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DOES INTRUSIVE COUNSELING INTERVENTION POSITIVELY  
IMPACT THE RETENTION OF AT-RISK, FIRST TIME TO  
COLLEGE STUDENTS?

presented by

Stanley Scott Chase

has been accepted towards fulfillment  
of the requirements for the

Ph.D. degree in Education Administration

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**DOES INTRUSIVE COUNSELING INTERVENTION POSITIVELY IMPACT THE  
RETENTION OF AT-RISK FIRST-TIME-TO-COLLEGE STUDENTS?**

**By**

**Stanley Scott Chase**

**A DISSERTATION**

**Submitted to  
Michigan State University  
in partial fulfillment of the requirements  
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**DOCTOR OF PHILOSOPHY  
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## ABSTRACT

### DOES INTRUSIVE COUNSELING INTERVENTION POSITIVELY IMPACT THE RETENTION OF AT-RISK FIRST-TIME-TO-COLLEGE STUDENTS?

By

Stanley Scott Chase

The question whether intrusive counseling positively impacts the retention of at risk students was motivated by national and local high attrition rates. If colleges are to increase or maintain enrollment, creative means for retaining students is crucial; this factor was a primary driving force of this study. The purpose of this study is to investigate retention tendencies of at-risk first-time-to-college students at Lansing Community College.

This study examined intrusive counseling intervention with a population of at-risk students and their re-enrollment in subsequent terms. Intrusive counseling focused on the areas of student need, such as coping skills, self-confidence, self-image, anxiety, beliefs, expectations, prejudices, academic ability, and connectedness to the college campus and its resources. A pilot study was conducted to identify factors that were strong predictors of students who may be at-risk of dropping out (find jobs before degree completion) or stopping out (leave for a semester or two and return). The study revealed several characteristics that provided high predictability of success and identified at-risk students. The items utilized were:

- Ethnic background
- High school grade point average

- Number of hours employed
- College financial situation

The methodological design of the study allowed for the predictors of success to be included on the admissions application, resulting in the identification of the target population of those students who are at-risk of not continuing in the subsequent term. Over a three-semester time-span, each of 897 students who did or did not meet with a counselor became a member of the research sample group.

The target population was tracked to determine the number of students who re-enrolled in subsequent terms and whether there existed a significant difference between the re-enrollment of the target group who did meet with a counselor and those who did not meet with a counselor. The results of the study revealed students who did meet with a counselor were single and non-white; students who did not meet with a counselor were white. Further, the study showed that students who meet with a counselor were generally more academically oriented and tended to carry more credits. The study found that the academic performance of students who did meet with a counselor was not significantly different from those students who did not meet with a counselor. The study revealed that students who did meet with a counselor across all semesters were significantly more likely to re-enroll in subsequent semesters than those who did not meet with a counselor.

The results of the study allowed for the following conclusions to be made by this researcher. Emphasis should be placed upon the importance of counselor intervention on at-risk first-time-to-college students. The data indicates a strong relationship between intrusive counseling and re-enrollment in subsequent semesters. The lack of significant differences in academic performance should not minimize the significant benefit that can be achieved relative to the retention of at-risk students who meet with a counselor.

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Dedicated to my wife, Yvette Chase, whose steadfast belief in my capabilities served to sustain me throughout this entire process. Yvette's love, her prayers, words of encouragement, patience and quiet, deep, strength has allowed this dream to become a reality. To my mother, Doris Rose-Ella Cephas, and my aunt and uncle, Mary Chase and Reverend Harvey G. Chase, Jr. who have always encouraged and challenged me to achieve excellence and who instilled in me the knowledge and power of, and the love for, education. Their faith and encouragement in me never ceased. My deep love and thanks to you all.

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# CHAPTER 1

## INTRODUCTION

### Statement of the Problem

Student attrition has been a focal point in higher education for many years. Despite all of the efforts to address the needs of the student through programming and dialogue, an enormous number of students continue to drop out of college before they achieve their educational goals. National Center for Education Statistics (N.C.E.S.) (1999) and American College Testing (A.C.T.) (1998) report that it is not uncommon for colleges and universities to experience attrition rates ranging from twenty-five to sixty percent of their freshmen classes. One study shows, four-year universities report that 49.8% of their students drop out, while two-year colleges experience dropout rates of 67.6% A.C.T. (1998).

Figures on the persistence rates among community college students reported as early as 20 years ago (London, 1989 and Zwerling, 1976) remain as consistent today as in earlier studies. Public, private, two year, and four-year institutions express continued interest in reducing their dropout rates (Tinto, 1984 and 1993). Two year public colleges (for the purposes of this study, two-year public colleges include liberal arts and vocational colleges) have been the most likely to experience the highest, most sustained attrition rates. This has been attributed to the open enrollment policies of the community college, where, for example, the college admits students who have been turned down previously by other four-year colleges. Among institutions, it is clear that keeping students is as important as attracting them.

Sixty-three percent (63%) of students who began their postsecondary education at United States (U.S.) community colleges in 1989-90 had not completed a degree at an institution by 1994. Further, 22% of the 37% who graduated college completed an Associates Degree at their first institution (U.S. Department of Education 1998). The relatively high dropout rates from the two-year colleges can be attributable partially to the relatively high dropout-proneness of their entering students (Cope, Hannah 1975). “About two-thirds of high school graduates continue to pursue a higher education,” said Wes Hadley, Director of the ACT office for the Enhancement of Education Practices, but some of these are not prepared whether academically or socially to succeed (ACT 2001). There must be a reason or reasons this occurs. Studies on why students leave or drop out may be beneficial to college officials and may, in some cases indicate clear, corrective actions that could reduce attrition.

### Background

Beginning in 1991, Lansing Community College (LCC) began to experience a two pronged concern: a decline in its enrollment and a constant struggle to reduce both attrition rates and to improve student retention. The attempts by the college to reduce student attrition through programs such as freshman orientation, mentoring programs, and student success courses used as tools employed to improve attrition have achieved marginal success.

In an attempt to reverse this trend, the college (LCC) decided to institute a student success initiative to reduce the attrition rates of at-risk first-time-to-college students (for the purpose of this study, at-risk students are defined as those student who are at risk of stopping-out, dropping-out, or not achieving their academic goals).

The problem was addressed by instituting an intrusive counseling program that established a one-to-one counselor/student relationship and guidance in an effort to support the academic and social needs of students.

### Purpose

This study researches the impact of intrusive counseling on this population of community college students. This study investigated whether intrusive counseling impacts the retention and academic success of students who are at-risk of leaving the college. Intrusive counseling is defined as a process of connecting students early in their educational journey with counselors to engage in a systematic approach that incorporates academic, social, emotional, and individual counseling at regular intervals. Further, intrusive counseling is a holistic approach that addresses the student's situational factors affecting persistence including role conflict, time management, financial and transportation needs, and children. Finally, intrusive counseling addresses psychological influences such as coping skills, self-confidence, self image, anxiety about school based upon prior experience, beliefs, expectations, prejudices real or imagined, and the student's ability to be successful.

For the purposes of this dissertation, "success" is defined as completing the enrolled course with a grade of 2.0 or higher, and re-enrolling in the subsequent term (retention).

### Significance

College enrollment revenues, in most cases, can be increased significantly by a modest increase in the percentage of students who re-enroll. This research can be invaluable to college administration when planning for retaining students, stabilizing

enrollment, projecting budgetary needs, solidifying budgets in tough economic times, and planning strategy. It is more economical to have students re-enroll than to continually market for a new group to fill the void.

## CHAPTER 2

### LITERATURE REVIEW

#### Introduction

A review of the literature on student retention at the community college reveals four primary considerations which will be explored in this section. The first section reviews factors that have made student retention an important issue. The second section reviews research on factors that affect college success and retention. The third section discusses research on institutional factors that impact student retention and the fourth section of the review discusses student services and the impact counseling has on student retention.

#### Relevance Of Retention

Student attrition is a concern at all educational levels. Beginning with McNeely (1938), education researchers using retention rate as an indicator of performance report that 55% of students were retained until college graduation. Over time retention research moved beyond simply tracking rates to examining the causes, impacts, and remedies of student attrition (Cope & Hannah, 1925, Noel et al., 1985; Tinto, 1987). At elementary and secondary levels, retaining students for poor performance is a mandate of state and/or local governing bodies. However, at postsecondary levels, student retention is not mandated. Despite all of the attention (governmental concern, legislative mandates, policy changes, or community awareness of the problem), many students still drop out of college before they achieve their educational goals. Approximately half of the freshmen enrolled in colleges and universities drop out before completing their programs; this rate is fairly stable (U.S. Department of Education 1998). Department of Education statistics

verify that the dropout rate at community colleges is greater than that of four-year institutions, which substantiates the importance of this study to the community college arena.

Studies investigating retention and attrition of students in community colleges indicate high dropout rates can be attributable particularly to the relatively high drop out proneness of their entering students (Cope, Hannah 1975). Additionally, greater accountability in higher education has resulted in enhanced reliance by colleges and universities, governmental agencies, and the general public on measures of economic accountability and institutional effectiveness. Nedwek and Neal (1994) note that through the 1992 Reauthorizations of the Higher Education Act of 1965, the United States Congress has established fresh opportunities for scrutiny of higher education institutions using a vast array of measures. The institutional overall focus has shifted accordingly. An institution's retention rate is one widely employed indicator of its effectiveness, yet other increased accountability in higher education necessitates a greatly expanded understanding of retention rate analysis, of tracking, of behavior, and how this information can be used in evaluating college or university effectiveness. Studies on why students leave or drop out can be beneficial by indicating corrective actions that could reduce attrition. Success in lowering attrition rates could also promote many associated benefits, including stabilized enrollments, utilization of unused capacity, increased goal attainment (graduation) rates, and improved student academic performance. Further, these studies can help to focus financial resources on students most likely to be successful. Retention is a paramount concern that colleges and universities should

monitor, analyze, and consider in their decision making on a regular basis says Whiteley, Porter and Fenske (1992), and the American Association of Community Colleges (1994).

Large numbers of students dropping out of community colleges can have an impact on college operations and funding. This study will be viewed from the lens of the college administrator because first, the student-centered focus of the college is a key factor in students reaching their goals, and second, the utilization of counselors with at-risk students is a great investment that could result in the reduction of student attrition, enrollment stabilization, and revenue enhancement. Stabilization of enrollment allows for predictive enrollment capabilities for strategic planning and budgeting. Executive leadership will find enrollment stabilization valuable to the entire college community, both student and administration.

This study will fill gaps that exist in the literature relating to retention of at-risk community college students and will provide information on the role that counselor intervention has upon student retention.

### Factors Affecting Retention

Attributing factors basic to understanding the successful retention of college students is a frequent and at times complex discussion. Learning why some students are able to achieve success and others struggle with social and academic issues is important. Research has focused on determining and understanding those factors that influence both retention and attrition.

Much of the research on retention is guided by Tinto's model that focuses on the academic and social integration of students into college and university life. Tinto (1993) argues that students enter college with family influences, attained academic skills, and

preconceived ideas of what the college experience will be. He claims that these individual attributes interact with the academic and social environment of the college to positively or negatively influence students' commitment to complete their educational goals and to persist at the institution.

The academic arenas of the college are characterized by grades and intellectual development while the social arena includes interaction with faculty, students, and college administrators, and can also include student participation in the extra-curricular activities of the college. Tinto's model of connectedness and social integration has been tested and generally supported in studies of four-year, residential institutions. Grosset (1989) reviewed some of the research that applied to Tinto's model at nonresidential colleges, inclusive of two-year and four-year colleges. This later study suggested that Tinto's model may not explain retention/attrition at commuter colleges and may be even less explanatory at community colleges. Grosset concluded her review by suggesting that there is no generalized, all-purpose, attrition model applicable to all institutions. Studies by Brooks-Leonard (1991), Daniels, (1990), Grosset, (1989), Voorhees, (1987), and Sarkar (1993) each analyzed one or two specific factors to determine whether they influenced retention or attrition rates. The approach in these studies contributed to a listing of substantial factors but do not identify which may be more important and which may contribute uniquely to retention and attrition. Based on her study of retention at the community college of Philadelphia, Grosset found that a student's ethnicity, basic skills, admission test scores, and type of high school attended (public or private) were tied to persistence.

Voorhees (1987) studied community college persistence among 369 new and continuing students who responded to ACT student's opinion survey. He tested four different models and studied two factors at a time:

1. Gender and full-time/part-time status
2. Purpose for enrolling and ethnicity
3. Intent to return and satisfaction with the institution
4. Factors of grade-point average, informal interaction with faculty, and weekly study hours.

Voorhees concludes that the only factors related to persistence were purpose for enrolling, intent to return, and gender. His findings suggest that while ethnicity, grade point average, interactions with faculty outside of the classroom, number of hours studying, and full-time or part-time status were important, they did not significantly correlate with persistence.

Brooks and Leonard (1991) tested the impact of educational objectives, full-time or part-time status, hours worked, age, gender, income, prior educational level, remedial need, marital status, and race on 796 first-time students) at the Indiana Vocational Technical College. They found that the factors evident in those who persisted compared to those who did not persist were educational objectives, full-time or part-time status, age, hours worked, and first term grade point average. Students who were employed full-time, and those over 40 years of age, exhibited lower retention.

1557 first time college students from the four campuses of Saskatchewan Institute of Applied Science and Technology who were seeking either certificate or degree goals were studied by Sarkar (1993) questioning the impact on student success using seven

factors. These were (1) reasons for taking program, (2) goal commitment, (3) educational ability, (4) academic/social integration, (5) satisfactory/use of services, (6) student characteristics, and (7) labor market conditions. Sarkar found that non-completers differed significantly from completers except in the area of academic and social integration. Sarkar's findings also revealed that when students identified reasons for selecting a specific program, non-completers had lower educational goals. Goal attainment was lower for non-completers who were less certain about their career choice, expressed less goal commitment, and had set for themselves lower final educational goals. Educational ability and previous educational achievement were lower for non-completers. There was no significant difference in academic and social integration between non-completers and the total sample, measured by participation in various activities and groups. Tutorial help, counseling services, computer labs, and library facilities were more frequently used by non-completers. Within student characteristics, non-completers are more likely to be disabled, of aboriginal ancestry, female, married, and have dependent children. They are more frequently employed and work more hours. Non-completers were more influenced by the current economic conditions. Sarkar (1993) did not focus on the types of support services that must be accessible, but he does indicate that these services must allow greater flexibility and that counseling services are an integral part of this process.

Feldman (1993) conducted a quantitative study with 1140 first-time community college students considered most likely to persist. She found student gender, ethnicity, age, status, goals, and basic skills need all had significant influence on retention.

Feldman noted that all but remedial need was associated with whether or not a student

returned in one year. Feldman states that four factors were significant predictors of attrition: ethnicity, full-time/part-time status, age, and high school grade point average. Feldman also suggested that factors identified as significant predictions of student risk are available prior to the beginning of the students' college program. Further, students who are at-risk would be better served the earlier they could be identified. She continues by suggesting that colleges could utilize known at-risk characteristics to positively impact attrition rates.

While Tinto's model has been repeatedly validated and has served as a foundation for much of the studies on retention, the focus of these studies has been at four-year institutions and shows the needs of community college students as being different. The literature on community college retention is somewhat limited. However, the data available suggest characteristics that are statistically associated with student retention and attrition which can serve as indicators for early identification of at-risk students. Given this information, community colleges can take a logical next step. This step is to develop strategies that will utilize this body of knowledge to identify those students who are at-risk and to intervene as early in the matriculation process as possible, and thereby improve the possibility of student success.

### What Works

#### (Features of the Institution That Affect Success and Retention)

Institutions have been charged to provide service to a diverse student population, a population whose face drastically changed over a 10-year period. During this span (1984- 1994), the number of white undergraduates increased by 51% compared to a 61% increase of Native American, African American, Asian American, and Hispanics

graduates (Pascarella and Terenzini, 1998). Accountability for the success of these students is partnered with the responsibility of the college to provide service. In this role institutions are expected to provide an effective strategy that will promote retention by this diverse population of first generation, adult, educationally disadvantaged, at-risk, and minority students. Retention and persistence result from the interaction of a variety of student characteristics, circumstances, and educational environment. The influence that institutions have over student characteristics and circumstances is limited. It is suggested that a more effective way to improve retention is to establish and communicate an institutional perspective, policy, and attitude toward potential dropouts.

It is essential that the institution first define “dropout” before any such policy or position on retention be developed. Wlodkowski (1985) says there are different types of attrition. These include stopouts (those students who leave for a semester or two and then return), dropouts (those who find jobs before degree completion), and personal interest students. The first step is to identify those factors leading to attrition which are harmful to the vitality of the institution and to student objectives. Tinto (1993) argues that the practical question of what institutions can do to increase retention depends on why a student drops out. This identification will assure that limited college resources are targeted correctly, and the appropriate students receive service.

It is the role of the college to determine which type of dropout should be the focal point of institutional action for the purpose of developing programs to retain these potential dropouts. From a macro perspective, all students who withdraw can be labeled as dropouts regardless of their motivations for departing, and the departure of some students may be amenable to institutional action. Some actions may involve specific

segments of the student populations and include a number of different types of students. Some actions by students may result in their permanent withdrawal from all forms of higher educational endeavors. Some students may transfer to other institutions, some may temporarily withdraw, some may stop out from their studies (Tinto, 1993). Student departure for any of the above reasons results in a reduction of the seat count, the loss of a potential graduate, and a reduced revenue source for the college. Without unlimited supplies of replacement students, dropping out can have a devastating impact on the institution and its potential for continued existence.

The definition and identification of specific types of student dropouts will permit the institution to target specific programs for the implementation of an effective and economically efficient retention program. For the purpose of this study, the focus is on at-risk first-time-to-college students enrolled in a degree or certificate program who are at-risk of dropping out/stopping out before they have graduated or have achieved their academic goals.

The literature documents many retention programs that have been successful; many of these programs share common features. Tinto (1993) enumerated these commonalities in his identification of the “The Principles of Effective Retention.”

- Effective retention programs are committed to the students they serve. They put the welfare of students ahead of other institutional goals.
- Effective retention programs are, first and foremost, committed to the education of all, not some of their students.

- Effective retention programs are committed to the development of supportive social and educational communities in which all students are integrated as competent members.
- Institutions should provide resources for program development and incentives for program participation that reach out to faculty and staff alike.
- Institutions should commit themselves to a long-term process of program development.
- Institutions should place ownership for institutional change in the hands of those across the campus who will implement that change.
- Institutional actions should be coordinated in collaborative fashion to ensure a systemic, campus wide approach to student retention.
- Institutions should act to ensure that faculty and staff possess the skills needed to assist and educate their students.
- Institutions should continually assess their actions with an eye toward improvement.
- Institutions should front load their efforts on behalf of student retention

Clearly, support for these expectations is found in the professional literature of American College of Personnel Services (1994), Helgot and Culp (1995), Lyons, Miller, and Trow (1994), and O'Banion (1987) and community colleges across the nation have developed outstanding programs and practices enveloping these expectations. As they have been put into practice, these expectations have been refined into goal statements with a specific focus for professionals of student affairs, such as those characterized in Becherer and Becherer (1995);

Professionals of student affairs should provide leadership:

- For a student-centered environment throughout the college.
- For an instructional faculty collaboration to ensure student success.
- For an array of enrollment services that ensure student access and smooth transition from the enrollment of the student through matriculation.
- For an advising and counseling program that appropriately both challenge and support student success.
- For ensuring that the first time college student receives special attention and support.
- For ensuring appropriate educational interventions for students who seem unlikely to meet their educational objectives.
- For facilitating a program of student involvement that encourages institutional community building through student/faculty interaction.
- For developing and disseminating information about students to faculty and policymakers and for building practices assuring student success.

The question of “what works” is identified here by what constitutes a student dropout and is accompanied by institutional principles that must be in place for student retention to be increased. Consider what programs an institution should adopt to reduce student attrition, given the fact that student retention and learning are shaped by those institutional characteristics shown above (Becherer and Becherer 1995). Students’ needs should be identified and addressed from their first encounter with the college or university before potential problems become full-blown issues.

## **Student Services and the Impact of Counseling on Retention**

Student services continue to play an important part in the planning in two-year college. As student services are analyzed from the perspective of retention, literature strongly reiterates that counseling services for students is critical. O'Banion (1989) argues that counseling has been 'touted as the heart' of the function of student affairs. Other literature expresses varied opinions as to the importance of the role counseling or counselors should play within the college or university. Recently, the need for counselors has increased due to the changing nature of students at the community college. Campuses are impacted by the increased numbers of minorities, by academically disadvantaged, by economically deprived, by adults and, by women enrolling in colleges says Coll (1993). He states not only campuses are impacted by the need for services, but students have expressed an increased need for counseling. It has been suggested by some that counseling support should be restricted to the academic needs of students rather than the focus on vocational education. Others suggest career and vocational counseling must be offered. Still another group espouses the whole-person philosophy; the individual is more than a student so a holistic approach that addresses personal, psychological, academic, and vocational needs should be included in the delivery of counseling services.

At Lansing Community College, the counseling process is viewed first as a developmental process that assists students in the clarification of life and career goals. Second, the design process assists students in the development of educational plans for the realization of their goals and to provide connections with other campus resources within the college environment. Last, the counselor serves as an anchor, a communication facilitator, and an ombudsperson charged with assisting the student from

goal declaration to goal attainment. Proponents of a counselor-focused system suggest that counselors are in a better position to refer students to institutional resources because counselors have greater experience in goal setting, career selection, life planning, and personal problem solving.

General support exists for the importance of good counseling in student success and retention. Theories of integration (Tinto, 1993) and involvement (Astin, 1993) address the importance of the interaction between the student and the environment. A study by Seidman (1991) supports the premise that student interaction with counselors resulted in a significantly higher rate of retention than the group that did not interact with a counselor. This study planned a series of ongoing interactions between students and counselors that began from the moment a student expressed intent to attend the college and continued through the first semester. Seidman (1991) concluded that early and persistent intervention can make a difference. The pre/post admissions/counseling process positively affected student retention rates.

## CHAPTER 3

### METHODOLOGY

#### Introduction

The purpose of this study was to test the impact of intrusive counseling strategies with at-risk first-time-to-college students at Lansing Community College. It is a known factor and not uncommon for colleges and universities to experience attrition rates ranging from 25% to 60% of their freshman classes, with one example showing retention rates of 59% for low income students compared to 71% for their non-poor counterparts. (NCES, 2000). In this study, student data was extracted from the college management records and student contact tracking systems and was analyzed to identify strategies that may be instituted to increase retention of at-risk first-time-to-college students. An established factor in retention is student connectedness. It is important for colleges to know whether counseling of students during their first semester contributes to connectedness and aids in student retention.

Success is the dependent variable for this population of at-risk first-time-to-college students who completed first semester courses and returned for the subsequent semester. In general, continued enrollment for LCC students from Spring 1999 to Fall 1999 was 53.1 percent; continued enrollment from Fall 1999 to Spring 2000 was 57.7 percent (LCC Office of Institutional Research, 2001).

This research investigated how intrusive counseling would impact and aid the at-risk student to be persistent and successful. Tinto and Spady's theory of social and academic integration was utilized as a foundation to guide this study. Tinto's (1988) model was developed to explain the learning behavior of students in educational

institutions. He argues that student departures would be reduced if their interactions with the institutions social and academic systems were deepened. Spady's model stated that such interactions give the student opportunities to succeed in the social and academic system of the institution.

The focus of this study was on the weaknesses in college planning, rather than on what is wrong with the student that causes them to leave. This study seeks to determine how the college can increase the retention rates of at-risk first-time-to-college students by providing intrusive counseling.

#### Predictors of Success – Pilot Study

This study was conducted at Lansing Community College, a North Central Association Accredited college. A large urban college that enrolls approximately 18,000 students, the population is varied with 77.5% white students and 15.3% minority students and 7.2% are of undisclosed races. The average age of the student is 27.5 years. The sample is being selected from the total population of entering first-time-to-college students of Spring 1999, Fall 1999, and Spring 2000.

This pilot project was conducted to identify factors that are strong predictors of students who may be at-risk of dropping out or stopping out. Involved were 897 students who responded to a series of 32 survey questions asked of first-time-to-college students enrolled in Gateway courses (Appendix A). Following the completion of the survey, these students were tracked to determine their persistence to successfully complete their course(s) and to correlate that success to the responses in the survey. In this pilot study, student success is acquiring a 2.0 grade point average or higher in the courses in which they had enrolled, and their persistent re-enrollment in the following semester. The

findings of the study revealed that several questions could be used to provide a high prediction of success. The statistical procedure used for this analysis was logistic regression. Areas showing a high correlation are shown as completion rates in the following table.

#### Predicted Completion Rates

SURVEY ITEM	Predicted Completion Rate
<i>Item 1: Course</i>	
MATH 107	.48
PSYC 200	.68
ELTE 100*	.74
<i>Item 2: Course Taken Before</i>	
Yes	.36
No	.65
<i>Item 13: Average High School Grade</i>	
A	.76
B	.65
C	.53
D	.38
E/F	.27
<i>Item 14: Self-reported Assignment</i>	
Always complete	.72
Usually complete	.56
Sometimes complete	.33
Never complete	**
<i>Item 15: Last attend school full-time</i>	
≥5 years ago	.71
1 year ago	.61
2 years ago	.51
3 years ago	.54
4 years ago	.50
<i>Item 16: Last level of education registered full-time</i>	
HS, Vocational, University	.65
Community College	.53
<i>Item 19: Level of math education</i>	
Basic math (arithmetic)	.41
Algebra I	.49
Geometry	.57
Algebra II	.65
Pre-calculus or higher	.72
<i>Item 24: Employment hours working per week</i>	
Less than 10	.68
Between 10 and 20	.65
Between 20 and 30	.61
Between 30 and 40	.57
More than 40	.54

\*Electrical Technology

\*\* Sample size too small

These questions and data elements were placed on the admission application, and were used to identify students at-risk, and were selected as the sample for this study:

- Ethnic Background
- My high school grade point average  
4.0                  3.0                  2.0                  1.0                  0.0
- How many hours per week do you plan to work your first semester?
  - Not Working
  - 10 hours per week or less
  - 11 to 20 hours/week
  - 21 to 30 hours/week
  - 31 to 40 hours/week
  - more than 40 hours/week
- My financial situation regarding college is as follows:
  - I will have enough money
  - I will need financial assistance
  - I don't know yet

Average high school grade: American College Testing Report states “the factor of students’ course work taken and the grades earned in high school most strongly relate to their performance in college” (ACT, 2001).

Hours employed: Economic factors can play a significant part in the student’s persistence in college. Significant numbers attend college part-time as a result of competing priorities. Feldman (1993) and Price (1993) concur that the most prevalent characteristic among studies of non-persisters is part-time attendance.

Ethnicity: Attrition rates for both minorities and non-minorities continue to be a serious problem in most community colleges. Nora and Rendon (1998) note attrition rates for minority students in some two-year colleges is about 60% and in some instances as high as 80%.

Financial situation: While the factors indicate a marginal relationship between financial status and persistence, this was included in the indicators. The inclusion of this information was based on research that stated 59% of low-income students complete college compared to 71% of their counterparts (NCES, 2000).

When answered in a specific manner, the completion of the admission application containing the data elements and questions resulted in the identification of the target population (students at high risk of not completing). Subsequent to identification of the target population, all identified students were contacted to come in for a voluntary meeting with a counselor. Students who accepted the invitation entered into a relationship with a counselor and became members of the research sample group.

#### Intervention

Once the students were identified, the following process was implemented:

- A group of students was randomly assigned to a counselor.
- A letter was sent to each student requesting a meeting with a counselor to get acquainted with the college and its resources and to discuss the student's academic goals.
- A follow-up telephone call was made to each student by peer advisors inviting the student to the college.

- Contact by the counselor or peer advisor was made with the students during weeks 3, 6, 9, and 12 of the semester. Students who had not responded to the initial contact were again invited in. If the student had made contact, this contact was used to check their progress.
- Information on students who did meet with a counselor was recorded in the Counseling Advising Tracking System (CATS).
- Following the end of the semester, academic information was assessed using the Academic Records Software System.
- This information record in the system contained data on:
  - students flagged as at-risk and who did meet with a counselor.
  - students flagged as at-risk and who did not meet with a counselor.
  - performance data of the total college student population.

Currently, student demographic data are kept in the college student records system and were accessible for the study. Additionally all dropouts (students who leave during or at the end of a semester and do not return), stopouts (students who leave for a semester and return), course grades, and curricula status are kept in the same system.

Student academic records involved in the study are in the record system; however, a separate database is utilized to track student/counselor contact. The student services (SRVS) tracking system is utilized to track all contacts between counselors and students and to document anecdotal notes; while the information is confidential, for the purpose of this study permission was given to retrieve relevant information on counselor contact.

## Program Theory

The Program Theory model (Figure 1) provides a visual of the overarching theoretical assumptions on which the Intrusive Counseling Initiative is based. It is an inductive model that guided the research on the counseling interventions of Lansing Community College. There is strong support for the Intrusive Counseling Initiative and its impact on future college activities and student outcomes inclusive of initial, intermediate, and/or long-term support. College administrators and program directors have the discretion of deciding where the activities and/or outcomes should lie within this spectrum.

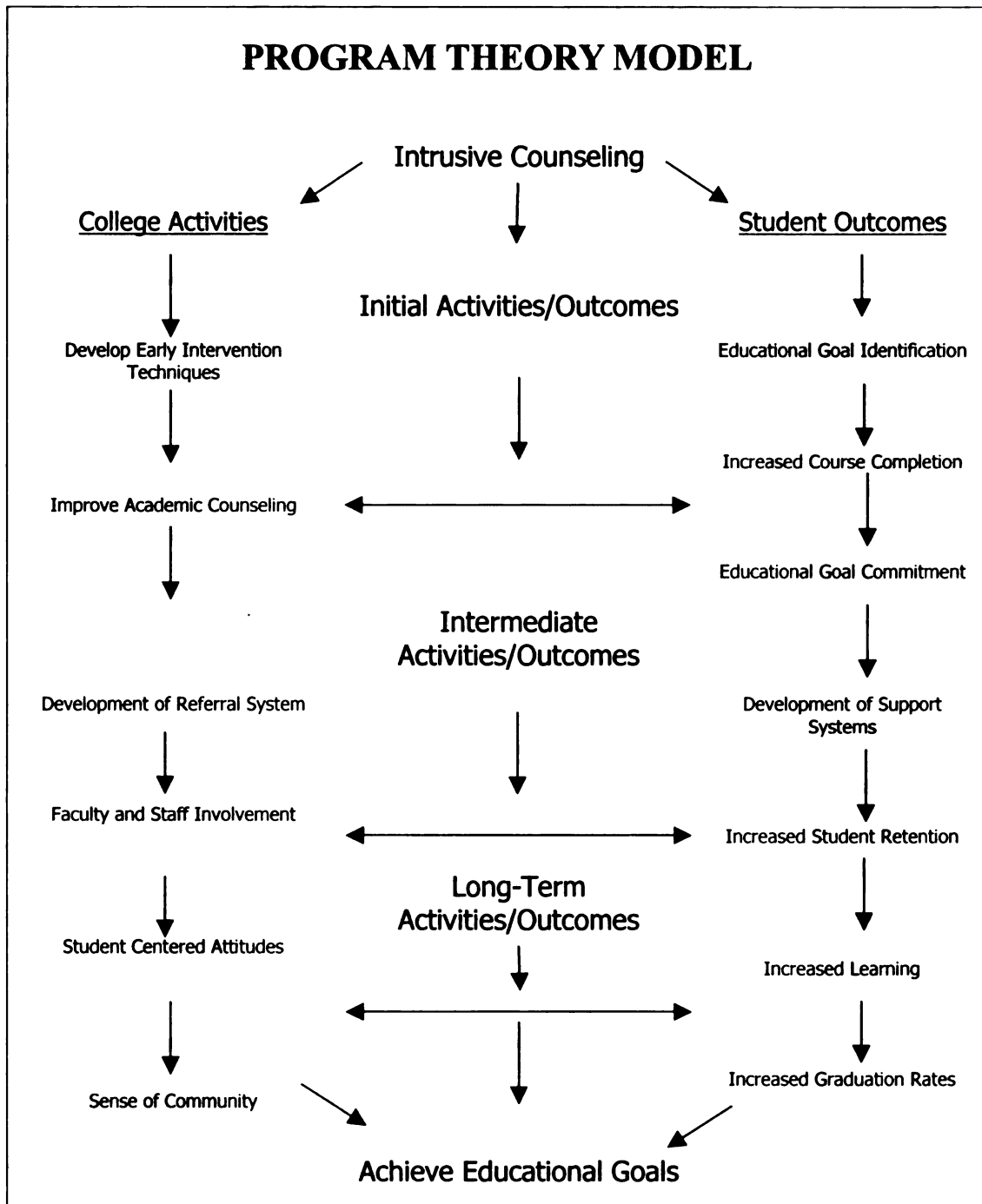
In the Intrusive Counseling Initiative, the initial activities by the College are the development of early intervention mechanisms; such as questions placed on the admissions application and the improvement of academic counseling. These activities lead to intermediate activities to assure students are scheduled properly and receiving the support necessary to assist in their success that consists of faculty and staff involvement in retention efforts and the development of a college-wide referral system. Once these activities are in place, long-term activities will take place; these consist of the development of student-centered attitudes and a sense of community.

Student outcomes for the Intrusive Counseling Initiative are portrayed in a similar manner within the Intrusive Counseling model where outcomes are measurable and can be compared over a period of time to indicate progression or lack thereof. Initial student outcomes consist of identification of educational goals and increased course completion rates. When students identify an educational goal, they are more likely to take and to complete courses that move them closer to that goal. Intermediate outcomes involve the

development of college-wide support systems and educational goal commitment. Last, increased learning, increased student retention rates, and increased graduation rates identify long-term outcomes.

While the model may appear linear in nature, the assumptions are not linear at all. The theory assumes that these activities and outcomes are needed to present the model in its entirety, but does not assume that every outcome or every activity must be performed to achieve the educational goal attainment of all students.

Figure 1



Program Theory Model (diagram and explanation)

### Addressing Sample Selection Bias

This study identifies at-risk first-time-to-college students using the Lansing Community College admissions application form and the pro-active efforts to provide counseling for those students. The research is designed to evaluate the impact of counselor intervention on the retention of at-risk first-time-to-college students.

A variety of explanations exists for any differences observed between the students who did meet with a counselor and those who did not, only one of which is the positive influence of counseling services. All invited students who come in may be motivated by something other than counselor intervention. Out of ethical considerations, it was not appropriate to withhold services to establish a control group. The issue of multiple competing explanations is of concrete relevance to the present study, as a variety of explanations for differences between students who did or did not meet with a counselor are addressed. One alternative explanation is that students who seek counseling are more motivated to succeed than other at-risk students who do not. Better performance may be due to traits such as time management, desire to succeed, and other such factors.

To account for these explanations, a slight alteration in the focus of the analysis adequately addressed this issue. Rather than conceptualizing the systemic differences between students who did or did not meet with a counselor as a nuisance variable, both the demographic and academic profiles of these two groups were examined in detail. Thus, an extended focus of the analysis is to understand the nature of the students who make use of the intrusive counseling services available to them.

## Data Collection and Analysis

This study consisted of at-risk first-time-to-college students identified through the application process and the intrusive counseling for these students. Names of students who fit the at-risk characteristics were obtained from the college records system. Following the end of each semester, (Spring 1999, Fall 1999, Spring 2000) student counselor contact with the target population was gathered from the Student Services Tracking System and subsequent enrollment data collected from the student records system. The purpose was to examine the effectiveness of counseling in enhancing student academic performance and increasing continued student enrollment.

The design of the analysis is to compare students who did meet with a counselor with students who did not meet with a counselor during Spring 1999, Fall 1999, and Spring 2000.

A Chi-square test was utilized to determine if the subsequent enrollment of at-risk students who did meet with a counselor was significantly greater than those at-risk students who did not meet with a counselor.

## Role of Researcher

This study is based upon this researcher's experience in tracking the persistence of at-risk first-time-to-college students. Such monitoring has revealed a need to identify strategies that will assist first-time-to-college and at-risk students to achieve success (defined as the student achieving a 2.0 or higher GPA and persisting from semester to semester). Both nationally and locally, continued high attrition rates have motivated this researcher to investigate practical strategies that may be implemented to reduce attrition rates for at-risk first-time-to-college students.

## CHAPTER 4

### ANALYSIS AND RESULTS

This research was guided by the question, “Does intrusive counseling positively impact the retention of at-risk first-time-to-college students?” This research question concerned the relationship between one or more meetings with a counselor and the impact of this connection on student retention. A cohort study was utilized to analyze the impact of counselor intervention on academic success and retention. Those who received counselor intervention were compared with similar students who did not receive counselor intervention.

#### Description of Test

Chi-square tests were used to determine whether the rates of retention differed significantly. A one-time t-test designed with a control group was employed to determine if the results indicated whether students who did meet with counselors re-enrolled the next semester at a higher rate from those students who did not.

#### Description of Data

The first segment of the analysis focused on the demographic characteristics and student profiles of the sample population. The second segment examined the effectiveness of counseling interaction in enhancing student academic performance and increasing subsequent enrollment.

Data for this analysis came from several sources. The Counseling Services staff provided 897 names and student numbers that formed the basis of the sample population. From the Counselor Advising Tracking System (CATS) database information was obtained showing the number of students who had met with a counselor. Enrollment

Tracking Files (ETF) maintained by Institutional Research, Analysis, and Reporting (IRAR) provided the student profile data, grades, and performance indicators for these students.

### Design of the Analysis

The design of the present analysis designates specific comparisons between students who did meet with a counselor and those who did not:

Section 1.) General Report on Sample. Comparison of

- Students who did meet with a counselor
- Students who did not meet with a counselor

Section 2.) Early Warning Spring 1999. (Tables 2a, 2b, and 2c) Comparison of

- Students who did meet with a counselor
- Students who did not meet with a counselor

Section 3.) Early Warning Fall 1999. (Tables 3a, 3b, and 3c) Comparison of

- Students who did meet with a counselor
- Students who did not meet with a counselor

Section 4.) Early Warning Spring 2000. (Tables 4a, 4b, and 4c) Comparison of

- Students who did meet with a counselor
- Students who did not meet with a counselor

Section 5.) Early Warning Subsequent Enrollment Across Groups.

(Tables 5a, 5b, and 5c) Comparison of

- Students who did meet with a counselor
- Students who did not meet with a counselor
- General college population

In this study, “Early Warning” refers to students who were “identified on their LCC admissions application as showing two or more of the ‘at-risk’ factors, including first-generation college enrollment or minority status.” Identified at-risk students received an introductory letter that assigned a counselor for them; peer advisors contacted students and encouraged them to meet with their counselor. Students received two additional follow-up letters over the semester advising them of relevant workshops and events and contained additional counseling and registration information.

The CATS database used by LCC counselors was utilized to record names of students who did or did not meet with a counselor. Note that the accuracy of the database is dependent upon each counselor having met his/her responsibility in recording whether the student received support services.

#### A Note on Interpretation

When interpreting the findings of this analysis, it should be noted that student participation in this study was voluntary and based solely on whether to engage a counselor. A variety of explanations exists for any differences observed between the students who did meet with a counselor and those who did not, only one of which is the positive influence of counseling services. Students who took the initiative to meet with a counselor may have been those who maintained a higher level of academic performance compared with those students who did not meet with a counselor. Their potentially higher rates of course completion or better academic performance could be attributed to their own scholastic abilities, tenacity, or motivation, including as well the influence of counseling services. Multiple explanations for the observed findings are inherent in any design that does not use random assignment to the treatment or service under evaluation.

In this study, the staff of Counseling Services chose to forgo random assignment out of an **ethical consideration** that counseling should be provided to all students who could benefit from it. However, the issue of multiple competing explanations is of concrete relevance to the present study and is available to determine differences between groups of students who did or did not meet with a counselor.

This issue by conceptualizing the systemic difference between students who did or did not meet with a counselor as a nuisance variable examined both the demographic and academic profiles of these two groups in detail. The primary focus of this segment of the analysis is to understand the nature of students who make use of services available to them.

#### Expected Outcome Measures

By targeting at-risk first-time-to-college students, the following outcomes were anticipated:

- An improvement in year-to-year student retention rates
- An enhanced level of involvement among counseling staff in retention efforts
- The development and implementation of a strong research base for evaluating retention activities.

From the research, the expectation was for higher academic success and retention rates among the at-risk targeted experimental group compared with the at-risk control group.

## Section 1: Report on Sample.

Table 1 Early Warning Group Proportions across Semester.

<b>Project</b>	<b>Did Meet with Counselor</b>	<b>No Record of Meeting with Counselor</b>	<b>Total Sample</b>
<b>Early Warning Spring 2000</b>			
Count	80	191	271
% of Total	29.5%	70.5%	100.0%
<b>Early Warning Fall 1999</b>			
Count	149	335	504
% of Total	29.6%	70.4%	100.0%
<b>Early Warning Spring 1999</b>			
Count	90	32	122
% of Total	73.8%	26.2%	100.0%

Table 1:

Each of these three groups (cohort) represent students enrolling at LCC in the respective semester. These data are provided primarily to indicate the sample sizes of the subsequent analyses. Due to incomplete documentation from the CATS database, the absolute proportions of students in these groups should be interpreted with caution.

Information available indicated that the proportion of Early Warning students who did meet with counselors was considerably higher in the Spring 1999 semester than in both the Fall 1999 and Spring 2000 semesters. This proportional difference may be attributed to an increased student realization of the need for counseling assistance, or the degree of counselor effort in contacting students, or the enthusiasm of counselors and peer advisors in contacting students.

## Section 2: Early Warning Spring 1999

Table 2a Early Warning Spring 1999: Demographic Profile across Groups.

		Did Meet with Counselor		No Record of Meeting with Counselor		Significance of Difference	Total Cohort	
Demographics								
Age								
Mean		27.0		29.1		$t(107) = .919$ , nonsig	27.5	
SD		9.9		11.4			10.2	
Gender								
Male		42	52.5%	13	54.2%	$\chi^2(1) = .021$ , nonsig	55	52.9%
Female		38	47.5%	11	45.8%		49	47.1%
Marital Status								
Single		66	78.6%	16	64.0%	$\chi^2(1) = 2.78$ , sig $p=.096$	82	78.6%
Married		14	16.7%	8	36.0%		22	20.2%
Unknown		4	4.8%	1	4.0%		5	4.6%
Ethnicity								
White		34	40.5%	16	64.0%	$\chi^2(1) = 4.29$ , sig $p=.038$	50	45.9%
Non White		50	59.5%	9	36.0%		59	54.1%
Am. Indian		3	3.6%	0	0.0%		3	2.8%
Asian		1	1.2%	1	4.0%		2	1.8%
African-American		30	35.7%	5	20.0%		35	32.1%
Latino/Latina		7	8.3%	2	8.0%		9	8.3%
White		34	40.5%	16	64.0%		50	45.9%
Nonresident Alien		2	2.4%	0	0.0%		2	1.8%
Unknown		7	8.3%	1	4.0%		8	7.3%
Residency Status								
Resident		56	60.0%	15	60.0%	$\chi^2(3) = 1.22$ , nonsig	71	65.1%
Out-of-district		23	27.4%	9	36.0%		32	29.4%
Out-of-state		3	3.6%	1	0.9%		4	3.7%
International		2	2.4%	0	0.0%		2	1.8%

Table 2a:

The above table summarizes the demographic characteristics of the Spring 1999 Early Warning students who did or did not meet with a counselor. Chi-square correlated factors tests were run for the demographic variables of gender, marital status, race and ethnicity, and residency status. Using these characteristics the tests indicate whether students who did meet with a counselor differed systematically by these characteristics from those who did not meet with a counselor.

Results indicate that a significantly larger proportion of the students who did meet with a counselor were single and non-White (59.9%) compared with students who did not meet with a counselor (36.0%). The higher participation rate for non-White students is

most likely the result of African-American students who were more likely to meet with a counselor. However, the age, gender, and residency status of the students did not differ significantly across the two groups, and did not affect the research.

Table 2b Early Warning Spring 1999: Student Profile across Groups.

		Did Meet with Counselor		No Record of Meeting with Counselor	Significance of Difference		Total Cohort
Student Profile							
Reason for Attending							
Occup.* Program	16	30.8%	5	33.3%	$\chi^2(4) = 1.61$ , nonsig	21	31.3%
Upgrade Skills	3	5.8%	1	6.7%		4	6.0%
Gain New Skills	10	19.2%	1	6.7%		11	16.4%
Transfer	19	36.5%	6	40.0%		25	37.3%
Personal Interest	4	7.7%	2	13.3%		6	9.0%
Educational Goals							
Associate Degree	24	46.2%	7	46.7%	$\chi^2(2) = 2.03$ , nonsig	31	46.3%
Certificate	15	28.8%	2	13.3%		17	25.4%
Courses/Transfer	13	25.0%	6	40.0%		19	28.4%
Educational Background							
Some HS	8	15.4%	5	33.3%	$\chi^2(5) = 9.06$ , nsig p=.107	13	19.4%
HS Graduate	32	61.5%	5	33.3%		37	55.2%
Some College	8	15.4%	4	26.7%		12	17.9%
Associate Degree	0	0.0%	1	6.7%		1	1.5%
Bachelors Degree	3	5.8%				3	4.5%
Master's Degree	1	1.9%				1	1.5%
Employment Status							
Full-Time	25	48.1%	10	66.7%	$\chi^2(3) = 2.00$ , nonsig	35	52.2%
Part-Time	15	28.8%	2	13.3%		17	25.4%
Seeking Emplm't	9	17.3%	2	13.3%		11	16.4%
Other Responsibl.	1	6.7%	3	5.8%		4	6.0%
Full-Time/Part-Time Status							
Full-Time	13	15.5%	5	20.0%	$\chi^2(1) = .286$ , nonsig	18	16.5%
Part-Time	71	84.5%	20	80.0%		91	83.5%
Financial Aid Status							
Not Receiving	56	66.7%	21	84.0%	$\chi^2(1) = 2.79$ , sig p=.095	77	70.6%
Receiving	28	33.3%	4	16.0%		32	29.4%
Class Times							
Day Only	36	42.9%	13	52.0%	$\chi^2(2) = 1.62$ , nonsig	49	45.0%
Night Only	24	28.6%	8	32.0%		32	29.4%
Both	24	28.6%	4	16.0%		28	25.7%

\*Occupational

Table 2b:

Profiles across groups of Spring 1999 Early Warning students who did meet with a counselor did not differ significantly from those who did not. A trend showed that those who did meet with a counselor were more likely to be high school graduates and to be receiving financial aid, although neither of these differences were significant by conventional standards ( $p < .05$ ).

Table 2c Early Warning Spring 1999: Academic Profile across Groups.

	Did Meet with Counselor		No Record of Meeting with Counselor		Significance of Difference	Total Cohort	
Academic Profile							
Withdraw by State Count*							
Spring 1999 Semester							
Withdraw	6	6.7%	7	21.9%	$\chi^2(1) = 5.74$ , sig p=.017	13	10.7%
Remained Enrolled	84	93.3%	25	78.1%		109	89.3%
Credits Carried							
Mean	6.45		5.92		$t(107) = .547$ , nosig	6.33	
SD	4.27		4.27			4.26	
Mean Grade Spring 1999							
Mean	2.11		2.67		$t(91) = 1.44$ , nosig	2.39	
SD	0.18		0.34			0.19	
Lowest Grade							
Mean	1.8		2.52		$t(91) = 1.82$ , nosig	2.16	
SD	0.19		0.35			0.20	
Highest Grade							
Mean	2.42		2.74		$t(91) = .791$ , nosig	2.58	
SD	0.19		0.36			0.20	
Failed to Complete At Least One Course							
No	34	41.5%	13	59.1%	$\chi^2(1) = 2.18$ , nosig	47	45.2%
Yes	48	58.5%	9	40.9%		57	54.8%
Failed to Complete All Courses							
No	58	70.7%	17	77.3%	$\chi^2(1) = .369$ , nosig	75	72.1%
Yes	24	29.3%	5	22.7%		29	27.9%
Number of Courses Carried							
Mean	2.10		1.96		$t(107) = .468$ , nosig	2.06	
SD	1.30		1.17			1.26	
Credits Earned							
Mean	7.65		6.62		$t(106) = .702$ , nosig	7.14	
SD	0.51		0.95			0.54	

\*State of Michigan educational count day

Table 2c:

The academic profiles of Spring 1999 Early Warning students who did meet with a counselor were significantly less likely to have withdrawn from LCC by the State of Michigan educational count day of Spring 1999 compared with those who did not meet with a counselor. None of the other Academic Profile variables differed significantly across the two groups.

### Section 3: Early Warning Fall 1999.

Table 3a Early Warning Fall 1999: Demographic Profile across Groups.

		Did Meet with Counselor		No Record of Meeting with Counselor		Significance of Difference	Total Cohort	
Demographics								
Age						$t(496) = 1.02, \text{nosig}$		
Mean		21.6		22.3			22.1	
SD		6.8		7.2			7.1	
Gender						$\chi^2(1) = .040, \text{nosig}$		
Male		70	49.3%	171	50.3%		241	50.0%
Female		72	50.7%	169	49.7%		241	50.0%
Marital Status						$\chi^2(5) = 4.80, \text{nosig}$		
Single		128	85.9%	284	80.0%		412	81.7%
Married		13	8.7%	35	9.9%		48	9.5%
Other/Unknown		8	5.3%	36	10.1%		44	8.7%
Ethnicity						$\chi^2(1) = 4.94, \text{sig}$ $p=.026$		
White		76	51.0%	219	61.7%		295	58.5%
Non-White		73	49.0%	136	38.3%		209	41.5%
Am. Indian		4	2.7%	8	2.3%		12	2.4%
Asian		1	0.7%	5	1.4%		6	1.2%
African-American		47	31.5%	71	20.0%		118	23.4%
Latino/Latina		17	11.4%	38	10.7%		55	10.9%
White		76	51.0%	219	61.7%		295	58.5%
Unknown		4	2.7%	14	3.9%		18	3.6%
Residency Status						$\chi^2(3) = .881, \text{nosig}$		
Resident		86	58.9%	187	55.5%		273	56.5%
Out-of-district		57	39.0%	142	42.1%		199	41.2%
Out-of-state		3	2.1%	7	2.1%		7	2.1%
International		0	0.0%	1	0.3%		10	2.1%

Table 3a:

The above table summarizes the demographic characteristics of Fall 1999 Early Warning students who did meet or who did not meet with a counselor. As Spring 1999 tests results indicate that a significantly larger proportion of at-risk first-time-to-college students who did meet with a counselor were non-White compared with at-risk first-time-to-college students who did not meet with a counselor. Remaining demographic variables did not differ significantly across the two groups.

Table 3b Early Warning Fall 1999: Student Profile across Groups.

	Did Meet with Counselor		No Record of Meeting with Counselor		Significance of Difference	Total Cohort	
Student Profile							
Reason for Attending							
Occup.* Program	27	20.0%	69	22.7%	$\chi^2(4) = 17.9$ , sig p=.001	96	21.9%
Upgrade Skills	6	4.4%	28	9.2%		34	7.7%
Gain New Skills	18	13.3%	27	8.9%		45	10.3%
Transfer	82	60.7%	147	48.4%		229	52.2%
Personal Interest	2	1.5%	33	10.9%		35	8.0%
Educational Goals							
Associate Degree	52	40.0%	123	42.1%	$\chi^2(4) = 9.23$ , sig p=.056	175	41.5%
Certificate	3	2.3%	27	9.2%		30	7.1%
Courses/Transfer	72	55.4%	130	44.5%		202	47.9%
Personal Interest	1	0.8%	4	1.4%		5	1.2%
Educational Background							
Some HS	6	4.4%	9	3.0%	$\chi^2(3) = 1.73$ , nosig	15	3.5%
HS Graduate	108	80.0%	251	83.9%		359	82.7%
Some College	20	14.8%	35	11.7%		55	12.7%
Associate Degree	1	0.7%	4	1.3%		5	1.2%
Employment Status							
Full-Time	69	51.1%	148	48.7%	$\chi^2(2) = .844$ , nosig	217	49.4%
Part-Time	48	35.6%	105	34.5%		153	34.9%
Seeking Empl'm't	18	13.3%	51	16.8%		69	15.7%
Full-time – Part-time Status							
Full-Time	65	44.5%	110	32.6%	$\chi^2(1) = 6.22$ , sig p=.013	175	36.2%
Part-Time	81	55.5%	227	67.4%		308	63.8%
First Time in Any College							
No	30	20.5%	58	17.2%	$\chi^2(1) = .761$ , nosig	88	18.2%
Yes	116	79.5%	279	82.8%		395	81.8%
First Time at LCC							
No	4	2.7%	9	2.7%	$\chi^2(1) < 0.01$ , nosig	13	2.7%
Yes	142	97.3%	328	97.3%		470	97.3%

\*Occupational

Table 3b:

Results from the Spring 1999 analysis and results from the Fall 1999 analysis indicate a significant difference between Early Warning students who did meet or who did not meet with a counselor on three significant student profile variables: reasons for attending, educational goals, and full-time versus part-time status. Students who did meet with a counselor were more likely to report transfer plans to a 4-year institution or to the acquisition of new job skills as their primary reasons for attending LCC. Of the full and part-time students who did meet with a counselor observed differences are

consistent with what may be expected. It is difficult for someone employed part-time or full-time to get in to see a counselor because no late evening or weekend counseling was available. A preponderance of Early Warning students of both groups entering LCC as their first college enrollment partially validated the “at-risk” designation derived from the LCC application.

(Note: Due to the conversion from the SOLAR system to Banner (software system used to maintain student academic records, registration processes, and other student info) that took place between the Spring and Fall 1999 terms, some of the student and academic profile variables were not available for analysis across both terms.)

Table 3c Early Warning Fall 1999: Academic Profile across Groups.

	Did Meet with Counselor		No Record of Meeting with Counselor		Significance of Difference	Total Cohort	
<b>Academic Profile</b>							
<b>Withdraw by State Count*</b>							
Fall 1999 Semester							
Early Withdraw	3	2.0%	18	5.1%	$\chi^2(1) = 2.46$ , nsig p=.117	21	4.2%
Remained Enrolled	146	98.0%	337	94.9%		483	95.8%
<b>Credits Carried</b>							
Mean	9.50		8.04		$t(442) = 3.56$ , sig p<.001	8.50	
SD	3.33		4.29			4.06	
<b>Mean Grade Fall 1999</b>							
Mean	2.18		1.96		$t(446) = 1.62$ , nsig p=.087	2.03	
SD	1.18		1.40			1.33	
<b>Lowest Grade</b>							
Mean	1.63		1.65		$t(411) = .117$ , nonsig	1.65	
SD	1.34		1.44			1.41	
<b>Highest Grade</b>							
Mean	2.91		2.65		$t(411) = 1.83$ , sig p=.051	2.74	
SD	1.20		1.46			1.39	
<b>Failed to Complete At Least One Course</b>							
No	99	70.2%	232	76.6%	$\chi^2(1) = 2.04$ , nosig	331	74.5%
Yes	42	29.8%	71	23.4%		113	25.5%
<b>Failed to Complete All Courses</b>							
No	134	97.1%	280	93.0%	$\chi^2(1) = 2.93$ , sig p=.070	414	94.3%
Yes	4	2.9%	21	7.0%		25	5.7%

\*State of Michigan educational count day

Table 3c:

As was the case in Spring 1999, Fall 1999 Early Warning students who did meet with a counselor were less likely to have withdrawn from LCC by State of Michigan count day than those who did not meet with a counselor. This difference approached significance only for the Fall 1999 cohort. Figures show that though Fall 1999 Early Warning students who did meet with a counselor also carried more credits, a lower percentage of them failed to complete all courses compared with students who did not meet with a counselor. Further, the number of Fall 1999 students who did meet with a counselor showed significantly higher average grades across all courses and more A and B grades compared with students who did not meet with a counselor.

#### Section 4: Early Warning Spring 2000.

Table 4a Early Warning Spring 2000: Demographic Profile across Groups.

		Did Meet with Counselor		No Record of Meeting with Counselor		Significance of Difference		Total Cohort	
Demographics									
Age									
Mean			25.7		24.6	t(266)=.308 nonsig			25.0
SD			8.2		7.6				7.8
Gender									
Male		43	53.8%	118	61.8%	$\chi^2(2) = 1.508$ , nonsig		161	59.4%
Female		37	46.3%	73	38.2%			110	40.6%
Marital Status									
Single		18	22.5%	38	19.9%	$\chi^2(2) = 4.472$ , nonsig		56	20.7%
Married		1	1.3%	15	7.9%			16	5.9%
Unknown		61	76.3%	138	72.3%			199	73.4%
Ethnicity									
White		36	45.6%	120	63.5%	$\chi^2(1) = 7.357$ , sig		156	58.2%
Non White		43	54.4%	69	36.5%	p=.007		112	41.8%
Am. Indian		5	6.3%	4	2.1%			9	3.3%
Asian		2	2.5%	10	5.2%			12	4.4%
African-American		27	33.8%	37	19.4%			64	23.6%
Latino/Latina		8	10.0%	17	8.9%			25	9.2%
White		36	45.0%	120	62.8%			156	57.6%
Unknown		2	2.5%	3	1.6%			5	1.8%
Residency Status									
Resident		50	62.5%	108	56.5%	$\chi^2(3) = 4.777$ , nonsig		158	58.3%
Out-of-district		25	31.3%	79	41.4%			104	38.4%
Out-of-state		5	6.3%	4	2.1%			9	3.3%

Table 4a:

Table 4a summarizes the characteristics of Spring 2000 Early Warning students.

Chi-square tests were run for the demographic variables of gender, marital status, proportion of white and non-white students, and residency status.

Test results continue to show that a significantly larger proportion of students who did meet one or more times with a counselor were non-White compared with students who did not meet with a counselor. However, age, gender, and residency status of students did not differ significantly across the two groups.

Table 4b Early Warning Spring 2000: Student Profile across Groups.

	Did Meet with Counselor		No Record of Meeting with Counselor		Significance of Difference	Total Cohort	
Student Profile							
Reason for Attending							
Occup. * Program	18	30.8%	39	29.8%	$\chi^2(4) = 6.614$ , nonsig	57	29.7%
Upgrade Skills	5	5.8%	21	16.0%		26	13.5%
Gain New Skills	9	19.2%	12	9.2%		21	10.9%
Transfer	25	36.5%	40	30.5%		65	33.9%
Personal Interest	4	7.7%	19	14.5%		23	12.0%
Educational Goals							
Associate Degree	41	46.2%	99	52.9%	$\chi^2(3) = 2.179$ , nonsig	140	52.8%
Certificate	4	28.8%	19	10.2%		23	8.7%
Courses/Transfer	30	25.0%	61	32.6%		91	34.3%
Other/Unknown	3	25.0%	8	4.3%		11	4.2%
Educational Background							
Some HS	9	15.4%	29	15.3%	$\chi^2(3) = 2.834$ , nonsig	38	14.1%
HS Graduate	46	61.5%	119	62.6%		165	61.1%
Some College	23	15.4%	38	20.0%		61	22.6%
2/4 Year Degree	2	0.0%	4	2.1%		6	2.2%
Employment Status							
Full-Time	35	48.1%	92	59.4%	$\chi^2(3) = 3.330$ , nonsig	127	56.2%
Part-Time	17	28.8%	37	23.9%		54	23.9%
Seeking Empl'm't	7	17.3%	10	6.5%		17	7.5%
Not Employed	12	6.7%	16	10.3%		28	12.4%
Full-Time/Part-Time Status							
Full-Time	59	15.5%	148	81.3%	$\chi^2(1) = .389$ , nonsig	207	79.9%
Part-Time	18	84.5%	34	18.7%		52	20.1%
Financial Aid Status							
Not Receiving	46	66.7%	143	74.9%	$\chi^2(1) = 8.061$ , sig p=.005	189	69.7%
Receiving	34	33.3%	48	25.1%		82	30.3%
Class Times							
Morning	12	15.6%	34	18.7%	$\chi^2(4) = 1.677$ , nonsig	46	17.8%
Afternoon	7	9.1%	19	10.4%		26	10.0%
Evening	23	29.9%	53	29.1%		76	29.3%
Weekend/Arranged	3	3.9%	12	6.6%		15	5.8%
Combination	32	41.6%	64	35.2%		96	37.1%

\*Occupational

Table 4b:

On most student profile variables, Early Warning students who did meet one or more times with a counselor did not differ significantly from those students who did not. Those who did meet with a counselor were slightly more likely to be high school graduates and to not be receiving financial aid, although neither of these differences was significant by conventional standards ( $p < .05$ ).

Table 4c Early Warning Spring 2000: Academic Profile across Groups.

	Did Meet with Counselor		No Record of Meeting with Counselor		Significance of Difference	Total Cohort	
Academic Profile							
Withdrew by State Count*							
Fall 1999 Semester							
Early Withdraw	3	(3.8%)	9	(4.7%)	$\chi^2(1) = .725$ , nonsig	12	(4.4%)
Remained Enrolled	77	(96.3%)	182	(95.3%)		256	(95.6%)
Credits Carried	7.26		6.91		$t(257) = .408$ , nonsig	7.02	
Mean	3.68		4.03			3.93	
SD							
Mean Grade Spring 2000							
Mean	2.44		2.34		$t(366) = .381$ , nonsig	2.37	
SD	1.39		1.59			1.45	
Lowest Grade							
Mean	2.16		2.14		$t(198) = .004$ , nonsig	2.15	
SD	1.63		1.41			1.47	
Highest Grade							
Mean	2.68		2.62		$t(198) = .088$ , nonsig	2.64	
SD	1.6		1.31			1.4	
Failed to Complete At Least One Course							
No	34	(42.5%)			$\chi^2(1) = 1.184$ , nonsig	129	(47.6%)
Yes	46	(57.5%)				142	(52.4%)
Number of Sections Carried							
Mean	2.04				$t(269) = .785$ , nonsig	1.94	
SD	1.12					1.12	

\*State of Michigan educational count day

Table 4c:

The academic profiles of Spring 2000 Early Warning students who did meet one or more times with a counselor did not differ significantly from those students who did not meet with a counselor. Although a fairly large proportion (57.5%) of students in this cohort failed to complete one or all of the courses in which they were enrolled during the Spring 2000 semester (i.e. withdrew or received average grades of zero in courses), these numbers did not differ significantly across the two groups.

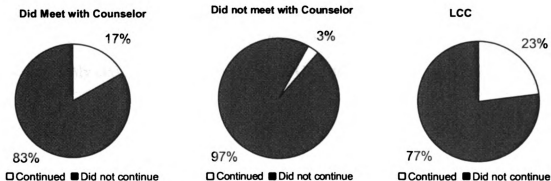
## Section 5: Early Warning Subsequent Enrollment Across Groups.

Table 5a Early Warning Spring 1999: Subsequent Enrollment across Groups.

	Did Meet with Counselor		No Record of Meeting with Counselor		Significance of Difference	Total Cohort	
Subsequent Enrollment							
Enrolled Summer 1999							
Yes	15	16.7%	1	3.1%	$\chi^2(1) = 3.80, \text{ sig } p=.051$	16	13.1%
No	75	83.3%	31	96.9%		106	86.9%
Enrolled Fall 1999							
Yes	34	37.8%	7	21.9%	$\chi^2(1) = 2.68, \text{ sig } p=.102$	41	33.6%
No	56	62.2%	25	78.1%		81	66.4%

### Early Warning Spring 1999: Subsequent Enrollment Pie Graphs.

#### Continued Enrollment from Spring 1999 to Summer 1999



#### Continued Enrollment from Spring 1999 to Fall 1999

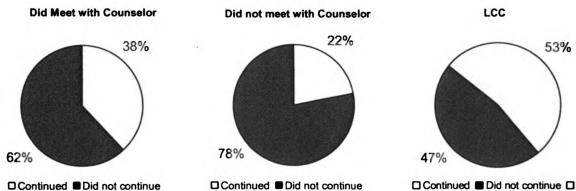


Table 5a:

Spring 1999 Early Warning students who did meet one or more times with a counselor were significantly more likely to enroll both in the Summer 1999 term and in the Fall 1999 term compared with students who did not meet with a counselor. These findings may be interpreted in light of an auxiliary analysis showing that 22.7% of LCC students in general continued their enrollment from Spring 1999 to Summer 1999 and 53.1% continued enrollment to Fall 1999. The retention from Spring to Fall of both Early Warning students who did meet with a counselor and those who did not was significantly lower than the base rate among all LCC students,  $\chi^2(1) = 8.48, 12.52$  respectively,  $ps < .01$ . However, the retention of those who did meet with a counselor was significantly closer to the rate among all LCC students.

Table 5b Early Warning Fall 1999: Subsequent Enrollment across Groups.

	Did Meet with Counselor		No Record of Meeting with Counselor		Significance of Difference	Total Cohort	
Subsequent Enrollment							
Enrolled Spring 2000							
Yes	109	73.2%	167	47.0%	$\chi^2(4) = 17.9, \text{ sig } p=.001$	228	45.2%
No	40	26.8%	188	53.0%		276	54.8%

Early Warning Fall 1999: Subsequent Enrollment Pie Graphs.

Continued Enrollment from Fall 1999 to Spring 2000

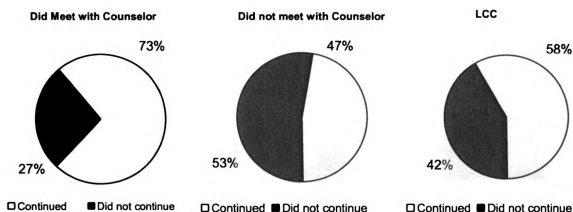


Table 5b:

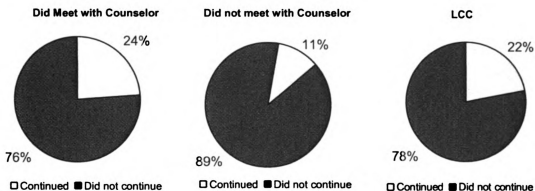
Replicating the differences in student retention found in the Spring 1999 term, Fall 1999 Early Warning students who did meet one or more times with a counselor were significantly more likely to enroll in the Spring 2000 term compared with students who did not meet with a counselor. An auxiliary analysis (Table 5b) showed that 57.7% of all LCC students continued from Fall 1999 to Spring 2000. A Chi-square test confirmed that the retention of Early Warning students who did meet with a counselor significantly exceeded this base rate,  $\chi^2(1) = 14.62$ ,  $p < .001$ , whereas the retention of Early Warning students who did not meet with a counselor was significantly lower than the base rate,  $\chi^2(1) = 16.49$ ,  $p < .001$ .

Table 5c Early Warning Spring 2000: Subsequent Enrollment across Groups.

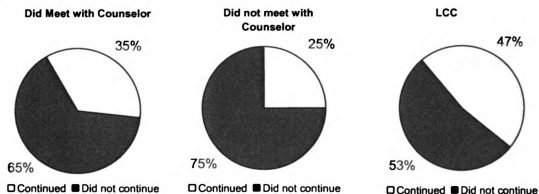
		Did Meet with Counselor		No Record of Meeting with Counselor		Significance of Difference		Total Cohort	
Subsequent Enrollment									
Enrolled Summer 2000									
Yes	19	23.8%	21	11.0%	$\chi^2(1) = 7.291$ , sig $p=.007$	40	14.8%		
No	61	76.3%	170	89.0%		231	85.2%		
Enrolled Fall 2000									
Yes	28	35.0%	48	25.1%	$\chi^2(1) = 2.721$ , nonsig	76	28.0%		
No	52	65.0%	143	74.9%		195	72.0%		

Early Warning Spring 2000: Subsequent Enrollment Pie Graphs.

Continued Enrollment from Spring 2000 to Summer 2000



Continued Enrollment from Spring 2000 to Fall 2000



**Table 5c:**

Spring 2000 Early Warning students who did meet one or more times with a counselor were significantly more likely to enroll in the Summer 2000 term compared with students who did not meet with a counselor. These findings may be interpreted in light of an auxiliary analysis (Table 5c) showing that 22% of LCC students in general continued their enrollment from Spring 2000 to Summer 2000, and 47% continued their enrollment to Fall 2000.

## CHAPTER 5

### CONCLUSIONS, IMPLICATIONS OF RESEARCH, FUTURE RESEARCH

#### SUGGESTED

##### Introduction

Traditionally, college and university leaders have been concerned with students dropping out of college, many in the first several weeks of their first year. The indication by NCES 1999, ACT (1998) that colleges and universities experience exceptionally high attrition rates of twenty-five to sixty percent of their freshmen class, was supported through this research. One example shows four year universities reporting 49.8% of their students drop out, while two-year colleges experience drop out rates of 67.6% ACT (1998). Attributed to the open enrollment policies of community colleges, two year public colleges have been the most likely to experience the highest, most sustained attrition rates.

Why do some college students continue to enroll while others drop out? What factors exist within the college environment that results in non-persistence for some students and persistence to completion for others? Tinto's (1974, 1989) theoretical model of student retention has been repeatedly validated as his model has established some understanding of why some college students remain while others drop out. Further, Tinto's (1999) theory of college student attrition states that success or lack of success of college students to integrate themselves into the social and academic structure of college correlates to the student continuing to persist. Astin (1984), as well as Tinto, sought to analyze student retention in terms of the relationship between persistence and the student's social and academic integration into the college community. In his Theory of

Student Involvement, Astin (1984) states that the more personal commitment the student invests in the college experience, the greater the possibility of the student remaining enrolled. Both theorists (Astin and Tinto) espoused that there exists a correlation between a student's level of interaction and involvement (connectedness) in the campus environment and in retention. Student retention models of Tinto, Feldman and Seidman were utilized to guide this study on college student retention.

This study investigated whether intrusive counseling impacted the ability of at-risk first-time-to-college students to continue their coursework and achieve academic success. The findings provide community colleges, universities, and professional organizations with research that may help them make informed decisions regarding ways to set priorities and identify the most effective services, such as tutoring, extra-curricular involvement, and the implementation of retention programs and strategies.

#### Finding, Implication for Practice, and Conclusions

The findings of this research study are consistent with the research findings of other investigators, including Tinto (1975, 1993) and Astin (1989, 1993). Specifically, findings support the ideas that integration and involvement in the college environment contribute to a significantly higher rate of subsequent semester enrollment for at-risk first-time-to-college students. These findings are consistent with Siedman (1991), who supports the premise that students who interact with counselors have a significantly higher rate of retention than the group who did not interact with a counselor.

The following significant findings were revealed:

1. A larger number of students who did meet one or more times with a counselor were single and non-White compared with the number of students who did not meet with

a counselor. A greater number of African-American students did meet one or more times with the counselor. The study revealed, however, that the age, gender, and residency of the students did not differ across the two groups.

**Implications for Practice:** To increase the counselor's knowledge of factors that contribute to the success of black students, counselors may need to become more aware of literature promoting understanding of African-American student culture and its impact upon retention of black students. Counselors may acquire enhanced insight for accessing and recommending support services for this population. This learning may be facilitated through professional development. Additionally, administrators may want to identify reasons why White students are not taking advantage of the counseling resources that are available and that have been offered to them. Identification could be achieved by the college through development of a satisfaction survey used within the counseling services department to measure factors, such as (1) reasons for services to be used, (2) quality of information received, (3) customer service provided, (4) whether the problem was solved, (5) wait time for service, and (6) usage if service hours are expanded.

**Conclusion for finding #1:** In this study, these findings (1) reflected the desires of African-American students to seek assistance in achieving their goals, (2) showed White at-risk students do not take advantage of counseling services, and (3) demonstrated outreach strategies of the counseling staff were effective in encouraging non-traditional and at-risk students to arrange for counseling.

2. This study identified the students who did meet with a counselor one or more times were generally more academically oriented (transfer students who were seeking transfer to four year colleges and universities) compared with those students who did not

meet with a counselor. The study identified that students who did not meet with a counselor were occupationally oriented or interested in classes for personal development. Across all semesters, students who did meet one or more times with a counselor carried more credits and were more likely to be enrolled full-time compared with students who did not meet with a counselor and who tended to attend part-time and to carry fewer credits.

**Implications for Practice:** These findings suggest that the college should target more retention efforts on students who carry fewer credits and who attend part-time. Data shows that students who did meet with a counselor were more likely to carry more credits, to be enrolled full-time, and to be employed full-time. These factors would support expanding the hours of counseling services to include non-traditional appointment times, such as weekday evening hours, Saturdays, and Sundays. This scheduling could allow access to counseling services for this population of students. Additionally an expanded strategy should be developed to encourage both part-time, full-time at-risk students to more frequently use all counseling services and thereby increase this population's persistence rates.

**Conclusion for finding #2:** In this study, a disproportionate use of counselor services between transfer students and non transfer students and between full-time and part-time students was revealed. The conclusion may be drawn that at-risk students who carry fewer credits and who work part-time are not taking advantage of counseling services and not persisting. Expanded programs and strategies should be developed to encourage these students to take advantage of services.

3. This study found that the academic performance of students who did meet one or more times with a counselor was not significantly different from that of students who did not. The absence of a significant difference does not necessarily indicate that the program held no beneficial effect, especially if students who did meet with a counselor did so as a result of experiencing difficulties with their classes.

Implications for Practice: These findings suggest that continued intervention by counselors may serve to assist at-risk students in establishing a firm foundation in seeking aid and in encouraging a higher rate of retention from them. Further, it is hoped these findings will encourage instructors to more often refer their at-risk students to counseling support services, since a higher number of those who saw a counselor frequently were more persistent.

Conclusion for finding #3: The conclusion may be drawn that student counselor interaction may not enhance academic performance in any group; however, at-risk students who did meet with a counselor achieved a higher rate of persistence than those who did not.

4. Students who did meet one or more times with a counselor across all semesters were significantly more likely to enroll in subsequent semesters than those who did not. Note the greatest differences between the two samples: 16% of students who did meet a counselor one or more times in Spring of 1999 enrolled in Summer of 1999 compared with 3.1% of students who did not meet a counselor; furthermore 37.8% of at-risk students who did meet with a counselor in Spring of 1999 enrolled in Fall of 1999 compared to 21.9% of those who did not.

The same pattern was observed for at-risk first-time-to-college students entering Fall 1999 and Spring 2000. Fully 73% of the students who saw a counselor in Fall 1999 enrolled in Spring 2000 compared to 47% of students who did not receive counseling. The pattern persisted for at-risk first-time-to-college students enrolled from Spring 2000 to Summer 2000. Tables indicate 24% of the students who saw a counselor one or more times in Spring 2000 enrolled in Summer 2000 compared to 11% who did not receive counseling. Moreover, 35% of at-risk first-time-to-college students who did meet with a counselor one or more times in Spring 2000 continued in Fall 2000 compared to 25% who did not meet with a counselor.

**Implications for Practice:** These findings suggest that the student-counselor relationship should be expanded so that all students would be exposed to a strategy that encourages student success and persistence. This could be accomplished by establishing a program of mandatory counseling for all at-risk first-time-to-college students entering Lansing Community College. On a broader scale, a mandatory counseling program could be established for all first-time students entering Lansing Community College. The college administration should continue to ensure that appropriate funding be directed to this program to maintain it at its current level or to increase funding to expand services to develop and continue the proposed mandatory counseling plan.

Additionally, these findings have possible implications for creating a K-12 “Pre-Collegiate Outreach Program” that would build a positive support base between at-risk college bound students and counselors at the receiving college.

First conclusion for finding #4: In this study, the research findings emphasize the importance of counselor intervention on at-risk first-time-to-college students, and the

data indicates a strong relationship between **intrusive counseling intervention and subsequent student re-enrollment.**

Implications for Practice: Community colleges and universities have historically used recruitment and marketing strategies to increase declining enrollments. An aggressive investment in counselor intervention strategies could prove to be a more effective and less expensive process resulting in student retention in addition to recruitment and marketing. Keeping the student enrolled in classes more cost effective than seeking new students in new markets to replace them.

#### Recommendation for Future Research

In a time of shrinking budgets and increased accountability, student retention is a critical issue for community colleges and universities. College leadership may be well served to re-examine institutional commitment and resources both human and monetary and better direct funds to activities related to the variables of retention: counseling, orientation, tutorial services, and student life.

This study examined the relationship between at-risk first-time-to-college students and the relationship between intrusive counseling intervention and retention. Several recommendations for future research have emerged as a result of the findings from this study. It is hoped that these recommendations will be helpful to others conducting research on retention of students in community colleges and universities. Moreover, it is hoped professional associations will be interested in these findings and implications.

This study revealed a larger number of non-White students took advantage of the counseling program. The study did not, however, address the issue of why some students

were more likely to take advantage of counseling services or why other students were not. It is recommended that a follow-up qualitative study be considered targeting at-risk first-time-to-college students who meet one or more times with counselors and entering at-risk first-time-to-college students who do not take advantage of counseling services. A study such as this will be key to understanding the perception of students regarding the value of counseling services, and why students did or did not participate in campus counseling programs. To reap the full benefit of innovative practices, a study could be conducted to determine why there existed a disproportionate number of non-White students using counseling intervention. This study examined the effectiveness of counseling intervention efforts as a positive contribution to retaining ethnic minorities. The ultimate goal of this study is to develop models that two year colleges can modify and incorporate according to the specific dynamics of their student population to increase the retention rates of minority students.

Since a positive relationship was found between counseling intervention and student retention, researchers may want to replicate this study using other variables (tutoring, orientation, and student life) in an effort to enhance understanding regarding student retention and whether this understanding can impact further program planning.

Community colleges are engaged in a variety of efforts to facilitate the retention and achievement of its diverse student population by both facilitating the connection and integration of ethnic minority students into the educational community. A strong recommendation is made that studies be conducted to examine the effectiveness of strategies such as counseling, tutoring, and other variables on minority populations. Additionally, community colleges should be encouraged to investigate current innovative

practices so that the full benefit of successful practices to facilitate student success can be realized.

The study revealed that the implementation of counselor intervention had a positive impact on retention. Future studies may assess the value of more specific types of intervention and how they may contribute to the economic health and/or growth of the institution or to the lack of economic benefit.

Based upon the findings of this study which showed a positive impact of counselor intervention on at-risk first-time-to-college students; a pilot project is proposed to connect high school at-risk college-bound seniors and college counselors during the student's senior year (Pre-Collegiate Outreach Program) to determine if early intrusive counseling intervention would help the students be successful. This project would include an on-going relationship throughout the student's freshman year and would assess the impact of the counselor intervention on the persistence of these students compared to a similar cohort who did not receive this intervention.

#### Final Comments

Using the findings from this study, as well as current retention literature and retention studies to further examine the relationship between the students' involvement and interaction with their college environment and the likelihood of their retention, community colleges and universities may want to direct their own institutional research on student retention.

This researcher, as a result of this study, has gained a greater understanding of the issues of at-risk first-time-to-college students and retention. Student retention is complex and involves a plethora of variables (interaction with faculty, students, and college

administrators, student participation in extra curricular activities, ethnicity, etc.) requiring consideration. While there are no simple answers to discovering the complexities of retention, it is this investigator's conclusion that both institutional and environmental variables are factors that lead to retention. How the student interacts or how the institution establishes programs for students to interact with these variables impacts retention.

This research study has demonstrated that intrusive counseling **does** positively impact at-risk first-time-to-college student retention. Further, the research indicates that while this variable can have a positive impact on student retention extraordinary efforts must be made by the institution to connect students to these important services. A counselor must bring to this process the motivation and desire to facilitate the task of student retention. One counselor said:

They've been identified as possibly at-risk, and our job is to contact these students. My preference is to make personal contact by phone, inviting them to come in for further intervention. I offer to them that I can help them with study tips, how to study better, **or to identify other things that might get in the way of their success.** Sometime, there is a lack of information on their part, and just letting these students know about the resources that are available to them makes all the difference in the world. If there is anything I can do to help these students feel they have a personal connection to LCC - that they are just not a number in a huge organization - that's what I try to do.

A student who was a part of the study said the following of his counselor interaction and of his first year's experience:

I had nothing to do in everyday life, just hanging out with friends. I didn't ever think I would find myself in college. I know the life I was living is no life. I came here without nothing, really. And now I've got a lot. They helped me so I can get what I need to go to school...books, bus passes. **By them helping me**, it makes me try even that much harder.

Finally, when reviewing the data on these variables of counselor intervention, I realize the finding of this study may not be applicable to all institutions of higher learning and to all counselor intervention programs. However, the results of this research make a contribution to the literature in the field by exploring the one variable of counselor intervention that has been little explored previously but that does have significant impact on retention of at-risk first-time-to-college students.

While the faculty, staff, and administrators at the college exhibit an intense on-going interest in retention, it is desirable to see this research serve as a catalyst in re-igniting meaningful discussions covering retention issues at this institution, to fuel the interest in retention at other institutions, and to emphasize and support the values added by counseling professionals to the goal of student retention and persistence.

## APPENDIX

## APPENDIX A

### LANSING COMMUNITY COLLEGE

#### Demographic Survey Questions

1. **Course** (*chose one only*)  
☐ Mathematics 107                      ☐ Psychology 200                      ☐ Electrical Technology 100
2. **Have you taken this course before?**  
☐ Yes                                      ☐ No
3. **Name**  
Last                                      First
4. **Student Number**  
SSN
5. **Age**
6. **Sex**  
☐ Male                                      ☐ Female
7. **Is this your first semester at College?** (*select one*)  
☐ Yes, first semester at LCC                      ☐ No, I've attended LCC before  
☐ Yes, first semester at any college                      ☐ No, I've attended another college before
8. **I applied to Lansing Community College:**  
☐ Prior to June 1, 1997                      ☐ Between July 16 and the beginning of classes  
☐ Between June 1 and July 15, 1997                      ☐ After classes began, Fall 1997
9. **What factors influenced our enrolling LANSING COMMUNITY COLLEGE (as opposed to another college)?** (*select all that apply*)  
☐ LCC is close to home                      ☐ Athletics  
☐ LCC outreach efforts                      ☐ Fine Arts events (music concerts, art and theater)  
☐ Employer recommendation                      ☐ Lower relative cost (compared to a four year university)  
☐ Specific careers certificate/program                      ☐ Special Support Services (i.e. disability services, tutorial services)  
☐ Visit to LCC                      ☐ Open enrollment  
☐ The reputation of LCC programs                      ☐ Scholarships  
☐ The reputation of LCC faculty
10. **Before you registered at LANSING COMMUNITY COLLEGE, did you have friends registered at LANSING COMMUNITY COLLEGE?**  
☐ Yes                                      ☐ No
11. **While attending high school, to what extent were you involved in extracurricular activities?**  
☐ A lot                                      ☐ Some                                      ☐ Very little

- 12. Are you planning on getting involved in any of the following activities while at LCC?**
- |  |   |
|--|---|
| <input type="checkbox"/> Student Government          | <input type="checkbox"/> Athletics (intramural)                       |
| <input type="checkbox"/> Student clubs/organizations | <input type="checkbox"/> Fine Arts Activities (theater, music or art) |
| <input type="checkbox"/> Athletics (intercollegiate) |   |
- 13. What was your overall average in your last years of high school?**
- |                            |  |
|----------------------------|--|
| <input type="checkbox"/> A | <input type="checkbox"/> D                     |
| <input type="checkbox"/> B | <input type="checkbox"/> E or F                |
| <input type="checkbox"/> C | <input type="checkbox"/> Did not complete H.S. |
- 14. In the past, I have completed assignments (school homework or work related) on time:**
- |                                  |                                    |
|----------------------------------|------------------------------------|
| <input type="checkbox"/> Always  | <input type="checkbox"/> Sometimes |
| <input type="checkbox"/> Usually | <input type="checkbox"/> Never     |
- 15. The last time I attended school (high school, college, university) full-time was:**
- |                                    |                                      |
|------------------------------------|--------------------------------------|
| <input type="checkbox"/> 1996/1997 | <input type="checkbox"/> 1993/1994   |
| <input type="checkbox"/> 1995/1996 | <input type="checkbox"/> 1992/1993   |
| <input type="checkbox"/> 1994/1995 | <input type="checkbox"/> Before 1992 |
- 16. The last level of education in which I was registered full-time was:**
- |  |   |
|--|---|
| <input type="checkbox"/> High School       | <input type="checkbox"/> 4 Year College or University |
| <input type="checkbox"/> Community College | <input type="checkbox"/> Vocational Training Program  |
- 17. What was your primary activity during the 12 months prior to entering LCC? (select one)**
- |  |   |
|--|---|
| <input type="checkbox"/> High school   | <input type="checkbox"/> Employed full-time               |
| <input type="checkbox"/> Community College, full-time                                  | <input type="checkbox"/> Employed part-time               |
| <input type="checkbox"/> Community College, part-time                                  | <input type="checkbox"/> Working full-time as a homemaker |
| <input type="checkbox"/> 4 year College/University, full-time                          | <input type="checkbox"/> Vocational Training Program      |
| <input type="checkbox"/> 4 year College/University, part-time                          | <input type="checkbox"/> Seeking work while unemployed    |
| <input type="checkbox"/> Adult Education Program (i.e. reading, writing, ESL, or math) | <input type="checkbox"/> Other                            |
- 18. What is your highest educational completion?**
- |   |  |
|---|--|
| <input type="checkbox"/> Earned a US High School Diploma                          | <input type="checkbox"/> GED or received a High School equivalency certificate |
| <input type="checkbox"/> Special student, currently enrolled in grade 12 or below | <input type="checkbox"/> Earned a Foreign Secondary diploma or certificate     |
| <input type="checkbox"/> Not a High School graduate                               | <input type="checkbox"/> Earned an Associate's degree                          |
- 19. What is the highest level Math class you have completed?**
- |  |   |
|--|---|
| <input type="checkbox"/> High School Basic Math (arithmetic) | <input type="checkbox"/> High School Intermediate Algebra                     |
| <input type="checkbox"/> High School Algebra 1 (elementary)  | <input type="checkbox"/> High School Pre-calculus or higher level math course |
| <input type="checkbox"/> High School Geometry                | <input type="checkbox"/> College level math (algebra or higher)               |
- 20. What is the highest level English class that you have completed?**
- |  |  |
|--|--|
| <input type="checkbox"/> High School honors        | <input type="checkbox"/> College English/Composition               |
| <input type="checkbox"/> High School College Prep  | <input type="checkbox"/> English as a Second Language, College     |
| <input type="checkbox"/> High School Basic English | <input type="checkbox"/> English as a Second Language, High School |
| <input type="checkbox"/> College, Basic English    |  |
- 21. Have you ever taken the SAT or the ACT?**
- |                              |                             |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

**22. Have you ever attended the START (orientation) Program?**

- ☐ Yes ☐ No

**23. My plans for employment, while attending LCC are as follows:**

- ☐ Do not intent to be employed ☐ I am already employed  
☐ Hope to find employment on campus ☐ I am uncertain  
☐ Hope to find employment off campus

**24. If you are employed, how many hours a week do you plan to work while a student?**

- ☐ Less than 10 hours/week ☐ Between 30 and 40 hours/week  
☐ Between 10 and 20 hours/week ☐ More than 40 hours/week  
☐ Between 20 and 30 hours/week

**25. My financial situation regarding college is as follows: (select one)**

- ☐ Have enough money ☐ Depends on College financial aid  
☐ Do not have enough money ☐ Depends on employer sponsorship  
☐ Depends on employment ☐ Not sure

**26. Which factors do you feel could affect the completion of your educational goals at LCC? (select all that apply)**

- ☐ Adjustment to the Lansing community ☐ Health factors  
☐ Not able to cope with school and work at the same time ☐ Child care  
☐ Not having enough money ☐ Support for special needs (i.e. disabilities)  
☐ Lack of support from family and friends ☐ Other personal reasons  
☐ Coping with stress ☐ Non of the above

**27. Prior to classes beginning, I had met at least one academic instructor at LCC.**

- ☐ Yes ☐ No

**28. At this point in time, I have concerns with the following: (select all that apply)**

- ☐ Reading skills ☐ Application of information from on area to another  
☐ Writing skills ☐ Computer skills  
☐ Oral communication skills ☐ Study skills  
☐ Math skills ☐ Time management  
☐ Math anxiety ☐ Ability to learn  
☐ Problem solving skills ☐ Skills needed for job retraining  
☐ Science reasoning skills ☐ None of the above

**29. At this point in time, my feelings about attending college include the following: (select all that apply)**

- ☐ Not sure what I'm getting into ☐ Confident of success  
☐ Anxious about my college performance ☐ Determined to complete my college education  
☐ Not what I really wanted ☐ Looking forward to an exciting profession/career  
☐ I would prefer to work full-time ☐ None of the above  
☐ Eager to get started

**30. Which one of the following best describes your future plans after completing course work at LCC?**

- |   |  |
|---|--|
| <input type="checkbox"/> Continue present employment                | <input type="checkbox"/> Obtain full-time employment |
| <input type="checkbox"/> Continue with job retraining               | <input type="checkbox"/> Obtain part-time employment |
| <input type="checkbox"/> Transfer to a four year college/university | <input type="checkbox"/> Start up a business         |
| <input type="checkbox"/> Attend another community college           | <input type="checkbox"/> Other                       |

**31. Do you feel you will require help in: (select all that apply)**

- |  |   |
|--|---|
| <input type="checkbox"/> Reading skills      | <input type="checkbox"/> Career counseling            |
| <input type="checkbox"/> Writing skills      | <input type="checkbox"/> Academic transfer counseling |
| <input type="checkbox"/> Math skills         | <input type="checkbox"/> Specific course tutoring     |
| <input type="checkbox"/> Math anxiety        | <input type="checkbox"/> Securing financial aid       |
| <input type="checkbox"/> Study skills        | <input type="checkbox"/> Reasoning skills             |
| <input type="checkbox"/> Computer skills     | <input type="checkbox"/> Disability support services  |
| <input type="checkbox"/> Time management     | <input type="checkbox"/> None of the above            |
| <input type="checkbox"/> Personal counseling |   |

**32. Are you willing to accept help in: (select all that apply)**

- |  |   |
|--|---|
| <input type="checkbox"/> Reading skills      | <input type="checkbox"/> Career counseling            |
| <input type="checkbox"/> Writing skills      | <input type="checkbox"/> Academic transfer counseling |
| <input type="checkbox"/> Math skills         | <input type="checkbox"/> Specific course tutoring     |
| <input type="checkbox"/> Math anxiety        | <input type="checkbox"/> Securing financial aid       |
| <input type="checkbox"/> Study skills        | <input type="checkbox"/> Reasoning skills             |
| <input type="checkbox"/> Computer skills     | <input type="checkbox"/> Disability support services  |
| <input type="checkbox"/> Time management     | <input type="checkbox"/> None of the above            |
| <input type="checkbox"/> Personal counseling |   |

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