Percent
small / rural (S / R)	74	32	43.24%
medium / rural (M / R)	64	28	43.75%
large / rural (L / R)	15	8	53.33%
small / suburban (S / S)	10	5	50.00%
medium / suburban (M / S)	28	9	32.14%
large / suburban (L / S)	22	19	86.36%
small / urban (S / U)	9	6	66.66%
medium / urban (M / U)	20	10	50.00%
large / urban (L / U)	27	18	66.66%
Total	**269**	**135**	**51.00%**

Research Findings

The research findings section of this chapter first addresses question one, describing the most frequently used practices for retaining full-time associate degree-seeking community college students from their first-to-second year of enrollment. Next, the findings for question two are presented describing the level of importance placed on each of the retention practices, as perceived by community college enrollment management administrators. The first two research questions associated with this study are general in nature and serve to lay the foundation for an understanding of retention practices and their perceived importance in community colleges. No comparisons are made and there is no intent to determine if statistically significant differences exist between independent variables. Descriptive statistics allowed for complete information to be provided that address the first two questions.

To address research questions three through six, Analysis of Variance (ANOVA) testing was conducted. This test was selected because there were 25 factors associated with the dependent variable of enrollment practices, as well as three variables associated with each independent variable of enrollment size and campus setting. ANOVA testing provided for all 25 of the enrollment practices, and the community college enrollment management administrators' use of and perception of importance, to be tested for significant statistical differences. The use of ANOVA, as opposed to other testing methods helped to reduce or eliminate the possibility of encountering Type I errors.

Analysis of the ANOVA results indicated statistically significant differences greater than the $p<.05$ level between the perception of importance of retention practices

and the independent variables of enrollment size and campus setting. Following, each of the primary research questions is independently stated. For the first two questions, descriptive statistics are presented. For questions three through six, the corresponding null hypothesis is presented, followed by presentation of ANOVA results and discussion.

Research Question 1

The first question associated with this study asked: *What are the most frequently used practices for retaining full-time, associate degree-seeking students from their first-to-second year of enrollment?* This question was addressed through the use of descriptive statistics.

In determining the most frequently used practices for retaining full-time, associate degree-seeking students in community colleges, the choice was made to identify those practices with the highest overall usage, regardless of enrollment size or campus geographic setting. Of the 25 practices listed in the questionnaire, 16 were used by 50% or more of the enrollment management administrators responding. Of these 16 practices, seven were used by at least 90% (120 of 135) of the institutions responding to the survey. Five of the 16 practices were marked as being used by 75% (100 of the 135) of those responding. Four practices out of the top 16 were utilized by a minimum of 67.7% (69 of 135) of those responding. The top ten retention practices were used by a minimum of 84.2% of community colleges as perceived by the enrollment management administrators responding.

The practice receiving the highest percentage of use was that of *providing academic accommodations for students with learning disabilities* (identified as *disability*

accommodations in the tables provided). This practice was indicated as being used by 132 of the 135 institutions responding or 99.2% of responders. The practice with the fewest users responding was *providing access to a full-year schedule of academic offerings* (full-year schedule). This practice was listed as being used by only 21.8% (29 of 135) of the community college enrollment management administrators responding to the survey.

It should be noted that the practice of providing *disability accommodations* is greatly influenced by federal regulations under the Americans With Disabilities Act which requires all institutions of higher education to provide appropriate and reasonable academic accommodations for students with learning disabilities. This Act further requires that reasonable accommodations be made for access to all programs, services and facilities for those with physical disabilities. This factor must be taken into consideration when determining which retention practices are the most frequently used in efforts to retain full-time, associate degree-seeking students in community colleges. With this factor in mind, this practice might be disregarded for purposes of determining the practices most frequently used and considered to be the most important in retaining full-time, associate degree-seeking students in the community college. If the provision of *disability accommodations* is disregarded, the practice utilized most frequently is providing *open-access computer labs*. This practice was used by 98.5% of the community colleges responding to the survey.

When disregarding the provision of disability accommodations, the top ten retention practices used by community colleges in retaining full-time, associate degree-

seeking students as perceived by enrollment management administrators and the percentage of institutions utilizing each practice are:

1. Providing open-access computer labs for student use,
2. Providing peer or other tutoring services,
3. Providing for on-line registration by students,
4. Requiring mandatory placement in developmental/remedial courses for students with low course placement test scores,
5. Providing access to academic skills labs or centers,
6. Providing assistance with completing the financial aid/scholarship application process,
7. Requiring entering students to take mandatory course placement tests,
8. Providing individual career exploration and guidance services,
9. Providing written or computerized information on courses that transfer to four-year colleges, and
10. Providing an early-warning system for academically at risk students.

Table 4.2 provides detail regarding the retention practices most frequently of the 25 retention practices listed in the ERPQ. The listing is in order by number and percent of respondents from the highest to lowest.

Table 4.2

Most Frequently Used Retention Practices (highest to lowest)

Practice	Response	Percent of Response
disability accommodations	132	99.2
open-access computer labs	131	98.5
on-line registration	127	95.5
tutoring services	130	97.7
mandatory course placement	121	91.0
academic skills labs	121	91.0
assistance with financial aid process	120	90.2
required placement testing	116	87.2
career guidance services	113	85.0
course transfer information	112	84.2
early warning system	103	77.4
personal counseling services	100	75.2
social integration activities	92	69.2
at-risk advising	90	67.7
freshman orientation	69	67.7
individual degree plan	69	67.7
learning communities	65	48.9
child care	60	45.1
peer mentoring	57	42.9
faculty interaction	56	42.1
mandatory academic advising	54	40.6
minority programs	52	39.1
mid-term reports	45	33.8
faculty mentoring	44	33.1
full-year schedule	29	21.8

Research Question 2

Research question two asked: *What is the level of importance (ranging from very important to not at all important) placed on each of these practices as perceived by community college enrollment management administrators?* This question was also addressed through the use of descriptive statistics.

Respondents to the Effective Retention Practices Questionnaire (ERPQ) were asked, based upon his/her individual perception, to rate the importance of each of the 25 retention practices listed by using a fully anchored four-point Likert Scale. Respondents were instructed to rate the importance of each practice even if a particular practice was not used by his/her institution. The Likert Scale was as follows: 4 = *very important*, 3 = *somewhat important,* 2 = *not very important* and 1 = *not at all important*.

The average importance rating attained by each of the 25 practices listed in the ERPQ as perceived by community college enrollment management administrators responding to the survey ranged from a high of 3.82 to a low of 2.81. Only four of the 25 practices received an average importance rating of less than 3.00. The mean importance score for all retention practices was 3.14 and the mode was 3.22.

The practice receiving the highest importance rating was *providing academic accommodations for students with learning disabilities (disability accommodations)* with a rating of 3.82. As was shown by the data addressing research question one, *disability accommodations* also received the highest usage rating with 99.2% of all community colleges reporting using this retention practice.

If *providing disability accommodations* is disregarded as a retention practice due to the federal law mandating its use, the next practice rated as being the most important by enrollment management administrators responding to the survey was providing *academic skills labs or centers (academic skills labs).* This retention practice received an importance rating of 3.78 on the four-point Likert Scale. The practice receiving the lowest importance rating was *child care* with a rating of 2.81 on the same four-point scale.

The top ten retention practices each received a minimum importance rating of 3.54 and they were as follows:

1. Providing access to academic skills labs or centers,
2. Requiring mandatory placement in developmental/remedial courses for those students with low placement tet scores,
3. Requiring entering students to take mandatory course placement tests,
4. Providing an "early warning system" for academically at-risk students,
5. Providing special advising interventions for at-risk students,
6. Providing assistance with completing the financial aid/scholarship application process,
7. Providing an individual degree plan for each entering student,
8. Providing peer or other tutoring services,
9. Providing open-access computer labs for student use, and
10. Requiring an extended freshman seminar or orientation course.

Table 4.3 provides additional detail regarding the importance rating of each of the 25 retention practices contained in the ERPQ as rated by all responding community college enrollment management administrators.

Table 4.3

Rating of Importance of Retention Practices

Practice	VI	SI	NVI	NI	Rating Average
disability accommodations	106	23	0	0	3.82
academic skills labs	101	28	0	0	3.78
mandatory course placement	101	25	0	0	3.75
required placement testing	98	29	2	0	3.74
early warning system	98	28	0	0	3.73
at-risk advising	91	35	3	0	3.68
assistance with financial aid process	82	46	1	0	3.63
individual degree plan	89	28	11	0	3.59
tutoring services	79	46	4	0	3.58
open-access computer labs	73	55	1	0	3.56
freshman orientation	84	33	10	0	3.54
on-line registration	71	50	8	0	3.49
course transfer information	75	42	8	4	3.46
career guidance services	61	63	5	0	3.43
personal counseling services	59	62	7	1	3.39
mandatory academic advising	56	61	11	1	3.33
social integration activities	48	66	11	4	3.22
minority programs	51	62	9	7	3.22
faculty interaction	47	64	11	7	3.17
faculty mentoring	48	60	11	10	3.13
full-year schedule	50	45	23	11	3.04
mid-term reports	42	52	24	10	2.97
learning communities	29	66	24	10	2.88
peer mentoring	25	75	18	11	2.88
child care	26	65	26	12	2.81

Note. Scale is: Very Important (VI) = 4; Somewhat Important (SI) = 3; Not Very Important (NVI) = 2; Not at all Important (NI) = 1

Research Question 3

Research question 3 asked: *Do differences in utilized retention practices exist with regard to enrollment size – small, medium, large?* This question was addressed through ANOVA testing of the corresponding null hypothesis.

Hypothesis 3. *There is no statistically significant difference between retention practices used and enrollment size of the institution – small, medium, large*.

Based on the results of ANOVA testing, using an alpha level of .05, there was no statistically significant difference between those retention practices used and the institution's enrollment size. This null hypothesis was accepted. A summarization of the results of this ANOVA is presented in Table 4.4.

Table 4.4

Univariate Analysis of Variance of Retention Practice Use and Enrollment Size

	p	Type III SS	df	MS	F
Between	49.002	2	24.501	.0367	.9640
Within	48129.754	74	668.469		
Total	48178.755	76			

When considering data from small, medium, and large enrollment community colleges, the most frequently utilized retention practices were disability accommodations, online registration, tutoring services, open-access computer labs, academic skills labs,

placement testing, and mandatory course placement. Among the least used practices were full-year scheduling, mandatory advising, faculty mentoring, child care programs, and learning communities. Additional information is provided in the Appendices (see Appendices E, F, G) pertaining to the frequency of use of each of the retention practices by institutions in each of the three enrollment size categories–small, medium and large.

Research Question 4

Research question 4 asked: *Do differences in utilized retention practices exist with regard to campus setting – rural, suburban, urban?* This question was addressed by ANOVA testing of the corresponding null hypothesis.

Hypothesis 4. *There is no statistically significant difference between retention practices utilized and campus setting – rural, suburban, urban*.

Based on the results of ANOVA testing, using an alpha level of .05, there was no statistically significant difference between those retention practices that are used and the institution's campus setting. This null hypothesis was accepted. A summarization of the results of the ANOVA is presented in Table 4.5.

Table 4.5

Univariate Analysis of Variance of Retention Practice Use and Campus Setting

	Type III SS	df	MS	F	p
Between	1076.886	2	538.443	.7681	.4676
Within	50470.767	72	700.983		
Total	5154.653	74			

When considering data from rural, suburban, and urban institutions, the most frequently utilized retention practices were disability accommodations, online registration, open-access computer labs, tutoring services, assistance with financial aid processes, academic skills labs, and mandatory course placement. Some of the least used practices included minority programs, learning communities, full-year scheduling, faculty mentoring, and mid-term reports. Additional information is provided for each category of campus setting–rural, suburban, urban--in Appendices H, I and J regarding retention practices utilized.

Research Question 5

Research question 5 asked: *Do differences in the perception of importance placed on certain retention practices exist with regard to institutional enrollment size – small, medium, large?* This question was addressed by ANOVA testing of the corresponding null hypothesis.

Hypothesis 5. *There is no statistically significant difference between perceived importance of certain retention practices and enrollment size – small, medium, large.*

Based on the results of ANOVA testing, using an alpha level of .05, there was not a statistically significant difference between enrollment practices deemed 'very important' and enrollment size. Based on additional ANOVA testing, using an alpha level of .05, there was not a statistically significant difference between retention practices deemed 'very important' and 'somewhat important' and enrollment size. This null hypothesis was accepted. A summarization of the results of this ANOVA is

presented in Table 4.6. Additional detail related to the importance rating of each of the 25 retention practices listed in the ERPQ by enrollment size is provided in Appendices K and M.

Table 4.6

Univariate Analysis of Variance of Retention Practice Importance and Enrollment Size

	Type III SS	df	MS	F	p
			'Very Important'		
Between	1047.829	2	523.915	1.2642	.2887
Within	29839.313	72	414.435		
Total	30887.142	74			
			'Very Important' and 'Somewhat Important' combined		
Between	11.565	2	5.783	.9577	.9440
Within	7221.245	72	100.295		
Total	7232.810	74			

Research Question 6

Research question 6 asked: *Do differences in the perception of importance placed on certain retention practices exist with regard to campus setting – rural, suburban, urban?* This question was addressed by ANOVA testing of the corresponding null hypothesis.

Hypothesis 6. *There is no statistically significant difference between perceived importance of certain retention practices and campus setting – rural, suburban, urban.*

Based on the results of ANOVA testing, using an alpha level of .05, there was a statistically significant difference between retention practices perceived to be 'very important' and campus setting. Based on additional ANOVA testing, using an alpha level of .05, there was a statistically significant difference between retention practices perceived to be 'very important' and 'somewhat important' and campus setting. This null hypothesis was rejected. A summarization of the results of this ANOVA is presented in Table 4.7 with additional detail in Appendices L and N.

Table 4.7

Univariate Analysis of Variance of Retention Practice Importance and Campus Setting

	Type III SS	df	MS	F	p
			'Very Important'		
Between	2517.718	2	1258.859	3.1369	.0494*
Within	28894.189	72	401.308		
Total	31411.907	74			
			'Very Important' and 'Somewhat Important' combined		
Between	2607.381	2	1303.691	13.9590	.0000*
Within	6724.405	72	93.395		
Total	9331.786	74			

*denotes significance greater than p<.05.

Chapter Summary

When perceptions of importance for enrollment practices were examined, the quantitative results of this study indicated that there was a significant difference between campus setting and the enrollment management administrators' perceptions regarding retention practices considered to be very important. There was no significant difference between enrollment size and what enrollment management administrators believed to be important retention practices. There was a marked similarity between the retention practices that were utilized in community colleges, regardless of enrollment size or campus setting, and no statistically significant difference was noted.

The results of this study suggest that there is a preference for certain retention practices in community colleges. The most utilized retention practices are disability accommodations, tutoring services, open computer labs, online registration, placement testing and mandatory course placement, early warning systems, skill labs, and guidance services. The least utilized practices include full-year scheduling, minority programs, child care services, faculty mentoring, mid-term reports and learning communities. While there is a statistically significant difference in the perception of importance of certain retention practices, based on campus setting, there is no significant difference when investigating enrollment size of the institution. Regardless of institution size or geographic location, there is no statistically significant difference between those retention practices that are actually utilized in the community colleges included in the study.

CHAPTER FIVE: CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Chapter Five presents a final summary of the research study. The chapter is organized into nine sections: (a) summary of purpose; (b) summary of design, (c) summary of participants, (d) summary of procedures, (e) restatement of research questions and results, (f) summary and discussion of findings, (g) conclusions, (h) implications, and (i) recommendations for future research.

Summary of Purpose

The purpose of this study was threefold: to determine the retention practices most frequently used by community colleges to retain full-time, associate degree-seeking students from their first-to-second year of enrollment; to determine the level of importance placed on these practices as perceived by enrollment management administrators; and, to determine if differences exist between those practices most frequently used and those considered to be most important when the enrollment size and campus geographic setting of the institution are considered.

Although a number of studies have been conducted on a national level pertaining to retention of college students (Bean, 1980; Brooks-Leonard, 1991; Noel, Levitz, & Salura, 1985; Pascarella, Smart, & Ethington, 1986; Tinto, 1987), the majority of this research has been directed to the traditional student enrolled in the four-year college. There still exists a major gap in the research concentrating on community colleges and their efforts to retain students. This study was directed toward full-time, associate

degree-seeking students with the purpose of adding to the knowledge base that might lead to improvement in the year-to-year retention and degree completion rates of these students. This study of retention practices and their perceived importance may assist in the development of retention models that include elements addressing the individual institutional characteristics of enrollment size and the geographic setting of the campus.

Summary of Design

Based in the conceptual framework of Tinto's (1975) Student Integration Model, this study focused on the application of this model to the community college student. This quantitative, non-experimental study was designed as causal-comparative and descriptive in nature. In this design, there was no manipulation of either the independent or dependent variables and no random assignment of participants to groups. This design was selected in order to ascertain if a statistical difference existed between the independent variables of enrollment size–small, medium, large–and campus setting–rural, suburban, urban–and the dependent variables which were the frequency of use of an identified set of retention practices and the level importance placed on these practices in retaining full-time, associate degree-seeking students in the community college. As stated by Johnson and Christensen (2000), causal-comparative research design does not provide for reaching strong conclusions concerning cause-and-effect but the statistical results obtained are typically easier to comprehend and interpret. In this study, follow up testing allowed for each of the independent variables to be tested for differences between each of the dependent variables.

Summary of Participants

The population selected for survey in this national study consisted of all two-year, publicly controlled community colleges within the United States holding membership in the American Association of Community Colleges. The population was represented by those administrators designated by each of these institutions as having primary responsibility for enrollment management that included a student retention component.

The total population consisted of 910 institutions. From this population a sample of 269 institutions was required for the study. Due to the nature of the independent variables of enrollment size and campus setting, the sampling technique of stratified random sampling was used to ensure an appropriate representation from each of the enrollment size and campus setting categories of institutions. Through the stratified random sample process, nine categories of institutions were identified using the enrollment size and campus setting variables. Due to the small number of small/urban community colleges, all nine in the population were included in the sample. From the 269 sample surveys, a total of 135 responses were received from the selected sample for an overall response rate of 51%.

Summary of Procedures

The online survey instrument designed by the researcher, accompanied by an explanatory email message, was sent to the sample to collect all the data for this study. As responses were received online, the data were automatically entered into a computerized database provided by SurveyMonkey. The participant responses to the questions regarding enrollment size and campus setting provided the data for validation and

placement into the appropriate institutional enrollment size and campus setting categories.

Descriptive statistical analyses were utilized to address the first two research questions. Research questions four through six were addressed through the use of inferential, non-parametric statistics, inclusive of the use of univariate analysis of variance (ANOVA). The use of ANOVA greatly reduced the possibility of encountering Type I errors.

Restatement of Research Questions and Summary of Results

Six primary research questions were addressed in this study.

Research Question 1: What are the most frequently used practices for retaining full-time, associate degree-seeking students from their first-to-second year of enrollment as perceived by community college enrollment management administrators? The practice receiving the highest use as perceived by survey respondents was that of providing academic accommodations for students with learning disabilities. This practice was indicated as being used by 132 of the 135 enrollment management administrators or 99.2% of those responding. As was noted in Chapter Four, the use of this practice is significantly influenced by the Americans with Disabilities Act (ADA), thus its high use is understandable. With this factor considered, the retention practice receiving the next highest use rating was providing open-access computer labs for student use with 131 responses or 98.5% of responders utilizing this strategy. Sixteen of the 25 retention practices listed on the survey were used by more than 50% of the community college enrollment management administrators responding.

Research Question 2: What is the level of importance (ranging from very important to not at all important) placed on each of these practices as perceived by community college enrollment management administrators? The results of the data analysis indicated that the practice with the highest importance rating was providing academic accommodations for students with learning disabilities with an importance rating of 3.82 on a fully-anchored Likert scale with 4 being very important. Again, applying the rationale that the ranking of this practice in terms of importance is significantly influenced by the ADA, the retention practice rated as most important was providing assistance to students through the use of academic skills labs or centers. This retention practice received an importance rating of 3.78 on the four point Likert scale.

Research Question 3: Do differences in utilized retention practices exist with regard to institutional enrollment size–small, medium, large? Results indicated no significant difference in the retention practices utilized and enrollment size. Those practices most frequently used were the same regardless of the size of the community college.

Research Question 4: Do differences in utilized retention practices exist with regard to campus setting–rural, suburban, urban? The results of this study did not support a significant difference in the retention practices utilized when campus setting was considered. The most frequently used practices are not influenced by the geographic setting of the campus.

Research Question 5: Do differences in the perception of importance placed on certain retention practices exist with regard to institutional enrollment size–small,

medium, large? The results of the analysis of data for this question indicated that there are no statistically significant differences between the perceived importance of certain retention practices and enrollment size. There was no statistically significant difference between enrollment practices deemed 'very important' and enrollment size. Based on additional testing, there was no statistically significant difference between enrollment practices perceived as 'very important' and 'somewhat important' and enrollment size.

Research Question 6: Do differences in the perception of importance placed on certain retention practices exist with regard to institutional campus setting–rural, suburban, urban? Results of data analysis in this study support that a significant difference in the perceived importance of certain retention practices exists with regard to institutional campus setting–rural, suburban, urban. There was a statistically significant difference between retention practices deemed 'very important' and campus setting. Through additional ANOVA testing it was determined that a significant statistical difference exists between practices deemed 'very important' when combined with those rated 'somewhat important' and campus setting.

Summary and Discussion of Findings

Based on the results of data analysis, there were several primary findings identified pertaining to retention practices as perceived by community college enrollment management administrators. The research results indicate: (a) the most frequently used practice for retaining full-time associate degree-seeking students was providing academic accommodations for those with learning disabilities; (b) the retention practice perceived as being the most important was providing academic accommodations for those with

learning disabilities; (c) there were no statistically significant differences in the retention practices utilized with regard to institutional enrollment size or campus setting; (d) there were no statistically significant differences in the perception of importance of certain retention practices with regard to institutional enrollment size; and (e) there was a statistically significant difference in the perception of retention practices rated as 'very important' and 'somewhat important' with regard to campus setting.

Most Frequently Used Retention Practices

The first finding of this study revealed that there were certain retention practices used more frequently by enrollment management administrators in community colleges to retain full-time, associate degree-seeking students from their first-to-second year of enrollment. The single most frequently used retention practice by all community colleges was providing academic accommodations for students with learning disabilities. This practice was reported as being used by 99.2% of all respondents. Because the Americans with Disabilities Act mandates that these accommodations be provided, this practice is understandably ranked as the most frequently used.

Among the remaining retention practices, the following were reported as being used by more than 90% of the enrollment management administrators responding to the survey: (a) provide peer or other tutoring services, (b) provide for online registration, (c) require mandatory course placement, (d) provide academic skills labs or centers, and (e) provide assistance with completing the financial aid and/or scholarship application process.

Importance Rating of Retention Practices

The second finding of this study indicates that there are certain retention practices deemed to be 'very important' in retaining full-time, associate degree-seeking students from their first-to-second year of enrollment as perceived by community college enrollment management administrators. The retention practice reported as receiving the highest importance rating was providing academic accommodations for those with learning disabilities. This finding is consistent with the previous finding that this practice is also the most frequently used. It is a reasonable assumption to attribute both the high use and high importance of this particular practice to the ADA and its potential penalties for non-use.

With the aforementioned factors noted, the practice receiving the next highest importance rating was providing academic skills labs or centers. Academic skills labs or centers involves a service for students which provides them assistance directed toward improving basic skills and overall academic performance through special tutoring and other services. Such services often include personal and one-on-one assistance.

The results of the data analysis for research question 2 were addressed in Chapter Four (see Table 4.3). It is pertinent to note that no retention practice received an importance rating of less than 2.81 with "2" representing 'not very important' and "1" indicating 'not at all important.' Twenty-one of the 25 retention practices included in the survey were rated as either 'very important' or 'somewhat important' by all respondents without regard to the independent variables of enrollment size and campus setting.

Use of Retention Practices and Enrollment Size

The third finding of this study was that there were no differences in the retention practices used with regard to enrollment size. For this study, three classifications of enrollment were established using data from the Carnegie Foundation for the Advancement of Teaching (http://www.carnegiefoundation.org). Institutions with a full time equivalent (FTE) enrollment of less than 2000 were classified as small enrollment; 2000 to 4999 FTE were categorized as medium enrollment; and those with 5000 or greater were determined to be large enrollment. Minor differences in the rank order of frequency of use were noted for each of the three enrollment size classifications–small, medium, large (see Appendices E, F, G). The frequency of use of these retention practices was consistent among all community colleges with only a slight difference in the percentage of use. It is noted that when enrollment size is considered, providing academic accommodations for students with disabilities was used by less than 100% of medium enrollment community colleges. This is interesting in light of the Americans with Disabilities Act. However, it has also been established that the slight difference in the percentage of institutions utilizing any single retention practice is not significant.

Use of Retention Practices and Campus Setting

The fourth finding of this study was that there were no statistically significant differences in the retention practices used by community colleges with regard to rural, suburban, or urban campus setting. For this study, three categories of institutional campus setting were established as defined by the Carnegie Foundation for the

Advancement of Teaching (http://www.carnegiefoundation.org). Some minor differences in the rank order of use from highest to lowest of individual practices were present for each of the three campus setting categories (see Appendices H, I, and J).

Perception of Importance and Enrollment Size

Finding five from the study, indicated that there were no statistically significant differences in the perception of the importance of certain retention practices and institutional enrollment size–small, medium, large. A slight variation in the rating of importance of individual retention practices was evidenced in the responses from each of the enrollment size categories (see Appendices K). However, there was no statistically significant differences demonstrated through ANOVA testing.

Perception of Importance and Campus Setting

The sixth and most significant finding of this study was that there was a significant difference in the perception of the importance of certain retention practices and campus setting–rural, suburban, urban. This finding was based on ANOVA testing of the null hypothesis 'there is no statistically significant difference between perceived high importance of certain retention practices and campus setting–rural, suburban, urban.' Using an alpha level of .05, it was determined there is a statistically significant difference between the retention practices deemed 'very important' and campus setting. The testing resulted in a significance level of p.0494 and thus the rejection of the null hypothesis. Additional ANOVA testing using the alpha level of .05, indicated a statistical significance level of p.0000 between those practices deemed 'very important' when

combined with those rated as 'somewhat important' when compared to the independent variable of campus setting.

The retention practice receiving the highest average rating (3.82 on a 4 point scale) in terms of importance by all community college enrollment management administrators was providing academic accommodations for students with disabilities. This practice was consistently rated as the single most important by all community colleges regardless of campus setting.. Rural community colleges rated it at 3.78, suburban at 3.94 and urban at 3.79. Not withstanding the high importance rating of the provision of academic accommodations for students with learning disabilities by all community colleges, there were significant differences in the importance ratings when campus setting was considered. Based on the results of ANOVA testing using an alpha level of .05, there was a statistically significant difference between retention practices deemed 'Very Important' and campus setting. Ten of the 25 retention practices reflected this statistically significant difference. Those retention practices were:

1. Require mandatory academic advising prior to registration each semester,
2. Provide scheduled time for interaction with faculty,
3. Provide child care services,
4. Provide for participation in learning communities,
5. Provide peer mentoring services,
6. Provide for mentoring of students by faculty,
7. Provide mid-term progress reports,
8. Provide regularly scheduled activities for social integration,

9. Provide access to full-year schedule of course offerings, and

10. Provide special support programs for racial/ethnic minorities.

Additional detail pertaining to the importance rating of the 25 retention practices and campus setting are provided in the Appendices K, L, M, and N. Discussion of the importance ratings of the retention practices and the independent variable of campus setting–rural, suburban, urban–is summarized here.

Of the 25 retention practices included in the survey, 17 were rated by the enrollment management administrators of rural community colleges as being either 'Somewhat Important' or 'Very Important.' The remaining eight retention practices were rated as either 'Not Very Important' or 'Not at all Important.' The list of 25 retention practices and their respective importance ratings for rural community colleges are included in Appendix L. The specific retention practices with an importance rating of 'Very Important' or 'Somewhat Important' by suburban and urban community colleges and resulting in a statistically significant difference with the rating by rural institutions were:

1. Require mandatory academic advising prior to registration each term.

2. Provide scheduled outside class time for interaction with faculty.

3. Provide child care services.

4. Provide for participation in learning communities.

5. Provide peer mentoring services.

6. Provide mentoring of students by faculty.

7. Provide students with mid-term progress reports.

8. Provide regularly scheduled activities for social integration.

9. Provide access to full-year schedule of course offerings.

10. Provide special support programs for racial/ethnic minorities.

Each of these retention practices may pose serious challenges for rural community colleges for several reasons. Access to child care services in rural areas is not as readily available when compared to suburban and/or urban areas. Child care for children younger than school-age is often provided by family rather than by licensed child care providers. Thus, the provision of child care services by community colleges in rural areas may be viewed as less important than many of the other retention practices.

Learning communities most often involves the identification of a group of entering students who form a cohort for purposes of course scheduling and participating in planned activities both in and outside the formal class setting. These cohorts have a common schedule of classes, schedule time for group discussion and study outside the classroom with faculty, have access to special academic support such as tutoring, and often participate in organized social activities as a group. To participate in a learning community requires a time commitment that may not be as easily maintained for commuter students in rural communities. Travel restrictions in terms of miles to and from campus and the time commitment required of participating students may impede the success of learning communities in rural community colleges.

Peer mentoring, mentoring of students by faculty, and scheduled opportunities for interaction with faculty outside class time are retention practices that also involve a time commitment that may be a challenge for students attending rural community colleges.

Many community colleges, and particularly rural community colleges, do not provide on-campus housing. The majority of students attending these institutions live at home and commute to campus through personal transportation due to limited public transportation systems in rural areas. Because of the travel involved, both in terms of cost and time commitment, these students are often not able (or willing) to make the necessary commitment to participate in the types of services provided through these retention practices. Without student participation, community colleges are reluctant to offer such services, thus resulting in the low rating of importance of peer mentoring, mentoring by faculty, and outside class interaction with faculty as reflected in this study.

Participation in special support programs for racial/ethnic minorities also involves a time commitment on the part of students. This retention practice may also not be relevant to institutions with limited minority enrollments. Because the survey did not differentiate between institutions based on minority enrollment, it is not possible to elaborate on the reason(s) for the low importance rating of this particular retention practice.

The provision of mid-term progress reports and access to a full-year schedule of course offerings do not rely on student participation, time commitment by students or other similar challenges as stated in the discussion of the previous retention practices with a low importance rating. Further research and analysis would be needed to address those issues and to explain the low importance rating of these retention practices by rural community college enrollment management administrators.

Analysis of the responses from urban community colleges pertaining to rating of importance indicate that 100% of the 25 of the retention practices were rated as 'Very Important' or 'Somewhat Important' by the enrollment management administrators of these institutions. As was true with suburban community colleges, a statistically significant difference exists from the rural institution regarding the perception of importance of certain retention practices. The retention practices demonstrating the significant difference for urban community colleges is the same as those of the suburban institutions.

Conclusions

Cone and Foster (2002) define convergent findings as those that are similar to the findings of comparable research. Differences in findings with research on similar topics are referred to by these authors as divergent findings. Due to the paucity of similar research, it is difficult to compare the findings of this study with that of other researchers. Research within the community college sector of higher education is limited and research focused on the topic of the use and importance of specific retention practices is even more so. However, there were several conclusions generated from the findings of this study.

Frequency of Use of Retention Practices

The first conclusion of this study is that the retention practices most frequently employed by enrollment management administrators to retain full-time, associate degree-seeking students are common among all community colleges. The existing literature in this area is very limited, however, the findings from this study were convergent with that of Habley and McClanahan (2004) in terms of current retention practice. The high

frequency of use of each of these practices as indicated by responses to the survey questions indicate that these practices might be considered to be "best practices" by the enrollment management administrators participating in this study.

In this study and that of Habley and McClanahan (2004), several retention practices were found to be in common among what they termed "high-performing" institutions in regard to student retention. Habley and McClanahan categorized those practices into three areas: (a) academic advising, (b) learning support, and (c) assessment. Within these categories, the following specific retention practices found in both the Habley and McClanahan study as well as the present study were: (a) academic skills labs/centers, (b) advising interventions for at-risk students, (c) learning communities, and (d) programs for racial/ethnic minorities.

The current study does not support that enrollment size influences the use of any particular strategy by enrollment management administrators in efforts to retain full-time, associate degree-seeking students in the community college. This conclusion is somewhat divergent from that of Bailey et al., (2005b) who suggested that enrollment size is a characteristic that affects the success of community college students. These authors found that graduation rates go down as enrollment size increases. These findings appear to be in opposition one to the other in that the literature supports the premise that high year-to-year retention rates are directly linked to high graduation rates.

Another conclusion drawn from this study was that campus setting has no influence on the frequency of use of any retention practice. Bailey et al., (2005b) also found that there is no strong argument for expecting any particular effect on student

success based on a college's location in an urban, suburban, or rural area. However, these authors did conclude that suburban colleges might be expected to have greater resources especially in states where local taxes support these institutions. From the findings of the present study, the conclusion that campus setting has no influence on the use of any retention practice is convergent with the findings of Bailey et al., (2005b).

Importance of Retention Practices

As there were conclusions associated with their frequency of use, there were also conclusions derived from this study regarding the level of importance placed on the 25 retention practices as perceived by community college enrollment management administrators. It can be concluded that each of the retention practices were considered to be equally important by respondents to the survey. This finding is also convergent with the finding of Habley and McClanahan (2004) who found that among community colleges, the retention practices considered to be of greatest importance in student retention were similar to the 25 practices identified in the current study. Although some practices were rated slightly higher in this study, all 25 practices were rated as being either very or somewhat important.

Another conclusion of this study is divergent from the findings of Bailey et al., (2005b). These authors found that size is negatively related to measures of student success and that students who attend larger institutions are less likely to earn an associate degree than those who attend smaller two-year colleges. Their conclusion was that a more personalized atmosphere and individualized special services would seem more likely to be found at a smaller institution. However, the current study found that there is

no significant difference in the perception of the importance of any retention practices in regard to enrollment size or campus setting and diverges from that of Bailey.

The sixth conclusion of this study is based on the finding that there is a statistically significant difference in the perception of importance of certain retention practices and campus setting. As was stated in the discussion of findings, the results of ANOVA testing, using an alpha level of .05, there was a statistically significant difference between retention practices deemed 'Very Important' and the campus setting of rural, suburban, and urban community colleges. Based on additional ANOVA testing, using an alpha level of .05, there was a stronger statistical difference between those retention practices deemed 'Very Important' and 'Somewhat Important' and campus setting.

This finding converges with the findings of Bailey et al., (2005b) who found that there is no strong argument for expecting any particular effect on student success (including retention) based on the college's location in an urban, suburban, or rural area. The current study revealed there was a significant difference between campus setting and the respective community college enrollment management administrators' beliefs regarding the importance of certain retention practices.

Appropriate Theoretical Framework for Retention Models

The final conclusion of this study is that Tinto's (1993) work regarding social and academic integration along with Bean's (1985) theory of student departure and attrition served as appropriate guides in studying the use and importance of retention practices in efforts to retain full-time, associate degree-seeking students in the community college.

Although both theories are grounded in the four-year, residential college and were focused on traditional age students, they do posit that the major factor in student persistence is how well the student is integrated into the institution. Both agree that the interaction between the student and the academic and social systems are vital to the student connecting with the institution. These academic and social systems are often demonstrated through the services and assistance associated with the retention practices examined in this study.

It should be noted, however, that although these theories were appropriate as the conceptual framework for this study, the models that have been developed based on these theories are applicable to the four-year college and not appropriate for the community college. New perspectives need to be included in student retention models to work effectively with the student in the community college setting. Elkins, Braxton, and James (2000) recommend that Tinto's formulations regarding student separation theory be replicated especially in the community college to test the models in different environments.

Implications of the Study

There are several implications in the area of retention practices used by community colleges drawn from this study. Prior to this study, research pertaining to student retention had focused on the perspective of the institutional president or chief academic officer. In this study, we now have the perceptions of the enrollment management administrator regarding the use and importance of current retention practices. However, an implication resulting from the findings of this study is that their

perceptions are not significantly different from that of other college administrators. It would appear that their insight would be different because of their proximity to and often direct involvement in the services provided through the retention practices which were the focus of this study.

Another implication from this study and that of others (Bailey et al, 2004; Habley & McClanahan, 2004; Jenkins, 2006; Lotkowski, Robbins, & Noeth, 2005; Wild & Ebbers, 2002) is that identified best practices, while useful in the student retention effort in the community college, appear to not be having the desired effect of improving retention rates. It can be argued that without these practices retention rates might be lower, however, they do not appear to have improved these rates over time as reflected in the national data.

Factors associated with retention are not significantly impacted by the enrollment size or geographic setting (rural, suburban, urban) of the campus is another implication of this study. Other determinants beyond the institution's control are at play in the decision by students to leave the community college. Enrollment management administrators must become more involved in retention research to assist in the development of retention models directed toward the community college student. Of particular interest are those implications that indicate the continuing need for the development of effective retention models for two-year institutions. Such models are sorely needed if the retention rates of community college students are to be improved. Although several retention models have been developed through research at the baccalaureate level, these models have not proven to be effective in serving the needs of community colleges.

Over the past 30 plus years, retention practices have been evolving but a search for applicable and effective retention models to be implemented by community college enrollment management professionals is thwarted by the severe lack of available research at the two-year college level. While studies like the current one may add to the research in this area, much more research is needed if effective retention policies and practices are to be developed. Without doubt, the existing data demonstrate that retention of community college students continues to be a concern for legislators, policy makers, governing boards, and community college administrators. More data-driven research must be conducted to address these concerns.

The findings of this study show that the enrollment size of the institution is not a major factor in the decision to use any particular retention practice. However, campus setting, particularly for rural community colleges, does impact the retention practices deemed to be important in the retention efforts of the institution as perceived by those administrators charged with the development and implementation of enrollment management plans. The implication is that this variable should be a consideration by these administrators in their retention planning process. This finding has also added to the body of knowledge pertaining to community college retention.

Recommendations for Future Study

The first recommendation for future research in retention practices would be the need to determine any relationships between the retention practices most frequently used and considered to be the most important and the actual retention rates of community colleges. It would also prove valuable for future research to include comparative studies

such as those practices used and considered to be most important in retaining part-time and non-degree seeking students within these same institutions.

Although included as demographic descriptors of the institutions studied, the present study did not provide for the analysis of data regarding single-campus and multi-campus as variables which might impact the use of certain retention practices or the level of importance placed on them. More in-depth research might include the single-campus/multi-campus factors as independent variables.

The current study was posited solely from the perspective of the enrollment management administrators of publicly controlled community colleges in the United States. Additional studies in the area of retention practices and their importance from the perspectives of the faculty and students who have dropped out would also add to the knowledge base in this arena.

Wild and Ebbers (2002) stated, "It is imperative that new research initiatives be undertaken that are targeted directly at community colleges. The initiatives should include the development of theories and models related specifically to community college student retention" (p. 504). Although there are a number of retention models centered on four-year, residential college students, future research, building upon the foundation of this study, could lead to the development of such models for community college student retention when institutional enrollment size and campus setting are considered.

This study determined that a statistically significant difference exists in the perception of importance of certain retention practices and campus setting–rural, suburban, urban. Additional research is needed to further explore this variable and to

validate this finding. Future research regarding the link between effective retention practices and the campus geographic setting may lead to the development of student retention models that address differences in campus setting.

It is also recommended that further research be conducted regarding any relationship between year-to-year retention and graduation rates at the community college level. Bailey et al., (2005a) concluded that in general, community colleges located in urban areas were predicted to have significantly lower graduation rates while rural community colleges could expect to have much higher success in terms of graduation. The same study posited that enrollment size is an important predictor of degree completion rates with larger enrollment community colleges having a 9 to 14 percent lower graduation rate than smaller institutions. With these data in mind, additional research is needed.

Chapter Summary

Chapter Five provided a summary of the research study. Information concerning the purpose and design of the study were presented, along with demographic data regarding participants. Procedures employed in carrying out the study were reviewed with a restatement of the research questions and a summary of the results presented. This was followed by a summary and discussion of the findings from the study. Six primary conclusions drawn from the research were offered followed by a discussion of possible implications. Chapter Five concluded with a presentation of recommendations for future research pertaining to community college student retention practices.

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APPENDIX A: SURVEY INSTRUMENT

Effective Retention Practices Questionnaire

1. Welcome

Thank you for agreeing to participate in this survey. The purpose is to gather data pertaining to the current practices used or services provided by community colleges within the United States to assist these institutions in improving the fall-to-fall retention rate for first-time, full-time, associate degree-seeking students. Your participation will assist in determining if the practices used and/or services provided are significantly different based on the enrollment size and/or the geographic setting of the institution.

Please proceed to the next page to begin the survey.

Effective Retention Practices Questionnaire

2. Section I: Institutional Information

In Section I, you are asked to provide information regarding your community college and your position with the institution.

*** 1. Using the enrollment scale provided, which of the following best describes your institutional enrollment size and geographic setting?**

small enrollment = 1 to 1999 FTE students;
medium enrollment = 2000 to 4999 FTE students;
large enrollment = 5000 or more FTE students;

Please check only one answer.

- ◯ small enrollment and rural setting
- ◯ medium enrollment and rural setting
- ◯ large enrollment and rural setting
- ◯ small enrollment and suburban setting
- ◯ medium enrollment and suburban setting
- ◯ large enrollment and suburban setting
- ◯ small enrollment and urban setting
- ◯ medium enrollment and urban setting
- ◯ large enrollment and urban setting

*** 2. Which of the following best describes your community college organization?**

- ◯ single-campus
- ◯ multi-campus

*** 3. Which of the following best describes the retention rate (percentage retained) for first-time, full-time, associate degree-seeking students from fall 2006 to fall 2007 or the most recent academic year for which you have data? [If actual rate is unknown, please estimate]**

- ◯ 0 to 25%
- ◯ 26 to 50%
- ◯ 51 to 75%
- ◯ 76% or more

Effective Retention Practices Questionnaire

*** 4. Does your institution have a written enrollment management plan that includes strategies or practices identified to assist in efforts to retain first-time, full-time, associate degree-seeking students from their first to second year of enrollment?**

- ◯ Yes
- ◯ No

5. What is the title of your position with the institution?

6. Approximately what percentage of your time is spent on responsibilities directly related to the development and implementation of your institution's plan to increase the retention rate of first-time, full-time, associate degree-seeking students?

- ◯ 0%
- ◯ 1 to 25%
- ◯ 26 to 50%
- ◯ 51 to 75%
- ◯ 76% or more

Effective Retention Practices Questionnaire

3. Section II: Retention Practices

The following are examples of practices used or services provided by community colleges to assist in retaining first-time, full-time, associate degree-seeking students from their first to second year of enrollment. Please check the appropriate box to indicate if that practice or service is used by your institution.

*** 1. Which of the following practices or services are currently used by your institution to retain first-time, full-time, associate degree-seeking students from their first to second year of enrollment? (Please check all that apply)**

- ☐ Require an extended freshman seminar or orientation credit course
- ☐ Provide a written or computerized degree plan for each entering student
- ☐ Provide peer or other tutoring services
- ☐ Require mandatory academic advising prior to registration each term
- ☐ Provide scheduled outside class time for interaction with faculty
- ☐ Provide individual career exploration and guidance services
- ☐ Provide academic skills labs or centers
- ☐ Provide child care services
- ☐ Provide assistance with completing financial aid and/or scholarship application process
- ☐ Provide open-access computer labs
- ☐ Provide written or computerized information on courses that transfer to four-year colleges
- ☐ Provide academic accommodations for students with learning disabilities
- ☐ Provide for participation in learning communities
- ☐ Provide peer mentoring services
- ☐ Provide mentoring of students by faculty
- ☐ Provide early warning system for academically at-risk students
- ☐ Provide students with mid-term progress reports
- ☐ Provide regulary scheduled activities for social integration
- ☐ Provide personal counseling services
- ☐ Provide for on-line registration
- ☐ Provide access to full-year schedule of course offerings
- ☐ Provide special advising interventions for at-risk students
- ☐ Provide special support programs for racial/ethnic minorities
- ☐ Require mandatory course placement testing
- ☐ Require placement in developmental/remedial courses for students with low placement test scores

Effective Retention Practices Questionnaire

4. Section III: Level of Importance

Based upon your individual perception, please rate the level of importance of each of the following practices or services in retaining first-time, full-time, associate degree-seeking students. Please rate each practice or service even if it is not currently being used or provided by your community college.

*** 1. What is your perception as to the level of importance of each of the following practices or services in retaining first-time, full-time, associate degree-seeking students from their first to second year of enrollment? (You must rate every practice or service even if it is not currently used by your institution.)**

	Very Important	Somewhat Important	Not Very Important	Not at all Important
an extended freshman seminar or orientation credit course	○	○	○	○
an individual degree plan for each student	○	○	○	○
peer or other tutoring services	○	○	○	○
mandatory academic advising prior to registration each term	○	○	○	○
scheduled outside class time for interaction with faculty	○	○	○	○
individualized career exploration and guidance services	○	○	○	○
academic skills labs or centers	○	○	○	○
child care services	○	○	○	○
assistance with completing financial aid and/or scholarship application process	○	○	○	○
open-access computer labs	○	○	○	○
information on courses that transfer to four-year colleges	○	○	○	○
academic accommodations for students with learning disabilities	○	○	○	○
learning communities available	○	○	○	○
peer mentoring	○	○	○	○
mentoring of students by faculty	○	○	○	○
an early warning system for academicall at-risk students	○	○	○	○
providing students with mid-term progress reports	○	○	○	○
regularly scheduled activities for social	○	○	○	○

Effective Retention Practices Questionnaire

integration				
personal counseling services	○	○	○	○
on-line registration available	○	○	○	○
access to full-year schedule of academic course offerings	○	○	○	○
special advising interventions for at-risk students	○	○	○	○
special support programs for racial/ethnic minorities	○	○	○	○
mandatory course placement testing	○	○	○	○
mandatory placement in developmental/remedial courses for students with low placement test scores	○	○	○	○

2. Please list any other practice or service you perceive to be "very important" in retaining first-time, full-time, associate degree-seeking students from their first to second year of enrollment. (This question is optional.)

1.
2.
3.
4.
5.

APPENDIX B: INTRODUCTORY E-MAIL

My name is Merle Dempsey and I am a doctoral candidate in Higher Education Administration at the Marshall University Graduate College in Huntington, West Virginia. I am currently engaged in research for my dissertation on Enrollment Management Administrators' Perceptions Regarding Community College Student Retention Practices.

This is a national study and you have been selected for participation based on information located in the 2007 membership directory of the American Association of Community Colleges (AACC). It is vitally important that I receive responses that are representative of community colleges of varying levels of enrollment (small, medium, large) and geographic setting (rural, suburban, urban). Your participation as a representative of your community college is crucial to the successful completion of this dissertation.

The online survey consists of three sections and, based upon a survey pilot, should require approximately ten minutes to complete. By completing and submitting the survey electronically, you will be providing your informed consent and acknowledge that your participation is strictly voluntary.

It is important that you complete and submit the survey by _____. I know your time is valuable and I sincerely thank you for assisting me in completing the requirements of my doctoral program.

Here is a link to the survey:
http://www.surveymonkey.com/s.aspx

This link is uniquely tied to this survey and your email address, please do not forward this message.

Please not: If you do not wish to receive further emails regarding this survey, please click the link below and you will be automatically removed from this mailing list.
http://www.surveymonkey.com/optout.aspx

Thank your for your assistance in this research project.

Sincerely,

Merle Dempsey
Doctoral Candidate
Marshall University

APPENDIX C: FOLLOW UP E-MAIL TO NON-RESPONDERS

My name is Merle Dempsey and I am a doctoral student at Marshall University Graduate College in Huntington, West Virginia. A few weeks ago you should have received an email requesting your participation in an online survey as part of my dissertation research project. The research pertains to the perceptions of community college administrators' regarding the level of use and the degree of effectiveness of an identified set of practices in retaining associate degree-seeking students from their first-to-second year of enrollment.

As of this date, I have not received the number of responses needed to complete this research project. It is vitally important that I receive responses that are representative of community colleges with varying levels of enrollment (small, medium, large) and geographic setting (rural, suburban, urban). Responses must be representative of the general community college population. By completing and submitting the online survey, you will be providing essential data from your institution that will allow for the successful completion of my research project. The survey will take approximately ten minutes to complete.

Here is a link to the survey:
http://www.surveymonkey.com/s.apx

This link is uniquely tied to this survey and your email address, please do not forward this message.

Thank you for you participation.

Please note: If you do not wish to receive further emails regarding this survey, please click the link below and you will be automatically removed from our mailing list.
http://www.surveymonkey.com/optout.aspx

Sincerely,

Merle Dempsey
Doctoral Candidate
Marshall University

APPENDIX D: IRB APPROVAL FORM

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Office of Research Integrity
Institutional Review Board

Tuesday, September 23, 2008

Michael W. Galbraith, Ed.D.
Leadership Studies
100 Angus E. Peyton Drive
South Charleston, WV. 25303

RE: IRB Study # EX08-0026 **At:** Marshall IRB 2

Dear Dr. Galbraith:

Protocol Title:
Enrollment Management Administrators' Perceptions of Community College Retention Practices

Expiration Date:	9/22/2009	
Our Internal #:	5223	
Type of Change:	Annual Report	Approved
Expedited ?:	☐	
Date of Change:	9/23/2008	
Date Received:	9/23/2008	
On Meeting Date:		
Description:	The above study and informed consent were approved for an additional 12 months by the Marshall University IRB#2 Chair. This study is for student Merle Dempsey. The approval will expire 9/22/08. Continuing review materials should be submitted no later than 30 days prior to the expiration date.	

Respectfully yours,

Stephen D. Cooper, Ph.D.
Marshall University IRB #2 Chairperson

APPENDIX E: FREQUENCY OF USE OF RETENTION PRACTICES BY SMALL ENROLLMENT COMMUNITY COLLEGES

Practice	Number	Percent
disability accommodations	41	100.0
tutoring services	40	97.6
open-access computer labs	40	97.6
on-line registration	37	90.2
mandatory course placement	37	90.2
required placement testing	36	87.8
assistance with financial aid process	36	87.8
course transfer information	35	85.4
early warning system	35	85.4
academic skills labs	34	82.9
career guidance services	33	80.5
freshman orientation	29	70.7
personal counseling services	28	68.3
mandatory academic advising	26	63.4
social integration activities	26	63.4
at-risk advising	25	61.0
individual degree plan	24	58.5
peer mentoring	17	41.5
faculty interaction	16	39.0
learning communities	15	36.6
mid-term reports	15	36.6
faculty mentoring	14	34.1
child care	11	26.8
minority programs	11	26.8
full-year schedule	9	22.0

APPENDIX F: FREQUENCY OF USE OF RETENTION PRACTICES BY MEDIUM ENROLLMENT COMMUNITY COLLEGES

Practice	Number	Percent
open-access computer labs	47	100.0
disability accommodations	46	97.9
tutoring services	46	97.9
on-line registration	45	95.7
academic skills labs	43	91.5
assistance with financial aid process	43	91.5
mandatory course placement	43	91.5
course transfer information	42	89.4
required placement testing	41	87.2
career guidance services	38	80.9
early warning system	38	80.9
social integration activities	36	76.6
personal counseling services	36	76.6
at-risk advising	32	68.1
child care	27	57.4
freshman orientation	24	51.1
faculty interaction	21	44.7
individual degree plan	21	44.7
mid-term reports	21	44.7
learning communities	20	42.6
minority programs	19	40.4
mandatory academic advising	18	38.3
peer mentoring	18	38.3
faculty mentoring	15	31.9
full-year schedule	9	22.0

APPENDIX G: FREQUENCY OF USE OF RETENTION PRACTICES BY LARGE ENROLLMENT COMMUNITY COLLEGES

Practice	Number	Percent
disability accommodations	45	100.0
on-line registration	45	100.0
tutoring services	45	100.0
academic skills labs	44	97.8
open-access computer labs	44	97.8
career guidance services	42	93.3
assistance with financial aid process	43	91.5
mandatory course placement	41	91.1
required placement testing	39	86.7
personal counseling services	36	80.0
course transfer information	35	77.8
at-risk advising	33	73.3
learning communities	30	66.7
early warning system	30	66.7
social integration activities	30	66.7
individual degree plan	24	53.3
peer mentoring	22	48.9
minority programs	22	48.9
child care	22	48.9
faculty interaction	19	42.2
freshman orientation	16	35.6
faculty mentoring	15	33.3
mid-term reports	13	28.9
mandatory academic advising	10	22.2
full-year schedule	10	22.2

APPENDIX H: FREQUENCY OF USE OF RETENTION PRACTICES BY RURAL COMMUNITY COLLEGES

Practice	Number	Percent
disability accommodations	65	98.5
open-access computer labs	65	98.5
tutoring services	65	98.5
assistance with financial aid process	61	92.4
on-line registration	61	92.4
required placement testing	61	92.4
mandatory course placement	58	87.9
academic skills labs	56	84.8
career guidance services	55	83.3
course transfer information	51	77.3
early warning system	51	77.3
personal counseling services	46	69.7
social integration activities	42	63.6
freshman orientation	41	62.1
at-risk advising	39	59.1
mandatory academic advising	36	54.5
individual degree plan	28	42.4
faculty interaction	26	39.4
mid-term reports	25	37.9
peer mentoring	22	33.3
child care	21	31.8
faculty mentoring	17	25.8
full-year schedule	17	25.8
learning communities	16	24.2
minority programs	12	18.2

APPENDIX I: FREQUENCY OF USE OF RETENTION PRACTICES BY SUBURBAN COMMUNITY COLLEGES

Practice	Number	Percent
disability accommodations	33	100.0
tutoring services	32	97.0
academic skills labs	32	97.0
open-access computer labs	32	97.0
on-line registration	32	97.0
mandatory course placement	30	90.9
required placement testing	29	87.9
course transfer information	29	87.9
assistance with financial aid process	28	84.8
career guidance services	27	81.8
individual degree plan	26	78.8
social integration activities	26	78.8
early warning system	23	69.7
personal counseling services	23	69.7
at-risk advising	23	69.7
learning communities	21	63.6
child care	17	51.5
minority programs	17	51.5
faculty interaction	16	48.5
freshman orientation	15	45.5
peer mentoring	13	39.4
faculty mentoring	11	33.3
mandatory academic advising	10	30.3
mid-term reports	7	21.2
full-year schedule	6	18.2

APPENDIX J: FREQUENCY OF USE OF RETENTION PRACTICES BY URBAN COMMUNITY COLLEGES

Practice	Number	Percent
disability accommodations	34	100.0
on-line registration	34	100.0
open-access computer labs	34	100.0
tutoring services	33	97.1
academic skills labs	33	97.1
mandatory course placement	33	97.1
course transfer information	32	94.1
career guidance services	31	91.2
assistance with financial aid process	31	91.2
personal counseling services	31	91.2
early warning system	29	85.3
learning communities	28	82.4
at-risk advising	28	82.4
required placement testing	26	76.5
social integration activities	24	70.6
minority programs	23	67.6
child care	22	64.7
peer mentoring	22	64.7
faculty mentoring	16	47.1
individual degree plan	15	44.1
faculty interaction	14	41.2
freshman orientation	13	38.2
mid-term reports	13	38.2
mandatory academic advising	8	23.5
full-year schedule	6	17.6

APPENDIX K: IMPORTANCE RATING OF RETENTION PRACTICES BY ENROLLMENT SIZE

Practice	Small	Medium	Large	Average
freshman orientation	3.63	3.52	3.49	3.54
individual degree plan	3.63	3.43	3.72	3.59
tutoring services	3.55	3.59	3.60	3.58
mandatory academic advising	3.50	3.22	3.30	3.33
faculty interaction	3.15	3.22	3.14	3.17
career guidance services	3.33	3.50	3.47	3.43
academic skills labs	3.75	3.80	3.79	3.78
child care	2.85	2.87	2.72	2.81
assistance with financial aid process	3.50	3.74	3.63	3.63
open-access computer labs	3.50	3.59	3.58	3.56
course transfer information	3.43	3.52	3.42	3.46
disability accommodations	3.83	3.76	3.88	3.82
learning communities	2.73	2.98	2.93	2.88
peer mentoring	2.90	2.98	2.77	2.88
faculty mentoring	3.10	3.15	3.14	3.13
early warning system	3.68	3.80	3.70	3.73
mid-term reports	2.83	2.98	3.08	2.97
social interaction activities	3.10	3.33	3.23	3.22
personal counseling services	3.25	3.52	3.37	3.39
on-line registration	3.30	3.61	3.53	3.49
full-year schedule	2.98	3.15	2.98	3.04
at-risk advising	3.68	3.72	3.65	3.68
minority programs	3.18	3.37	3.09	3.22
required placement testing	3.70	3.70	3.84	3.74
mandatory course placement	3.75	3.65	3.86	3.75

Note. Very Important = 4; Somewhat Important = 3; Not Very Important = 2; Not at all Important = 1

APPENDIX L: IMPORTANCE RATING OF RETENTION PRACTICES BY CAMPUS SETTING

Practice	Rural	Suburban	Urban	Average
freshman orientation	3.45	3.74	3.53	3.54
individual degree plan	3.38	3.81	3.79	3.59
tutoring services	3.58	3.65	3.53	3.58
mandatory academic advising	3.30	3.52	3.24	3.33
faculty interaction	2.98	3.45	3.26	3.17
career guidance services	3.27	3.68	3.53	3.43
academic skills labs	3.78	3.77	3.79	3.78
child care	2.53	3.10	3.09	2.81
assistance with financial aid process	3.63	3.65	3.62	3.63
open-access computer labs	3.59	3.52	3.53	3.56
course transfer information	3.30	3.61	3.62	3.46
disability accommodations	3.78	3.94	3.79	3.82
learning communities	2.55	3.19	3.24	2.88
peer mentoring	2.59	3.26	3.09	2.88
faculty mentoring	2.88	3.48	3.29	3.13
early warning system	3.64	3.87	3.76	3.73
mid-term reports	2.78	3.29	3.03	2.97
social interaction activities	3.03	3.55	3.29	3.22
personal counseling services	3.27	3.45	3.56	3.39
on-line registration	3.44	3.68	3.41	3.49
full-year schedule	2.91	3.35	3.00	3.04
at-risk advising	3.63	3.81	3.68	3.68
minority programs	2.95	3.45	3.50	3.22
required placement testing	3.7	3.87	3.71	3.74
mandatory course placement	3.67	3.90	3.76	3.75

Note. Very Important = 4; Somewhat Important = 3; Not Very Important = 2; Not at all Important = 1

APPENDIX M: PRACTICES RATED VERY IMPORTANT / SOMEWHAT IMPORTANT BY ENROLLMENT SIZE

Practice	Small	Medium	Large
	%	%	%
freshman orientation	90.0	86.4	93.0
individual degree plan	90.0	89.1	93.1
tutoring services	95.0	95.6	100.0
mandatory academic advising	95.0	89.1	88.4
faculty interaction	87.5	87.0	83.8
career guidance services	95.0	93.5	100.0
academic skills labs	100.0	100.0	100.0
child care	67.5	73.9	69.8
assistance with financial aid process	97.5	100.0	100.0
open-access computer labs	100.0	97.9	100.0
course transfer information	95.0	91.3	86.0
disability accommodations	100.0	100.0	100.0
learning communities	67.5	74.0	79.0
peer mentoring	82.5	76.1	74.4
faculty mentoring	87.5	80.4	83.7
early warning system	100.0	97.8	95.3
mid-term reports	70.0	67.4	81.4
social interaction activities	87.5	89.1	88.4
personal counseling services	92.5	91.3	97.7
on-line registration	92.5	93.5	95.3
full-year schedule	67.5	78.2	74.4
at-risk advising	100.0	97.8	95.4
minority programs	87.5	95.7	79.1
required placement testing	100.0	95.6	100.0
mandatory course placement	100.0	93.5	100.0

APPENDIX N: PRACTICES RATED VERY IMPORTANT / SOMEWHAT IMPORTANT BY CAMPUS SETTING

Practice	Rural	Suburban	Urban
	%	%	%
freshman orientation	81.2	100.0	88.2
individual degree plan	85.9	96.8	94.1
tutoring services	95.3	100.0	97.1
mandatory academic advising	73.5	96.7	91.2
faculty interaction	78.1	93.5	94.2
career guidance services	92.2	100.0	100.0
academic skills labs	100.0	100.0	100.0
child care	54.7	87.1	85.3
assistance with financial aid process	98.5	100.0	100.0
open-access computer labs	98.4	100.0	100.0
course transfer information	84.4	100.0	94.1
disability accommodations	100.0	100.0	100.0
learning communities	54.7	90.3	94.2
peer mentoring	62.5	96.7	88.2
faculty mentoring	71.9	93.5	97.1
early warning system	95.3	100.0	100.0
mid-term reports	62.5	90.3	76.4
social interaction activities	79.7	100.0	94.1
personal counseling services	89.1	100.0	97.1
on-line registration	92.2	100.0	91.2
full-year schedule	67.2	83.9	76.5
at-risk advising	95.3	100.0	100.0
minority programs	78.1	93.5	100.0
required placement testing	96.8	100.0	100.0
mandatory course placement	95.3	100.0	100.0

APPENDIX O: INSTITUTIONS INCLUDED IN THE STUDY

Alabama Southern Community College
Alamance Community College
Allegany College of Maryland
Alvin College
American River College
Anoka Hennepin Technical College
Arapahoe Community College
Arkansas Northeastern College
Ashland Community and Technical College
Austin Community College
Bakersfield College
Baltimore City Community College
Barstow Community College
Baton Rouge Community College
Bishop State Community College
Black Hawk College
Blue Mountain Community College
Bluegrass Community and Technical College
Bossier Parish Community College
Brookhaven College
Broward Community College
Brunswick Community College
Bucks County Community College
Butler County Community College
Butte College
Caldwell Community and Technical College
Capital Community College
Carteret Community College
Cascadia Community College
Central Arizona College
Central Carolina Community College
Central Florida Community College
Central Maine Community College
Central Virginia Community College
Cerro Coso Community College
Chandler/Gilbert Community College
Chattnooga State Technical Community College
Chemeketa Community College
Chesapeake College
Clarendon College
Clark State Community College
Cleveland State Community College
Coastline Community College
Coconino Community College
Coffeyville Community College
Colby Community College
College of Alameda
College of Dupage
College of Lake County
College of Southern Idaho
College of Southern Maryland
Collin County Community College District
Columbia-Green Community College
Columbus State Community College
Community College of Allegheny County
Community College of Aurora
Community College of Denver
Community College of Rhode Island
Compton Community College
Copiah-Lincoln Community College
Copper Mountain Community College
Cosumnes River College
Cuyamaca College
Dabney S. Lancaster Community College
Dakota County Community College
Dallas County Community College District
Danville Area Community College
Dawson Community College
Daytona Beach Community College
Dekalb Technical College
Delaware Technical and Community College
Diablo Valley College
Durham Technical Community College
Dyersburg State Community College
East Arkansas Community College

East Central College
East Central Community College
East Los Angeles College
Eastern Arizona College
Eastern Shore Community College
Eastern Wyoming College
Edison College
Edison State Community College
Elgin Community College
Elizabethtown Community and Technical College
Enterprise-Ozark Community College
Essex County College
Estrella Mountain Community College
Fayetteville Technical Community College
Folsom Lake College
Fredrick Community College
Fresno City College
Front Range Community College
Fullerton College
Garrett College
Gaston College
Gateway Community and Technical College
Gateway Community College
Gavilan College
Georgia Perimeter College
Germanna Community College
Glendale Community College
Gordon College
Green River Community College
Gulf Coast Community College
Harrisburg Area Community College
Harry S. Truman - City Colleges of Chicago
Hazard Community and Technical College
Heartland Community College
Henry Ford Community College
Hinds Community College
Holyoke Community College
Hopkinsville Community College
Ilisagvik College
Illinois Central College
Illinois Valley Community College
Independence Community College
Indian Hills Community College
Inver Hills Community College
Itasca Community College
J Sargent Reynolds Community College
James H. Faulkner State Community College
Jamestown Community College
Jefferson Community and Technical College
Jefferson Community College
JF Drake State Technical College
JF Ingram State Technical College
John Tyler Community College
John Wood Community College
Kalamazoo Valley Community College
Kankakee Community College
Kansas City Kansas Community College
Kilgore College
Kirkwood Community College
Labette Community College
Lake City Community College
Lake Michigan College
Lake Tahoe Community College
Lamar Community College
Lawson State Community College
Lenoir Community College
Lincoln Land Community College
Linn State Technical College
Lorain County Community College
Lord Fairfax Community College
Lurleen B. Wallace Community College
Luzerne County Community College
Madison Area Technical College
Martin Community College
Mayland Community College
Mesalands Community College
Metropolitan Community College - Blue River

Metropolitan Community College - Longview
Midlands Technical College
Mid-South Community College
Mid-South Technical College
Mid-State Technical College
Miles Community College
Milwaukee Area Technical College
Minneapolis Community and Technical College
Mira Costa College
Mississippi Gulf Coast Community College
Moberly Area Community College
Modesto Junior College
Mohave Community College
Monroe Community College
Montgomery College - Rockville
Montgomery County Community College
Motlow State Community College
Mott Community College
Mount Hood Community College
Mount Wachusett Community College
Murray State College
Napa Valley College
Neosho County Community College
New Hampshire Technical Instititute
Normandale Community College
North Central State College
North Florida Community College
North Hennepin County Community College
North Harris County College - Houston
North Shore Community College
Northampton County Area Community College
Northeast Iowa Community College
Northeastern Technical College
Northern Maine Community College
Northern Virginia Community College
NorthWest Arkansas Community College
Northwest Iowa Community College
Northwest Shoals Community College
Northwestern Michigan College
Olney Central College
Orange Coast College
Orangeburg-Calhoun Technical College
Owens Community College
Owensboro Community and Technical College
Pamilico Community College
Parkland College
Patrick Henry Community College
Paul D. Camp Community College
Pearl River Community College
Pellissippi State Technical Community College
Pennsylvania Highlands Community College
Penn Valley Community College
Peralta College
Piedmont Virginia Community College
Pikes Peak Community College
Pima Community College
Portland Community College
Pueblo Community College
Quinebaug Valley Community College
Rainy River Community College
Rappahannock Community College
Red Rocks Community College
Redlands Community College
Reedley College
Richland Community College
Rose State College
Roxbury Community College
Saint Louis Community College- Forest Park
San Bernardino Valley College
San Diego Mesa College
Santa Barbara City College
Santa Fe Community College
Santa Rosa Junior College
Santiago Canyon College
Scottsdale Community College
Shelton State Community College
Sheridan College

Sinclair Community College
South Georgia College
South Mountain Community College
South Suburban College
Southern State Community College
Southwest Tennessee Community College
Southwest Virginia Community College
Southwestern Community College
Southwestern Michigan College
Spoon River College
St. Charles Community College
St. Johns River Community College
Tarrant County College - Southeast
Texas State Technical College - Harlingen
Three Rivers Community College
Tidewater Community College
Tillamook Bay Community College
Trinidad State Junior College
Triton College
Truckee Meadows Community College
Tulsa Community College
Ulster County Community College
Valencia Community College
Vance-Granville Community College
Victoria College
Wake Technical Community College
Washington County Community College
Washtenaw Community College
Wayne County Community College
West Virginia State Community and
Technical College
Western Nevada Community College
Western Technical College
Wichita Area Technical College
Williamsburg Technical College
Williston State College
Wisconsin Indianhead Technical College
Wor Wic Community College
Wytheville Community College
York Technical College

CURRICULUM VITA

Merle Dempsey

EDUCATION

Marshall University
Ed. D., 2007 : Major - Educational Leadership
Higher Education Administration emphasis

Marshall University
MA, 1976 : Major - Education Administration

Marshall University
BA, 1972 : Major Teacher Education
Social Studies Comprehensive (Grades 7-12)
Elementary Education (Grades 1-6)

PROFESSIONAL EXPERIENCE

1999 – to Present Executive Vice President
Southern West Virginia Community and Technical College
Mount Gay, WV

July to November 1999 Interim President
Southern West Virginia Community and Technical College
Mount Gay, WV

1998 – 1999 Vice President for Academic Affairs
Southern West Virginia Community and Technical College
Mount Gay, WV

1997 – 1998 Acting Executive Vice President for Academic and Student Affairs
Southern West Virginia Community and Technical College
Mount Gay, WV

1994 – 1997 Vice President for Student Affairs
Southern West Virginia Community and Technical College
Mount Gay, WV

1990 – 1994 Interim Vice President for Instruction and Student Services
Southern West Virginia Community and Technical College
Mount Gay, WV

1989 – 1990 Director of Telecommunications and Educational Services and Acting Dean of Student Services
Southern West Virginia Community College
Mount Gay, WV

1987 – 1989 Assistant Director, Telecommunications and Educational Services
Southern West Virginia Community College
Mount Gay, WV

1984 – 1987 Principal
Mingo County Schools
Williamson, West Virginia

1979 – 1984 Administrator
Heritage Christian School
Columbus, Ohio

1977 – 1979 Assistant Principal/Teacher
Heritage Christian School
Columbus, Ohio

1976 – 1977 Administrator
Wee Care North Pre-School
Columbus, Ohio

1972 – 1976 Principal/Teacher
Mingo County Schools
Williamson, WV

CERTIFICATIONS

State of West Virginia Professional Teaching Certificate - Permanent
Specializations: Elementary Education Major 1-8
Social Studies Major 1-12

State of West Virginia Professional Administrative Certificate - Permanent
Specializations: Principal Elementary, Junior/Senior High School

PROFESSIONAL ASSOCIATIONS

West Virginia Community College Association (WVCCA)
West Virginia Association of Academic Administrators (WVAAA)
National Career Pathways Network (NCPN)
National Association of Developmental Education (NADE)
National Council of Instructional Administrators (NCIA)