Community College Retention: The Role of Late Registration Policies

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COMMUNITY COLLEGE RETENTION: THE ROLE OF LATE REGISTRATION POLICIES

by

Kay L. Keck

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Submitted to the
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Dr. Sue Poppink, Advisor

Western Michigan University
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COMMUNITY COLLEGE RETENTION: THE ROLE OF LATE REGISTRATION POLICIES

Kay L. Keck, Ph.D.

Western Michigan University, 2007

Issues of retention and student persistence have been of concern for institutions of higher education for decades. The retention of community college students is greatly affected by open admissions policies and practices designed to address the needs of a student population which greatly varies by academic and social preparation as well as in their understanding of the purpose, value, and need for a college education.

Of particular interest to researchers in the community college realm are registration policies which are theoretically designed to assist students in the short term which may inadvertently hinder their success in the long term. The purpose of this study was to explore the relationship between policies intended to remove barriers to enrollment and student persistence at an open admissions institution. Specifically, the study explored the policy of late enrollment at community colleges, the affects of the policy on the students’ academic persistence and success, and how students experienced the phenomenon. The mixed-research design for this study was planned sequentially to first quantitatively examine the relationship between late enrollment policies and student persistence and second to qualitatively explore the experience and perceptions of students in regard to late enrollment; in a final analysis the qualitative results were used to further explain the quantitative findings.
The study provided for a clearer understanding of the impact of late registration on community college retention and student persistence. Of particular interest were the results of the examination of the course-specific side of late registration. The most significant findings of this study were: (1) Students who registered and began a course on time had a greater likelihood to successfully complete the course. The consequences students associated with late registration included missing critical first class day information and feeling rushed and unprepared to begin the class; (2) A majority of late registrants were successful in the late registered course, and late registrants were satisfied with their performance. Students perceived their individual backgrounds, strengths, academic abilities, and determination to complete a course as important in their success in the course; (3) The course subject area had a significant impact on the successful completion of the late registered course, and students expressed their reluctance to late register into a course subject area unless they had completed coursework or had experiential learning in the course subject area. Students would avoid registering late into a course delivered in an online format.
ACKNOWLEDGEMENTS

As a high school student I had not been encouraged to go on to college until the end of my senior year when one counselor, Gini Kuhn, suggested I enroll at the local community college. What would I study? Since I had spent my entire high school career on secretarial studies, it was decided that was the best career option and course of study for me to pursue in college. Upon graduating from the community college, I remained at the college working as a secretary. My career path seemed set at a young age. Fast forward 10 years and I was fortunate to work for Dr. Ed Haring, then Vice President of Instruction at the community college. He encouraged me to go on for a bachelor’s degree and my career changed drastically and became focused on student services. After I completed a master’s degree, Dr. Haring asked me, “what about a doctorate?”

And, so, I begin my acknowledgements with Dr. Ed Haring, President of Kellogg Community College. You are about developing people holistically, and you provide an atmosphere conducive to taking risks and meeting challenges. To the professors who have forever changed me professionally and personally: Dr. LouAnn Bierlein-Palmer, Dr. Andrea Beach, and my advisor, Dr. Sue Poppink. You each have pushed me, stretched me, and made me think when I didn’t want to think anymore. Thank you! And to my long-time mentor, Dr. Alice Marie Jacobs: You hired me for my first position at the community college, and you encouraged me not to remain status-quo yet to reach for my greatest potential.
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Kay L. Keck

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CHAPTER I

INTRODUCTION

Community colleges have been in existence for over one hundred years and were designed with the primary mission to prepare students to enter baccalaureate institutions (Townsend, 2001). Historically, when discussion occurred regarding the retention of community college students, this was the primary mission assumed when determining if a student was retained via consistent enrollment. Yet, community college missions have been broadened over the years to include providing educational opportunity to anyone who desires to attend college. This mission includes a population of students with differing educational goals such as completion of a two-year degree, career advancement, personal interest and others. These students also come from different levels of academic and social preparation. It is the institution’s ability to retain all such students as well as students’ ability and desire to persist in meeting their educational purposes and goals that now completes the circle of the educational process for community colleges.

There are many phenomena that serve to support as well as to hinder a successful higher education experience for students. Tinto (1975; 1987) articulates these phenomena to include the background characteristics of the student, both academic and social; the environment of the institution and how the student fits within that environment; the institution’s commitment to the student; and the integration of the student into the educational process. These aspects vary according to the type of institution, whether the institution is public or private and whether a four-year university or a two-year community college.
Theorists on student retention and attrition provide significant direction for baccalaureate institutions serving traditional students with a specific level of academic and social preparation prior to beginning their college career (e.g., Astin, 1993; Bean & Metzner, 1985; Pascarella & Chapman, 1983; Tinto, 1987). Research studies provide a wealth of quantitative information on the demographics of students at four-year institutions who are retained, the academic and social connections important to persistence, and the academic and family backgrounds which are thought to predict student persistence (Cabrera, Castaneda, Nora, & Hengstler, 1992; Nippert, 2000; Pascarella, Duby & Iverson, 1983; Pascarella, Pierson, Wolniak & Terenzini, 2004; Skahill; 2002; Smith, 2005). Some researchers have studied these same aspects at community colleges (e.g., Bers & Nyden, 2000; Goel, 2002; Pascarella & Chapman, 1983; Pascarella, Smart, & Ethington, 1986; Polinsky, 2003; Smith, Street, & Olivarez, 2002).

Research to date has shown that the aspects contributing to student persistence and retention within two-year community colleges are different than those within four-year institutions: Most community colleges follow an open admissions philosophy with minimal to non-existent academic admission requirements. The open admissions nature of the community college brings together a student population that greatly varies by academic and social preparation as well as in their understanding of the purpose, value, and need for a college education. This population of students demands a broader consideration of retention and attrition issues from the perspective of a diverse set of individuals. Such perspective must consider the traditional as well as the non-traditional student based on demographics and characteristics such as age, ethnicity, enrollment...
status, educational goal, socio-economic background, and educational history of the family (Voorhees, 1987).

In an effort to encourage students to begin college and pursue their educational goals, community colleges establish enrollment policies and procedures to lay necessary ground rules, but not to discourage students or delay their enrollment. The policies and procedures designed to support the concept of open admission are established with good intent; however, the practical application can be misguided in nature and have both positive and negative effects in regard to retention and student persistence. One positive effect could be that students with low assessment scores are not hindered to begin college when the potential does exist to persist and attain their educational goals. In contrast, a negative effect could be that students begin their college career without sufficient academic skills or recognition of their academic deficiencies needed to succeed and complete coursework. Analysis of the impact of various policies and practices, followed by pertinent revisions, may improve retention and student persistence (Calder & Gordon, 1999).

One specific policy indicative of community colleges is that of allowing late registration into classes. For instance, at one southern Michigan community college, 7.8% of degree-seeking students will typically register late for at least one class each semester. The underlying theory behind this type of policy is that students who make a late decision to take a class should not be discouraged from attending college. However, debate exists as to whether allowing students to register into classes late hinders their academic success (Freer-Weiss, 1999; Roueche & Roueche, 1993; Smith, Street, & Olivarez, 2002).
It is in the application of this policy where issues arise and the academic impact for the student is realized. For instance, the theory behind a late registration policy is potentially deficient in its consideration of whether the student has the academic ability to begin a class late, or whether the course subject matter allows for a student to comprehend the material after starting the class late. A few researchers (Angelo, 1990; Freer-Weiss, 2004) have specifically studied the impact of registration timing on student persistence; however, there is a need to understand more about what role late registration plays in retention and in the student’s long term success at community colleges.

Statement of the Research Problem

The retention of community college students has largely been researched from the perspective of theorists who have a focus on four-year universities (Astin, 1993; Bean & Metzner, 1985; Pascarella & Chapman, 1983; Tinto, 1975, 1987, 1993). The nature of the community college student population, however, is vastly different from that of the university student population (Kim, 2002). Aspects such as the average age of the student population, the students’ family history in regard to college education, and the academic preparation of the students are factors, to name a few, which describe the differences in the two populations—community college students and university students. Differences also include varied intentions between the two populations in attending college, varied institutional policies and procedures designed to accommodate the selective or open access nature of the institution, and differences in the environment of a university campus versus a community college campus.

Of particular interest to researchers in the community college realm are admission and registration policies which are theoretically designed to assist students in the short
term and may inadvertently hinder their success in the long term. The impact of policies and practices enacted by open access higher education institutions has been explored to some degree by researchers (Angelo, 1990; Freer-Weiss, 2004; Mendiola-Perez, 2004; Perkins, 2002; Smith, Street, & Olivarez, 2002; Street, 2000). The results of these studies range from policies and practices having little to no effect on academic performance and persistence, to policies and practices having a direct effect on academic performance and the retention of students.

In previous community college studies of late registrants, these students were found to have different demographic characteristics from on-time registrants in that late registrants tended to be male, older (non-traditional), and have earned a GED as opposed to a high school diploma; ethnicity was not found to be a significant factor (Freer-Weiss, 2004). Previous studies on late registration and the impact on student persistence and retention have also found that students who register late are more likely to have a lower grade point average, higher withdrawal rates, lower academic success rates, and lower retention rates by semester than students who register on time (Mendiola-Perez, 2004; Smith, Street, & Olivarez, 2002; Street, 2000). Yet other studies contradicted these findings and failed to support the hypothesis that on-time registrants demonstrate superior academic performance or persistence rates, in particular for students attending college for the first time (Angelo, 1990; Perkins, 2002).

Late registration has been studied to a fair extent from a student demographic perspective, and researchers have noted the need to consider the impact of late registration from the academic perspective (Smith, Street & Olivarez, 2002; Summers, 2003). Street (2000) posed the need for a study to distinguish the effects of late
registration among the course subject area and the relative difficulty of the subject matter.

In addition, several researchers call for qualitative inquiry into the experiences of students with the phenomenon of late registration (Freer-Weiss, 2004; Mendiola-Perez, 2004; Perkins, 2002; Smith, Street & Olivarez, 2002; Street, 2000).

Research Questions

Given the call for additional qualitative research regarding the impact of open admissions policies, the researcher designed a mixed method study to explore the relationship between policies designed to remove barriers to enrollment and student persistence at an open admissions institution. Specifically, it was the intent of this study to explore the policy of late enrollment at a community college, the effects of the policy on the students’ academic persistence and success, and how students experienced the phenomenon of late registration in regard to why they registered late and their perception of the relationship between late registration and their educational experience.

In designing this study two overarching research questions were considered to frame the research, followed by several sub-questions that frame the issues and the topics of the study (Bogdan & Biklen, 2003; Creswell, 1998).

1. What is the relationship between late enrollment policies and student persistence, specifically:
   (a) to what extent does late enrollment predict student success or non-success as defined by course completion;
   (b) to what extent does the number of courses registered late predict the likelihood of failing grades; and
(c) to what extent does the subject matter of a course (i.e. allied health, arts and humanities, business and computers, communication, math and science, public service, social sciences) predict a late registrant’s completion of that course?

2. What are the experiences and perceptions of students in regard to late enrollment, specifically:
   (a) how do students describe the reasons for their late registration;
   (b) how do students describe the impact of late enrollment policies on their educational experience; and
   (c) how do students experience the late enrollment policies, and did they feel there was a relationship between late registration and completion of coursework?

Research Methods Précis

To address the research questions, a mixed research study was designed to include a quantitative analysis of any relationships between late registration and student success, along with a qualitative analysis of how students experienced the phenomenon of late registration. Utilizing Creswell’s (1998) sequential exploratory strategy which is a two-phase approach to data analysis, the researcher conducted the first phase of this study in a quantitative manner and the second phase in a qualitative manner. The qualitative findings were used to expand upon the quantitative findings of the study.

Participants in the quantitative portion of the study consisted of two groups of students: late registrants and a random sample of timely registrants. The two groups were equal in size for comparison, and the total number of participants was anticipated at 1500. The final course grades for these two groups of students were analyzed and compared by registration behavior (i.e. timely, late) and by course subject area (i.e., allied health, arts
and humanities, business and computers, communication, math and science, public service, social sciences).

A purposeful sample of participants from the late registrant group was selected for qualitative analysis. These participants took part in an in-depth interview designed to explore their experience with the phenomenon of late registration. It was anticipated that 10 to 15 students would participate in the interview portion of this study.

Rationale for the Study

The rationale for this study is found in the recommendations for future research contained in various empirical studies (Bers & Nyden, 2000; Goel, 2002; Mendiola-Perez, 2004; Pascarella & Chapman, 1983; Pascarella, Smart, & Ethington, 1986; Perkins, 2002; Polinsky, 2003; Street, 2000). Researchers call for additional study, both quantitative and qualitative, to further the understanding of college student departure (Braxton, 1999; Schuetz, 2005; Terenzini & Pascarella, 1991; Tucker, 1999). In addition, Smith, Street, and Olivarez (2002) and Summers (2003) specifically recommend research to determine the reasons students register late, if students consistently register late and why, and the effects of late registration on student success in different course subject areas.

This proposed study addressed the call for additional research and helped fill two critical gaps in the literature. The first gap was addressed via a quantitative examination of the course-specific side of late registration. Specifically, the study explored whether late registration in liberal arts courses such as math and science had a different effect on success when compared with late registration in vocationally-based courses such as allied health and public service. Unlike previous studies which were mainly focused on students
attending college for the first time, this study examined both new and returning students. This study sought to broaden understanding of the relationship between registering late and completion of courses.

The second gap in the literature was a lack of qualitative study in regard to retention and student persistence, especially at the community college level. This study explored qualitatively why community college students registered late and how their late registration impacted their academic success. Qualitative evidence was gathered to support or refute the findings in the quantitative research.

The outcomes of this study are beneficial to community college administrators as an analysis of the impact of policies and practices intended to support the nature of open access institutions. The results of the study are expected to provide significant detail from the community college student perspective in order to better understand this student population. Community college students will benefit from either the support or alteration of existing policies in an effort to strengthen the students' potential to persist in attaining their educational goals.

Connecting the findings of local and national retention studies, specifically studies conducted at community colleges, will produce common threads and themes in research on retention. Incorporating the work of retention theorists with study findings will aid in the development of an overall picture of student persistence and a retention model for community colleges.

Conceptual Framework

The conceptual framework for this study, as depicted in Figure 1, was based on Tinto's (1975) model of student departure which emphasizes the student's pre-entry
attributes as well as his or her academic and social integration into the systems of the institution as predictors of retention and student persistence. The educational goals and commitments with which the student enters the institution are initially important, and how those goals and commitments develop determines his or her decision to stay or to leave the institution.

Considered along with student commitment were Tinto's (1987) three principles of institutional commitment for effective retention. The principles include: (a) institutional commitment to student welfare above institutional goals, (b) institutional commitment to the education of all students, and (c) institutional commitment to the integration of all students into the academic and social communities of an institution. Institutional commitment is the theoretical basis for the development of a strong community college retention model, and understanding of the impact of community college policies on retention and student persistence will contribute to the advancement of the model.

Delimitations and Limitations of the Study

This study was conducted at one community college located in Southwest Michigan. Generalizations of this study to other community colleges are limited given differences in student populations and policy definitions; however, the results of this study could provide insight to other colleges. Given that the construct of the study is based on an analysis of course-specific late registrations and success, replication of the study would require equating courses and an equivalent measure of success.
Figure 1. Conceptual Framework for Study

Definition of Terms

Specific terms used in this dissertation require definition and specifics for clarity and proper interpretation of the study results and findings. These terms are as follows:

Attrition: Attrition refers to students who leave college without completing a degree. The literature review in this document will further describe attrition in terms of student drop-out, transfer-out, and stop-out.

Completer: A student who has met his or her educational goal.

Course subject area: The course subject area is the discipline area of the course (i.e. allied health, arts and humanities, business and computers, communication, math and science, public service, social sciences).
Educational goal: A student’s educational goal can be to complete a degree, take courses to transfer to another institution, complete occupational certification, take skills courses for employment, or take courses for the purpose of job promotion.

Late registration: The late registration timeframe refers to class registration which occurs after the semester begins. For this study, late registration is defined as registration which occurs the day after a class begins and anytime between that point and when the class ends.

Open Admission: Open admission refers to admission policies with minimal criteria or no criteria.

Retention: Retention in higher education refers to keeping students enrolled at an institution until the educational goal is met; which is typically a college degree.

Student Persistence: Student persistence is a term applied to students who continuously pursue their educational goal, generally by enrolling semester after semester without a break in enrollment.

Withdrawal: Withdrawal in this study refers to student withdrawal from a class, regardless of the reason for withdrawal (i.e. student decision or administrative withdrawal).

Summary

This chapter has provided an introduction to the mission of the community college, the demographics of its student population, and how that mission and population call for variance in the retention theories designed for baccalaureate institutions. Following this introduction is Chapter II which is a review of the literature on retention theories in higher education and, more specifically, retention designed in particular to
address the unique nature of the community college and its student population. Community colleges operate as open door institutions which denote that barriers, actual and perceived, to entering the institution are minimal. The resulting admission and enrollment policies and procedures are lenient, are designed to provide access, and play a significant role in the success and retention of students. Of great interest in the literature review are the studies conducted in regard to the late registration policies and procedures at community colleges. Chapter III presents the particulars of the study designed to explore the relationship between late registration policies intended to remove barriers to enrollment and student persistence at an open admissions community college. Chapter IV offers the results of the study, while Chapter V is a discussion of the findings and a presentation of the study implications and potential future research.
CHAPTER II
REVIEW OF THE LITERATURE

Issues of retention have been a concern for institutions of higher education for decades. Tinto (1975, 1987) asserts it is important for institutions of higher education to have knowledge of the general character and causes of student departure and to have an understanding of the nature of successful retention programs. An understanding of why students leave institutions will lead to the formulation of a retention plan that can be successfully applied to a variety of institutional types and settings. Such retention plans must relate to the policies as well as to the academic mission of the institution, and it is imperative that members of the institution understand the importance of and need for such a plan. Successful retention measures lie with the faculty and staff of the institution, not in any one retention plan or strategy (McClenney & Waiwaiole, 2005; Polinsky, 2003; Tinto, 1987, 1993; Wang & Grimes, 2000).

Theoretical Background on Retention and Student Persistence

An extensive review of the literature in regard to retention models for higher education institutions revealed the major theories which provide broad theoretical frameworks on the topic. The theorists include Tinto, Bean, Metzner, and Astin, with Tinto's (1975) model of student departure as the foundational framework for studies and exploration of additional theories on retention and persistence. These models offer important foundational information for this study in their provision for the impact of academic and social systems, student background characteristics, and institutional commitment to the student on retention and student persistence.
Tinto’s Longitudinal Model of Departure from Institutions of Higher Education

Tinto’s (1975) model of student departure is based on sociologic concepts and seeks to explain how student decisions to withdraw from an institution are predicated on their interactions among the academic and social systems of the institution. The model asserts that certain pre-entry attributes such as family background, skills and abilities, and prior academic experience, determine the educational goals and commitments of incoming students. Once the student is part of the institution’s community (has matriculated), his or her formal and informal involvement with the academic and social components of the institution’s structure influence his or her developing educational goals and commitments. How the student’s goals and commitments develop depends on his or her level of academic and social integration. It is the developing commitment to educational goals and to the institution that determine the student’s decision to stay or to leave the institution.

Tinto’s model of student departure has been validated through many studies (Braxton, Milem & Sullivan, 2000; Pascalella, Duby, Miller, & Rasher, 1981; Pascarella, Smart, & Ethington, 1986; Pascarella & Terenzini, 1979; Pascarella & Terenzini, 1980; Sandler, 2000). Other researchers have tested the model for applicability to two-year and commuter institutions (Freer-Weiss, 1999; Freer-Weiss, 2004; Goel, 2002; Pascarella & Chapman, 1983; Pascarella & Terenzini, 1991; Spurling, 2000) and have suggested re-conceptualization of the model based on their findings (Pascarella, Duby, & Iverson, 1983; Tucker, 1999). Specifically, according to a study by Pascarella et al. (1983), certain components must be revised or added to Tinto’s model in order to appropriately apply the model to community colleges. First, a strong direct relationship was found to exist

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between student background attributes and academic and social integration and not the determinant relationship posed by Tinto. Second, the institutional commitment held by the entering student was found to have a stronger direct influence than any single predictor on student persistence and withdrawal decisions. This component must be added to Tinto’s model for applicability to the study of retention and student persistence at community colleges.

Overall, Tinto (1993) views retention as an effort to socially and intellectually educate students. Understanding the goals and commitments of students is essential to retaining students. Of equal importance is for the agents of the institution to understand the goals and commitments of the institution toward its mission and toward the students it serves.

In regard to effective retention from the institutional viewpoint, Tinto (1993) postulates three principles of effective retention. Specifically, the three principles are: (a) institutional commitment to students, (b) commitment to the education of all students, and (c) commitment to the integration of all students into the academic and social communities of an institution. Tinto’s model of student departure, along with his principles of effective retention, is used as the conceptual framework for this study.

Bean’s and Metzner’s Theory of Attrition for Non-Traditional Students

Bean and Metzner (1985) developed a theoretical model of attrition for non-traditional students. The model is derived from Bean’s (1980) model of student departure which provides that academic and social integration are directly connected to student background characteristics, and those characteristics have an indirect connection to the student departure decision. Bean and Metzner applied Tinto’s (1987) model of student
departure to non-traditional undergraduates and determined the social integration needs of this population are different than those of traditional students. Non-traditional students, and in particular those who commute to college and do not reside on the college campus, are more affected by variables in their external environment than they are by the social structure of the campus. In this model the variables of student background and characteristics, academic performance, environment, and intent to leave have greater impact on the student’s decision to persist or to leave an institution. Several researchers have found similar results in the determination of the importance of academic integration and limited importance of social integration (Nippert, 2000; Pascarella & Terenzini, 1979; Pascarella & Terenzini, 1980) and the difference of findings where institutional type and external environment are considered as factors (Cabrera, Nora, & Castaneda, 1993).

Astin’s Theory of Involvement and Input-Environment-Outcome Assessment Model

Astin’s (1977, 1993) theory of involvement stresses institutional environment along with student exposure to college and interaction with peers and faculty as important in the student’s decision to persist. The student’s academic involvement, involvement with faculty, and involvement with student peers have a great influence on his or her academic and personal development, and retention is positively associated with involvement. Metz (2004), in an analysis of Tinto’s theory, made a connection between Tinto’s integration model and Astin’s involvement model postulating that the assimilation of students into the college environment requires that students take part in their education, and the level and intensity of the students’ involvement impacts their willingness and potential to persist.
The purpose of Astin's (1977, 1993) input-environment-outcome assessment model is to evaluate and measure how students are affected by their college experiences. There are three basic elements to the model. The first element is the personal qualities a student brings from his or her background to the institution as their inputs to the educational environment. Environment is the second element and is comprised of the student's experiences with institutional programs and policies and his or her exposure to faculty and peers during his or her education. The outcomes, the third element in the model, are the characteristics the student develops during his or her education and exposure to the institutional environment.

One application Astin presents for his model is that the proper assessment of input, environment, and outcome variables is useful in determining the value and effect of educational policies and practices on student persistence. Smith, Street, and Olivarez (2002) applied this model in their study of the characteristics of community college student registrants. The study was designed to determine the effects of specific input (student GPA), environment (timing of registration), and outcome (withdrawal and persistence) variables on student success and to assess the policies and practices of student registrations. It found that late registrants were more likely to withdraw from classes, were much less likely to persist from one semester to the next, and earned a significantly lower GPA than on-time registrants.

Retention and Student Persistence at Community Colleges

The theorists on student retention and attrition provide much direction for four-year institutions based on traditional students with a specific level of academic and social preparation prior to beginning their college career. However, the population of students at
the community college is comprised of a diverse set of individuals with varying levels of academic and social preparation, and this population requires a broader consideration of factors contributing to retention and attrition (Voorhees, 1987). This broad perspective considers the traditional as well as the non-traditional student based on demographics and characteristics such as age, ethnicity, enrollment status, educational goal, socio-economic background, and educational history of the family.

Retention and Student Persistence

Retention is a term used by institutions of higher education in reference to keeping students enrolled until their educational goals are met. Student persistence is defined as those students who remain in college until they have met their educational goal. For some institutions retention is determined by whether a student enrolls each academic semester, and for others it is whether a student enrolls the following academic year. Once their educational goal is met, whether that goal is graduation, transfer, or the completion of a specific sequence of courses, the student is classified as a completer.

Attrition refers to students who leave college, withdraw, prior to meeting their educational goals. Traditionally, any student who leaves an institution prior to completing a degree was determined to be a student who had dropped out of the institution. However, individuals enter institutions of higher education with various goals and intentions in mind such as degree completion, transfer to another institution, occupational certification, and job promotion (Kasper, 2003; Metz, 2004; Palmer, 1998; Summers, 2003). Many students accomplish their goal prior to completing a degree, and to classify these students as dropouts in the narrow sense of failure is inaccurate (Hagedorn, 2005; Palmer, 1998; Summers, 2003; Tinto, 1982a).
For accuracy in determining attrition, it is necessary to further classify attrition in terms of student drop-out, transfer-out, and stop-out (Hagedorn, 2005; Porter, 2003; Tinto, 1975). Students who truly leave an institution with no intention of completing their educational goal are to be determined to have dropped-out of the institution. Students who enroll at an institution with the goal to transfer to another institution for degree completion, and then do transfer, are to be classified as transfer-outs. Students who find it necessary to leave college for a period of time and return at a later date are to be classified as stop-outs. It is misleading to assume students who have stopped-out have failed in their attempt to obtain a college education.

It is important to recognize that student attrition has as much a positive side as a negative. Tinto (1982a) explains that for some students leaving an institution is not only positive, it is in the best interest of both the student and the institution. At community colleges, for instance, students who have the goal of transfer may find it desirable and even imperative that the transfer take place prior to graduation with the two-year degree. This is an understandable and a positive form of attrition, one that is in keeping with the community college mission to promote transfer to baccalaureate institutions (Porter, 2003). Likewise, for the community college student who desires only a few classes for job skill enhancement, it might not be in the best interest of the student to continue at the college in pursuit of a degree. Tinto (1993) also identifies that attrition can be an important part in the social and intellectual maturation of an individual, which will have a positive effect when the student returns and is better prepared for the necessary academic and social integration into the institution and the educational process.
In regard to negative attrition, these are situations where failure can be applied to both the institution and the student (Tinto, 1993). The reason for dropping out can be associated with one of three broad categories: student characteristics, life circumstances, and student experience at the college or the environment of the college (Polinsky, 2003; Winter & Fadale, 1986). Polinsky (2003) draws from several authors in providing a list of student characteristics which can be associated with negative attrition: ethnicity other than white, female gender, poor academic preparation, low socio-economic status, and low grade point average in high school. The list of life circumstances includes: number of hours worked while attending college, work demands, family responsibilities, finances, and personal problems. In regard to the college experience, Polinsky (2003) provides the three main elements attributing to negative attrition: low first-semester grade point average, lack of interaction with faculty, and part-time attendance. Another factor noted was a lack of academic and social integration. Winter and Fadale (1986) found that dissatisfaction with the college experience was highly related to the student’s decision to leave the institution.

Understanding the purposes for which students are admitted and retained is imperative for institutions to determine the actions they take with regard to student retention (Tinto, 1987). Determining which attrition characteristic an institution will seek to treat is just as important as determining the course of action to take in designing retention efforts and programs (Tinto, 1982b). More important than the retention programs institutions construct is the fundamental institutional commitment to students that motivates and supports these programs (Tinto, 1993).
Community College Institutional Commitment to Retention

Tinto's (1993) three principles of institutional commitment are applicable to explore the issue of what the community college commitment to students should be in an effort to retain students in pursuit of their educational goals.

Institutional commitment to students. An institutional commitment to students is expected to generate a commitment from students to the institution, and it is the student commitment which is the foundation of student persistence (Tinto, 1993). An institutional commitment to students is discernible in the policies, procedures, and day-to-day activities of the college (Braxton & Mundy, 2001). This commitment includes properly orienting students to the college, developing healthy social environments for students, meeting student financial and resource needs, and providing effective learning environments in the classroom (Braunstein, McGrath, & Pescatrice, 2002; Braxton & McClendon, 2001; Polinsky, 2003).

As open admission and open enrollment institutions, community colleges develop policies and practices designed to encourage student enrollment and which promote convenient and barrier-free attainment of an education (Bers & Nyden, 2000). Many of these policies and practices are student-oriented from a service perspective and are geared to the multiple demands on adult students’ time as well as their purposes in attending the community college. Illustrations of these policies and practices include: one-stop centers that handle admission, registration and payment; registration processes that do not require the student to come to campus (i.e. web, touch-tone, U.S. mail, and fax); lenient payment plans that do not require payment up-front and that offer generous refunds for dropped classes; and allowances for late admission and late registration into classes.
The downside to these policies and practices is that little commitment or effort is required on behalf of the student. It is easy for students to drop classes and not attend, and there is no academic or financial consequence for their decision. Allowing late admission and late registration into classes causes students to begin the semester amid a sense of rush and confusion, and often corners are cut to get the student into classes (Freer-Weiss, 2004). These types of policies are seen as good marketing techniques until the institution experiences declining enrollments and retention becomes an issue for the institution (Bers & Nyden, 2000). The Bers and Nyden (2000) study found that ten percent of enrolled students at one community college dropped their courses or were dropped by the institution due to failure to pay the required tuition and fees. Although their findings were inconclusive that a change in payment or registration policies would improve the retention rate, their qualitative findings indicated that lenient payment and registration policies could contribute to students’ decisions to leave the institution prior to attaining their educational goals.

**Institutional commitment to the education of all students.** Tinto (1993) views an integration of the student into the learning process as an essential component to the education of all students. An institutional commitment to the education of all students is evident in the student learning initiatives on a college campus (Braxton & Mundy, 2001). This commitment includes recognizing the history and culture of the various racial and ethnic groups represented on the campus, connecting the curriculum to students’ lives outside the classroom, promoting student awareness of mentoring programs and groups designed to connect and support students, and providing effective learning environments in the classroom (Braxton & McClendon, 2001; Braxton & Mundy, 2001).
The student population at a community college is an assortment of individuals from diverse backgrounds who are attending college for a myriad of reasons (Jalomo, 2001). Their backgrounds are diverse from the standpoint of their academic preparation as well as their demographics. Their diversity reflects the population of the college's community service area and includes ethnic and racial diversity, usually with an emphasis on minorities; socio-economic class; high school graduation, GED completion, or neither; traditional and non-traditional ages (many are adult students); and first-generation college students (those who are the first in their family to attend college). Their diversity continues with their level of enrollment, full- or part-time, which is often associated with their level of employment; most community college students are employed at least part-time with many working full-time while attending college.

Studies have been conducted to identify the characteristics that hinder community college students from earning a degree or completing a program of study (Schmid & Abell, 2003). Students who attend community colleges are often characterized as a group being at-risk of not successfully completing their educational goals. These students are typically first-generation college students, have a perceived lack of preparation for college courses, have the burden of work and family responsibilities, and lack a consistent connection to the college which is inherent for a commuter campus (McArthur, 2005). As more and more students are beginning their studies at the community college with plans to transfer and attain a bachelor's degree, the characteristics of community college students are becoming broader than those associated with an at-risk population.

Brotherton (2001) states that in order to retain today’s students, colleges must give attention to the diverse backgrounds, needs, and expectations of students, and then

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take action through policy and practice to accommodate students. The institutional commitment of community colleges to the education of all students must cover the myriad of student backgrounds discussed in the literature. An overall learning environment which is responsive to various levels of academic preparation as well as age and cultural differences is pertinent and crucial to retention initiatives at the community college. Reflecting the population living in the community college district, academic and social programs must be sensitive and responsive to the diverse needs of the population.

Institutional commitment to the academic and social integration of all students. Tinto's (1975, 1987) model of college withdrawal stresses that a student’s integration into both the academic and social systems of the college will positively influence persistence. An institutional commitment to the academic and social integration of all students is found in the retention programs designed to create bonds among and between students as well as between students and faculty (Braxton & Mundy, 2001; Nippert, 2000; Spurling, 2000). Included in this commitment is the responsibility to provide social activities designed to engage students, make students aware of the academic and social rules and regulations of the institution, and provide developed social environments for students (Braxton & McClendon, 2001).

Researchers have studied the validity of Tinto’s (1975, 1987) model in different types of institutions (i.e. commuter and non-commuter; four-year and two-year) and determined that the influence of social and academic integration on student commitment and persistence differs significantly when the data are disaggregated by institution type (Goel, 2002; Nippert, 2000; Pascarella & Chapman, 1983; Pascarella, Duby & Iverson, 1983; Pascarella, Smart, & Ethington, 1986; Skahill, 2002). The main difference

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identified in these studies is that the relationship of academic integration to community college persistence is greater than that of social integration.

Tucker (1999) conducted research from the perspective of a critical interpretation of Tinto’s model on retention and identified areas where his research disagrees with Tinto. One such area is academic and social integration. Where Tinto saw these as two distinct items, Tucker proposes a combination of academic and social components in building a student’s sense of belonging to the college community. In his study, Tucker found that students did not distinguish between social and academic components, instead the two were interwoven. Students sought connections without regard to their social or academic impact.

Tucker’s (1999) contention that academic and social integration is interwoven makes absolute sense on the community college campus. Many community college students, adults in particular, arrive on campus just in time for class. Students enter the classroom building through the nearest door, and leave campus when class is finished to return to their work or home life outside of the college. Their primary social network is most likely found outside of the college environment with some intermingling of the two environments.

The classroom is seen as a main venue for social integration in that it is the first opportunity for students to become involved in the academic and social communities of the college (Tinto, 1987; Braxton, Milem, & Sullivan, 2000; Kasworm, 2005). Students at the community college, and in particular non-traditional students, have limited time to offer to out-of-class activities intended to promote social interaction. Donaldson and Graham (1999) offer their model of college outcomes for adult students which provides
six components in regard to the dynamics associated with the development of adult students in college. One of the components involves how adults use the classroom as their venue for social engagement on campus and how the classroom experience defines who they are as students and the meaning they associate to learning. This makes the classroom the most powerful influence on the campus experience for adult students.

Community College Student Population

There is a growing demographic diversity in the population of undergraduate students, and the greatest diversity is found in community college student populations (Pascarella, Pierson, Wolniak, & Terenzini, 2004). Often, community college students attend college part-time, are generally under-prepared academically which requires remedial coursework in their initial college semesters, and are attending college for reasons other than degree completion (Ender, Chand, & Thornton, 1996; Voorhees, 1987). Nearly half of community college students work more than 20 hours per week (Community College Survey of Student Engagement, n.d.), and as a group they tend to be older, female, and of minority status (Voorhees, 1987). The average age of community college students is 29, which is older than the traditional 18 to 22-year old college student (CCSSE, 2005).

Certain student background traits are found to have a direct effect on persistence (Pascarella & Chapman, 1983). Many community college students exhibit these traits and are characterized of at-risk for not completing their college education. Students entering college under the demographic of at-risk are those who are from single-parent families and families with a lower socio-economic status, have a sibling who dropped out of high
school, are from an ethnic minority group, have limited English proficiency, and have a poor academic performance from high school (Kim, 2002; Smith, 2005).

Included in the demographics of at-risk students are first-generation college students. These are the students who are the first in their family to attend college; neither parent has more than a high school education (McConnell, 2000). According to Pascarella, Pierson, Wolniak, and Terenzini (2004), 53% of students who begin their higher education at the community college are classified as first-generation students. In their research, these authors found that a distinct disadvantage exists for these students in regard to their understanding of, knowledge about, and expectations of the higher education system. They do not have the experience of their parents as a support system for navigating the higher education system and for establishing their educational goals. Their academic preparation in high school is often less than that of their classmates whose parent completed a college education. Their transition to college includes an academic and a social transition as well as the usual anxieties and difficulties faced by all first-year college students.

Pascarella, Pierson, Wolniak, and Terenzini (2004) studied the academic and nonacademic experiences of first-generation students to determine if the influence of their experiences on cognitive and psychosocial outcomes differed from other college students. This study was conducted through the dual lens of cultural capital and social capital. The authors describe cultural capital as “the degree of ease and familiarity that one has with the dominant culture of society,” and social capital as “a form of capital that resides in relationships among individuals that facilitate transaction and the transmission of different resources” (p. 251). From the viewpoint of cultural and social capital, the
student with highly educated parents has a definite advantage over first-generation
students in understanding the social structure of the higher education institution as well as
having support in making the right academic and social decisions during their education.

In their study, Pascarella, et al. (2004) found significant differences between first-
generation students and other students regarding how certain college experiences affect
the outcomes of the overall college experience. For instance, first-generation students' 
level of social involvement and engagement in academic activities had a strong positive 
effect on their level of critical and cognitive thinking as well as their ownership of their 
academic success and degree plans. Likewise, these differences were found to be 
attributable to the experiences of first-generation students after they matriculate rather 
than as an aspect of pre-college variables.

*Student Persistence at the Community College*

There are numerous variables contained in persistence studies at community 
colleges which appear to affect persistence. These studies show conflicting evidence with 
respect to the relationship between the variables (i.e. gender, age, ethnicity, educational 
goals, grade point average, part-time/full-time status, credit hours taken) and retention 
rates (Bers & Nyden, 2001; Goel, 2002). The departure of community college students 
often occurs for reasons beyond the control of the institution (Schuetz, 2005).

It is difficult to rationalize the theoretical models in regard to persistence and 
withdrawal behavior given that the external and personal determinants influencing the 
student behavior have been found to be distinctive (Pascarella & Chapman, 1983). A 
community college study conducted by Wyman (1997) poses the question of whether 
retention is a function of the differences in student demographics and external factors or a
function of the differences in institutions and the effect of institutional policies. It was found that both play a role, and that it is important in retention efforts to determine what policy actions can be taken to increase retention rates. This begins the conversation of whether policy changes in areas such as admissions, financial aid, and registration can and should be made to increase academic performance and, thus, improve retention and student persistence.

Goel (2002) states that a retention and student persistence model has not yet been designed to specifically address the unique nature of the community college and its student population. Researchers applying Tinto’s model to community college student persistence and withdrawal find that the framework is useful for understanding the decision making process of undergraduate students. There is some disagreement in regard to the model explaining student behavior and withdrawal behavior at different types of institutions. This is a limitation noted in the Pascarella and Chapman (1983) study given that community college students tend to vary their attendance pattern causing studies to perhaps capture a temporary change in attendance rather than an actual, permanent withdrawal.

The Open Door Community College

The mission of the open door community college is to provide access to education, and in so doing, to minimize the actual and perceived barriers to entering the institution. The resulting policies and procedures, designed to provide access, have the potential to have an adverse effect on the student-oriented approach (Bers & Nyden, 2000). Tinto (1993) speaks to students’ commitment to their education. Students who rush into college and are rushed through the admission and registration process are likely
to be academically, emotionally, and financially under-prepared to begin their college education and, thus, are likely to have a lower level of commitment to their education. Students new to the college environment need ample time to adjust and adapt to the college environment, and late registration does not allow that adjustment time (Chen, 1999).

Admission and Registration Policies

The policies guiding admissions and registration at the community college play a significant role in the persistence and success of students (Freer-Weiss, 2004). There are two initial rationales for late admission and late registration in community colleges (Smith, Street, & Olivarez, 2002). The first is the open door philosophy and ease of access to an education, removing the barriers and encouraging admittance for students to begin whenever they show up. The second is a result of institutional state funding which is based in part on enrollment counts, whereby making allowances for late admittance and registration is often viewed as a financial benefit to the college.

Community college faculty, administrators, and academic advisors express their sense that allowing students to register late for classes hinders their academic success, and that these students typically do not complete their coursework (Freer-Weiss, 1999; Roueche & Roueche, 1993; Smith, Street, & Olivarez, 2002). The question to be considered is whether the allowance of late registration is a disservice to students and contributes to the vulnerability of certain students to the causes of negative attrition.

Studies on Late Admission and Registration at Community Colleges

Studies on late admission and late registration at community colleges have presented conflicting conclusions stating both that late admission and late registration
have little to no effect on academic performance and persistence (Angelo, 1990; Perkins, 2002), and that late admission and late registration are deterrents to the academic success and retention of students (Mendiola-Perez, 2004; Smith, Street, & Olivarez, 2002; Street, 2000). These studies were conducted on students who were attending college for the first time (Mendiola-Perez, 2004; Perkins, 2002; Smith, Street, & Olivarez, 2002) and on a combination of first time and returning students (Angelo, 1990; Street, 2000).

Angelo (1990) poses the question of whether late registrants perform as well academically as those students who register in a timely manner. Typically the format of the course and expectations of the students are presented during the initial class meetings. Predictors of the late registrant’s success in the course could be dependent upon factors such as the student’s prior academic experience and personal motivation as well as the academic level of the course and course content.

In his study, Angelo (1990) proposed two hypotheses. First, that the persistence rate of students who register late would be significantly lower than timely registrants. Second, that the academic performance would be significantly lower for late registrants who persist than those who registered on time. The findings of the study failed to support either hypothesis. Angelo (1990) concluded that late registrants are not certain to fail. Having found dissimilar results in other studies, he further concluded that the diverse nature of community college populations prohibits the generalization of retention and attrition study findings.

Smith, Street, and Olivarez (2002) continued Angelo’s study using Astin’s (1993) input-environment-outcome assessment model. This model considers the personal characteristics and qualities of a student as they enter the institution, the student’s actual
experiences during his or her educational pursuit, and the talents developed by the student during his or her education. They found that late registration is a deterrent to the academic success and retention of students. Late registrants were less likely to persist than students who registered on time, and the retention of late registrants was lower both within the semester (withdrawal) and to the next semester (persistence).

In a study of first-time students in their first semester at the community college, Mendiola-Perez (2004) found that students who register late may have lower first-semester grade point averages, lower academic success rates, and lower retention rates than first-time students who register on time. On the other hand, Perkins (2002) found the opposite was true in her study of first-time students. Late registration was not found to have negative implications on academic success and retention.

Freer-Weiss (2004) sought to understand the characteristics of late applicants and the effect of late application and late registration on student persistence. Her study detailed characteristic and academic differences in students classified as late in the admissions and registration process. These differences, for the most part, coincide with Tinto’s profile of an at-risk student described by pre-entry attributes of age, gender, race, and academic ability. Tinto’s (1993) model describes at-risk students as male, older, minority, and those who obtained a GED rather than earned a high school diploma, among other attributes. The characteristics exhibited by late registrants in the Freer-Weiss (2004) study included male as the significant gender, non-traditional students from upper age ranges, and as a group these students completed their GED as opposed to earning a traditional high school diploma. Race was not a significant factor in the characteristics of
late registrants. The results of this study were intended to influence policy and diminish the effects of late admission and late registration.

In a study of academic advisors’ perceptions of the characteristics of late admit students, Freer-Weiss (1999) discovered that academic advisors identified characteristics according to two groupings of students: traditional and non-traditional. Noting the at-risk characteristics of traditional students, advisors referred to Tinto’s (1993) model of student departure stating the students were lacking in the areas of goals and commitment to their education. Non-traditional students were characterized as having concerns with their external environment which increased their at-risk status, referencing Bean’s and Metzner’s (1985) model of non-traditional student attrition. The external environment was described in terms of concerns with finances (i.e. paying for education,) employment (i.e. altering or reducing job schedules), and family responsibilities (i.e. child care and time with family).

In a qualitative study of students experiencing the phenomenon of late registration, it was discovered these students are at the margin socially, experience multiple life situations, made a recent decision to attend college, and started their education feeling isolated both socially and academically (Bryant, Danley, Fleming, & Somers, 1996). These students will typically be in need of extensive support services to overcome the additional disadvantage of late admission and late registration.

Summary

Retention is a theory, it is a strategy, and it is a combination of policies and practices designed to keep the student engaged in his or her learning experience until educational goals are met. Although designed primarily for four-year institutions whose
inherent purpose is to meet both the education and basic needs of its student population, Tinto's model on retention necessarily plays into retention strategies for community colleges as well. Tinto's three principles of institutional commitment for effective retention take on a different perspective when viewed through the lens of the community college. Community colleges should focus on the welfare of the student in regard to his or her specific educational goal; consider the myriad of student backgrounds in the education of all students and in the design of policies intended to remove barriers to education; and, design dual strategies, both inside and outside of the classroom, to provide for the academic and social integration of students—all leading to student retention and attainment of educational goals.

As is often found in the application of theory and best practices, no one approach to retention will bring about the desired retention effect for every institution. It is the role of the institution to determine the make-up of its own student population and to design and implement appropriate strategies to educate the whole student and, thus, retain the student until the educational goals of the student are met. To say retention is an art is justified; to say it is someone else's responsibility is unjustified. It is in the systematic approach and overall understanding of retention that an institution will succeed and determine its own best practices in retention.

Determining strong retention practices requires an analysis of the policies and procedures designed to support the open door concept, as well as information as to how well those policies and procedures work. Previous results have shown open door policies have both positive and negative effects on retention and student persistence. This impact has been both theorized in the literature and examined through research studies conducted
at various types of institutions and with specific classifications of students. Studies conducted at community colleges have specifically examined the policies and procedures related to late course registration and how this practice affects retention and student persistence.

Two gaps in the literature were identified during this review. The first gap was an examination of the course-specific side of late registration. The question was whether the subject area of the course (i.e. liberal arts or occupational education) had a relationship to success in a late registered course. The second gap was a qualitative examination of how students experienced the phenomenon of late registration; what were the students’ experiences and perceptions in regard to late registration. The ensuing study in this dissertation sought to answer these questions and help fill the gaps in the literature.
CHAPTER III
METHODOLOGY

Proposed Study

This study was designed to explore the relationship between policies intended to remove barriers to enrollment and student persistence at an open admissions institution. Specifically, the study explored the policy of allowing students to register for a class late at community colleges, the impacts of the policy on the students’ academic persistence and success, and how students experienced the phenomenon. Of particular interest in the study was an examination of the course-specific side of late registration and whether the success in a late registered course had any relationship to the subject area of that course. Also of interest was the qualitative follow up of the study, which helped clarify the quantitative data and explored ideas presented in the literature. For the purposes of this study late registration was defined as registration which occurred after the first day the class was scheduled to meet and continued throughout the semester.

Research Design

Creswell (2003) presents three considerations in determining whether the approach to a study should be quantitative or qualitative, and these same considerations were taken into account in the design of this research: the research problem, the personal experience of the researcher, and the audience for the study. The research problem addressed is one that has been previously explored largely in a quantitative manner (e.g., Angelo, 1990; Freer-Weiss, 2004; Mendiola-Perez, 2004; Perkins, 2002; Smith, Street, & Olivarez, 2002; Street, 2000). These previous studies called for additional quantitative research at individual institutions as well as qualitative studies in order to further explore
the findings of the quantitative studies. The researcher had been trained in both quantitative and qualitative analysis through dissertation coursework and by practical experience. The audience for the study is community college administrators who are expected to find significance in the qualitative exploration of how students experience the phenomenon of late registration, and as well in the numerical exploration of relationships among the traits in the quantitative analysis.

**Sequential Explanatory Strategy**

The study was proposed as a mixed research design which included a quantitative analysis of the relationship between late registration by course and student persistence, along with a qualitative analysis of how students experienced the phenomenon of late registration, again, in particular related to course specificity. Employed in the research design was a sequential explanatory strategy described by Creswell (2003) as a two-phase approach to data analysis. The purpose of this strategy is to conduct a study which is primarily quantitative in design and then employs qualitative methods to better understand the quantitative data. The intent of the study was to explain and interpret relationships, and sequential explanatory strategy was a good fit with this intent.

Sequential explanatory strategy is conducted in two separate phases. The first phase of this study was conducted in a quantitative manner, and the second phase of the study was conducted in a qualitative manner. During the analysis and interpretation phase of the study the findings were integrated, and the quantitative findings were elaborated on with the qualitative findings to further explain the relationships examined in the study.

The quantitative analysis was based on a predictive model and conducted through an analysis of archival data from a secondary data source. Data gathered was used to
analyze the population of late registrants, along with a population of on-time registrants, from a statistically analytical perspective to discover any relationships among the populations and late registration actions and outcomes.

The qualitative analysis was conducted through in-depth interviews. The interview protocol was designed to gather information that cannot be found on the database (e.g. why students register late) and to explore the human experience of the phenomenon of late registration. This phase of the study was conducted in a phenomenological manner in order to understand what individual students think, feel, and experience regarding late registration (Creswell, 1998; McMillian & Wergin, 2002; Patton, 1990), and to further explore the findings from the first phase of the study. In order to examine policy and procedure theoretically designed to promote student success, the actual experience of the student must be heard lending his or her voice to the conversation on the impact of such policy and procedure.

Study Site

The site of this study was Kellogg Community College located in Battle Creek, Michigan. Kellogg Community College is an open-admissions institution located in a city of 53,364 residents (Muni Net Guide, n.d.) and services a tri-county area of 244,882 residents (U.S. Census Bureau, n.d.). Founded in 1956 by the Battle Creek Board of Education, the College operates sites in Battle Creek, Albion, Coldwater, Hastings, and at the Ft. Custer Industrial Park in Battle Creek. The college offers transfer associate degrees, occupational associate degrees and certificates, post-baccalaureate certificates, and pre-professional college and university transfer curricula.
Quantitative Phase of the Study

Data Collection

Participants. All participants in the study are students who were enrolled for classes in the 2005-2006 academic year, and specifically for the fall 2005 and spring 2006 semesters. The population included first time students and returning students, traditional and non-traditional aged students, and students who were diverse in gender, ethnicity, and academic backgrounds.

In the quantitative phase of the study, the sample formed two groups. The first were those students who registered late for at least one class in the 2005-2006 academic year. A second group, equal in size to the first group, was a random sample of students who did not register late for classes. A computer program was generated to randomly select the necessary number of timely registrants for the study. The sample size for each group was expected to be between 600 and 800 students. In the end there were a total of 1,424 study participants evenly divided between late registrants and timely registrants.

Study variables. The variables available through secondary data collection include participant characteristics such as age, gender, and ethnicity. Variables available to describe the participant from an academic perspective were course enrollment, final course grades, and part-time or full-time enrollment status. Variables specific to this study for the population that registered late included for how many, and for which, classes the student registered late during the 2005-2006 academic year. The variables available through archival data which were retrieved for this study are shown in Table 1.
Table 1

*Description of Study Variables from Secondary Data Source*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Description of Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Student’s age as of September 1, 2005; Classified as traditional aged 24 and younger, or non-traditional</td>
</tr>
<tr>
<td>Gender</td>
<td>Male or Female</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>White; Black; Hispanic; Asian or Pacific Islander; American Indian/Alaskan Native; Multi-Racial; Undeclared</td>
</tr>
<tr>
<td>Part-time/Full-time</td>
<td>Part-time (enrolled 0 to 11 credit hours); Full-time (enrolled 12 or more credit hours)</td>
</tr>
<tr>
<td>Enrollment Status</td>
<td></td>
</tr>
<tr>
<td>Course Grade</td>
<td>Final course grade represented as 0 - 4.0, on a 4.0 grading scale</td>
</tr>
<tr>
<td>Subject Area of Course</td>
<td>Subject area of the course categorized as: Allied Health; Arts and Humanities; Business and Computers; Communication; Math and Science; Public Service; Social Sciences</td>
</tr>
<tr>
<td>Timely Registrants</td>
<td>Those students who registered by the end of the first day on which the class began.</td>
</tr>
<tr>
<td>Late (Untimely) Registrants</td>
<td>Those students who registered after the first day on which the class began.</td>
</tr>
<tr>
<td># of Courses Registered Late</td>
<td>Number of courses for which the student late registered during academic year 2005-2006</td>
</tr>
</tbody>
</table>

*Instrumentation.* Data collection for the quantitative portion of the study was conducted through an analysis of archival data on student demographics and success in specific courses. Prior to conducting the study a sample of quantitative data was pilot tested.

*HSIRB.* Prior to conducting data collection, application to conduct research was submitted to and approved by the Institutional Review Boards at Western Michigan University and at Kellogg Community College (Appendix F).
Quantitative Data Analysis

Once all of the data for the study were collected, the researcher began the process of analyzing the data. Data was described in narrative form as well as in tables and diagrams where appropriate. All results are provided in Chapter 4 with example tables offered here.

During the quantitative phase of the study the dataset was grouped by late registrants and on-time registrants, and described in terms of age, gender, ethnicity, and enrollment status. An example of the table created from this data is shown as Table 2.

Table 2

Description of Dataset

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Timely Registrants</th>
<th>Late Registrants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Percent</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-traditional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undeclared</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undeclared</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Indian/ Alaskan Native</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi-Racial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undeclared</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrollment Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time Enrolled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part-time Enrolled</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pearson's Chi-square analysis was used to provide descriptive statistics to determine the significance of the different characteristics in the dataset in relation to
registration behavior. An example of the findings derived from the Chi-square analysis is provided as Table 3.

Table 3

*Descriptive Statistics*

<table>
<thead>
<tr>
<th>Background Variable</th>
<th>Chi-square</th>
<th>Degrees of Freedom</th>
<th>&quot;p&quot; value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrollment Status</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

After describing the dataset, the researcher explored whether the independent variables of course subject (i.e., allied health, arts and humanities, business and computers, communication, math and science, public service, social sciences), and the number of courses for which a student registered late were significant predictors in regard to successful completion of the late registered course. The dependent variable in the study was the final course grade in the late registered course. For the purposes of this study, successful completion of a course is defined as a final grade of “C” or higher (2.0 on a 4.0 grade scale). These findings were then compared with the sample group of students who did not register late. An example of the table of these findings is presented as Table 4.
Table 4

Independent Variables

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Timely Registrants</th>
<th>Percent</th>
<th>Late Registrants</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Subject</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allied Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arts and Humanities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business and Computers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math and Science</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Regression analysis was employed to examine the significance of the independent variables as predictors of the dependent variable, course grade. The strength and direction of the relationship between registration behavior and outcome, course grade, was tested at the .05 significance level. The results were described in a narrative fashion in terms of variability (R-Squared) and predictive strength. An example of the findings derived from the regression analysis is provided as Table 5.

Table 5

Multiple Regression Analysis

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Course Grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Subject Area</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Qualitative Phase of the Study

Data Collection

Participants. A purposeful sample of participants for qualitative analysis was selected from the group of students who registered late for at least one class in the 2005-2006 academic year, and who were able and willing to provide in-depth responses to questions regarding their experience with the phenomenon of late registration. A specific criterion from which to select participants was identified from findings discovered during the quantitative analysis. The criterion used for selection was those students who late registered during the 2005-2006 academic year and who continued in their enrollment in the 2006-2007 academic year.

Creswell (2003) articulates that interviews be conducted with up to 10 individuals. The number of participants in interviews for this study was expected to be between 10 and 15. The primary focus of this study was quantitative, and the perspectives of 10 to 15 students were expected to provide good qualitative data to further explain the relationship between late registration and student persistence.

Instrumentation. Data collection for the qualitative portion of the study was conducted in a phenomenological manner through in-depth interviews (Patton, 1990). Textual data for qualitative analysis was collected through interviews with study participants. Interview questions were designed to explore the findings from the quantitative analysis, explore how the students experienced the phenomenon of late registration, and probe the participants to share how their experience affected their success in the class as well as the circumstances which caused the students to register late for classes. Prior to conducting the study the interview protocol was pilot tested with...
students who experienced the phenomenon in an earlier semester and who were not selected to participate in the interviews for this study. The interview protocol is included in this proposal as Appendix B.

In preparing for qualitative data collection, a letter (Appendix A) was sent to those students who registered late for classes asking for volunteers to participate in the interview sessions. Participants in interviews were informed of their rights as a participant which included their right to remove themselves from participation at any time, information on how the data will be used, and their rights to a copy of the study results. Participant responses were digitally recorded and later transcribed verbatim by the researcher.

*Interview protocol and HSIRB.* The interview protocol, included as Appendix A, was designed with open-ended questions intended to encourage information-rich responses (Patton, 1990). Flexibility was allowed in the protocol for the researcher to respond to early themes and topics resulting from the interviews. Bogdan and Biklen (2003) discuss the concept of a semi-structured interview. This type of interview is guided by a set of exploratory questions concerning the topic, and the interviewee’s responses are allowed to shape the content of the interview. The interviewer protocol incorporated a set of probing questions designed to dig deeper into the interviewee’s response.

Prior to conducting data collection and interviews, application to conduct research was submitted to the Institutional Review Boards at Western Michigan University and at Kellogg Community College. IRB approval was received prior to conducting interviews (Appendix F). The applications to conduct research included a copy of the interview protocol.
protocol and participant consent form. The participant consent form (Appendix C) covered critical information for the participants including the fact that their participation was voluntary, and they could remove themselves from participation at any time; a guarantee of their privacy as a participant in the study; the purpose of the study and the procedures of the study so the participants knew what to expect; and their right to ask questions and obtain a copy of the final study (Creswell, 2003).

Qualitative Data Analysis

Once all of the data from the study was collected, the researcher began the process of analyzing the data. According to Creswell (1998), the process of analyzing qualitative data begins with creating and organizing files with what can be massive amounts of data. The researcher reviewed the transcription of interview sessions and began to code data in order to describe the meaning of the experience described by participants. Bogdan and Biklen (2003) provide an extensive list of types of codes which are used by the researcher to develop a coding system to identify patterns and themes in regard to the setting, participant perspectives and meanings, and other important structures in analyzing the data. The meanings are classified and grouped into units prior to the researcher actually interpreting the data and beginning to write descriptions of the essence of the experience.

In this phase of the study the researcher transcribed the interview text verbatim, as described by Patton (1990), for a close analysis and in order to provide enough detail for rich, thick descriptions of the data in the analysis stage. Care was taken to identify the researcher's own personal bias in regard to the subject of the study, and to bracket out any presuppositions in order to analyze the data in pure form. Codes were created at the
conclusion of the interview sessions and, in an inductive manner, were based on the overall themes that emerged during multiple readings of the transcripts. The codes were designed to represent the ideas, themes, and patterns that emerged and allow for ample investigation and discovery. Caution was used not to over-code which could hinder the analysis of data. The data was then organized into meaningful clusters and described through a structural synthesis. Data analysis was concluded when the researcher was comfortable with the results of the data, and data were described in narrative form.

**Overall Data Verification**

Creswell (1998) offers eight procedures used in the verification of data. This study utilized Creswell’s recommendation to perform three validation procedures including triangulating among different data sources, having the researcher write detailed descriptions, and performing parallel analysis. Triangulation refers to the use of more than one data collection method which is intended to provide an assurance in the creditability of data collected (McMillan & Wergin, 2002). In this study analysis was performed to determine if information collected in the quantitative portion of the study did coincide with information collected from in-depth interviews.

Rich and thick descriptions are provided by the researcher to detail the participants and the setting involved in the study (Creswell, 1998). In the data analysis the researcher provided such rich and thick descriptions in order to provide the reader an opportunity to consider if the findings of the study can be applied to other settings. In parallel analysis a fellow-researcher reviewed the data collected along with the researcher’s analysis, coding, interpretation, and conclusions to verify the accuracy and
credibility of the researcher's account (Creswell, 1998). Details of all data collected and
the statistics run are provided next, in Chapter IV.
CHAPTER IV
RESULTS

The purpose of this study was to examine the practice of late registration at the community college and the impact of late registration on students. The researcher chose a mixed research methodology designed as a sequential explanatory strategy with a two-phase approach to data analysis (Creswell, 2003). A quantitative analysis was first performed on student data, and this was followed with a qualitative analysis conducted through interviews with late registrants. This study was conducted between October, 2006, and March, 2007, and examined a population of community college students who register on time and those who register late for classes, the academic outcome for both groups of students, and the experiences of late registrants.

This chapter presents results from the analysis of archived data on timely registrants and late registrants as well as interviews conducted with late registrants at Kellogg Community College. The quantitative findings are presented first to describe the demographics of the participants and then to answer research question one regarding the relationship between late enrollment policies and student persistence. Responses from interview participants are presented to explore research question two on the experiences and perceptions of students in regard to late registration. The final section of this chapter follows the sequential explanatory strategy which elaborates on the quantitative findings with the qualitative findings to explain the relationships which were examined in the study.
Quantitative Phase of the Study

Participants and Description of Dataset

Participants for the quantitative analysis portion of this study were students who late registered during the fall 2005 and spring 2006 semesters and a random sample of students who registered on time during the same two semesters. Table 6 describes the dataset of quantitative participants, grouped by timely registrants and late registrants, in terms of age, gender, ethnicity, and enrollment status.

Table 6

Demographics of Quantitative Dataset

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Timely Registrants</th>
<th>Late Registrants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td>382</td>
<td>430</td>
</tr>
<tr>
<td>Non-traditional</td>
<td>327</td>
<td>282</td>
</tr>
<tr>
<td>Undeclared</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>222</td>
<td>279</td>
</tr>
<tr>
<td>Female</td>
<td>488</td>
<td>428</td>
</tr>
<tr>
<td>Undeclared</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>545</td>
<td>454</td>
</tr>
<tr>
<td>Black</td>
<td>29</td>
<td>101</td>
</tr>
<tr>
<td>Hispanic</td>
<td>10</td>
<td>19</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>American Indian/ Alaskan Native</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Multi-Racial</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Undeclared</td>
<td>98</td>
<td>112</td>
</tr>
<tr>
<td>Enrollment Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time Enrolled</td>
<td>246</td>
<td>349</td>
</tr>
<tr>
<td>Part-time Enrolled</td>
<td>466</td>
<td>363</td>
</tr>
</tbody>
</table>

A description of the characteristics of timely registrants is that as a group these students are predominantly of traditional age, White ethnicity, female gender, and a part-time enrollment level. Late registrants carry these same characteristics with the exception
of their percentage of full-time to part-time enrollment which is within one percent of equal.

Pearson’s Chi-square analysis was used to provide descriptive statistics and determine the significance of the different characteristics in the dataset in relation to registration behavior. The results from the Chi-square analysis are provided as descriptive statistics in Table 7 and by characteristic in Table 8.

Table 7

Descriptive Statistics

<table>
<thead>
<tr>
<th>Background Variable</th>
<th>Chi-square</th>
<th>Degrees of Freedom</th>
<th>&quot;p&quot; value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>9.163</td>
<td>2</td>
<td>0.010</td>
</tr>
<tr>
<td>Gender</td>
<td>11.701</td>
<td>2</td>
<td>0.003</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>52.893</td>
<td>6</td>
<td>0.000</td>
</tr>
<tr>
<td>Enrollment Status</td>
<td>30.628</td>
<td>1</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Results of the Chi-square analysis indicate there is a statistically significant relationship between registration behavior, timely or late, and the different characteristics in the dataset. For each of the characteristics (age, $p = .010$; gender, $p = .003$; ethnicity, $p < .001$; enrollment status, $p < .001$) the p-value is less than .05; therefore, each of the characteristics is significant in relation to registration behavior. The significance is shown more clearly in Table 8.
Table 8

Registration Behavior by Characteristic

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Percent Timely Registrant</th>
<th>Percent Late Registrant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td>47.0</td>
<td>53.0</td>
</tr>
<tr>
<td>Non-traditional</td>
<td>53.7</td>
<td>46.3</td>
</tr>
<tr>
<td>Undeclared</td>
<td>100.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>44.3</td>
<td>55.7</td>
</tr>
<tr>
<td>Female</td>
<td>53.3</td>
<td>46.7</td>
</tr>
<tr>
<td>Undeclared</td>
<td>28.6</td>
<td>71.4</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>54.6</td>
<td>45.4</td>
</tr>
<tr>
<td>Black</td>
<td>22.3</td>
<td>77.7</td>
</tr>
<tr>
<td>Hispanic</td>
<td>34.5</td>
<td>65.5</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>62.5</td>
<td>37.5</td>
</tr>
<tr>
<td>American Indian/Alaskan Native</td>
<td>50.0</td>
<td>50.0</td>
</tr>
<tr>
<td>Multi-Racial</td>
<td>50.0</td>
<td>50.0</td>
</tr>
<tr>
<td>Undeclared</td>
<td>46.7</td>
<td>53.3</td>
</tr>
<tr>
<td>Enrollment Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time Enrolled</td>
<td>41.3</td>
<td>58.7</td>
</tr>
<tr>
<td>Part-time Enrolled</td>
<td>56.2</td>
<td>43.8</td>
</tr>
</tbody>
</table>

Table 8 shows that the majority of traditional age students enrolled late (53%) and the majority non-traditional age students enrolled on-time (53.7%). Male students enrolled late (55.7%) and female students enrolled on-time (53.3%). In the ethnic categories, White (54.6%) and Asian or Pacific Islander (62.5%) students enrolled on-time while Black (77.7%) and Hispanic (65.5%) students enrolled late. In consideration of enrollment status, full-time students enrolled late (58.7%) and part-time students enrolled on-time (56.2%).

The description of late registrants in this study differed from that found in other empirical studies on late registrants. For instance, in the study conducted by Freer-Weiss (2004), late registrants were predominantly male and non-traditional in age; ethnicity was
not considered a significant factor in the characteristics of late registrants (n = 785). The difference in findings between the two studies could be in how the characteristics of the overall student population for each of the study sites match those of the late registrants. Such as, the characteristics of late registrants in the current study are reflective of the population at the study site which is predominantly of non-traditional age, White ethnicity, female gender, and a part-time enrollment level. The characteristics of the overall study site in Freer-Weiss (2004) are not known in order to make a comparison.

The Relationship between Late Enrollment Policies and Student Persistence

The first overarching research question in the quantitative phase of the study was: What is the relationship between late enrollment policies and student persistence? To examine the relationship between late enrollment policies and student persistence, analysis was conducted to explore whether the independent variables of course subject area (i.e., allied health, arts and humanities, business and computers, communication, math and science, public service, social sciences), and the number of courses for which a student registers late are significant predictors in regard to successful completion of the course. The dependent variable was final course grade. For the purposes of this study, successful completion of a course was defined as a final grade of “C” or higher (2.0 on a 4.0 grade scale). The findings were compared on the basis of timely and late registration behavior.

Late enrollment as a predictor of student success. The first sub-question to research question one was: To what extent does late enrollment predict student success or non-success as defined by course completion?

54
The final dataset contained 1,845 final grades for 712 timely registrants and 984 final grades for 712 late registrants. The distribution of successful and unsuccessful course completion grouped by registration behavior is reflected in Table 9.

Table 9

Final Course Grade

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Timely Registrants</th>
<th>Percent</th>
<th>Late Registrants</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Successful Grade</td>
<td>1628</td>
<td>88.2</td>
<td>625</td>
<td>63.5</td>
</tr>
<tr>
<td>Unsuccessful Grade</td>
<td>217</td>
<td>11.8</td>
<td>358</td>
<td>36.4</td>
</tr>
</tbody>
</table>

Table 9 shows timely registrants (88.2%) to have a higher likelihood of success than late registrants as measured by percentage of successful final course grade. The majority of late registrants (63.5%) were also shown to achieve a successful final course grade.

To determine whether a significant difference exists in course completion between timely registrants and late registrants, a t-test was performed on the dataset to analyze the success and nonsuccess of the two groups. Final course grade was used as the dependent variable, and registration behavior as the independent variable. Table 10 presents descriptive statistics for each registration type.

Table 10

Descriptive Statistics

<table>
<thead>
<tr>
<th>Final Course Grade</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timely Registrants</td>
<td>1845</td>
<td>1.12</td>
<td>0.322</td>
</tr>
<tr>
<td>Late Registrants</td>
<td>983</td>
<td>1.36</td>
<td>0.481</td>
</tr>
</tbody>
</table>
Looking at the means from the descriptive statistics table, late registrants (M = 1.36, SD = 0.481) and timely registrants (M = 1.12, SD = 0.322), it appears that timely registrants have a higher likelihood of success in terms of final course grade.

Table 11

**Independent Samples t-Test**

<table>
<thead>
<tr>
<th>t-test for Equality of Means</th>
<th>t</th>
<th>Degrees of Freedom</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Course Grade</td>
<td>-14.428</td>
<td>1462.346</td>
<td>0.000</td>
<td>-0.25</td>
</tr>
</tbody>
</table>

T-test results (Table 11) show that the two groups, timely registrants and late registrants, are statistically significantly different in terms of final course grade, \( t(1462.346) = -14.428, p < .001 \).

Summing up these tables, it appears that students who register and begin a course on time are more likely than late registrants to complete the course and earn a grade of “C” or higher. This result supports the intuition of community college faculty, administrators, and academic advisors who, in studies (Freer-Weiss, 1999; Roueche & Roueche, 1993; Smith, Street, & Olivarez, 2002), expressed their sense that allowing students to register late for classes hinders academic success, and that late registrants typically do not complete coursework. It is reasonable to suppose that students who begin a course late are at a disadvantage to successfully complete that course; therefore, the results are not surprising.

To further explore the impact of late registration as a predictor of student success, the final grade data was analyzed by the characteristics of the participants. Table 12 reflects numerically the successful and unsuccessful course completion of timely and late registrants.
registrants in terms of age, gender, ethnicity, and enrollment status. Table 13 expresses the successful and unsuccessful course completion data once again in terms of percent successful and unsuccessful by characteristics and by registration behavior.

Table 12

Course Completion by Characteristic and Registration Behavior

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Timely Registrants</th>
<th>Late Registrants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Successful Final Grade</td>
<td>Unsuccessful Final Grade</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td>324</td>
<td>58</td>
</tr>
<tr>
<td>Non-traditional</td>
<td>294</td>
<td>32</td>
</tr>
<tr>
<td>Undeclared</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>197</td>
<td>25</td>
</tr>
<tr>
<td>Female</td>
<td>423</td>
<td>64</td>
</tr>
<tr>
<td>Undeclared</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>484</td>
<td>60</td>
</tr>
<tr>
<td>Black</td>
<td>22</td>
<td>7</td>
</tr>
<tr>
<td>Hispanic</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>American Indian/Alaskan Native</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Multi-Racial</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Undeclared</td>
<td>75</td>
<td>21</td>
</tr>
<tr>
<td>Enrollment Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time Enrolled</td>
<td>222</td>
<td>23</td>
</tr>
<tr>
<td>Part-time Enrolled</td>
<td>399</td>
<td>67</td>
</tr>
</tbody>
</table>

For each characteristic, timely registrants performed better in terms of final course grade than did late registrants. An analysis of the characteristic itself shows that nontraditional age students performed better than traditional age students regardless of registration behavior. Male students performed better than female for timely registrants, and female students performed better than male for late registrants. Full-time enrolled students performed better than part-time enrolled students regardless of registration behavior.
Table 13

Percent Course Completion by Characteristic and Registration Behavior

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Timely Registrants</th>
<th>Late Registrants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent Successful Final Grade</td>
<td>Percent Unsuccessful Final Grade</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td>84.8</td>
<td>15.2</td>
</tr>
<tr>
<td>Non-traditional</td>
<td>90.2</td>
<td>9.8</td>
</tr>
<tr>
<td>Undeclared</td>
<td>100.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>88.7</td>
<td>11.3</td>
</tr>
<tr>
<td>Female</td>
<td>86.9</td>
<td>13.1</td>
</tr>
<tr>
<td>Undeclared</td>
<td>50.0</td>
<td>50.0</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>89.0</td>
<td>11.0</td>
</tr>
<tr>
<td>Black</td>
<td>75.9</td>
<td>24.1</td>
</tr>
<tr>
<td>Hispanic</td>
<td>90.0</td>
<td>10.0</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>90.0</td>
<td>10.0</td>
</tr>
<tr>
<td>American Indian/Alaskan Native</td>
<td>100.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Multi-Racial</td>
<td>100.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Undeclared</td>
<td>78.1</td>
<td>21.9</td>
</tr>
<tr>
<td>Enrollment Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time Enrolled</td>
<td>90.6</td>
<td>9.4</td>
</tr>
<tr>
<td>Part-time Enrolled</td>
<td>85.6</td>
<td>14.4</td>
</tr>
</tbody>
</table>

Although the study of late registrants by Freer-Weiss (2004) did not find ethnicity as a significant factor of late registrants, this study did find, as shown in Table 7, a statistically significant relationship between registration behavior and ethnicity ($p < .001$). In regard to the success of late registrants, the Asian or Pacific Islander population had the highest level of success in the late registered course (83.3%) followed by American Indian/Alaskan Native (69.2%), White (68.9%), Hispanic (57.9%), and Black (55.4%) populations.

The Chi-square test of independence was used to determine the significance of the variables within the different characteristics in the dataset in relation to successful and
unsuccessful course grade. The results from the Chi-square analysis are provided as Table 14 for late registrants and Table 15 for timely registrants.

Table 14

Chi-square on Characteristics and Final Course Grade for Late Registrants

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Chi-square</th>
<th>Degrees of Freedom</th>
<th>&quot;p&quot; value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1.401</td>
<td>1</td>
<td>0.237</td>
</tr>
<tr>
<td>Gender</td>
<td>1.548</td>
<td>2</td>
<td>0.461</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>9.953</td>
<td>6</td>
<td>0.127</td>
</tr>
<tr>
<td>Enrollment Status</td>
<td>0.585</td>
<td>1</td>
<td>0.444</td>
</tr>
</tbody>
</table>

The results show that for late registrants each of the characteristics has a \( p \)-value greater than .05; therefore, the proportion difference in the variables within each of the characteristics is not significant in relation to final course grade. For example, as shown in Table 13, a larger percentage of non-traditional aged late registrants (69.1%) were successful; however, measured as a proportion (age, \( p = .237 \)), there is not a significant difference in success between non-traditional and traditional aged late registrants. Likewise, a larger percentage of female late registrants (67.9%) were successful; however, measured as a proportion (gender, \( p = .461 \)), there is not a significant difference in success between female and male late registrants. Once again, a larger percentage of full-time enrolled late registrants (67.9%) were successful; however, measured as a proportion (enrollment status, \( p = .444 \)), there is not a significant difference in success between full-time and part-time enrolled late registrants.

The closest measure to significance came in the proportion of students within the various ethnic categories who were successful. These percentages range from 83.3% of Asian or Pacific Islander late registrants who were successful to 42.9% of multi-racial...
late registrants who were successful. When this range is measured as a proportion (ethnicity, \( p = .127 \)), late registrants in any one ethnic category who were successful is not significantly different to the proportion among the categories.

Table 15

*Chi-square on Characteristics and Final Course Grade for Timely Registrants*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Chi-square</th>
<th>Degrees of Freedom</th>
<th>&quot;p&quot; value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>5.02</td>
<td>2</td>
<td>0.081</td>
</tr>
<tr>
<td>Gender</td>
<td>3.017</td>
<td>2</td>
<td>0.221</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>15.127</td>
<td>6</td>
<td>0.019</td>
</tr>
<tr>
<td>Enrollment Status</td>
<td>3.616</td>
<td>1</td>
<td>0.057</td>
</tr>
</tbody>
</table>

The results for timely registrants show that for three of the characteristics the \( p \)-value is greater than .05; therefore, the proportion difference in the variables within these characteristics is not significant in relation to final course grade. For example, as shown in Table 13, a larger percentage of non-traditional aged timely registrants (90.2%) were successful; however, measured as a proportion (age, \( p = .081 \)), that percentage is not significantly different to the percentage of traditional aged timely registrants (84.8%) who were successful. Likewise, a larger percentage of male timely registrants (88.7%) were successful; however, measured as a proportion (gender, \( p = .221 \)), that percentage is not significantly different to the percentage of female timely registrants (86.9%) who were successful. Once again, a larger percentage of full-time enrolled timely registrants (90.6%) were successful; however, measured as a proportion (enrollment status, \( p = .057 \)), that percentage is not significantly different to the percentage of part-time enrolled timely registrants (85.6%).
The analysis in the ethnic category did show significance in the relationship to final course grade for timely registrants. These percentages range from 100% of both the American Indian/Alaskan Native and multi-racial timely registrants who were successful to 75.9% of Black timely registrants who were successful. When this range is measured as a proportion (ethnicity, \( p = .019 \)), timely registrants in any one ethnic category who were successful is significantly different to the proportion among the categories.

The overall results show that late enrollment does predict student success or non-success as defined by course completion. Although the majority of late registrants (63.5%) did achieve a successful final course grade and complete the late registered course, timely registrants (88.2%) were shown to have a higher likelihood of success as measured by percentage of successful final course grade. Timely registrants were also shown to perform better than late registrants for each participant characteristic (i.e., age, gender, ethnicity, and enrollment status). This result is not extraordinary in that timely registrants are perceived to have an advantage over late registrants due to having the full time allotted to complete course assignments (Freer-Weiss, 1999; Roueche & Roueche, 1993; Smith, Street, & Olivarez, 2002).

The number of late registered courses as a predictor of student success. The second sub-question to research question one was: To what extent does the number of courses registered late predict the likelihood of failing grades?

The population of late registrants (n = 712) registered late into a total of 984 courses. Table 16 describes the dataset in terms of the number of courses into which each late registrant registered late. The majority of students late registered into only one course. The frequency decreased as the number of late registered courses increased.
Table 16

*Number of Courses Registered Late*

<table>
<thead>
<tr>
<th>Number of Courses Registered Late</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>584</td>
<td>59.3</td>
</tr>
<tr>
<td>Two</td>
<td>240</td>
<td>24.4</td>
</tr>
<tr>
<td>Three</td>
<td>99</td>
<td>10.1</td>
</tr>
<tr>
<td>Four</td>
<td>40</td>
<td>4.1</td>
</tr>
<tr>
<td>Five</td>
<td>15</td>
<td>1.5</td>
</tr>
<tr>
<td>Six</td>
<td>6</td>
<td>0.6</td>
</tr>
</tbody>
</table>

The relationship between the number of courses registered late and final course grade is first described in terms of the final course grade, number and percentage successful or unsuccessful, for each late course registration. This description is shown in Table 17.

Table 17

*Number of Courses Late Registered and Final Grade*

<table>
<thead>
<tr>
<th>Successful Final Grade</th>
<th>Percent</th>
<th>Unsuccessful Final Grade</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Course Registered Late</td>
<td>394</td>
<td>67</td>
<td>190</td>
</tr>
<tr>
<td>2 Courses Registered Late</td>
<td>144</td>
<td>60</td>
<td>96</td>
</tr>
<tr>
<td>3 Courses Registered Late</td>
<td>53</td>
<td>54</td>
<td>46</td>
</tr>
<tr>
<td>4 Courses Registered Late</td>
<td>16</td>
<td>40</td>
<td>24</td>
</tr>
<tr>
<td>5 Courses Registered Late</td>
<td>14</td>
<td>93</td>
<td>1</td>
</tr>
<tr>
<td>6 Courses Registered Late</td>
<td>5</td>
<td>83</td>
<td>1</td>
</tr>
</tbody>
</table>

The majority of students who late registered for one, two, or three courses achieved a successful final course grade. The same was true for students who late registered for five or six courses. The difference was found in the ten students who late registered for four courses. For those students, 60% of the final course grades were unsuccessful.
Interestingly, the higher percentage of successful course completion was found with those students who registered late for five (93%) and six (83%) courses. Speculation about this correlation ventures into premise of the students’ academic background and their diligence to complete coursework, and in particular late registered coursework. Students who take five and six courses per semester show some determination to pursue their education, and that coupled with the decision to late register shows perseverance and dedication to their academic studies. It is also important to note that a relatively small number of students late registered for five courses (3 students) and six courses (1 student), which may be a further explanation for the higher percentage of successful course completion.

Table 18 presents descriptive statistics for final course grade and number of courses registered late.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Course Grade</td>
<td>984</td>
<td>1.36</td>
<td>0.48</td>
</tr>
<tr>
<td>Number of Courses Registered Late</td>
<td>984</td>
<td>1.66</td>
<td>0.99</td>
</tr>
</tbody>
</table>

The relationship between the number of courses registered late and final course grade was analyzed using bivariate regression analysis between the two variables. Table 19 shows the correlation between number of courses registered late and final course grade ($n = 984; r = .071, p = .027$). This significance level is less than .05 concluding that there is a significant correlation between number of courses registered late and final course grade.
Table 19

Regression Model Summary

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.071</td>
<td>0.005</td>
<td>0.004</td>
<td>0.48</td>
</tr>
</tbody>
</table>

*"R" Predictors: (Constant), Number of Courses Reg Late
Dependent Variable: Final Course Grade

The overall results are interesting in that there is a correlation between the number of courses registered late and final course grade, and the higher percentage of successful course completion was found with those students who registered late for more courses. To a large extent the number of courses registered late does predict the likelihood of failing grades, and the greatest likelihood of failure was found in those students who late registered for four courses. For those students, 60% of the final course grades were unsuccessful. It was unexpected that the results did not show a failure rate that progressed along with the number of courses registered late. Intuition would express that students in a position to compensate for starting late in four, five, or six courses would have a higher likelihood of failure than those starting late in one, two, or three courses. The result that four courses was the optimum figure for a higher failure rate queries if other factors not revealed in this study would account for the outcome. These factors could include influences from the students’ external environment such as those identified by Bryant, Danley, Fleming, and Somers (1996).

Course subject as a predictor of student success. The third sub-question to research question one was: To what extent does the subject matter of a course (i.e., allied...
health, arts and humanities, business and computers, communication, math and science, public service, social sciences) predict the late registrants’ completion of that course?

To begin to describe the relationship between course subject area and course completion, Table 20 presents the dataset in terms of registration behavior into the seven course subject areas which were a part of this study. The individual course subjects are shown in Appendix D grouped into the seven subject areas for courses.

Table 20

Course Subject Area

<table>
<thead>
<tr>
<th>Course Subject</th>
<th>Timely Registrants</th>
<th>Timely Registrants Percent</th>
<th>Late Registrants</th>
<th>Late Registrants Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allied Health</td>
<td>212</td>
<td>11.5</td>
<td>44</td>
<td>4.5</td>
</tr>
<tr>
<td>Arts and Humanities</td>
<td>111</td>
<td>6.0</td>
<td>109</td>
<td>11.1</td>
</tr>
<tr>
<td>Business and Computers</td>
<td>432</td>
<td>23.4</td>
<td>184</td>
<td>18.7</td>
</tr>
<tr>
<td>Communication</td>
<td>289</td>
<td>15.7</td>
<td>115</td>
<td>11.7</td>
</tr>
<tr>
<td>Math and Science</td>
<td>356</td>
<td>19.3</td>
<td>210</td>
<td>21.3</td>
</tr>
<tr>
<td>Public Service</td>
<td>138</td>
<td>7.5</td>
<td>115</td>
<td>11.7</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>307</td>
<td>16.6</td>
<td>207</td>
<td>21.0</td>
</tr>
</tbody>
</table>

The majority of timely registrants were enrolled in the course subject area of business and computers (23.4%) followed by math and science (19.3%), social sciences (16.6%), and communication (15.7%). The majority of late registrants were enrolled in the course subject area of math and science (21.3%) followed by social sciences (21%), business and computers (18.7%), communication (11.7%), and public service (11.7%).

The relationship is next described in Table 21 in terms of registration behavior and successful or unsuccessful final grade in the seven course subject areas.
Table 21

**Course Subject Area and Final Course Grade Cross-tabulation**

<table>
<thead>
<tr>
<th>Course Subject Area</th>
<th>Timely Registrants</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Late Registrants</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Successful Final Grade</td>
<td>Unsuccessful Final Grade</td>
<td>Successful Final Grade</td>
<td>Unsuccessful Final Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allied Health</td>
<td>204</td>
<td>8</td>
<td>37</td>
<td>7</td>
<td></td>
<td>1628</td>
<td>217</td>
<td></td>
<td>625</td>
</tr>
<tr>
<td>Arts and Humanities</td>
<td>96</td>
<td>15</td>
<td>72</td>
<td>36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business and Computers</td>
<td>364</td>
<td>68</td>
<td>112</td>
<td>72</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>250</td>
<td>39</td>
<td>68</td>
<td>47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math and Science</td>
<td>295</td>
<td>61</td>
<td>118</td>
<td>92</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Service</td>
<td>134</td>
<td>4</td>
<td>96</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td>285</td>
<td>22</td>
<td>122</td>
<td>85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>1628</strong></td>
<td><strong>217</strong></td>
<td><strong>625</strong></td>
<td><strong>358</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 22 expresses the final grade data once again in terms of percent successful and unsuccessful by course subject area and by timely or late registrants.

Table 22

**Course Subject Area and Final Course Grade by Percent Successful and Unsuccessful**

<table>
<thead>
<tr>
<th>Course Subject Area</th>
<th>Timely Registrants</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Late Registrants</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Successful Final Grade</td>
<td>Unsuccessful Final Grade</td>
<td>Successful Final Grade</td>
<td>Unsuccessful Final Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allied Health</td>
<td>96.2</td>
<td>3.8</td>
<td>84.1</td>
<td>15.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arts and Humanities</td>
<td>86.5</td>
<td>13.5</td>
<td>66.7</td>
<td>33.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business and Computers</td>
<td>84.3</td>
<td>15.7</td>
<td>60.9</td>
<td>39.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>86.5</td>
<td>13.5</td>
<td>59.1</td>
<td>40.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math and Science</td>
<td>82.9</td>
<td>17.1</td>
<td>56.2</td>
<td>43.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Service</td>
<td>97.1</td>
<td>2.9</td>
<td>83.5</td>
<td>16.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td>92.8</td>
<td>7.2</td>
<td>56.9</td>
<td>41.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Percent Totals</strong></td>
<td><strong>88.2</strong></td>
<td><strong>11.8</strong></td>
<td><strong>63.6</strong></td>
<td><strong>36.4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For timely registrants, students enrolled in the course subject area of public service had a higher percentage (97.1%) of successful final course grade followed by students enrolled in allied health (96.2%) and social sciences (92.8%). Late registrants showed a higher percentage of successful final course grade in the course subject area of
allied health (84.1%) followed by public service (83.5%) and arts and humanities (66.7%). Overall, timely registrants had a higher percentage of successful final course grades (88.2%) than did late registrants (63.6%).

In an analysis of the results from the perspective of course subject areas, allied health produced the highest percentage of successful final course grade for late registrants (84.1%) and the second highest for timely registrants (96.2%). In comparison, the course subject area of public service produced the highest percentage of successful final course grade for timely registrants (97.1%) and the second highest for late registrants (83.5%).

The highest percentage of unsuccessful final course grade for both timely and late registrants was in the course subject area of math and science. For timely registrants 17.1% of students were unsuccessful as were 43.8% of late registrants. The course subject area of social sciences provided the most different results with only 7.2% of timely registrants unsuccessful in final course grade compared to 41.1% of late registrants who were unsuccessful in final course grade.

The Chi-square test of independence was used to determine whether there is a relationship between the variables of course subject area and final course grade for either timely or for late registrants. Table 23 shows the results of the Chi-square test of independence.

Table 23

<table>
<thead>
<tr>
<th>Registration Behavior</th>
<th>Chi-square</th>
<th>Degrees of Freedom</th>
<th>&quot;p&quot; value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timely Registrants</td>
<td>47.386</td>
<td>6</td>
<td>0.000</td>
</tr>
<tr>
<td>Late Registrants</td>
<td>36.549</td>
<td>6</td>
<td>0.000</td>
</tr>
</tbody>
</table>
The results show that for timely registrants as well as late registrants, $p < .001$ which is less than .05; therefore, it is assumed that there is a significant relationship between the two variables, course subject and final course grade, for both timely and late registrants. It appears that successful final course grades are dependent on course subject area. For example, 96.2% of students who enrolled on time in allied health and 97.1% in public service were successful as compared to late registrants in those two course subject areas who were only 84.1% and 83.5% successful, respectively.

To further explore the relationship, regression analysis was employed to examine the significance of the independent variable, course subject area, as a predictor of the dependent variable, final course grade. The strength and direction of the relationship between registration behavior and outcome, course grade, was tested at the .05 significance level. The results are expressed in the following tables in terms of descriptive statistics and variability (R-Squared). Tables 24 and 25 show the results for late registrants and Tables 26 and 27 show the results for timely registrants.

Table 24

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Course Grade</td>
<td>984</td>
<td>1.36</td>
<td>0.48</td>
</tr>
<tr>
<td>Course Subject Area</td>
<td>984</td>
<td>4.54</td>
<td>1.82</td>
</tr>
</tbody>
</table>

The correlation between the course subject area and final course grade ($n = 984$) was $r^2 = .001, p = .032$. The significance level is less than .05; therefore, there is a significant correlation between course subject area and final course grade. The conclusion is that course subject area does predict the final course grade for late registrants.
Table 25

Regression Model Summary for Late Registrants

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.032</td>
<td>0.001</td>
<td>0</td>
<td>0.48</td>
</tr>
</tbody>
</table>

"R" Predictors: (Constant), Course Subject Area
Dependent Variable: Final Course Grade

The following tables show results for the timely registrants.

Table 26

Descriptive Statistics for Timely Registrants

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Course Grade</td>
<td>1845</td>
<td>1.12</td>
<td>0.32</td>
</tr>
<tr>
<td>Course Subject Area</td>
<td>1845</td>
<td>4.14</td>
<td>1.866</td>
</tr>
</tbody>
</table>

The correlation between the course subject area and final course grade \((n = 1845)\) was \(r^2 < .001, p = .016\). The significance level is less than .05; therefore, there is a significant correlation between course subject area and final course grade. The conclusion is that course subject area does predict the final course grade for timely registrants.

Table 27

Regression Model Summary for Timely Registrants

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.016</td>
<td>0.000</td>
<td>0.000</td>
<td>0.322</td>
</tr>
</tbody>
</table>

"R" Predictors: (Constant), Course Subject Area
Dependent Variable: Final Course Grade
To a great extent the subject matter of a course (i.e., allied health, arts and humanities, business and computers, communication, math and science, public service, social sciences) does predict the late registrants’ completion of a course; subject matter also predicts the timely registrants’ completion of a course. The overall results are interesting in that there is a correlation between course subject area and final course grade. Late registrants who enrolled in allied health and public service were most successful, and those who enrolled in arts and humanities, business and computers, communication, social sciences, and math and science were the least successful. Timely registrants who enrolled in public service, allied health, and social sciences were most successful, and those who enrolled in arts and humanities, communication, business and computers, and math and science were the least successful.

It is notable that students in the allied health and public service subject areas were successful, and the courses in these subject areas represent content for occupational programs. As shown in Appendix D, the allied health area is comprised of the occupational fields of dental hygiene, medical laboratory technician, nursing, physical therapist assistant, and radiographer. Likewise, the public service area is comprised of the occupational fields of criminal justice, early childhood education, emergency medical technician, fire science, human services, paralegal, and social work.

The nature of occupational education programs are such that students progress through the programs in a cohort, develop their own academic support groups, and strive to achieve academic levels sufficient for licensure requirements within their occupational field. Students entering the allied health programs of study are generally required to meet specific grade point average requirements and to pass general education courses prior to
registering for allied health program courses. Upon graduation from the program these students will need to pass state boards and licensure requirements to enter the occupational field. Likewise, students who graduate in public service program areas are seeking certification or licensure to enter the occupational field. It is speculated these factors cause the occupational students to approach their studies in a resolute manner. Therefore, the result that students in these occupational course subject areas were most successful is not unexpected. Likewise, the result that the subject area of math and science produced the least successful final course grades is reflective of the necessary level of critical thinking skills and understanding of complex concepts to successfully complete courses in this subject area. Students from across all disciplines are enrolled in math and science courses, and not all students have the necessary level of academic skill to successfully complete these courses.

**Summary**

The quantitative data has shown that the characteristics of students who register on time and those who register late were representative of the overall population of students at Kellogg Community College. Students in the study were predominantly of traditional age, White ethnicity, female gender, and a part-time enrollment level.

Overall, timely registrants have a higher likelihood of success in terms of final course grade. An analysis of final course grade by student characteristic shows that among timely registrants, male students performed better than female as did those students of a non-traditional age and those who enroll full time. In the late registrant category, female students performed better than male; likewise, students of non-traditional age and those who enroll full time performed better than those of a traditional
age and those who enroll part-time. A test of the proportionate difference of the variables within each of the characteristics in relation to final course grade did not show a significant relationship for either group, timely or late registrants.

The ethnicity breakout is interesting in that for timely registrants the American Indian/Alaskan Native and multi-racial populations had the greatest likelihood of success followed by ethnicities of Hispanic and Asian or Pacific Islander. The two populations with the lesser likelihood of success were White and Black. For late registrants the ethnicity breakout was different where the Asian or Pacific Islander population had the greatest likelihood of success followed by American Indiana/Alaskan Native, White, and Hispanic populations; Black and the multi-racial population had the lesser likelihood of success.

The majority of late registrants enrolled late for one or two courses and some late registered for as many as six courses. The number of courses registered late does predict success in the final course grade. Counterintuitively, students who registered late for five or six courses had a higher percentage of success than those who registered late for only one course. For example, students who registered late for five courses had a higher percentage of success (93%) than those who late registered for only one course (67%). A more common assumption would be that students who started late in several courses would have less likelihood to catch up in each course and achieve academic success. Perhaps this result reflects the students’ dedication or determination to perform well and successfully complete courses. Theoretically these students stayed on task given the drawback of starting class late and the apprehension of not achieving academic success in the late registered courses.
For the purposes of this study, courses were classified into seven course subject areas: allied health, arts and humanities, business and computers, communication, math and science, public service, and social sciences. The majority of timely registrants enrolled for courses in business and computers. The majority of late registrants enrolled for courses in math and science and the social sciences.

In consideration of whether or not students were successful in the various course subject areas, timely registrants who enrolled in public service, allied health, and social sciences were most successful, and those who enrolled in arts and humanities, communication, business and computers, and math and science were less successful. For late registrants the overall results were slightly different with allied health and public service as the most successful followed by arts and humanities, business and computers, communication, social sciences, and math and science as less successful.

The public service and allied health areas represent occupational programs which are typically comprised of a cohort of students who progress through the program at the same pace and, thus, may develop their own support systems. As theorized earlier, this close-knit culture could lend to higher academic achievement in occupational courses. These programs also culminate in occupational licensure and certifications. Academic achievement is critical to students’ eligibility and ability to obtain the necessary licensure and certification to enter their chosen occupational field.

Courses in math and science are required of students across the curriculums, occupational degrees as well as transfer degrees such as associate in arts and associate in science. A supposition is that not all students enrolled in math and science courses had the academic background or the aptitude and desire to perform well in those courses. This
potential impact could be reflected in the less successful results for both timely and late registrants in math and science as a course subject area.

Qualitative Phase of the Study

Participants and Description of Dataset

A purposeful sample of participants was invited to participate in the qualitative portion of this study. After a review of the quantitative data, the researcher identified 289 late registrants who met specific persistence criteria. These were students from the quantitative analysis who late registered for at least one class in the fall 2005 or spring 2006 semester and who persisted in enrollment at Kellogg Community College and registered for at least one class in either the fall 2006 or spring 2007 semester. From this pool, 10 students responded to the letter of invitation to participate in an interview.

The demographics of the participants included six women and four men; the ethnicity consisted of six White, three Black, and one Hispanic; seven were of traditional age and three were non-traditional. Four of the participants enrolled full time during the quantitative phase of the study and six of the participants enrolled part-time. It is interesting to note that during the qualitative phase of the study seven participants were enrolled full-time.

Six of the study participants registered late for one course during the study semesters, three registered late for two courses, and one registered late for three courses. Their courses represented the subject areas of arts and humanities, business and computers, communication, math and science, public service, and social sciences. Of the fifteen courses for which the study participants registered, thirteen courses were completed successfully and only two were unsuccessful. Both of those unsuccessful
grades were in courses from the subject area of business and computers and both grades represented a withdrawal from the course.

Data Analysis

Interviews were held on the campus of Kellogg Community College including a study room and a conference room in the Learning Resource Center on the main campus and a conference room at the KCC Regional Manufacturing Technology Center located in the Fort Custer Industrial Park in Battle Creek. One interview was conducted in a private office on the main campus.

To design the interviews, collect the data, analyze the data, and triangulate the findings, the researcher adhered to the qualitative research process described by Creswell (1998), Bogdan and Biklen (2003), and Patton (1990). The interview design included five specific, open-ended questions and several probing questions which allowed the researcher to encourage a more in-depth response from participants. Each interview was audio taped and then transcribed verbatim by the researcher. Transcription by the researcher allowed an opportunity to hear again the tone and inflection in the voice of the participant as well as an opportunity to listen again to what was said prior to analysis of the printed transcripts.

Analysis of the data included coding to identify patterns and themes in the participants’ perspectives and meanings. The researcher was careful to identify any personal bias and to bracket out any presuppositions and elements from the world, in this case Kellogg Community College, which would contaminate the data. The data was then considered within the context of the study and delimited in order to eliminate from analysis any information provided during interviews which was determined to be
irrelevant to the study or repetitive in nature. To verify the accuracy and credibility of the researcher's account, parallel analysis was performed by an independent peer reviewer on the data contained in the qualitative portion of this study.

During data analysis several common themes became apparent from the late registrants' perspective and meanings associated to late registration and from key words and phrases which surfaced throughout the interviews. These themes were classified into four major categories: (a) the reasons for late registration were expressed in the themes of financial aid, transfer, and life circumstances; (b) the impact of late registration on the educational experience was described in themes of the consequences of late registration, the influence of the late registration process, and the impact of academic advising; (c) the relationship between subject knowledge and academic performance included themes of satisfaction with performance and the significance of the relationship between late registration and subject knowledge; and (d) factors contributing to decisions to late register carried many themes including life circumstances can cause late registration, early registration is key to success, student background factors and the level of determination and preparation needed to be successful in class, and decisions to late register in the future.

*The Experience and Perceptions of Students in Regard to Late Enrollment*

The overarching research question in the qualitative phase of the study was: What is the experience and perceptions of students in regard to late enrollment? This overarching question was followed by three sub-questions: (a) How do students describe the reasons for their late registration? (b) How do students describe the impact of late enrollment policies on their educational experience? and, (c) How do students experience
the late enrollment policies, and do they feel there is a relationship between late registration and completion of coursework?

*The reasons for late registration.* Study participants were asked to describe the reasons for their late registration. The interview question was: Tell me about your decision to register late, and how would you describe the circumstances which led you to register late. The common themes from responses were the impact of financial aid, transfer decisions, and the influence of life circumstances.

Respondents described both factors and circumstances contributing to their involvement in the late registration process and in their decision to late register. The factors included the financial aid process and requirements to transfer to a four-year institution. One student described a situation where proof of legal citizenship was required to complete the financial aid process. Acquiring documentation delayed the disbursement of financial aid monies and resulted in the student’s classes for the semester being dropped due to non-payment of tuition and fees by a specific date. This student had previously attended two other institutions and felt that “at some point I had to produce some sort of identification to show that I was a legal resident.” To add to the delay, the notification to the student that documentation was required was sent via the college’s student e-mail system, and the student stated, “I do not check my [college] e-mail during the summer … so I was just very disappointed that [the college] didn’t do hard-copy notification.” Once financial aid was disbursed the student was in the late registration time period for one course.

Transfer issues were mentioned by several students as a factor contributing to late registrations. One student described a scheduling conflict with two summer courses
crucial for transfer the upcoming fall semester. A second student referred to taking a course as a repeat in order to earn a higher grade to meet the transfer requirement. A third student described a recurring scenario of “jockeying my schedule around trying to figure out what would transfer to another college.” This student had experienced issues in academic advising which he felt contributed to wrong course selections for a specific transfer curriculum. The student now works with one specific advisor and together they contact the transfer institution to verify how the course selections fit the transfer curriculum. The student expressed “I don’t want to take any classes I don’t have to take because I am spending my money and I want to make sure I am spending it well.”

The circumstances contributing to students’ decisions to late register included students waiting to register until they made other crucial life decisions. One student described her life circumstances stating, “At that time I was pregnant and I had just gotten out of the military … I didn’t know if I wanted to just have the baby first or just go ahead and pursue my education. So I did decide to go ahead after much contemplation so I kind of waited until the last minute.” Another student with similar circumstances stated, “I had my daughter … and then trying to deal with a brand-new baby and decide to go to college or not to go to college, to quit my job or not quit my job, those were a lot of decisions that I made at that time … basically made me late register because I had all of those decisions to make.”

Another recalled, “As I remember it was a toss up between going to school or taking a job.” This student began his academic career at KCC in the 1980’s and then transferred and earned a bachelor’s degree before returning to KCC last year. His remarks continued,
It was one of those things where I have an ultimate goal of accomplishing an MFA [master’s degree in fine arts], so to be able to do that definitely weighed more heavily in my decision. It worked out that I was actually able to go to school. Some people would have questioned my going here to KCC ... the ultimate goal for me is to be able to teach in a studio arts capacity. So to be able to teach classes that I’ve actually had before would probably be wise. So that’s ... what primarily led to my decision to come here to KCC. To be able to take these intro classes and ... they transfer as well which is really nice...

Other students mentioned class cancellations by the college and the drop and add process as contributing to their involvement in the late registration process. As one student explained, “Most of the time I register online ... way ahead, and if I late register it’s because a class doesn’t fit into my schedule ... or I needed to take something different.” This student described her schedule as “pretty full” and talked about dropping and adding classes as her life circumstances changed, and about times when she’s discovered “a class that I picked already doesn’t really work into the schedule I have after [registering] that early.” She is planning to graduate in May of 2007 and has also utilized the late registration process when she discovered she needed a different course to graduate.

One of the younger respondents described her late registration circumstance as “...the fact that I’ve changed my mind about what classes I wanted to take and so I go back and forth for so long and then it comes down to the wire and I have to make a decision.” Further along in the interview this student explains, “I was just going to school

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because my dad told me to” and attributes her late registration to procrastination and a lack of interest in going to college. She expressed one other factor contributing to her late registration,

Math is not one of my greatest subjects. I’ve always had a problem with math ever since high school, middle school was good and high school started going down hill. When I took the [placement] test here to put me into whatever math class, I did really bad. It was really weird because I took Algebra II and geometry and all that in high school, and then when I placed here I placed in just, what, remedial? I mean, I didn’t even hit college algebra, so that shocked me. And so I just thought I was really bad at [math] and so that was another reason why the late [registration]. I just didn’t really want to take it, but I knew I had to and so I was just kind of slacking off.

There was one student whose response was interesting, but the response did not fit any of the general themes. This student was quite honest in stating, “If I register late it’s because I’ve waited too long to register in the first place.” This student typically registers late for at least one course each semester and stated, “… admittedly I don’t really like dealing with the academic advising office … and I know if I register late they’re just trying to get me in and out as fast as possible and they don’t tend to hassle me nearly as much … since they’ve got so many people registering late to begin with.”

The impact of late enrollment policies on the educational experience.
Respondents were asked to describe the impact of late enrollment policies on their educational experience. The interview question was: Tell me about your experience in
the late registered course, and how did it compare with your experience in a course for
which you registered on-time. The common themes from responses were the
consequences of late registration, the influence of the late registration process, and the
impact of academic advising.

When asked about the impact of late registration policies on their educational
experience, several students referred to the consequences of being allowed to begin a
class late. More than one student expressed a sense of feeling behind the rest of the class
when allowed to start a class late. One student responded, “When you late register and if
you don’t get in on the very first class you already start out behind ... you miss the
syllabus, there are lots of things that an instructor covers on that first night that may not
be on the syllabus and so you miss it and then you may miss an assignment or something
....” Another student described the experience as rushed stating, “I had to rush to get my
books and I didn’t have enough time to get my mind right and ready to be able to absorb
the information.”

Missing critical first-day information was discussed by several respondents. As
described by one respondent, “[If] you weren’t in the classroom environment to hear the
lecture there might be overheads, they might show a video .... [In another class] there
was a lot of information, information that was outside of the book. And if you weren’t
there you missed it and it would be on a quiz or an exam.” Said another, “…that
introduction or orientation of the class, that’s very important ....” Hearing the syllabus
information and layout of the class directly from the instructor was mentioned by several
respondents as important to success in the class.
The student who typically late registers every semester described how the difference missing the first day or two of a course made on the experience was dependent on an instructor’s teaching style. “I can usually count on the first day being introductions and syllabus and the second and third day still getting into the subject matter.” So, for most instructors, this student stated, “I know they’re going to go straight out of the book to start with so I can catch up fairly quickly.” However, for one specific instructor, this student noted, “I know if I register late I’m coming in at more of a deficit because the first day is syllabus and right into the information.” At least one other student agreed that whether missing the first day or two of a class was critical depended on the instructor’s lesson plans and the student’s determination to complete the course.

Another concern heard from students was that of being prepared to begin their class. One student remarked, “I didn’t feel I was on the same track as students who seemed to be a little bit more prepared than me. I couldn’t get in the mode and I couldn’t get in the rhythm. It seemed that they were already in rhythm and I was just trying to get into rhythm.” This sentiment was further expressed by another student:

That would be it, it’s just the catching up that you have to do.... If you get in a week late, at least a week late, they’ve already given assignments and you already have [assignments] to read and it’s hard to catch up, especially with everything else you have to do. Everybody, it seems, has their mid-terms and final exams ... and their tests around the same time. So, if you go in late you’re playing catch up it seems to me throughout the whole semester in that class and it’s hard.
One other student explained, “When I went into the class I pushed harder because
I knew I was running late, and so I felt like I had to catch up even though it was
only a day or two days [behind]. I just felt like I had to get in there and, like,
really push myself to at least get caught up to the point where the rest of the class
was at.”

Respondents talked about the late registration process and the role of the
instructor in the process and in their completion of the late registered course. One student
described the late registration process as “It was simple here. I’d go up to the desk and
say, ‘OK I’m going to go for this class,’ and they’d give me this piece of paper. I’d sign it
and take it to the instructor. If he was cool with it he’d sign it and I’d bring it back and
I’m in. There wasn’t a lot of hoops to jump through or anything like that.” Another
student who has taken classes at KCC for 20 years said about the registration process,
“Everything is a lot easier and more streamlined” and about the late registration process,
“The process was a pleasant one I suppose.” And yet another student stated, “The process
itself was actually really easy.”

For one student who late registered for an independent study course, the process
was described as “… it went fine. There was a little confusion in my circumstances
because there was no class. [The instructor] had to do on her end what she had to do, and
then somebody in Customer Service had to do on their end before I could register. So I
was a couple of days getting registered, but that’s probably pretty understandable. So I
think it was fine.” Another student talked about when a class fills up that he needs or
really wants to be in, “to give it a week into the class and in that week to check every day
for openings in the class and just register for it late. It’s really kind of like a planned thing

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for me to everyday get on and check to see when somebody drops out, and I can register
late. And I approach the professors, too, to see if they’ll add me as an extra seat.” A more
detailed response came from another respondent who said,

It’s time consuming.... First of all you have to find the instructor when
they’re in the classroom...or if they’re not in the classroom, their office
hours, and you need to find out all that information. Then you have to
catch up with them, have them sign your slip to register, and then you
have to take it back to the Registrar’s Office, or an advisor if you haven’t
done that already, then you have to take it back to the Registrar’s Office
and then they give you the copy of it, and then you can go to the class. So,
it’s a time consuming process.

In regard to how long the process can take, the respondent stated, “It’s taken a day for me
to catch up with everybody that I had to catch up with to get a signature at times. So, if
that’s the day of the class, then you’re another day behind.”

Respondents acknowledged the role of the instructor in the process as a positive
aspect. As expressed by one student, “I think it’s very good that they usually make you
talk to the teacher and get the OK because the teacher knows how hard it is going to be to
catch up. The teacher may not know how disciplined you are, but they do know how
much work is involved in catching up.” Said another, “…the fact that the teacher’s really
willing to talk to you” gave her some confidence in the late registration process. Another
student explained, “Some instructors won’t let you [register late]. I tried to register for a
chemistry class and it was just a week and a half I had missed, and he said plain and
simple ‘You’ve missed too much. We’ve gone over the basics.’”
Three respondents made reference to students taking the responsibility to catch up to the class when starting late, and that it was an important factor in the instructor’s decision of whether or not to allow a student to register late. As one student stated, “You can’t go in and expect the other 20 or 30 students to wait for you while the teacher explains what is going on. If you are going to late register you have to take it upon yourself to catch up.” Their point of view was more than likely reflective of their own sense of responsibility; however, it was an excellent point to emphasize responsibility as a contributor to success.

A common theme among respondents dealt with academic advising and the difference a student’s background makes in the impact of late registration on their educational experience. Responses were mixed regarding a positive or negative experience with academic advising. As one student stated, “I would highly recommend using an advisor every time. Although when I’ve used advisors there are some that take the time with you and there are others that will just plug that class in for you and you’re out of there.” This same respondent explained the importance of students knowing their program of study when she remarked, “Other times when I’ve sat down with advisors they pretty much let me tell them what classes I wanted to take and don’t really ask what program, what degree do you want to graduate with.” The respondent noted, “I think it’s real key if you find an advisor that you’re comfortable with that you feel takes the time with you, I’d stick with them” and that “they take a lot of unnecessary stress” off from students and “steer them in the right direction.” Other respondents agreed that if students are dissatisfied with an academic advisor they should seek a different advisor.
One student was displeased that the academic advisor discouraged late registration and felt that the advisor was judgmental based on the student’s academic record. In selecting classes the student expressed to the advisor the program and course selection that “would really be the best one for me with my family” and described the advisor’s “whole attitude of me going back to school and the late registering … it was really bad.” This respondent felt that her work background and determination to complete courses should override the history on her academic record, and expressed, “I think that because the [academic advisors] are the ones that are coming into most of the contact with the students I would say they need to take more time to probe into what’s going on before they say you should or shouldn’t or give advice.”

More than one respondent referred to the number of students registering late and the impact of academic advising having sufficient time to work with each student. As one respondent described, “Academic advising may not be able to catch or maybe don’t even ask why [students register late] they get so many students in there around the first couple of weeks of class changing classes, switching, doing this and doing that…”

Theoretically, that respondents were both positive and negative in the description of their experience with academic advising could be reflective of respondents’ demographic and background characteristics. Their different perspectives and reactions to advice could have depended on the relation of their age, gender, or ethnicity to that of the academic advisor and whether the student perceived the advisor as able to relate to their individual needs and situations.

*The relationship between late registration and completion of coursework.* Study participants were asked about their level of satisfaction in how they performed in the late
registered course and about the influence of course type and the subject area of the course on their performance as a late registrant. The two interview questions for this research sub-question were: (a) Describe your level of satisfaction with your performance in the late registered course. (b) Would your advice to other students and/or your decision to register late vary depending on the type of course or the subject area of the course? The common themes from responses were satisfaction with performance, the relationship between late registration and subject knowledge, and the relationship between late registration and online course delivery format.

Many of the respondents were satisfied with their overall performance in the late registered course stating they earned an ‘A’ or that they “did very well” and were “happy with it.” In their responses some students noted satisfaction given the drawbacks which they described in their earlier responses (i.e. feeling behind, missing critical first-day information, etc.). As expressed by one student, “My success I think was outstanding. I got A’s in all my classes, and I anticipated that, but it did take a lot of leg work to really kind of maintain that and really get out of it what I needed to get out of it.” There was only one respondent, the student who typically registers late, who felt there was no difference in satisfaction between a course registered late and a course registered on time.

One student described her performance as, “It was not good, not at all” and stated that she “didn’t do the best I could have done.” This respondent had changed program majors and was no longer interested in the subject matter of the course, and then withdrew from the course due to life circumstances. In comparison, the student talked about on-time registration and expressed, “When I registered on time I had plenty of time
to know what classes I wanted to take way before registration came along .... I’m more prepared .... I have my books earlier, you know and I’m just ready.”

Another respondent had recently late registered for another course and remarked she was not satisfied with her performance and described the situation as, “I couldn’t catch up. And that was an early childhood education class, and you had to do [assignments] outside of the class like go visit preschools and observe children for hours, a couple hours at a time. With all the work I had to catch up on after registering for it late, I couldn’t get it done. So I had to actually end up withdrawing from the class.”

More than one respondent talked about the difference the instructor made in their success and experience in the late registered course. In talking about success in the class, one student remarked, “The instructor had more to do with it than anything else. I’d had [the instructor] before. I knew [the instructor’s] teaching style so that probably had a lot to do with it. It probably would have been different if it was a different class and a different instructor.” As explained by another student, “I got ‘A’s’ in all my classes....I think it was the relational element between myself and [the instructor]. That was really a great thing because I already knew [the instructor] and knew that he was a pro along those lines, and it was really no problem at all.”

In regard to the relationship between late registration and subject knowledge, most of the respondents mentioned at least one course subject area for which they would not want to register late. The responses included business law, accounting, English, math, chemistry, and biology, and others referred to hard sciences and courses which were technical in nature. The common element seemed to be course subject areas in which they were comfortable and had some previous coursework or knowledge of the subject
area. For several respondents, if they had some knowledge of the subject matter and it was critical they take the course, they would consider late registration. Circumstances mentioned that were of a critical nature had to do with the sequencing of courses and courses needed for graduation.

One respondent, who said he would late register again, added that course subject area would make a lot of difference in his decision, “If it was political science or something like that, which was really at the level I took it just a basic civics class, I would do that. But math I wouldn’t because I struggle with math…. So it would depend on what course it was.” Another student pointed out that, “It would depend on the person’s skill level. If you registered for a class that you already had some idea of what was going on, then to catch up being a week or so late would be all right.” A more specific answer was provided by one student who said, “If it was a gym class or swimming or something like that you could do it, there’s nothing to really miss on that. Unless you don’t know how to swim or don’t know the sport. But I think when it gets more into the specialty classes, I think it’s tough.” As explained by one more student,

My courses haven’t varied very much at KCC … I’ve spent a lot of time in the social sciences and English and I haven’t really approached any of the hard sciences. But, I would be less apt to register for a hard science class late than I would social science because I know that I struggle with the hard sciences a little bit more. I would still register late for it if I needed the class, but I would be less inclined to do so.
As this student stated, his academic experience was limited in that he had not experienced many subject areas; however, the response reflected reluctance to late register into unknown or less comfortable subject areas.

The subject area of mathematics came up often in the responses. Talking about his experience in a late registered course, one student simply said, “It was math, I think that’s enough said there.” As expressed by another student, “Going into a statistics or MATH 121 and you come in a week or two weeks late, you could catch up but it wouldn’t be that much fun.” Yet another said it would depend on the content of the course and said she would choose math over an English course explaining, “If it was something like an English class that you had a lot of papers to write at the beginning or a lot of reading then it would be a lot harder to catch up. But something like math you can kind of do that on your own time…. But I think as long as you’re willing to put the effort into it, then anyone can do it.” She then explained further, “[In] English you have to put more effort into thinking about the topic you’re writing about and put more research into it where math … you could sit down for a few hours and be able to figure out how to do these problems.” Her response reflected her comfort level with finding a definitive answer in math as opposed to the more free-flowing aspects in the English writing process.

One student combined the subject area with knowing the teaching style of the instructor of the course,

The course would make all the difference in the world. You know because I had the instructor before and I knew about her teaching style and everything and I knew it would be OK. If it was math, maybe not, maybe I would look around and see if there is something I could substitute in that
wouldn’t mess up all of my class schedule. So I’d say the course and the instructor, if you know the instructor that would be huge.

A different perspective was provided by the respondent who had completed a bachelor’s degree and transferred coursework for an MFA. From his more extensive academic experience, he stated,

Over the years I’ve noted that sometimes just because something’s an introductory class or the first class, doesn’t make it any easier. As a matter of fact, sometimes the intro classes are harder than some of the grad-level classes that I’ve had just because there’s not a whole lot of specificity so you have to do a lot of memorization and a lot of just leg work that you have to get done ....The drawing class was a tremendous amount of work with regard to what had to be produced. I just found it interesting, it was just a neat reminder how much work it really can be even for an intro class...

The surprising aspect of this perspective was that an introductory course was viewed as more difficult to complete than an advanced course. The student’s explanation of the amount of memorization and leg work required to complete an introductory course gave the perspective relevance with regards to successful completion of an introductory course in view of late registration.

More than one respondent referred to the online course delivery format as having a critical relationship with success in a late registered course. This was an unexpected theme in that course delivery formats were not a consideration when the interview protocol was established, yet the theme emerged from the responses of several interview
participants. One student who had earned an ‘A’ in her first late registered course, which was Spanish, compared that experience with a recent situation where she again late registered,

As I mentioned earlier, Spanish is my first language, so [late registration] didn’t really put me behind. …but I think if it would have been another class, and I feel confident in saying this because this semester … I registered for a class and found that the lab was in conflict with one of my other labs. So I had to [take the class] online and I had already missed a lab and a class and that is material that I am not real familiar with, it happens to be a biology class. And that is real difficult. You have to catch up again with reading and all the back work. This particular instructor on Friday she closes out any quizzes, anything that’s due if it’s not there by 8:00 then you don’t get any credit, it’s not submitted at all. So, you’re already behind the eight ball, and that put me behind 38 points. Just in trying to move my class to an on-line class.

Those same sentiments were echoed by another student who stated,

I’ve taken a couple of online classes and those are a lot harder, tend to be a lot harder than the in-class classes. And also the subject makes a big difference. I took communications online but that doesn’t mean I’m going to take psychology online. You could easily catch up in communications. If you had no psychology background you might not catch up very easily in psychology.
Respondents referred to the layout of an online class and the difference that makes when a student registers late. As one student described,

It also depends on how the instructor has the online course set up. I’ve taken a class where you have to come in and take classes at the testing center compared to just taking classes right online at your own pace. The communications class … the due dates [were provided], everything is laid out. Get done as early or get done as late. But by December 14th everything will be due. … If they give you everything at once you should be able to see this is how much studying I’ve got to do to be able to make up to get ahead …. Whereas sometimes they don’t, they post one thing up a week ….

Most respondents referring to the drawbacks of registering late into an online course also agreed that if the course was necessary for graduation they would still choose to late register.

Factors contributing to decisions to late register in the future. Study participants were asked to describe their experience with the late enrollment policies. The interview question was: How would you advise other students in regard to registering late for a course, and would you late register for any courses in the future. The common themes from responses were circumstances can cause late registration; early registration is key to success; preparation, background factors, and determination make a difference on success; and decisions to late register in the future.

Although a common theme among respondents was that they would not readily choose to late register, many respondents talked about the circumstances which could
cause late registration. Those circumstances were described both in terms of situations in life as well as factors caused by policy and decisions made at the college.

“Registering late I don’t feel is a bad thing” stated one student. “For me it was a great thing because at that point in my life it was now or never. Sometimes that’s just what it comes down to, either I’m going to do this now or I’m not.” In discussing circumstances which could cause future late registration, the student expressed, “...sometimes you just can’t predict what’s going on. ...there are a lot of things that come up that are unexpected .... But, life happens. ...I would register again late. Not intentionally, but I would do it again if that’s what I felt I needed to do.”

Among the circumstances mentioned by respondents which could cause their involvement in late registration were birth of a child, death in the family, employment changes, and learning late about applying for financial aid or support services. A number of interesting examples were provided by one student who portrayed the following:

That’s a very difficult question to even answer honestly because there’s too many outside things that could be affecting [late registration]. Just in general, the parents. [The student] may be in their one class and all of a sudden, if they are still living in that parents’ house, and the parents want them to get a job. So then they have to start working. Or a young girl could figure out she’s pregnant while she’s in that [first] week [of school] and have to switch classes or downgrade from full-time student to part-time, take one class instead of four classes. ...Or they’re a single parent and have to take on another job because they can no longer afford to raise their child with just one job. They’re trying to better their education but
they can't because they need more money so they may have to downgrade from full-time status to part-time, or not at all. Or they might come in and someone talks to them and they're a single parent and realize that they have support services here to help them. And they come in and 'I don't know when classes started, but now is it too late for me to register?'

Respondents mentioned factors caused by policy and decisions made at the college which contribute to late registration. Those included the issues already stated about academic advising, delayed awarding of financial aid, and class cancellation.

Another issue was mentioned by one student who remarked she would feel it necessary to late register if the courses were sequenced, such as a language course:

With Spanish ... the class that I was taking wasn’t offered again until the following year because [the College] only offers them once a semester, once a school year so to speak. And the thing about Spanish is if you miss it one semester when you take it again next year it is very difficult to recall all that information. So Spanish would be a tough one to wait and take the following year.

The idea and benefits of registering on time came up often among respondents. Said one student, “It wouldn’t be something I would do every semester [late register]. I mean if you know you need to have the class just get in and register for it and be there when it starts. That way you can know whether you want it before the drop period ends or ... the refund, whatever the case might be.” As described by another student “…if you have an idea of what area you want to pursue or degree you want to pursue that you sit down with an advisor and that you take the courses in the order that they suggest in the
catalog. It makes it a lot easier. And as soon as you finish one semester and if and when the next registration date is open, register.”

When asked whether she would late register again, one of the younger respondents referred to times when she might be apprehensive about a subject matter and stated,

Not to procrastinate about it like ‘can I do this’ because I don’t like the … subject, and ‘Oh no, I don’t want to take that.’ It doesn’t matter. If that’s what you have to do to get your degree. If you’re really ambitious about doing what you want to do, then I’m not going to register late for it. I’m going to be as early as possible and more prepared. It just depends on how badly the person wants it.

In considering different factors in the decision to late register, more than one respondent spoke to the individual student backgrounds, their strengths, academic abilities, and determination to complete a course as important considerations. One student explained in detail,

I did say how I wouldn’t want to late register because I felt like I was not as prepared and wasn’t in rhythm. But then there are the students where circumstances and situations occur as to where they do have to late register and they are even more ambitious because they don’t get in there in the beginning. So then there are pros and cons to that. There are the people that register late and just excel beyond belief, and then there’s me that if I don’t get in there at the right time I just can’t get in the rhythm.
Another student referred to where a student is at in life as making a difference in the decision to late register and the probability of success in the late registered course. As she stated, “If I had late registered ... right after high school when I had no life experience per se, I probably would have blown off the class.” She stated that “determination makes a big difference” and included the aspect of how tuition is being paid as an influence on determination and success when she explained, “Now I’ve got two kids and a husband and I’m paying for all of this myself; that would probably be another factor...” She continued with her explanation stating that, “I would say a person’s high school or other college background, and sometimes jobs would also make a difference.” She had late registered for a biology course and stated that, “I worked at a doctor’s office for two years, so I don’t know if a lot of that helped me be able to catch up and get a good grade or what.”

One respondent referenced a number of considerations which could determine if the student is not only able to complete a late registered course, but ready for college in general. In her response she stated,

I think I would probably try to get down to the core of if they are even ready to put in the commitment of going to school. Because a lot of students are coming straight out of high school, ... they may be pushed from their parents to going to school because that’s what they’ve done and that’s what the generations before them have done. And so they’re scared they don’t know if they really want to, they don’t know what to expect. So I would just ... sit down with them to see if they can figure if they’re
actually ready to do this. Because the longer a person waits [to register] goes to show that there might not be an interest of really sitting down and doing the commitment or there might be other issues. But most of the time students may not be ready to take that step so they wait until the week of classes to come in and register and then they’re added late in the seat. So I would … sit down with them so they can process to see if they’re actually ready to do the commitment.

Determination came up in several responses with statements such as, “I’m also a dedicated student, so I was determined that I was going to get at least a ‘B’ in the class.” Being a non-traditional student was mentioned by one respondent who felt that the younger students hadn’t yet developed an appreciation for the learning experience and the necessity of a well-rounded education.

In regard to future late registration, most of the respondents stated they would not late register again if they could avoid doing so. As one respondent stated, “I think that starting behind is a disadvantage. …if you have a full [load] … it’s stressful. And if you have difficult classes I think it puts more pressure on you because you always seem like you’re behind. So, no, I wouldn’t register late.” Another respondent simply stated, “Absolutely not.” This respondent had been unsuccessful in the late registered course and provided no circumstances under which she would late register again.

Many respondents indicated they would late register again under specific circumstances. As one student explained, “If it was a subject that I felt comfortable, maybe some experience, something that happened in life that could relate to it. If it was something that I knew nothing about, no, I don’t think I would register late.” Another
student spoke about an academic program where a specific course sequence schedule was required, and she explained, “If it’s something where your schedule is set and you have this prerequisite class … and you have all your classes scheduled, and you have to do it [late register], well, let’s do it. But it wouldn’t be something I’d advise. It would make it a lot harder.”

One of the younger respondents explained circumstances within which she would consider late registration and described,

It would just all depend on the class and the time and what I was doing at that time in my life. If I was working, you know, 40 hours and taking three or four other classes, then it would really be hard. But if it was a time in my life where I thought that I could do it, that I didn’t have as much going on, then I would be more willing to [late register].

She continued her explanation expressing that if she liked the course subject area she would be more willing to register late, “because more than likely I would probably do better in it than if it was something that I just wasn’t, you know, totally in to.”

The respondent who typically registers late every semester stated about future late registrations, “I plan on transferring out one day …. I don’t plan on registering late once I [leave] KCC. Not to stereotype the community college, but I feel I can get away with registering late easier here than I could say at a university or a liberal arts college.” This stereotype of the community college was not surprising. In his advice to other students on late registration he stated, “I wouldn’t really advise anyone not to register late. Only if they were a student that I knew had difficulty catching up to a subject. But, if I knew
them to be pretty on the ball and capable of completing the course in the first place, I would advise them to register late.”

**Summary**

The characteristics of the population of students participating in the qualitative portion of this study were representative of the quantitative population in that the participants were predominantly of traditional age, White ethnicity, female gender, and a part-time enrollment level. The characteristics of the population also reflected those of the diverse nature of the community college.

Several emerging themes were identified in the course of the interviews, and these themes were classified into four major categories: (a) the reason for late registration; (b) the impact of late enrollment policies on the education experience; (c) the relationship between the participants’ knowledge of the subject area of the course and their academic performance; and, (d) factors contributing to decisions to late register.

The first theme category was the reason for late registration. Respondents described the factors and circumstances which contributed to their involvement in the late registration process. Their reasons were expressed in the themes of the impact of the financial aid process, requirements to transfer to a four-year university, and life circumstances which contributed to decisions to late register.

Responses indicated that the individual student backgrounds coupled with their demographic characteristics had an impact on their reasons for late registration, and late registration had an impact on their overall educational experience. Students acknowledged their own procrastination and academic inexperience as having bearing on the timing of their registration decisions. Their reasons for late registration included
barriers to registration caused by the overall financial aid process, adjustments to course
selections due to course cancellations and to meet four-year university transfer
requirements, and critical life situations such as the birth of their child, financial
considerations, and decisions of whether to go to work or go to school. These factors are
indicative of community college students and coincide with those described in Bean’s
and Metzner’s (1985) model of non-traditional student attrition. It was also interesting to
note that students were using the late registration process to circumvent the academic
advising process.

The second theme category was the impact of late enrollment policies on the
education experience. Participants discussed the impact in themes of the consequences of
late registration, influence of the late registration process, and impact of academic
advising.

Among the descriptive phrases students used to emphasize what they termed as
the consequences of late registration were: a sense of feeling rushed and behind the rest
of the class; missing critical first-day information; and, getting into rhythm and pushing
harder to catch up in their assignments. The late registration process was described as
simple and straight-forward, yet time consuming for obtaining the necessary approval
signatures. The role of the instructor in the late registration approval process was
considered a positive and needed aspect to weigh the probability of successfully
completing a course after missing the initial class meetings. Respondents perceived the
role of academic advisors as both positive and negative. The importance of academic
advisors taking sufficient time to understand the students’ needs and consider their
background characteristics when giving advice was emphasized by respondents.
The third theme category was the relationship between the participants’ knowledge of the subject area of the course and their academic performance. In this category participants discussed the relationship in themes of satisfaction with their own academic performance and their perception of the significance of the relationship between late registration and both knowledge of the subject area of the course and an online course delivery format.

Overall students were satisfied with their performance in the late registered course, and as a group they had an 80% success rate in late registered courses. Participants described both positive and negative impacts of late registration on their satisfaction with and success in the late registered course. They referred to the amount of effort required to catch up in assignments and complete a late registered course, and compared that experience to a more relaxed experience when they registered for and began a course on time. Students described the difference their instructor made in their experience in the late registered course, and contributed a portion of their success to the efforts of the instructor and to their knowledge of the instructor’s teaching style.

In describing the relationship between late registration and their knowledge of the course subject, students stated their comfort level with and prior knowledge of the subject area had a great impact on their success in the late registered course. The subject area of math and science was referred to most often as one in which students would avoid late registration. Interestingly, an introductory course was identified as more difficult to complete as a late registered course than a more advanced course given the broad nature of an introductory course and the amount of memorization necessary to learn a new topic.
Students also identified a relationship between late registration and the online course delivery format. The layout of an online course was seen as a critical factor, and that was coupled with the subject area of the course as dual factors, contributing to completion of a late registered course. If the layout was self-paced students could complete assignments according to their own timeline. If the course had a structured timeline with no allowance to retrieve and complete previous posted assignments, then students were at a great disadvantage when a course was started late.

The fourth theme category was factors contributing to decisions to late register. As a description of the themes, participants remarked on the life circumstances which could cause them to late register, their perception that early registration is a key to academic success, the background factors and the level of determination and preparation necessary to be successful in a course, and about their decisions to late register in the future.

Several participants acknowledged that the subject area of the course and the type of course would make a difference in whether they chose to late register in the future. Participants stated they would be reluctant to late register for courses in business and computers, math and science, and communication. The online delivery mode of instruction was also mentioned as a negative factor in the future late registration decision. The layout of the course, posting of assignments, and time limit on completing assignments were among the drawbacks noted when registering late in an online course. Several participants stated they would not choose to late register again unless circumstances called for them to do so. Those circumstances included a specific course sequence, to meet transfer requirements, to meet graduation requirements, and life
circumstances which revolved around birth of a child, death of a significant person in their life, and finances. Their comfort level with a course and previous knowledge of the subject matter were affirmed as principal factors in their future decision to late register.

Sequential Explanatory Strategy

The mixed research design for this study included sequential explanatory strategy (Creswell, 2003) which is a two-phase approach to data analysis. The purpose of this strategy was to conduct a study which was primarily quantitative in design and then to employ qualitative methods to better understand the quantitative data. This section of the results chapter elaborates on the quantitative findings with the qualitative findings to explain the relationships which were examined in the study.

In the quantitative portion of this study the overarching research question was: What is the relationship between late enrollment policies and student persistence? The quantitative findings for this question were explained in more detail with the phenomenological findings for the overarching research question in the qualitative portion of the study: What are the experiences and perceptions of students in regard to late enrollment?

The Relationship between Late Enrollment Policies and Student Persistence

Participants discussed their perspective on the relationship between late enrollment policies and student persistence throughout the interviews. The late registration policy itself was viewed as fairly straightforward; however, one student felt some discouragement in the time-consuming nature of the process. There was a general consensus that having a late registration policy was important in order for students to adjust their class schedules in response to course cancellations, corrections to class
schedules in regard to transfer requirements and the sequencing of courses, delays in receipt of financial aid, and life circumstances which deter registration in a timely manner. It was expressed that not having a late registration policy could hinder persistence for students who would be discouraged if their educational plan were interrupted and for those who are in a “now or never” frame of mind in regard to attending college.

Important aspects in the relationship between late registration and persistence included interactions with academic advising and the role of the instructor in the late registration process. Students expressed the need for academic advisors to take the necessary time to know their needs, understand their educational plan, and provide specific advice for their program of study. The role of the instructor in the process was seen as positive and helpful in regard to providing students with a true assessment of whether it was possible to register and begin a course late and to satisfactorily as well as successfully complete that course.

*The extent to which late enrollment predicts success.* The quantitative results did show that late enrollment does predict student success or non-success as defined by course completion. Late registrants did not perform as well as timely registrant, although the majority of late registrants (63.5%) did achieve a successful final course grade. Likewise, the majority of interview participants (80%) achieved a successful final course grade.

In interview responses participants discussed elements in their approach to the late registered course which contributed to their academic success. The element mentioned most often was the importance of receiving critical course information, which
is usually presented on the first class day, directly from the instructor and not through other students or by self-interpretation of the course syllabus. Another element was that of the student taking responsibility and exercising discipline to complete missed coursework and catch up to the rest of the class.

Again, students mentioned the role of the instructor in their successful completion of a late registered course. Having had a previous course with the instructor, knowing the instructor's teaching style, and having a relational element between the student and the instructor were contributing factors students mentioned in regard to their success in the course.

*The extent to which the number of courses registered late predicts the likelihood of failing grades.* The quantitative results did show that the number of courses registered late does predict the likelihood of failing grades. The highest percentage of unsuccessful course completion was found for those students who late registered for four courses (60%). An unexpected result was that the highest percentage of successful course completion was found with those students who registered late for five (93%) and six (83%) courses. Intuitively it was expected that students who late registered for one, two, or three courses would have a higher percentage of successful course completion than those late registered for five or six courses.

The interview participants registered late for one, two, and three courses. Of the six students who late registered for one course, two were unsuccessful. This represents a 33% nonsuccess rate. Three students late registered for two courses and all were successful. One student late registered for three courses and was successful. In the
interviews participants were not asked a question directly associated to the number of classes registered late, and the idea was not presented in their interview responses.

The extent to which the subject matter of a course predicts a late registrant’s completion of that course. The quantitative results did show that to a great extent the subject matter of a course does predict the late registrants’ completion of a course. Late registrants who enrolled in allied health and public service were most successful, and those who enrolled in arts and humanities, business and computers, communication, and social sciences were less successful; those students who late registered in math and science were the least successful.

In their responses, students listed the math and science subject area as the most difficult within which to complete a late registered course. The general consensus was that a subject with which students struggle and in subjects where a skill level has not been obtained should be avoided when considering late registration. One unexpected response was the reference made to the amount of work required in an introductory course and that being a drawback in the completion of a late registered course. The point made was that an introductory course typically contains broad-based content and requires a lot of memorization, learning new ideas, and a lot of work to complete the course objectives. Missing the initial days of an introductory course and then attempting to catch up to the class would hinder successful completion of the course.

Another surprising result in this research was the number of students who referenced the difficulty of the online course delivery format and how that format would effect the completion of a late registered course. Students talked about the layout of an online class and the importance of having all the assignments known in the beginning in
order to determine if they could accomplish the required work in the remaining class
time. The combination of course subject area and the online format was another critical
response. The idea communicated here dealt again with familiarity and comfort with the
subject area as being a critical factor in determining whether or not to enroll in an online
course. Given these concerns, students would still choose to enroll in the online course
format if the course was necessary for graduation.

*Supplementary explanations.* Most of the respondents recognized the value of
registering on time for a course, and stated that would be their preferred registration plan.
For these students, timely registration meant they were more prepared to begin the class,
understood the course requirements up-front, and they were “in rhythm” with the other
students in the class.

Students stated that it is important to know the requirements for their degree, to
meet with an academic advisor and take courses in the order those are presented in the
college catalog, not procrastinate when they are apprehensive about a difficult subject
matter, and to register as soon as the process opens for the next semester. Timely
registration was seen as an advantage in order to participate in the drop and add period if
necessary, have tuition and fees refunds available, and, again, to have ample opportunity
to be successful in the class.

Although most respondents referred to whether they were prepared to complete a
late registered course, one respondent detailed points to consider in whether a student was
ready to begin college. Procrastination and involvement in the late registration process
could signal that a student is not ready to make the commitment to begin their college
education, and that outside authorities and circumstances could be compelling the student
to register and begin college before they are ready to do so. This response lends to the idea of having academic advisors take the time, and have the time available, to sit down with each student attempting to late register and to assess the student’s academic background, personal background, and reasons for late registration prior to encouraging or discouraging the student in the late registration process.

Summary

The use of sequential explanatory strategy as part of the design of this study was beneficial to further explore the relationships which were identified through statistical analysis. Incorporating the human element, those responses gained through phenomenological analysis provided for a deeper examination of the relationships.

Through the interview process students added their voice to the research and were able to corroborate the findings from secondary data analysis. They were also able to provide answers to the question of why data showed what it did. Sequential explanatory strategy was a useful approach to unite an understanding of the relationship between late enrollment policies and student persistence with an examination of the experience and perceptions of students in regard to late enrollment.
CHAPTER V
DISCUSSION OF FINDINGS AND CONCLUSIONS

This chapter is the discussion of the results presented in Chapter IV from the analysis of archived data on 712 timely registrants and 712 late registrants as well as interviews conducted with 10 late registrants at Kellogg Community College. The results are reviewed according to the research questions presented in Chapter I, and implications for further study are presented at the conclusion of this chapter.

Purpose of Study

The purpose of this mixed-design research study was to explore aspects of student retention and the relationship between policies intended to remove barriers to enrollment and the retention of students at community colleges. More specifically, the study examined late registration policies and the impact of the policy on students’ academic success. Unlike other published studies conducted on late registration at community colleges (e.g. Angelo, 1990; Freer-Weiss, 2004; Mendiola-Perez, 2004; Perkins, 2002; Smith, Street, & Olivarez, 2002; Street, 2000), this research explored both quantitatively and qualitatively how students experience the phenomenon of late registration. Also, in comparison to other studies, the current study involved a total sample size of 1,424 students whereas the other studies involved between 251 and 975 students in the total sample size.

Sequential explanatory strategy (Creswell, 2003) was used as an approach to examine the common themes and apply the qualitative findings in further exploration of the quantitative findings of the study. The final result was an endeavor to explain and interpret the relationship between late registration and student success, and to add to the
conversation on the role late registration plays in student retention at the community college.

Quantitative data was collected first from a secondary data source. Data included students' registration behavior (i.e. timely or late); characteristics such as age, gender, ethnicity, and enrollment level; courses enrolled; and final course grades. The dataset was analyzed by registration behavior and described in terms of students' demographic characteristics in relation to registration behavior. The data on courses enrolled and final course grade was analyzed to determine the relationship between late enrollment policies and student success. Of particular interest was the examination of the course-specific side of late registration: Whether success in a late registered course had any relationship to the subject area of the course. The data was described in terms of: (a) the extent to which late enrollment predicted success or non-success as defined by course completion; (b) the extent to which the number of courses registered late predicted the likelihood of failing grades; and (c) the extent to which the subject matter of a course (i.e. allied health, arts and humanities, business and computers, communication, math and science, public service, social sciences) predicted the late registrants' completion of that course.

Following analysis of the quantitative data, interviews were conducted with 10 students involved in the late registration process to collect information on their experience. The experiences and perceptions of these students were gathered in regard to: (a) the reasons for late registration; (b) the impact of late enrollment policies on their educational experiences; and (c) the relationship between late registration and their completion of coursework. During analysis of the qualitative data, several common themes became apparent from the late registrants' perspective and the meanings they
associated to late registration. These themes were classified into four major categories: (a) the reasons for late registration; (b) the impact of late registration on the educational experience; (c) the relationship between subject knowledge and academic performance; and (d) factors contributing to decisions to late register.

Research Questions

Research Question One

The first research question asked about the relationship between late enrollment policies and student persistence. The assertion among community college faculty, administrators, and academic advisors is that allowing students to register late for classes hinders academic success, and that late registrants typically do not complete coursework (Freer-Weiss, 1999; Roueche & Roueche, 1993; Smith, Street, & Oliverez, 2002). This assertion was explored in a set of sub-questions designed to frame the issue.

Late enrollment as a predictor of student success. The first sub-question asked to what extent late enrollment predicts student success or non-success as defined by course completion. The statistical tests used to determine whether late enrollment could predict student success or non-success produced statistically significant results ($p < .001$) and did show that students who register and begin a course on time were more likely than late registrants to complete the course and earn a successful final course grade. From another perspective, the majority of late registrants did complete the late registered course and achieve a successful final course grade. These results showed that late registrants are not certain to be unsuccessful; however, late registrants are less likely than timely registrants to successfully complete a course.
These findings did support the literature that allowing students to register late hinders academic success (Freer-Weiss, 1999; Mendiola-Perez, 2004; Roueche & Roueche, 1993; Smith, Street, & Olivarez, 2002; Street, 2000). Also supported was Angelo's (1990) finding that late registrants will not definitely fail their course (n = 767). These are not competing findings; rather, they are complimentary. Students were found at a disadvantage when they did not begin a course on the first scheduled day. However, as students explained during interview sessions, there are several factors external to the numerical data that can impact students' successful completion of a course. These external factors were described in terms of the students' background characteristics and their academic abilities, knowledge of the course subject area, determination to complete the course, and interactions with the instructor. Each of these factors was perceived to have an impact on the students' successful completion of the late registered course.

When the relationship was explored further, an analysis of final course grade by student characteristics (i.e., age, gender, ethnicity, and enrollment status) grouped by registration behavior did show that among timely registrants, male students performed better than female as did those students of a non-traditional age than a traditional age and those who enrolled full time than those who enrolled part-time. In the late registrant category, female students performed better than male as did those students of non-traditional age than traditional age and those who enrolled full time than those who enrolled part-time. In regard to the performance of female, non-traditional aged late registrants, a deeper analysis could show that these students were attending college for the purpose of obtaining occupational credentials. External factors, such as being a single parent, could add to their sense of responsibility and aspiration to be successful in their
educational endeavor; thus, this type of external factor could serve as motivation to complete the late registered course in order to stay on track academically and prepare to enter the workforce.

Polinsky (2003) discussed from his study (n = 915) two student characteristics as associated with academic nonsuccess. Students of female gender were described to be less successful academically than male students. Likewise, in the current study, male timely registrants performed better than female timely students. However, for late registrants, the finding was opposite in that female students performed better than male students. Regarding the ethnic characteristic, Polinsky stated that students from an ethnicity other than White were associated with academic nonsuccess. In the current study students in both the Asian or Pacific Islander and the American Indian/Alaskan Native ethnic groups performed better than did students in the White ethnic group.

Extent the number of courses registered late predicts success. The second sub-question asked to what extent the number of courses registered late predict the likelihood of failing grades. The study found there was a significant correlation (p = .027) between the number of courses registered late and the final course grade. The majority of students registered late for only one course, and the frequency decreased as the number of late registered courses increased. The lowest percentage of students late registered for five and six courses; and, interestingly, these students had the higher percentage of successful course completion.

The success rate of those students who registered late for five and six courses was greater than that of those students who registered late for only one course. The greatest surprise was found in the success rate of those students who late registered for four
courses. The majority of those students were unsuccessful. There is no known literature regarding this result, and intuitively one would expect that when students who enrolled late in five and six courses were successful, then those who late registered in four courses would be successful as well. Speculation in regard to this result is that students’ academic background and external factors were an influence on success as well as the students’ diligence and determination to successfully complete the late registered courses. Perhaps the number of courses registered late when compared to students’ specific academic background factors, such as grade point average, would enlighten this result. Also important in the explanation is the fact that a relatively small number of students late registered for five courses (3 students) and six courses (1 student), which is a crucial aspect in examining the impact of specific factors about the student in regard to success.

*Extent course subject matter predicts success.* The third sub-question asked to what extent the subject matter of a course (i.e. allied health, arts and humanities, business and computers, communication, math and science, public service, social sciences) predicts a late registrant’s completion of that course.

Analysis of the statistical data for both timely and late registrants found a significant relationship ($p < .001$) between course subject and final course grade. To a great extent, the subject matter of a course was found to predict late registrants’ completion of that course. For late registrants, the majority of students were successful who enrolled in allied health and public service. In comparison, a lower percentage of students were successful who enrolled in social sciences and math and science. Similar results were found for timely registrants.
Angelo (1990) spoke to the late registrants’ success in the course as dependent upon factors such as the academic level of the course and course content. The findings of the current study support Angelo’s research and provide a more in-depth analysis of the impact of the specific course subject area on academic success for late registrants. In the next section of this chapter these findings are further explained by students in their detailed interview responses on subject area of the course, introductory courses, and courses offered in an online delivery format. Their responses are reflective of the quantitative findings and provide insight into both how and why certain subject areas have an impact on success, and how that impact varies by student.

Research Question Two

The second research question asked about the experiences and perceptions of students in regard to late enrollment.

Reasons for late registration. The first sub-question asked how students describe the reasons for their late registration. The students presented their reasons for registering late, and those reasons were characterized as the influence of life circumstances, the financial aid process, and decisions regarding transfer to a four-year institution. Other reasons included procrastination and a lack of interest in pursuing an education.

The influence of life circumstances was perhaps the most interesting contributor to the late registration process. The most common life circumstance was the decision of whether to begin college at this point in life which involved factors in the students’ external environment, their life outside of the college environment. For example, two of the respondents had recently experienced childbirth and were torn between the decision to immediately provide financial support for the child or to continue their education in
order to sustain long-term financial support. Another student was at a crossroads of taking a job or continuing his education in pursuit of a career as a fine arts teacher.

This type of critical decision, whether to attend college now or later, is indicative of community college students as referenced by Bean's and Metzner's (1985) model of non-traditional student attrition. In this model, non-traditional students, the largest segment of the community college population, are most concerned with their external environment described in terms of concerns with finances, employment, and family responsibilities.

Financial aid was also a factor for respondents. Not only was the federal financial aid application process mentioned, specific aspects of the institutional process were mentioned as well. From the students' perspective, alleviating barriers in the overall financial aid process would have eliminated or greatly limited their participation in the late registration process.

A major function of community colleges is preparing students for transfer to a four-year institution. Given that function, it is an important finding that transfer issues were mentioned by several students as contributing to their involvement in the late registration process, and that involvement was found to be positive as well as negative.

Students in the last semester of their community college education were thankful for the late registration process as a means to correct undetected issues in their academic schedule; issues resulting from schedule conflicts and from perceived erroneous information obtained from academic advising. The issue of academic advising surfaced throughout the interviews. The lack of time available with academic advisors also was a point made by students.
It was one of the younger respondents who first mentioned the issues of procrastination and lack of interest in college as reasons for late registration. In this type of situation it is an expectation of another person, usually a parent, that the student attends college. The student is merely responding to the expectation, and a delayed response may result in late registration. An important question is whether the student has an educational goal and a commitment to that goal which is presented by Tinto (1975) as an important factor in student persistence.

The idea of procrastination was also expressed when assessment testing placed the student into a level of math considered to be remedial. The testing result astonished the student and caused her to question her academic ability in the area of math. Her delayed acceptance of the test placement resulted in the student waiting to register for math until the late registration period. Both Tinto (1975) and Bean and Metzner (1985) speak to the students’ experience in the academic structure of the college as a critical element to retention.

Overall the reasons for late registration are reflective of a study conducted by Bryant, Danley, Fleming, and Somers (1996). This qualitative study of community college students (n = 203) found that students involved in late registration are typically those who experience multiple life situations, made a recent decision to attend college, and started their education feeling isolated both socially and academically. As presented in the foundational work of Tinto (1975), when students sense they fit in the educational setting, both within the classroom and in a social context, this has a great impact on their performance in the classroom and their commitment to achievement of their educational goals. In addition to the aspects mentioned in previous research, students in the current
study cited the financial aid process, preparation for transfer, advisor and course schedule issues, and procrastination on the part of the student as factors contributing to late registration.

The impact of late enrollment policies on educational experience. The second sub-question asked how students describe the impact of late enrollment policies on their educational experience. In describing the impact of late enrollment policies on their educational experience, students referred to the consequences of late registration, the influence of the late registration process, and the impact of academic advising. The responses of these students are informative as an explanation of why late registrants did not perform as well as timely registrants in this study.

In their responses, students tended to refer to consequences associated with late registration. The impact of late registration was not necessarily negative on their overall educational experience; however, there were consequences to overcome as a participant in late registration. These consequences included missing critical first day information, feeling rushed and unprepared to begin the class, and a constant need to catch up to other students in the class.

Many of the students shared that beginning a class late and missing what was termed as a critical first day experience was a major consequence to late registration. It was the opportunity to hear course information directly from the instructor and participate in the syllabus discussion that students expressed as important to success in most courses. There was some variation in how significant the first day experience was depending on the instructor of the course, and whether that instructor utilized an active first-day lesson plan or merely handled personal introductions on the first class day.
When allowed to register late, students described their experience in the class as rushed; they were unprepared to begin the class, and they had a sense of being behind the rest of the class with a constant need to catch-up. Academically these students felt behind their classmates in the late registered course, and spoke to their determination to successfully complete a course as a key to late registration having a positive impact on their educational experience. The majority of these students did achieve a successful final course grade in their late registered courses. They explained their success in how they exercised discipline to complete missed coursework and catch up to the rest of the class. This explanation relates to the finding that a majority of late registrants in the study did achieve a successful final course grade.

The sentiments of students are supported by Freer-Weiss (2004) who states that allowing late registration causes students to begin the semester amid a sense of rush and confusion. Students need sufficient time to complete the registration process which includes academic assessment and placement and to adjust to the responsibilities associated with completing coursework. The initial class meetings were viewed as critical by Angelo (1990) as the opportunity for students to understand the format of the course, and the instructors’ expectations, and to set the stage for academic success.

For the most part, students felt that the registration process was simple, straightforward, and, for necessary reasons, time consuming. The time consuming aspect came into play when getting approval signatures for the late registration from the instructor of the course; however, the involvement of instructors in the late registration process was seen as positive. The instructor’s input to determine the wisdom of starting a class late was seen as important for both the individual student and the impact on the
class as a whole. Interaction with faculty was viewed by Polinsky (2003) as a main element attributing to academic success. Students having interaction with faculty during the registration process sets the stage for continued interaction and a positive classroom experience.

The role of academic advising in the late registration process was perceived by students as having both positive and negative aspects. One common opinion among students was that academic advisors needed to take more time, and have more time available, to talk with students and get a sense of their academic background and personal situation prior to determining whether late registration was appropriate for the student. Some students opportunistically took advantage of the fact that advisors were extremely busy during the late registration process and would let the students enroll into courses quickly without knowledge of their academic background and experience. This finding was revealing in how students learn to use processes to their own perceived advantage in a manner which can ultimately serve as an academic disadvantage.

*Experience with late enrollment policies.* The third sub-question asked how students experience the late enrollment policies, and if they feel there is a relationship between late registration and completion of coursework. In considering actual experience with late enrollment, students related their: level of satisfaction with their academic performance in the late registered course; perceived relationship between completion of a late enrolled class and their knowledge of and comfort-level with the subject matter of the course; and perceived relationship between completion of a late enrolled class and the layout of the class when taken in an online format.
For the most part, students were satisfied with their academic performance in late registered courses. Any dissatisfaction was the result of withdrawal from the course or a sense that they just had not done their best given the drawbacks of starting the class late. Many students identified at least one course subject area in which they would be reluctant to late register again in the future. The course subject area varied depending on whether or not students were comfortable with the subject area based on previous coursework or experiential knowledge of the subject area. For instance, most students said they would not late register in math courses and one student said that she would; the qualifier was how well the student understood the subject of math. Their responses are reminiscent of Angelo’s (1990) statements regarding predictors of late registrants’ success such as the academic level and content of the course.

This majority response directly related to the study result that those students who late registered in math and science courses were the least successful in final course grade. As one explanation, students referred to their procrastination in taking general education courses, such as math, which denotes a lack of interest in or comfort level with the subject area of math. These two factors, interest and comfort, are potential deterrents to success in a course. This relates to Angelo’s (1990) statement that the students’ prior academic experience and personal motivation are predictors of the late registrants’ success in the course. From a broader perspective, both Tinto (1975) and Bean & Metzner (1985) relate student persistence to students’ educational goals, commitment to their goals, and academic performance.

An important statement came from the student who had completed a bachelor’s degree and had returned to the community college prior to transferring for a master’s
degree. Given this student’s academic experience it was significant to hear him state that an introductory course is sometimes harder to begin and complete than a graduate-level course. Angelo (1990) theorized that a predictor of late registrants’ success in a course could be the academic level of the course. Although the implication by Angelo was that a higher academic level would denote less likelihood of success, the crux for this student was the amount of memorization and work required in the beginning stages of gaining knowledge about a course subject area. It was a course from a lower academic level that this student would avoid in late registration.

An interesting theme emerged in statements about the relationship between completion of a late registered course and the format of an online course. The critical factor for students here was not only the subject area of the course but the layout of an online course. The difference came in whether students could complete the online course at their own pace, or if there was a definite structure to the posting of assignments and tests and no allowance to retrieve previous online postings. Completing the online course at the students’ own pace was seen as important to successful completion of an online course after late registering. In the online format, course subject area still had a factor in students’ perception of whether they could be successful in a specific class given late registration.

Research pertaining to the connection between course subject area and academic success for late registrants was not discovered during the literature review. It was based on Street’s (2000) implications for future research that this study was designed to explore the relationship between course subject area and the academic success of late registrants. There was an emphasis in the findings that courses which are of an occupational nature
(i.e. allied health and public service) fit the late registration scenario in a more positive manner than those that are of a liberal arts nature (i.e. math and science). Potential explanations for this finding were that students enrolled in occupational courses are striving to meet professional licensure requirements, or that not all students enrolled in math and science courses possessed the academic ability to perform well in those courses. In addition, students enrolled in allied health programs have met specific general education and grade point average requirements prior to beginning allied health courses, and this academic experience could have an impact on their ability and aspiration to successfully complete late registered courses. Such potential explanations leave room for further research and study in the area of course subject area as it relates to academic success for late registrants.

*Future decisions to late register.* In considering their future decisions to late register, students said that early registration, preparation, and determination are keys to academic success. Most would not choose to late register again; however, they also mentioned circumstances which could cause a decision to be made to late register.

Early registration was expressed by students as a key to their academic success. Students expressed the need to have knowledge of the classes they were required to take and the sequence in which the courses would be offered. This knowledge would assist the student to have a clear academic plan and to be prepared to register as soon as possible to avoid procrastination based on apprehension about the course subject matter or simply letting time get away.

Throughout the interviews respondents referred to their individual backgrounds, strengths, academic abilities, and determination to complete a course as important
considerations in whether to late register. The students recognized their differences and how those differences played into their level of success in a late registered course. Drawing from Tinto's (1975) model of student departure, one student's response directly related to the model's alignment of background and commitment to educational goals with academic success. Although long and detailed, simply stated, her response was to consider the students' background and motivation and to talk openly with students regarding their interest in accomplishing the course work and making the commitment to complete their education. The discovery might be that the student is not ready to take the step into a college education; and, an alternative approach could prepare the student to begin their college education at a later date.

One student referred to her motivations as family and the fact that she pays for her own education without the assistance of financial aid. These motivations have a direct influence on her determination to complete her education which includes completion of the late registered class. This description of determination correlates with Metz's (2004) statement that students' financial involvement in their education has an effect on their willingness and potential for academic success.

Most of the respondents stated they would not late register again if they could avoid doing so. Among the reasons they would late register included life circumstances revolving around the birth of their child, death of a significant person in their life, and finances which could delay their decision to attend or their ability to register on time. Other circumstances included schedule adjustments necessary to follow a specific sequence of courses, to meet graduation requirements, and to achieve a balance of class time and work time critical for success in both. In all cases, their interest in and comfort
level with the course subject area was a predominant factor in students' future decisions to late register.

Overall Conclusions and Future Study

This research explored further the findings from other studies, and specifically studies conducted at community colleges, about the impact of late registration policies on student performance and persistence. Provided in Appendix E is a comparison of research included in the literature review with the findings and conclusions of this study. The most significant findings of this study are:

*Student Characteristics, Background, and External Environment*

1. As a group, late registrants were characterized as predominantly of traditional age, White ethnicity, female gender, and a part-time enrollment level. A breakdown of the characteristics showed that the majority of traditional age students enrolled late as did a majority of male students, Black students, and full-time enrolled students.

2. In late registered courses, female students performed better academically than male; likewise, students of traditional age and those who enrolled full time performed better than those of non-traditional age and those who enrolled part-time. The Asian or Pacific Islander ethnic category had the highest level of success followed by ethnicities of American Indian/Alaskan Native, White, Hispanic, and Black.

3. Students registered late for reasons pertaining to life circumstances (i.e. decisions to attend college or seek employment), the financial aid process, transfer decisions, procrastination, and a lack of interest in their education.

4. Students perceived their individual backgrounds, strengths, academic abilities, and determination to complete a course as important considerations in whether to late
register.

5. The reasons students gave for possible late registration in the future included: birth of their child, death of a significant person in their life, finances, and schedule adjustments necessary for course sequencing, graduation, and to balance class time with their work schedule.

*Impact of Late Registration on Student Success*

6. Students were satisfied with their performance in the late registered course.

7. The consequences students associated with late registration included: missing critical first class day information, feeling rushed and unprepared to begin the class, and the constant need to catch up in assignments and to other students in the class.

8. The involvement of instructors in the late registration process was seen by students as positive in determining the wisdom of starting a class late.

9. The role of academic advising in the late registration process was perceived by students as both positive and negative. It was imperative for most students that advisors take the time, and have the time available, to fully know the students' background and personal situation prior to determining whether late registration was an appropriate option. However, some students took advantage of the advisors' lack of available time during the late registration period in order to self-select their courses without influence or advice.

*Success of Late Registrants*

10. Students who registered and began a course on time had a greater likelihood to successfully complete the course.

11. The majority of late registrants were successful in the late registered course.
12. The number of courses registered late did predict success in the final course grade. Those students who late registered for five or six courses had a higher percentage of success in final course grade than those who late registered for one to four courses.

13. The course subject area had a significant impact on the successful completion of the late registered course. The course subject areas of allied health and public service produced the highest percentage of success in final course grade. The course subject area of math and science produced the highest percentage of unsuccessful final course grade.

14. Students would avoid late registration in specific course subject areas unless they had completed coursework or had experiential learning in the course subject area. Math and science was the course subject area in which most students would avoid late registration.

15. Students were reluctant to late register for a course delivered in an online format; and, in the online format, course subject area was a factor in students' perception of whether they could be successful in the class given late registration. The difference for students was whether the course was structured so they could retrieve previous posted assignments and view all course assignments and due dates.

*Overall Conclusions*

As the list of findings indicates, there are many conclusions drawn from the research conducted for this study. To a great extent the conclusions agree with those found in previous studies conducted on late registration at community colleges (e.g. Angelo, 1990; Freer-Weiss, 2004; Mediola-Perez, 2004; Perkins, 2002; Smith, Street, & Olivarez, 2002; Street, 2000). However, this study found conflicting results in comparison to those studies and explored areas not previously researched. As stated
earlier, the current study involved a larger total sample size ($n = 1,424$) that the previous studies which involved between 251 and 975 students in the total sample size.

As an example of the differences in studies, the findings of the characteristics of late registrants and the overall success of these students based on their characteristics differ somewhat from previous studies. Freer-Weiss (2004) characterized late registrants as non-traditional age, male gender, and ethnicity was not seen as a factor ($n = 785$). The research conducted for the current study characterized late registrants ($n = 712$) as predominantly of traditional age, female gender, and ethnicity was seen as a factor with the majority of late registrants classified as White. The difference in the results between these two studies indicates that further research is needed to more accurately characterize late registrants as a group.

Previous research indicates that students' background characteristics (i.e. age, gender, ethnicity, and enrollment status) influence their likelihood to successfully complete a late registered course. For example, Polinsky (2003) identified student characteristics associated with poor academic performance as female gender and ethnicity other than White ($n = 915$). The research conducted for this study found that in regard to late registration ($n = 712$), female students performed better than male and students in two ethnic categories (i.e. Asian/Pacific Islander and American Indian/Alaskan Native) outperformed students in the White ethnic category.

During the interview sessions, students identified their reasons for registering late into courses, and intertwined in their responses were aspects from their own personal background characteristics and life situations. They perceived their individual backgrounds, strengths and abilities (both personal and academic), and their own
determination to complete a course as important considerations in whether or not they should have late registered. For the most part, they sought input from academic advisors and from faculty in regard to their decision to late register, and felt that advisors and faculty should take student individuality into consideration when providing advice and making decisions. The conclusion was that it is not necessarily one specific background characteristic or life situation that is a predictor of success in a late registered course, it is a combination of factors and whether that combination has a positive or negative impact on academic success varies by individual student.

Among the conclusions to be drawn from the research conducted for this study are the timing of registration and the impact of that timing on successful completion of a course. In agreement with previous research (Mendiola-Perez, 2004; Smith, Street, & Olivarez, 2002; Street, 2000), this study found that students who register and begin a course on time are more likely to successfully complete that course. However, the study also found that the majority of late registrants were successful in the late registered course; and, in talking with late registrants, they were satisfied with their performance in the late registered course and with their final grade. This subsequent finding is supported by Angelo (1990) who found that late registrants were not likely to fail.

Students did associate consequences with late registration, and those consequences did coincide with previous research which identified that students who are rushed through the registration process and allowed to register late were likely to be under-prepared to begin their college education (Chen, 1999; Freer-Weiss, 2004; Tinto, 1975). The students who were interviewed acknowledged that starting a class late meant they missed critical information presented during the first class session, felt rushed and
unprepared to begin the class, and were constantly working to catch up in assignments and to other students in the class.

The subject area of the course was found to have an influence on the students’ successful completion of the course when registered late. From a quantitative perspective, late registrants were most successful in occupational courses such as allied health and public service, and least successful in general education courses such as math and science. Considering that analysis alone, it is only the subject matter that influences student success. That conclusion supports Angelo (1990) who stated that the late registrant’s success in the course could be dependent upon factors such as the academic level of the course and course content. However, from students’ perspective, the impact varied dependent on the knowledge-level and comfort of students in the subject area of the course, as well as their relationship with the instructor and their knowledge of the instructor’s teaching style.

Students perceived that the online course delivery format had a potential impact on their completion of a late registered course. This impact was not studied from a quantitative perspective and was an unexpected discovery in the qualitative findings. The students’ reasoning for the impact involved the structure of the course and whether the student could view all class assignments and had an opportunity to retrieve and complete previously posted assignments, and their reasoning intuitively made sense.

The option to late register for courses was critical for some students either in beginning their education or in completing their education in a timely manner. Although considered a viable option, late registration was not deemed the best option for all students. Providing ample academic advising time to know and understand the students’
motivations and abilities was regarded as a critical aspect in the decision for late registration. Also, having a detailed conversation with the student so that the student enters late registration with full disclosure of the time, effort, and commitment required to complete the course was considered critical for academic success in a late registered course.

Students do have the potential for success in late registered courses. Although the quantitative data indicates the level of success for late registrants was not as great as it was for timely registrants, the voice of the students engaged in late registration said this was a viable and critical option for some students. The students expressed that the commitment of the institution when offering late registration as an option was to provide resources for ample academic advising, streamlined financial aid processes, clear and concise information for transfer students, and encouragement for instructors to consider the overall impact of late registration for the individual student as well as the overall educational experience for that student and the class as a whole.

In their responses, students aligned with Tinto’s (1993) principles of effective retention which includes institutional commitment to the welfare, education, and academic integration of all students. Summarized, students spoke to the institution making a commitment to students with the late registration process, knowing the students’ background and whether late registration is the best option, and supporting students academically when the late registration option is utilized.

Benefits of the Study and Implications on Late Registration Policies

The benefits of this study begin with an expanded understanding of why community college students register late and of the support needed for late registrants to
be successful. The quantitative results of the study show that late registrants have the potential to succeed; however, some improvements are called for in late registration policies and in the commitment institutions make to late registrants. For instance, the late registration policy should provide guidelines for when to offer late registration to students, and the option should not be offered outside of the academic or faculty advising conversation. This should be an extensive conversation with the student and an analysis of the student’s academic background in the subject matter of the course as well as his or her overall academic experience (i.e. freshman or sophomore student) and academic performance (i.e. GPA). Prior to offering late registration other options should be explored. As an institutional commitment to late registrants, once the student is accepted as a late registrant, ample instructional support or peer tutoring is necessary to bring the late registrant up-to-date and provide opportunity for success in the course.

This study also provides an expanded understanding of community college student persistence, which is beneficial to both community college administrators and community college students. As a continuation of the literature review presented in this dissertation, the results and findings of this study produce common threads and themes in retention research for community colleges and advance the development of community college retention models.

Future Research and Study

The implications for further research and study include replication of this study at another community college or group of community colleges. Replication would be useful to confirm or further debate the findings of this study and other studies on late registration in community colleges. For instance, a study conducted at a group of
community colleges would provide data at a similar point in time in order to consider common external factors in late registration including the economic climate, job outlook, and student transfer rate for a given geographic area.

Additional quantitative studies could be developed from the qualitative data presented in this study. For example, a study designed to further explore the impact of online course delivery formats on completion of coursework may be warranted. In consideration of the impact of academic advising, another study could be designed to explore the amount of time an academic advisor spends with a student and the academic success of that student. Factors could include the academic standing of students prior to academic advising compared to their standing following three or four semesters of academic advising; the likelihood of students engaged in academic advising to late register either initially or as a product of course drop and add; and the demographic characteristics (age, gender, ethnicity, enrollment status) of students who seek academic advising and are engaged in the advising process.

Further qualitative exploration is suggested by the discussion in this study. For example, it would be interesting to inquire of instructors who accept students as late registrants what impact the instructor feels this action has on late registrants’ success in the course and the success of other students in the class. Qualitative exploration could also be conducted of the experience of other students in the class when a classmate is allowed to begin a course late.

The qualitative data in this study presented a number of areas that call out for a quantitative approach. For example, the course completion rate for students who late registered and received financial aid could be a potential research study question. A
complimentary research question would explore how many financial aid recipients register late; and, of those, how many received loans? Also of interest is further exploration of the relationship between the number of courses registered late and student academic performance. Perhaps an analysis of specific academic background characteristics, such as grade point average, would show an impact on that relationship.

One difference found in this study was the significance of ethnicity in regard to late registration. A qualitative study could be designed to further explore the relationship of ethnicity with late registration. This type of study would include the voices of students as they expressed their thoughts about the impact of ethnicity on successful completion of late registered courses. Cultural factors related to late registration are an important aspect such as the perception of students from specific ethnic categories regarding the sharing of sensitive personal information critical in the timing of registration.

Finally, additional study is necessary to further explore the course-specific side of late registration. Replicating those portions of this study that examined course subject areas as related to academic success could emphasize several factors. For instance, analysis of the students’ status as a freshman or sophomore academic level and then to compare academic success in the various course subject areas as grouped by timely and late registrants. This would add a comparison of whether the student has already taken and completed courses, to what level, and how that data impacts the success or non-success in the course as grouped by registration behavior. Another interesting research piece would be to connect the gender of the late registrant to the course subject area and success or non-success in the late registered course. It would be interesting to note whether the female students, the majority of successful late registrants were female, are
connected to the allied health and public service subject areas, the areas in which the majority of late registrants were successful. The research possibilities are endless.

Summary

This study presented information on the impact of late enrollment policies on student success and students’ perceptions and experience with late registration, and joins other empirical research which provides the foundation upon which the impact of late registration has been explored. The results and findings of this study align with Tinto’s (1975) model of student departure and the connection between students’ background characteristics and commitment to their education with their academic success. Furthermore, Tinto’s (1993) principles of effective retention are reflected in the responses of students as they call for an institutional commitment to their academic needs as late registrants and for advisors and faculty to spend the necessary time to know who they are as students and to make decisions which align with their background and are intended for their academic welfare.

The collection of data on the course-specific side of late registration has been limited and is virtually an untapped area of research. The results presented in this study provide a new perspective and an opportunity to design research to further explore the relationship between course subject area and success in a late registered course. It is in the area of qualitative investigation where the findings of this study greatly impact the body of research. It is rare that on the topic of late registration students have had an opportunity to lend their voice to the conversation as those who have experienced the phenomenon. The anticipation is that their perspective will be employed in the analysis and redesign of policies and procedures at the community college intended to remove
barriers to enrollment which in fact contribute to retention and student persistence. Their voice indicates that a late registration policy is an essential component to help some students persist; one that should not be abused by students since it is indeed more difficult to succeed if you enroll late, but an important option to respond to life's circumstances.
REFERENCES


Northern Virginia Community College (n.d.). *Student retention at NVCC and strategies*
for improvement. Retrieved October 27, 2005, from

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Higher Education, 53(6), 687-700.


Appendix A

Interview Protocol
Interview Protocol

Project: Community College Retention and Student Persistence

Date and Time of Interview: ________________________________
Location of Interview: ___________________________________
Interviewee Pseudonym: ___________________________________
Interviewer: Kay L. Keck

Opening Statement/Conversation

I am conducting this interview to learn more about students’ decisions to register late for classes and their experience in the late registration process and in the class for which they registered late. During this interview I hope you will not only tell me about your experience, but that you will share your own ideas and opinions in regard to late registration. Do you have any questions before we begin?

Interview Questions

1. Tell me about your decision to register late, and how would you describe the circumstances which led you to register late?

2. Tell me about your experience in the late registered course, and how did it compare with your experience in a course for which you registered on-time?

3. Describe your level of satisfaction with your performance in the late registered course.

4. How would you advise other students in regard to registering late for a course, and would you late register for any courses in the future?

5. Would your advice to other students and/or your decision to register late vary depending of the type of course or the subject area of the course?

Probing Questions

What do you mean?
Would you explain that more fully?
Could you give me an example?
Tell me more about what you were thinking?
Could you tell me more about that?
Appendix B

Letter to Potential Study Participants
January, 2007

Dear Student:

My name is Kay Keck and I am a doctoral student at Western Michigan University. I am conducting research on the attitudes and perceptions of community college students and how they progress toward completing their educational goals.

As part of this study I am conducting interviews with students from Kellogg Community College. The purpose of these interviews is to explore the timing of when students register for a class and whether the timing has any impact on the outcome of the class.

I would like to interview you for this study. The interview will take no more than one hour, and in the interview I will ask you about your experiences as a student at Kellogg Community College. For instance, in the 2005-2006 academic year college records indicate that for at least one class you were registered after the class began. I am interested in knowing what impact you think the timing of your registration had on your experience in the class, and if there are other factors that affected your experience in the class. The interview will also cover background information pertinent to the study.

If you are interested in learning more about participating in the study, we will meet one-on-one in an interview setting at Kellogg Community College to go over details of the study and proceed with the interview, should you decide to participate. Our meeting can take place at the Battle Creek campus or at one of the academic centers: Grahl, Fehsenfeld, or Eastern Academic. Please know that you are under no obligation to participate in this research, and if you decide to participate you can change your mind at any time in the process without consequence. Your name and personal identifying information will not be used in the analysis or final results of this study.

If you are interested in learning more about participating in this study, please contact me at 269-965-3931, ext. 2611 or by e-mail at keckk@kellogg.edu. Interviews will be held during the months of February and March, and we will set a mutually agreeable time and location for the interview. This study is open only to Kellogg Community College students, past or present, who are 18 years of age or older.

Your time and consideration are greatly appreciated.

Sincerely,

Kay L. Keck, M.S.
Appendix C

Participant Consent Form
You are invited to participate in a study about “Community College Retention and Student Persistence.” This study is being conducted by Kay L. Keck, a doctoral student in the higher education leadership doctoral program at Western Michigan University, under the direction of Dr. Sue Poppink, her dissertation chair.

The following information is being provided for you to decide whether you wish to participate in this study as well as to inform you that you are free to decide not to participate in the study. Once you begin participation in the study, you may decide to withdraw from the study at any time without affecting your relationship with the researchers, Western Michigan University, or Kellogg Community College.

The purpose of this study is to understand the impact of community college policies regarding late registration, and to obtain a clearer understanding about the attitudes and perceptions of community college students towards the practice of allowing students to register late for classes.

If you decide to participate, you will be interviewed for between 30 and 60 minutes. Audio recording equipment will be used to ensure accuracy of the information received and written transcripts of all interviews will be produced. If you prefer not to have your interview audio taped, tell the interviewer. You may also request the interviewer to turn off the audio recorded at any time during the interview.

Your identification will remain confidential during this study and in the reporting of final results of the study. Confidentiality will be maintained by use of a pseudonym known only to the student researcher. All written transcripts from the study will be maintained in a locked filing cabinet in the office of the student researcher for a period of one year following the completion of the interviews. The written transcripts will be stored on the campus of Western Michigan University for a period of at least three years. The audio recordings will be destroyed once written transcripts have been completed and the research phase of the study is complete.
You should not hesitate to ask questions about the study either before signing this consent form or during the time you are participating in the study.

This study is being conducted in partial fulfillment of the student investigator’s doctoral work and will be published as a doctoral dissertation. The final results of this study are available to you should you so desire.

As in all research, there may be unforeseen risks to the participants; however, there are no known risks associated with participation in this study. There is a minor inconvenience associated with donating your time and effort to participate in an interview. Although great effort is taken to protect your identity as a study participant, there is a slight risk that a reader may identify you as a study participant. There are also no direct benefits associated with participating in this study. An expected overall benefit associated with your participation in this study is the opportunity to tell your story and to add to the understanding of how community college policies affect students in the achievement of their educational goals.

If you have any questions about this study you may contact the student investigator, Kay L. Keck, at 269-965-3931, ext. 2611 or by e-mail at keckk@kellogg.edu or Dr. Sue Poppink at 269-387-3569 or by e-mail at sue.poppink@wmich.edu. You may also contact the chairperson of Western Michigan University’s Human Subjects Institutional Review Board (269-387-8293) or the Vice President for Research at Western Michigan University (269-387-8298) if questions or problems arise during the course of the study.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board (HSIRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate in this study if the stamped date is older than one year.

Your signature below indicates that you have read and/or had explained to you the purpose and requirements of the study and that you agree to participate. A signed copy of this consent form will be given to you to keep for your records.

Participant Date

Consent Obtained by:

Interviewer/Student Investigator Date
Appendix D

Course Subject Areas
<table>
<thead>
<tr>
<th>COURSE SUBJECT AREAS</th>
<th>MATH and SCIENCE</th>
<th>PUBLIC SERVICE</th>
<th>SOCIAL SCIENCES</th>
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Appendix E

Comparison of Keck Research with Literature and Previous Research
### Table

**Comparison of Keck Research with Literature and Previous Research**

<table>
<thead>
<tr>
<th>Research Category</th>
<th>Previous Research on Student Retention</th>
<th>Keck (2007) Research on Community College Student Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Characteristics, Background, and External Environment</td>
<td>As a group community college students tend to be older, female, and of minority status (Voorhees, 1987). Late registrants are characterized as non-traditional age, male gender, and race was not seen as a factor (Freer-Weiss, 2004).</td>
<td>As a group, late registrants were characterized as predominantly of traditional age, White ethnicity, female gender, and a part-time enrollment level. This was representative of the community college study site where the overall population was predominantly of non-traditional age, White ethnicity, female gender, and a part-time enrollment level. A breakdown of the participant characteristics showed that the majority of traditional age students enrolled late as did a majority of male students, Black students, and full-time enrollment students.</td>
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<td>Among the list of student characteristics which can be associated with negative attrition are ethnicity other than white, female gender, and poor academic preparation (Polinsky, 2003).</td>
<td>In late registered courses, female students performed better academically than male; likewise, students of traditional age and those who enrolled full-time performed better than those of non-traditional age and those who enrolled part-time.</td>
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<td>As commuter students, community college students are more affected by variables in their external environment such as concerns with finances, employment, and family responsibilities (Bean &amp; Metzner, 1985).</td>
<td>Students registered late for reasons pertaining to life circumstances (i.e. decisions to attend college or seek employment), the financial aid process, transfer decisions, procrastination, and a lack of interest in their education.</td>
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<td>Late registrants are at the margin socially, experience multiple life situations, made a recent decision to attend college, and start their education feeling isolated both socially and academically (Bryant, et al., 1996).</td>
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<table>
<thead>
<tr>
<th>Research Category</th>
<th>Previous Research on Student Retention</th>
<th>Keck (2007) Research on Community College Student Retention</th>
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<tbody>
<tr>
<td>Certain pre-entry attributes such as family background, skills and abilities, and prior academic experience, determines the educational goals and commitments of incoming students (Tinto, 1975).</td>
<td>Students perceived their individual backgrounds, strengths, academic abilities, and determination to complete a course as important considerations in whether to late register.</td>
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<td>The list of life circumstances which impact attrition includes: work demands, family responsibilities, finances, and personal problems (Polinsky, 2003).</td>
<td>The reasons students gave for possible late registration in the future included: birth of their child, death of a significant person in their life, finances, and schedule adjustments necessary for course sequencing, graduation, and to balance class time with their work schedule.</td>
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<tr>
<td>Impact of Late Registration on Student Success</td>
<td>Late registration has little to no effect on academic performance and persistence (Angelo, 1990; Perkins, 2002).</td>
<td>Students were satisfied with their performance in the late registered course.</td>
</tr>
<tr>
<td>Students who rush into college and are rushed through the admission and registration process are likely to be academically, emotionally, and financially under-prepared to begin their college education (Tinto, 1975).</td>
<td>The consequences students associated with late registration included: missing critical first day information, feeling rushed and unprepared to begin the class, and a constant need to catch up in assignments and to other students in the class. Students may take advantage of the late registration process to avoid advice in course selection which is a potential disadvantage to their academic success.</td>
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<td>Students need ample time to adjust and adapt to the college environment; allowing late registration causes students to begin the semester amid a sense of rush and confusion (Chen, 1999; Freer-Weiss, 2004).</td>
<td>The involvement of instructors in the late registration process was perceived by students as positive in determining the wisdom of starting a class late.</td>
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<td>Lack of interaction with faculty is a main element to negative attrition (Polinsky, 2003).</td>
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<tr>
<th>Research Category</th>
<th>Previous Research on Student Retention</th>
<th>Keck (2007) Research on Community College Student Retention</th>
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<tbody>
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<td></td>
<td>Dissatisfaction with the college experience was highly related to the student's decision to leave the institution (Winter &amp; Fadale, 1986).</td>
<td>Satisfaction with the role of academic advising in the late registration process was perceived by students as both positive and negative. It was imperative for students that advisors take the time, and have the time available, to fully know the students' background and personal situation prior to determining whether late registration was an appropriate option.</td>
</tr>
</tbody>
</table>

#### Success of Late Registrants

Late registration is a deterrent to the academic success and retention of students (Mendiola-Perez, 2004; Smith, Street, & Olivarez, 2002; Street, 2000); late registrants were more likely to withdraw from classes than on-time registrants (Smith, Street, & Olivarez, 2002).

Students who registered and began a course on time had a greater likelihood to complete the course and earn a successful final course grade.

Late registrants are not certain to fail (Angelo, 1990).

The majority of late registrants were successful in the late registered course.

Late registrants typically do not complete their coursework (Freer-Weiss, 1999; Roueche & Roueche, 1993).

Predictors of the late registrant's success in the course could be dependent upon factors such as the academic level of the course and course content (Angelo, 1990).

The course subject area had a significant impact on the successful completion of a late registered course. The course subject areas of allied health and public service produced the highest percentage of success in final course grade. The course subject area of math and science produced the highest percentage of unsuccessful final course grade.
<table>
<thead>
<tr>
<th>Research Category</th>
<th>Previous Research on Student Retention</th>
<th>Keck (2007) Research on Community College Student Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Predictors of the late registrant's success in the course could be dependent upon factors such as the student's prior academic experience and personal motivation as well as the academic level of the course and course content (Angelo, 1990).</td>
<td>Students would avoid late registration in specific course subject areas unless they had completed coursework or had experiential learning in the course subject area. Math and science was the course subject area in which most students would avoid late registration.</td>
</tr>
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<td>Students were reluctant to late register for a course delivered in an online format; and, in the online format, course subject area was a factor in students' perceptions of whether they could be successful in the class given late registration. The difference for students was whether the course was structured so they could retrieve previous posted assignments and view all course assignments and due dates.</td>
</tr>
</tbody>
</table>
Appendix F

Approval of Human Subjects Institutional Review Board (HSIRB)
Date: October 19, 2006

To: Sue Poppink, Principal Investigator
    Kay Keck, Student Investigator for dissertation

From: Amy Naugle, Ph.D., Chair

Re: HSIRB Project Number: 06-10-04

This letter will serve as confirmation that your research project entitled “Community College Retention and Student Persistence” has been approved under the expedited category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may only conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: October 19, 2007