

9-2010

Factors Influencing Transition and Persistence in the First Year for Community College Students with Disabilities

Lori A. Corcoran

University of Massachusetts Amherst, lcorcoran16@gmail.com

Follow this and additional works at: https://scholarworks.umass.edu/open_access_dissertations



Part of the [Education Commons](#)

Recommended Citation

Corcoran, Lori A., "Factors Influencing Transition and Persistence in the First Year for Community College Students with Disabilities" (2010). *Open Access Dissertations*. 276.

https://scholarworks.umass.edu/open_access_dissertations/276

This Open Access Dissertation is brought to you for free and open access by ScholarWorks@UMass Amherst. It has been accepted for inclusion in Open Access Dissertations by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.

**FACTORS INFLUENCING TRANSITION AND PERSISTENCE IN THE FIRST
YEAR FOR COMMUNITY COLLEGE STUDENTS WITH DISABILITIES**

A Dissertation Presented

by

LORI A. CORCORAN

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
of the requirements for the degree of

DOCTOR OF EDUCATION

September 2010

Education

© Copyright by Lori A. Corcoran 2010

All Rights Reserved

**FACTORS INFLUENCING TRANSITION AND PERSISTENCE IN THE FIRST
YEAR FOR COMMUNITY COLLEGE STUDENTS WITH DISABILITIES**

A Dissertation Presented

by

LORI A. CORCORAN

Approved as to style and content by:

Joseph Berger, Chair

Benita Barnes, Member

Daniel Gerber, Member

Sharon Rallis, Member

Christine B. McCormick, Dean
School of Education

DEDICATION

To my parents, Byron and Rose McCluskey, who taught me hard work and instilled within me the drive to complete my dream.

To my family, my husband David and my children Veronica, Caroline, Audrey, and Yvonne, who are my inspiration and strength.

ACKNOWLEDGMENTS

I would like to thank my advisor, Dr. Joseph Berger, for his guidance throughout my program of study.

I would also like to thank Joanne Sharac, my critical friend, who provided helpful comments and suggestions throughout my dissertation.

Additionally, a special thanks to my family, David, Veronica, Caroline, Audrey, and Yvonne, for their support, patience, and confidence in me during my dissertation.

ABSTRACT

FACTORS INFLUENCING TRANSITION AND PERSISTENCE IN THE FIRST YEAR FOR COMMUNITY COLLEGE STUDENTS WITH DISABILITIES

SEPTEMBER 2010

LORI A. CORCORAN, B.S., UNIVERSITY OF MASSACHUSETTS AMHERST

M.Ed., UNIVERSITY OF MASSACHUSETTS AMHERST

M.S., WORCESTER POLYTECHNIC INSTITUTE

Ed.D., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Professor Joseph Berger

Community colleges have always played a crucial role in providing access to college, especially for students with disabilities. At the same time the rate of completion is exceptionally low for this particular population (Belch, 2004). In order to improve persistence and achievement measurably, colleges may seek clues in successful transitions by students with disabilities.

This project presents a qualitative research study to illuminate factors that contribute to semester-by-semester success of community college students with disabilities during their first year. A conceptual model of successful transitional processes was developed from theoretical constructs reported in the literature and was expanded by data from individual case studies. Seven very strong stages emerged as a result of the research. These stages were: 1) pre-college experiences that influence academic involvement, 2) initial encounters that created first impressions, 3) transition shock, 4) support-seeking and strategic adjustment 5) prioritizing and balancing of college and

non-college commitments, 6) recognizing success, and 7) a sense of belonging to the college community.

These results indicated a successful transition into college is an important first step in persistence for students with disabilities. Persistence of students with disabilities requires further attention and research in order to improve graduation rates of these students at community colleges.

TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	v
ABSTRACT	vi
CHAPTER	
1. INTRODUCTION	1
Statement of Problem.....	2
Purpose of the Study	4
Research Questions.....	5
Significance of the Study	6
Assumptions	7
Limitations.....	8
Definitions	8
Overview	10
2. REVIEW OF LITERATURE	12
Introduction	12
Historical Overview of Students with Disabilities in Higher Education	13
Transition for Students with Disabilities and Issues of Retention.....	16
Retention.....	18
Research Testing Student Integration and Student Attrition Models	24
Strategies to Enhance Transition for First-Year Students with Disabilities.....	29
Advising/Counseling	30
Freshmen Seminar	33
Universal Design	36
Academic Skills Training	38
Student Responsibilities and Self-Advocacy	40
Critique and Analysis.....	41
Summary	44

3.	METHODOLOGY	46
	Introduction	46
	Conceptual Framework	46
	Research Questions	49
	Research Design	49
	Research Site	51
	Participants/Data Source	51
	Trustworthiness/Authenticity	53
	Data/Measuring/Coding	53
	Analysis	55
	Conclusions	56
4.	FINDINGS	58
	Introduction	58
	The Participants.....	58
	Overview of the First-Year Transitional Success Process Model	61
	Pre-College Experiences	63
	Initial Encounters.....	65
	Transition Shock.....	68
	Strategic Adjustment.....	72
	Prioritizing Commitments	77
	Recognizing Success.....	80
	Sense of Belonging	84
	Strategies for Success.....	87
	Summary	90
5.	DISCUSSION.....	91
	Introduction	91
	Review of the Research Questions	92
	Recommendations.....	97
	Policy	98
	Practice	99
	Future Research.....	102
	Conclusion.....	104
 APPENDICES		
A.	INFORMED CONSENT LETTER	106
B.	INTERVIEW/QUESTIONS.....	107

C.	CONCEPT MAP 1.....	109
D.	CONCEPT MAP 2.....	110
E.	COLLEGE SUPPPORT CHECKLIST.....	111
	BIBLIOGRAPHY	112

CHAPTER 1

INTRODUCTION

The retention and persistence of community college students is gaining increased attention as an important issue of policy and practice in higher education. Additionally, students with disabilities are an increasing constituent within higher education and are among the most at-risk, and perhaps least studied, group of students attending postsecondary educational institutions. Given that community colleges tend to enroll more students with disabilities than do other types of postsecondary institutions (Upcraft, Gardner, Barefoot, et al, 2005; National Center for Education Statistics, 1999) more research is needed on the success of students with disabilities in community colleges.

More generally, the American College Testing Program (2001), noted that approximately 45 percent of students enrolled in two-year colleges depart during their first year. In addition, Wasley (2006) concludes that a major difficulty faced by commuter students is the lack of feeling and being connected to the college community. As a result, almost all colleges have started to implement some form of intervention to increase persistence during the first year of postsecondary enrollment (Upcraft et al, 2005). Such intervention requires the support from the entire institution, including involvement from all departments, with the main goal being a commitment to the student. This institutional environment as a portion of the intervention enhances first-year success.

At a time that colleges are developing more first-year intervention programs, the demographics of today's first-year students are constantly changing and these changes need to be considered in planning such college intervention programs. The National Center for Education Statistics report that public two-year colleges enroll more than half

of all college students reporting a disability (Phillippe, 1997). Belch (2004) concluded that an increased number of students with disabilities are attending postsecondary institutions, but the rate of degree completion is not increasing for these students.

During the first-year of college, a student's persistence and success relate to factors that provide a smoother college transition. Astin's Input-Environment-Outcome model (1993) is one of a few models that attempts to explain student persistence in college by looking at the influences (variables) that affect such persistence. Astin identifies the inputs or control variables including gender, race/ethnicity, and age to name a few of the possible 146 inputs that influence the outcomes such as persistence. Disability needs to be included as a demographic factor as an input variable to continue to allow for a broader range of demographics. Similarly, Tinto's (1975, 1982) theory of student integration looked at integration both social and intellectual between the student and the institution as the primary factor for persistence. Overall, the important piece is the college's commitment to develop a program that Noel, Levitz, & Saluri (1985) says allows "more students to learn, the more they sense they are finding and developing a talent, the more likely they are to persist; and when we get student success, satisfaction, and learning together, persistence is the outcome" (p.1).

Statement of Problem

Much research has been conducted on the retention and persistence of college students (e.g. Allen, 1999; Berger & Lyon, 2005; Goodman & Pascarella, 2006; Milem & Berger, 1997; Tinto, 1993). However, despite the voluminous literature on this topic, individuals with disabilities are one group of college students that remains under-studied

despite being among the most vulnerable and at-risk populations (Belch, 2004; Lane & Carter, 2006; Vogel & Adelman, 1992). This at-risk population is an increasingly important area of study as the number of college students with documented disabilities continues to grow each year. For example, the percentage of college freshmen reporting disabilities increased from less than 3 percent in 1978 to 11.3 percent in 2004 (<http://nces.ed.gov/fastfacts/display.asp?id=60>). According to Flick-Hruska and Blythe (1992), the increase is due to mainstreaming in high schools, postsecondary institutional efforts to make facilities and programs accessible to students with disabilities, and students' perceptions that higher education provides an opportunity for more independence as well as advancement in employment opportunities.

Although the rates of enrollment for students with disabilities are increasing, the rates of persistence are not. Only 36% of students with learning disabilities received a degree within five years in contrast to 50% of students without a disability in a study from three large school districts in the northwestern United States (Murray, Goldstein, Nourse, & Edgar, 2000). In addition, findings from the National Education Longitudinal Study indicate that students with disabilities are attending community colleges more frequently because they may be less academically prepared for college than those without disabilities (Horn & Berkold, 1999). Further, survey results from 1995-96 indicate that 21% of students with a disability at a public two-year institution reported taking at least one remedial course compared to 14% of students without a disability. In order to better address this concern about persistence, a deeper understanding is needed regarding the factors that influence transition and persistence of first-year college students with disabilities.

Purpose of the Study

The purpose of this study was to investigate factors that contribute to the semester-by-semester success of community college students with disabilities during their freshmen year. This study was designed to add to the body of knowledge about the supports needed by students with disabilities to transition successfully into higher education and to persist throughout ensuing semesters. Wessel, Jones, Markle, and Westfall (2009) reaffirmed research by Adler (1999) that drop-out was highest for students with disabilities during the first weeks of the semester, especially in the fall. Harris & Associates (2000), noted that only 12% of students with disabilities had graduated from college.

Given these alarming statistics, this study was designed to illuminate factors successful first-year students with disabilities identify as helping them to achieve academically and to persist through the first critical year of college, with specific focus on the fall semester. More specifically, this study examined intervention activities for students with disabilities at a community college in order to identify key strategies that promote successful transition to and performance in one community college. These strategies potentially included, but were not limited to, advisor/counselor contact, freshmen seminar, and academic skills training.

In addition using case study methodology, this study was attempted to replicate and extend aspects of existing research by examining students with disabilities to determine the significance of the academic environment and the role of college services as the two most important factors affecting college persistence and student success.

Utilizing qualitative research with individual interviews, this study was designed to further illuminate how Astin's persistence model can highlight factors that will impact student persistence.

This research provided an improved road map that made it easier for future students with disabilities to navigate the pathways of the first-year transition into higher education and to persist to graduation. The study also intended to increase institutional knowledge about the needs of students with disabilities attending community college.

Research Questions

Given the purpose of this research, this study addressed the following research questions:

- How do successful first-year students with disabilities describe their experiences as they transition into college?
- How do successful first-year students with disabilities describe their experiences with the college academic environment (such as academic advising, first-year seminar course)?
- How do successful first-year students with disabilities describe their experiences with their college support services environment (such as tutoring centers, or workshops)?
- How do successful first-year students with disabilities describe college success?

Significance of the Study

College departure of students has been the focus of much research for more than seventy years (Berger & Lyon, 2005; Braxton, 2000a; Braxton et al, 2004). These departure studies allow institutions to understand the factors that contribute to student persistence. This study focused on reasons that students with disabilities choose to stay in college and persist during their freshman year.

In 1999, the U.S. Department of Education's National Center for Education Statistics (NCES) reported that an estimated 428, 280 students with disabilities were enrolled at two-year and four-year postsecondary educational institutions. The numbers of students with disabilities transitioning from high school to higher education is expected to increase even more in the decades to come because of increased implementation of federal laws. Consequently, it is critical for community colleges to better understand the factors that contribute to student persistence especially during the freshmen year.

Research has shown that honors, bridge-type, career, and early-start programs are ways in which community colleges help high school students make the transition to higher education (Grant-Vallone Reid, Umali and Pohlert, 2004). In addition, Summers (2003) reports that early intervention by student support services for community college students who are not academically prepared is found to be beneficial. Some identified support services are counseling, advising, and tutoring (Roueche and Roueche, 2001).

However, few studies explore the quality of access and participation of students with disabilities in such higher education programs and services. Despite the rapid growth of students with disabilities attending postsecondary, not all will earn a degree

(Belch, 2004). This study provided data on factors related to transitioning into college as well as insight from the students' perspectives regarding an intervention program to enhance persistence for students with learning disabilities during their first year of study at a community college. The purpose was to acquire a deeper understanding about the factors that influence transition and persistence in the first year for students with disabilities. If this study can produce more evidence about the factors viewed as being most important for the persistence of students with learning disabilities, then such information can be useful in planning future transition and first-year support programs.

Assumptions

This study included the following assumptions: a) incoming freshmen students with disabilities, specifically learning disabilities, selected to be interviewed will provide a more in-depth answer to the research questions, b) the data collected will measure the knowledge and perceptions of factors that influence a successful transition for students with disabilities, and c) the interpretation of the data will reflect the perceptions of the students with learning disabilities who participated.

One assumption of the study was that the chosen qualitative type of methodology (multiple case studies) will provide the researcher with insider information on the factors that students with learning disabilities perceive as promoting or detracting from persistence in their first-year of college. The interviews allowed participants to generate insights as well as provide an in-depth focus with a smaller number of participants answering open-ended questions.

Limitations

Only a small number of students with learning disabilities were selected in a single-site study. One should be cautious about generalizing the findings of the study to all students with learning disabilities, to students with disabilities in general, and/or to other institutions. However, this study rigorously employed established qualitative research principles and practices in order to provide knowledge that is potentially transferable across contexts. Also, the research was conducted and interpreted through the Associate Dean who oversees the Disability Services department at the Community College in which the research was performed. This relationship with the students might in itself influence persistence as a factor.

Definitions

The following terms are used in this study:

Student with disabilities: students are considered to have a disability if they experience functional limitations that significantly restrict one or more of life's essential activities such as walking, seeing, and learning (ADA Amendments Act, 2008).

Learning disability: A generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition or use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are intrinsic to the individual and presumed due to central nervous system dysfunctions. Even though a learning disability may occur concomitantly with other handicapping conditions, it is not a direct result of those conditions (Brinckerhoff, Shaw, & McGuire, 2002, p.113; The National Joint Committee for Learning Disabilities, 1994a, pp.65-66).

Transition: a change in status from behaving primarily as a student to assuming adult roles in one's community (Halpern, 1994).

Persistence: the re-enrollment of a student from one semester to the following semester (Summers, 2003).

Retention: completion of a certificate or degree program in the same institution (Berger & Lyon, 2005).

Successful: the first-year student who navigates his/her transition into college by making connections on campus, earning credits by completing coursework, and persisting from first to second semester.

Accommodations: actions or services such as extended time or sign language interpreters that provide individuals with disabilities an equal opportunity to participate fully in all aspects of the educational environment.

Developmental Advising Model: a student-centered academic advising approach starting with the advisor providing more of the information and making more of the decisions and working towards the student making the decisions and the advisor just serving as support.

Remedial Courses: supplemental academic coursework provided to students to ensure basic skills mastery, which may include remedial English and/or fundamental math classes.

First-year Seminar: a course designed to assist first-year students in their transition to the college, to highlight the large array of educational opportunities available, and to integrate the students into the institution.

Universal Design (UD): a way of designing “products and environments to be usable to the greatest extent possible by people of all ages and abilities” (Story, Mueller, and Mace, 1998).

Transition Center: a student support office for students with disabilities whose primary mission is to implement a Student Success Plan aimed at increasing persistence in college by helping each student develop transitional skills within tutoring sessions.

Transition Skills: the following skills that assist with persistence are: learning styles, time management, organization, notetaking, study skills, test taking strategies, self advocacy, reading, writing, introduction to assistive technology, and introduction to other tutoring centers available in the college.

Overview

This dissertation consists of five chapters followed by references, an appendix, and a bibliography. This chapter outlined the statement of the problem, purpose of the study, research questions, significance of the study, assumptions made by the researcher, and explanation of key terms.

Chapter Two is a review of the literature. It will provide background information about students with disabilities in higher education, the laws that provide access, transitioning and issues of retention for students with disabilities, and the variables that influence persistence during the freshmen year. Chapter Three will explain the research methodology that will be used to conduct this study, including the study design, participants, data collection and analysis techniques that will be utilized. Chapter Four will give details of the results by describing the participants and the key findings of the

study. Chapter Five will inform the research questions and provide recommendations to policy, practice, and future research.

CHAPTER 2

REVIEW OF LITERATURE

Introduction

The purpose of this study was to understand the perspectives of students with disabilities and the different paths chosen in the college environment that encourage persistence. An integral contributor to student's persistence in college is the first year transition (Goodman & Pascarella, 2006). The factors that influence transition for the general student population need to be understood in order to increase persistence/retention for students with disabilities. Persistence can be defined as the re-enrollment of a student from one semester to the following semester (Summers, 2003) whereas retention is seen as the completion of a degree program.

This chapter will provide an overview of the history of students with disabilities attending higher education. The literature will show the importance of the laws that enabled students with disabilities to attend college with accommodations to ensure access both in and out of the classroom. Throughout the review, persistence and retention, as well as contemporary issues of interest, will be examined more closely, particularly by comparing four year institutions to two year institutions (community colleges). Another important factor to be examined will be the role of transitioning into higher education both for the general student population and students with disabilities. In addition, student development theories and their impact in identifying strategies that are important for increasing persistence/retention during students' first year of study will be explored. Some of the strategies reviewed will be the advisor/counselor contact, freshman seminar,

and academic skills training as they enhance retention for the general student population. These strategies will then be examined for their applicability to students with disabilities, specifically at community colleges.

Historical Overview of Students with Disabilities in Higher Education

The history of students with disabilities being encouraged to attend college was practically nonexistent prior to 1960 (Belch, 2004). The original GI Bill, which ended in 1956, provided the opportunity to continue education for those servicemen who became disabled during their service. Their increased enrollment gave rise to the recognition of students with disabilities participating in higher education (U.S. Department of Veterans Affairs, <http://www.gibill.va.gov/>).

After the GI Bill, the Civil Rights Act of 1964 was passed to prohibit discrimination on the basis of race, color or national origin in programs or activities receiving federal funds (U. S. National Archives and Records Administration, <http://www.archives.gov/education/lessons/civil-rights-act/>). However, disability was not included. Not until the Rehabilitation Act of 1973 were civil rights expanded to include people with disabilities. Additional legislation (Americans with Disabilities Act of 1990, and ADA Amendments Act of 2008) was passed to ensure equal access. Today, higher education continues to experience a growth in attendance of students with disabilities due to the combination of these laws that are designed to facilitate access.

Existing laws define a person with a disability as one who experiences functional limitations in one or more of life's essential activities such as walking, seeing, and learning (ADA, 1990). In 2008, the ADA Amendments Act expanded the qualification

standards in that the impairment must now “significantly restrict” instead of “severely restrict” a major life function, a less stringent standard. General categories of disabilities that are often served by these higher education institutions are: deaf and hard of hearing, visual impairments, mobility impairments, psychiatric disabilities, learning disabilities, attention deficit/hyperactivity disorders, systemic disabilities, brain injuries, and multiple chemical sensitivities/environmental illness (Belch, 2004).

Each year, numbers of students with documented disabilities are increasing in attendance at postsecondary institutions. There are several reasons for the growth in the number and percentage of students with disabilities registering for college. First, ADA and IDEA (Individuals with Disabilities Education Act) have allowed a greater number of students with disabilities to attend and succeed in high school, thus making them eligible to enroll in college. According to American Council on Education, the proportion of full-time freshmen who reported having one or more disabilities increased from 2.6% in 1978 to a high of 8.2% in 1994, and most recently, 6.0% in 2000 (Henderson, 2001).

In order to understand the dramatic increase, another study by the National Postsecondary Student Aid Study (NPSAS) (U.S. Department of Education, NCES, 1999 - 2000) showed there was a 9.3% enrollment of students with disabilities compared to Henderson’s sample of 6.0%. This increase was because the NPSAS sample included students enrolled in less than two-year institutions and community colleges as well as in four-year colleges and universities. The percentage distribution overall of students reporting disabilities between 1988 to 2000 by NPSAS showed increases in the following categories: orthopedic or mobility impairments, mental illness, health impairment or problem, visual or hearing impairment, learning disability or ADD/ADHD, and other

disabilities. Reasons cited for the increase are due to: 1) the categories used to identify the disability type (i.e. mobility vs. orthopedic or mobility), and 2) inclusion of less than two-year institutions and community colleges. Also, these percentages are likely to be underestimates (NCES, 1999 - 2000) because so many students with disabilities enroll on a part-time basis while these studies review only full-time enrollment.

Secondly, an increase in numbers of students with mild disabilities, such as learning disabilities and ADHD, has occurred perhaps due to more pervasive testing. These mild disabilities accounted for 16.1 percent of the total freshmen with disabilities in 1988 but 40.4 percent in 2000 (Henderson, 2001). Vogel, Leonard, Scales, Hermansen, and Donnell (1998) conducted a study across various types of institutions in higher education and showed the proportion of students with documented learning disabilities was higher in community colleges at 10 percent of the student population compared to .5 percent in the four-year universities. The overall proportion of students with learning disabilities in higher education was 2.4 percent of the total student population. Lastly, individuals with disabilities at all ages are attending college even more because of the advances in medicine that allow one to function more effectively physically, academically, and/or socially.

Although the number of students with disabilities entering the postsecondary environment is increasing, the number earning a degree is not. Only 36% of students with learning disabilities received a degree within five years in contrast to 50% of students without a disability in a study from three large school districts in the northwestern United States (Murray et al, 2000).

Students with disabilities face a number of challenges other students do not. They struggle to be accepted and to adapt to the college rigors through the utilization of accommodations (Thomas, 2000). Examples of reasonable accommodations which students with disabilities may require are: sign language interpreters; scribes; readers; notetakers; taped classes and/or texts; enlarged copies of notes, required readings, handouts and exam questions; extended time on exams; less distracting testing environment; assistive technology; and preferential seating in the classroom. Accommodations provide individuals with disabilities an equal opportunity to participate fully in all aspects of the educational environment.

In order to meet these postsecondary challenges students also need to self-identify as having a disability, identify necessary accommodations, and develop relationships with faculty to promote these accommodations. Students with disabilities often need to overcome the negative attitudes and perceptions regarding disabilities that exist on the part of the faculty who teach them, the other students who attend, and within themselves (Jensen, McCrary, Krampe, & Cooper, 2004).

Transition for Students with Disabilities and Issues of Retention

As students with disabilities register for courses at the postsecondary level, institutions need to review the transition process for this population. The first year transition is integral to a student's persistence in college (Goodman & Pascaraella, 2006). Halpern (1994) defined transition as referring to a change in status from behaving primarily as a student to assuming adult roles in one's community. The literature (Belch, 2004; Repetto & Correa, 1996; Serebreni, Rumrill, Mullins & Gorden, 1993) indicates

that students with disabilities experience even greater degrees of difficulty during the transition process than do their counterparts without disabilities. Some of these difficulties include poor organization skills, poor time management skills, test taking anxieties, low self-concept, and a lack of assertiveness in being a self-advocate (Smith, English & Vasek, 2002). Culbertson (1998) noted that low self-concept contributes to a high level of peer rejection and loneliness, which leads to multiple emotional problems. These difficulties are amplified by the move from an environment, for example high school, wherein students are carefully guided by school staff and individually taught by specialized teachers to an environment wherein they are expected to achieve on their own (Dalk & Schmitt, 1987).

In response to the need for smoother transitions to postsecondary institutions for students with disabilities, legislation was changed to include transition services within IDEA (Individuals with Disabilities Education Act). The Individuals with Disabilities Education Act of 1990 and its 1997 Amendments established transition planning and services as a component of a student's Individualized Education Program (IEP), beginning at the age of 14 (Mull & Sitlington, 2003). The transition plan is a long-term plan process coordinated by the family, student, and high school personnel with the goal of preparing a student for moving from high school to adult life (Repetto & Correa, 1996). Students with disabilities need to develop a thorough understanding of the challenges involved in transferring from high school to college and be involved in developing their transition plan, because the student role shifts to one with greater emphasis on the student as the decision-maker in higher education (Smith et al, 2002).

Retention

While a successful transition from high school to college is important for students with disabilities, even more important is persistence/retention. The study of college student retention strategies for students with disabilities is fairly new; however, it is embedded in a larger literature on college impact and student development theory. Research on college student development suggests that transition to higher education is particularly critical to retention. Transition involves a series of changes that influence student growth beginning in the freshman year and continuing through graduation (Chickering, 1969). For example, Tinto (1988) found that the first term, especially the first six weeks, is particularly crucial, as it is during this time that students are most susceptible and sensitive to feelings of marginality.

At the institutional level, student retention is a major focus for colleges and universities. The U.S. Department of Education, National Center for Education Statistics (<http://nces.ed.gov/ipeds/glossary/index.asp?id=772>) measures the rate of retention of students who “persist in their educational program at an institution, expressed as a percentage. For four-year institutions, this is the percentage of first-time bachelors (or equivalent) degree-seeking undergraduates from the previous fall who are again enrolled in the current fall. For all other institutions this is the percentage of first-time degree/certificate-seeking students from the previous fall who either re-enrolled or successfully completed their program by the current fall.” This is one definition of retention, and there are many alternative definitions. For example, Berger and Lyon (2005) define retention as “referring to the ability of an institution to retain a student from admission to the university through graduation (p. 7).”

Another challenge for research on retention is that some researchers interchange the words ‘retention’ and ‘persistence’. Persistence is typically defined as the student’s continued enrollment in college beyond any particular term (NCES, 2001) while retention often refers to program completion. Berger and Lyon (2005) more thoroughly discuss the different definitions and the evolution of these concepts in the history of higher education. The concept of retention evolved over time due to new issues emerging such as the diversity of the student population, which includes underrepresented students (minorities, low socio-economic, first generation, students with disabilities, women, and older students). Consequently, colleges started to make funding available to support extra services to develop skills necessary to persist and eventually graduate for such different populations of students. The competition for resources to support these extra services in higher education makes retention even more important as time moves forward. Lastly, as student populations become more diverse so does the postsecondary institutions within higher education.

Measuring retention rate can also be complicated by the type of postsecondary institution (four-year public/private versus two-year public/private) (Astin & Osegura, 2002). For example, community college retention rates are dramatically lower than those of four-year colleges/universities. Summers (2003) utilized research collected by the Southern Regional Education Board (January, 2003) to summarize that only 45% of community colleges’ first-time, full-time freshmen who intended to earn a degree or certificate graduated in the period from 1998 to 2001 and that 32% of students failed to return for their second year at a community college. Factors that contribute to this lower retention rate are the diverse student population (part-time and older working adults) and

the open admissions policy. Windham (1995) found that older students are more likely to drop out than are younger students, and those who work full-time were more likely to drop out as well. A suggested reason by Bers and Smith (1991) was the responsibilities of home.

Further, Hagedorn, Maxwell, and Hampton (2002) found that high school grades were strong predictors of college attrition. Students may have met a community college's open admission criteria of a high school diploma or a GED but are unprepared for college coursework due to their lack of learning as demonstrated in their high school grades and subjects taken. In addition, the average community college freshman is often considered academically under-prepared for higher education (McCabe & Day, 1998). The National Center for Education Statistics (1996) conducted a study in the Fall of 1995 in which the findings showed that 41% of students entering public community colleges were enrolled in one or more remedial courses. Remedial courses have been developed to improve the skills of the under prepared students entering postsecondary. Therefore, community colleges work to overcome academic deficits and retain these students (Mahon, 2003).

Models of factors contributing to persistence have been developed. One model of persistence is the I-E-O model (input – environment- outcome) by Astin (1993) which provides an example of a useful theoretical framework. This model examines student characteristics and campus environment which together lead to the outcome, either retention (persistence) or attrition, for example. The student input characteristics are gathered from the student's background (i.e. pretest performance, self-predictions). The environmental measures utilized are the institutional characteristics, peer group, faculty characteristics, curriculum, residence, student involvement, campus climate, and services

collected by a survey. Astin develops outcome measures by reviewing the survey and determining the type of outcome involved, the type of data, and the time dimension (during college or after college). Overall, the theory demonstrates that the assessment of college is measured by changes in the student characteristics over time and attempts to bring about desirable changes for persistence.

More specifically, Astin has contributed to our understanding of persistence and retention through his model of involvement. Astin's (1984) involvement theory suggests the following:

- 1) Involvement refers to the investment of physical and psychological energy in various "objects." The objects may be highly generalized (the student experience) or highly specific (preparing for a chemistry examination).
- 2) Regardless of its object, involvement occurs along a continuum. Different students manifest different degrees of involvement in a given object, and the same student manifests different degrees of involvement in different objects at different times.
- 3) Involvement has both quantitative and qualitative features. The extent of a student's involvement in, say, academic work can be measured quantitatively (how many hours the student spends studying) and qualitatively (Does the student review and comprehend reading assignments, or does the student simply stare at the textbook and daydream?).

- 4) The amount of student learning and personal development associated with any educational program is directly proportional to the quality and quantity of student involvement in that program.
- 5) The effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement.

Another useful model, Tinto's early theoretical model of student attrition, is known as the Student Integration Model (1975). This model consists of academic and social integration, and within these two areas other characteristics must be taken into account. These characteristics consist of family background (socio-economic status, family expectations); pre college schooling (high school rank and high school GPA); goal commitment (defined as the student's goal to complete college); and institutional commitment (the student's commitment to an institution). Academic integration is defined as the student's academic performance in the institution—for example, completion of academic courses, grade point average and rank. Social integration is defined as the informal and formal relationships formed with peers, faculty and staff, as well as the extracurricular activities the student is involved in during college years.

A balance between academic and social integration often leads to persistence (Tinto, 1975, 1982). However, integration in one area more than the other may cause dropping out. Tinto (1975) defined dropout as voluntary and academic withdrawal. Voluntary dropout happens when a student is more academically integrated and decides to leave the institution, while involuntary withdrawal occurs when a student is more socially integrated and is academically withdrawn by the institution.

While the Student Integration Model takes into consideration internal factors, it fails to take in account external factors. These external factors include the student's decision to persist in an institution based on finances, as well as transfers versus permanent dropout—students who continue their education at another institution as opposed to dropping out from college. This model fails to differentiate the experience of students of different gender, race and social status backgrounds (Tinto, 1982). In addition, the model does not consider time as a variable. In other words, the earlier theory focuses on a specific time frame, usually the student's first year. Tinto has added a time dimension incorporating Van Gennep's work on the "rites of passage" to his earlier research (Tinto, 1988).

Tinto (1988) "adds a time dimension by describing the longitudinal stages of the process of integration, in particular the early phases" of the rites of passage (pg. 447). Tinto (1988) advocated viewing student departure in three stages: separation, transition, and incorporation. He derived this view from the field of social anthropology, paralleling the movement from one group association to another in tribal societies with the departure of a student from home towards incorporation as a member of the new college community.

The separation phase involves "parting from past habits and patterns of affiliation" (Tinto, 1988, pg. 443). Tinto (1988) acknowledged that this process is somewhat stressful and that "in a very real sense, their staying in college depends on their becoming leavers from their former communities" (p. 443).

Once into the second stage of transition students need to cope with the additional discomforts of having left what is familiar and having not yet become familiar enough

with the new norms and behaviors to identify with them. Tinto (1988) suggested that the "stress and sense of loss, if not desolation, that sometimes accompanies the transition to college can pose serious problems for the individual attempting to persist in college" (p. 444). It is not the tasks themselves that are so overwhelming in this stage, but the associated stresses. "It is the individual's response to those conditions that finally determine staying or leaving" (Tinto, 1988, pg.445). The culminating stage of departure/attachment is incorporation. In this stage the student establishes competency as a member of the institution (its social and intellectual components of community).

Seidman (1996) summarizes Tinto's model of retention/attrition as follows:

The theory posits that an individual's pre-entry college attributes (family background, skill and ability, prior schooling) form an individual's goals and commitments. The individual's goals and commitments interact over time with institutional experiences (both formal and informal academic and social systems of the institution). The extent to which the individual becomes academically and socially integrated into the formal and informal academic and social systems of an institution determines the individual's departure decision (pg. 18).

Tinto's model states that balancing the "student's motivation and academic ability and the institution's academic and social characteristics help shape two underlying commitments: commitment to an educational goal and commitment to remain with the institution. Accordingly, the higher the goal of the college completion and/or the level of institutional commitment, the greater the probability of persisting in college." (Cabrera, Nora, & Castaneda, 1993).

Research Testing Student Integration and Student Attrition Models

There are numerous articles and works regarding different reasons for persistence in college; however, Tinto's theoretical model has been the most

comprehensively tested by many researchers (Berger & Milem, 1999 ; Braxton, Sullivan, & Johnson, 1997 ; Cabrera, Castenada, Nora, & Hengstler, 1992 ; Cabrera et al., 1993 ; Pascarella & Chapman, 1983). The following section summarizes recent studies testing variations of Tinto's and Astin's theoretical models.

Pascarella's and Terenzini's (1980) research centers on the social and academic integration aspects of retention. To investigate these dimensions, as well as goal and institutional commitment, they surveyed incoming freshmen at Syracuse University. The results yielded five factors: peer-group interactions, interactions with faculty, students' perception of faculty concern for their development, academic and intellectual development, and institutional and goal commitments. These factors correctly identified 78.9% of the persisters and 75.8% of the dropouts. These results generally support the predictive validity of the major dimensions of the Tinto's model.

Berger and Milem (1997, 1999) focused on behavioral involvement and perceptual integration in the student-persistence process. Similar to Berger and Milem the data were collected from a highly selective private residential university and sponsored by the office of the Provost. This longitudinal study used 718 individuals who had provided information at all three data points of the research. These data were merged together to form one data set. The variables consisted of seven sets: "(a) student background characteristics, (b) initial level of commitment to the institution, (c) mid-Fall behavior/involvement measures, (d) mid-Fall perceptual measures, (e) Spring

behavior/involvement measures, (f) academic and social integration, and (g) mid-Spring commitment to the institution” (Milem & Berger, 1997, pg. 393).

The results indicated that nearly every student who entered the university had a very high commitment to obtaining a degree. This is partially based on the unique background of the student population; therefore this variable was excluded since there was no variation in the results. With respect to the student background characteristics, the study found that being a woman, being white and being African-American positively predicted institutional commitment. There was a positive finding for social engagement during the Fall and Spring semester for traditional white students, and academic non engagement reported for white students in the Spring semester. On the other hand, African-American students perceived the institution to be less supportive of them during the Fall semester.

Early involvement was seen as a positive predictor for persisting and continued involvement in the Spring semester. Academic involvement during the Fall semester predicted continued involvement in the Spring semester and the perception of institutional support. In terms of academic non-engagement, however, students who were not involved in the Fall semester were not involved in the Spring semester and also perceived lack of support by the institution. Students who reported early traditional social involvement during the Fall semester reported involvement with faculty in the Spring semester.

Berger and Milem (1999) built upon their research (Milem & Berger, 1997) to further understand the relationship between behavioral involvement and perceptual integration. This study used the same sample from Milem and Berger (1997). They used

seven set of variables as before and in addition measured student persistence from the first to second year of college. The results of this proved useful in combining behavioral and perceptual components in describing the persistence process. The background characteristics such as being female resulted positive when looking at the peer relationships. In addition, family income also played an important role in peer relationships as well as for institutional commitment. High school grade point average also plays a significant role on involvement and institutional commitment; however, it was a negative result with faculty relationships.

Similar to the previous study, African-American students felt a lack of institutional commitment. Also early involvement in the Fall semester positively affects spring involvement and produces "significant effects on social integration, academic integration, subsequent commitment, and persistence" (Berger & Milem, 1999, pg. 658). It is also the case that positive peer involvement is associated with lower levels of non involvement in the spring but with greater academic and social integration. The study also points out that peer involvement strengthens institutional, social support and persistence. An interesting finding is that students with initial high level of institutional commitment lack in early involvement. Therefore, it is important to identify these students early in the process and help them become involved with campus life whether socially or academically. Involvement with faculty early on in the student's career negatively affects a student's social integration. This is due to the fact that students who tend to not fit in socially find support with faculty. Finally, academic and social integration has a positive correlation with institutional commitment. In this study students with a different political view have a harder time integrating socially into the

community. This model provides a better view on how students interact behaviorally and perceptually with regard to persistence and academic and social integration.

Another part of the framework for persistence would include the revision of Tinto's student departure theory by Braxton et al (2004) that included commuter colleges and universities along with an expansion to sixteen influences such as economic, psychological, and social considerations. The focus was primarily on student entry characteristics, external environment, campus environment, and academic communities of the institution. Many such interventions encourage postsecondary institutions to review the impact they have on the rate of persistence and eventually graduation.

Similar to Tinto's (1975, 1987, 1993) theory of departure, Astin's involvement theory (1999) posits that the student needs to be involved in the college in a variety of ways in order to be successful. This theory furnishes colleges with a plan to provide effective ways to promote success to the whole individual. Yet, students with disabilities face difficulty with involvement. In part, the lack of involvement is due to attitudinal barriers; essentially the individual may have a disability, but the environment itself produces the handicap (Belch, 2005; Yunker, 1988).

Students must feel comfortable in the community. Milem & Berger (1997) suggest the combination of Astin's and Tinto's theories of student involvement and behavior will lead to persistence toward a degree in college by sharing a common outcome of academic success mixed with effective socialization. This engagement needs to occur within the first weeks of college attendance. However, these studies included certain limitations. Specifically, they lacked an analysis of race, gender, ability, or

socioeconomic status. Also, they predominately focused on four-year institutions instead of including two-year institutions such as community colleges.

Recently, Wessel et al (2009) completed a longitudinal study looking at retention rates of students with disabilities compared to students without disabilities. It was noted that the office for disability services provided interventions to promote success for students with disabilities which led to no difference in retention rate and a difference of a year for graduation rate. The study cited Hossler's (1996) comments that persistence to graduation was the responsibility of offices and staff across an institution. The study showed that students with disabilities take a year longer to complete a degree due to taking the lowest number of credit hours possible to maintain full-time status.

Generally, these theories reflect similar views of student development and related effects on student persistence. These theories suggest it is the responsibility of higher education to provide appropriate supports such as the freshmen seminar, advising/counseling, academic skills training, and faculty-student interaction as positive influences for retention of college students. Interestingly, many of the strategies that are useful in meeting these goals of retention for non-disabled students are equally as effective with students with disabilities.

Strategies to Enhance Transition for First-Year Students with Disabilities

Institutions, especially community colleges, need to incorporate student characteristics, external and campus environments, and academic communities as foci in their strategies to promote persistence for students with disabilities. The following areas

will be reviewed as supports for college students, especially students with disabilities, as they transition into the postsecondary setting.

Advising/Counseling

Research has shown that many institutions utilize specialized advising programs as part of their freshmen year program (Nutt, 2000). Academic advising/counseling is a vital component of a student's connection to the college/university (Schrader & Brown, 2004). Some of the issues discussed in the student/advisor meetings may include appropriate classroom behavior, selection of classes, career decisions, and student development (Colton, Connor, Schultz & Easter, 1999). The developmental advising model developed by Winston et al in 1984 encourages students to develop their potential and independence over time. Colton et al (1999) indicate that a developmental advising model helps students achieve social/emotional, educational, and psychological development, as well as goals clarification. Tinto (1993) reports that the developmental advising model offers effective retention benefits, especially when a university requires mandatory advising/counseling meetings.

A common topic students discuss with the advisor, especially advisors who see at-risk students, is the student's learning styles and study habits (Colton et al, 1999). This topic is covered in the typical freshmen seminar course, but not early enough in the course. The advisors are having this discussion early in the semester because the student at risk is already feeling overwhelmed.

In addition, colleges are starting to design early warning systems, typically implemented by advisors/counselors, to capture students who are not doing well

academically (Rehuss & Quillin, 2005; Ryser & Alden, 2005). Effective early warning systems review learning styles and study habits in order to match them to major/career paths. Research (Iaccino, 1991) recommends that the student complete a learning styles inventory when taking his/her placement test. The results are used in discussions with the advisor to guide recommendations regarding study strategies and selection of classes at the college.

Furthermore, research on early warning systems has shown that students at-risk who are in academic difficulty should meet with advisors more frequently (Beck & Davidson, 2001; Vogel & Adelman, 1992). These meetings should emphasize the mapping out of a plan for success to guide the student and the advisor. In order for the frequency of meetings to increase, one needs to reduce the ratio of advisees assigned to an at-risk advisor (Heisserer & Parette, 2002). In a 2003 National Survey, Habley (2004a) explored the concept of a desirable caseload for professional advisors and concluded that caseloads of about 300:1 for full-time professional advisors and of 20:1 for full-time faculty advisors were “reasonable”. Habley (2004b) reports the mean number of contacts per term (semester) in 2003 for professional advisors was 2.5 in community colleges and 2.4 in universities.

Communication with advisors/counselors and other staff is one more key to a successful transition process (Beck & Davidson, 2001; Vogel & Adelman, 1992). The more the college staff can persuade the student to believe in him/herself, the more attached the student becomes to the institution. This attachment leads to persistence. The advisors need to require more meetings with their first-year freshmen and become more

knowledgeable about issues of at-risk students, including those of students with disabilities (Smith, 2002).

Many academic advisors/counselors who work with at-risk students receive little training in working with students with disabilities. Yocum and Coll (1995) reported that 31% of the faculty and only 6% of the academic counselors in community college settings have received preparation in special education. Advisors may feel that they do not know enough about various disabilities to be effective when advising these students. Having inexperienced advisors leads to more stress for students with disabilities. In addition, the problem is compounded by some students' inadequacies as independent learners and self-advocates due to their disabilities (Colton et al, 1999). To assist in selecting the course or faculty member to meet their needs advisees with disabilities should be encouraged to self-disclose to their academic advisors that they have a documented disability and what accommodations they are eligible to receive.

Counseling also provides a social support that enhances adjustment to college. A study by Jay and D'Augelli (1991) found that among 165 Caucasian and African-American college students, high levels of social support, as indicated by self-report measures, were associated with high levels of psychological adjustment. In another study (Serebreni et al, 1993), Project Excel employed a counselor to identify personal transition needs and issues of psychosocial adjustment for students with disabilities in a transition program. The counselor provided direct student consultation in the following areas: goal attainment, career exploration, problem solving, and socialization. In these counseling sessions, issues that arose included medical needs, roommate concerns, fear of academic failure, test anxiety, peer rejection, time management, family expectations, self-concept,

and participation in social activities. The questionnaire results indicated anxiety about some social activities such as Greek rush, time management, and test taking. The authors noted that students were not aware of the need to utilize accommodations and to inform advisors, college staff, and faculty about their disabilities.

Students with disabilities bring social and emotional issues with them to the advising relationship, which presents challenges to advisors. Advisors can best enhance student development if they have been trained professionally to work with students with disabilities. Advisors should have a referral network at the college, such as a disability services office or a counseling department, to enhance the success of students with disabilities (Ryser & Alden, 2005).

Freshmen Seminar

Freshmen seminar courses are intended to provide students with essential strategies and information to enhance the likelihood of their academic and social success as well as their retention in college (National Resource Center for The First-Year Experience and Students in Transition, 1999). The course for new students is designed to assist them in their transition to the college, to highlight the large array of educational opportunities available, and to integrate them into the institution. According to Gardner (1986), the first year experience is based on the concept that success during the first year provides the foundation on which the rest of the college experience rests. The content of these courses can vary significantly depending on the type and size of institution.

Students with disabilities represent an at-risk population that would benefit from taking the freshmen seminar as a cohort group. Students with disabilities must understand

the differences between high school and college in order to prepare for the reality of the college environment. For a successful transition, skills such as taking initiative, time management, and self – advocacy are particularly important in the freshman seminar (Feldman and Messerli, 1995). These skills are important for all students, but extremely vital for students with disabilities to ensure persistence. In addition, students with disabilities who choose postsecondary institutions must learn to access and advocate for the accommodations they need in order to be successful (Feldman and Messerli, 1995). Actually implementing accommodations also requires significant self-advocacy and initiative.

Student development and persistence theories serve as the framework by which these orientation/freshmen seminars are encouraged and promoted. Davig and Spain’s (2004) research on freshmen retention focused on the orientation course/freshmen seminar by studying the students’ perception of their idea of a successful adjustment to college life and whether the orientation course affected their level of persistence. The results supported the Tinto (1993) stage model of persistence in which the course incorporated the values of the institution and encouraged the development of strong social connections, thereby enhancing retention.

The weight of evidence demonstrates that the first-year seminars have provided positive benefits to all categories of students and that these seminars are an effective all-purpose intervention to increase persistence from first to second year (Colton et al, 1999; Davig & Spain, 2004; Goodman & Pacarella, 2006; Hunter, 2006). Goodman and Pascarella (2006) also review additional literature supporting the finding that many subpopulations, such as males and females, minority and majority students, students of

various ages, students from various majors, student living on or off campus, regularly admitted students, and at-risk students, benefit from participation in first-year seminars.

Sererbreni, Rumrill, Mullins, & Gordon (1993) conducted research regarding transition for students with disabilities through a project called Project Excel. This was a six-week summer transition program for students with disabilities held at the University of Arkansas. The program focused on adjustment to college, time management, test taking anxiety, grades, and learning to use accommodations in a college setting. The students chosen for the project were 12 high-achieving students with disabilities from Arkansas, Texas, and Illinois. Students represented a variety of disabilities. The results of the project demonstrated student performance success with a mean grade point average of 3.5 during the summer classes. Also, the evaluation questionnaire responses rated Project Excel as a good to excellent college preparatory experience.

By providing a comprehensive transition experience, Project Excel was an effective higher education transition model for twelve students with disabilities. The students' mean grade point was 2.84 in their first semester, which was markedly higher than the 2.34 mean grade point average for all first semester freshmen at the University of Arkansas. The limitation of this study was that it involved only twelve students, but overall the study showed the need for further research on freshman seminar courses or transition programs for college freshmen with disabilities.

The positive outcomes found in the literature for freshmen seminars are not limited just to persistence and retention. For example, several studies have concluded that students with disabilities who participate in first-year seminars experience more frequent and meaningful interactions with faculty and with other students (Colton et al, 1999;

Davig & Spain, 2004; Goodman & Pacarella, 2006). Other investigations indicate that participants who are at-risk (i.e. students with disabilities) become more involved in co-curricular activities, while still other studies show an increased level of satisfaction with the college experience (Colton et al, 1999). Academically, students who participate in first-year seminars have more positive perceptions of themselves as learners. They also achieve higher grades in college.

Universal Design

All these studies indicate the value of a first-year seminar to the student's first-year success. Research suggests these classes provide exactly the types of strategies needed to transition from secondary to postsecondary education and explore the use of universal design for students with disabilities in order to succeed. Universal Design (UD) as it applies to teaching and learning is one method for reaching a diverse student body made up of varying learning abilities and disabilities. The incorporation of the concepts of Universal Design into teaching methodology has been hailed as a mechanism to improve the access and ultimate success of students with disabilities (Higbee, 2001; Silver, Bourke, & Strehorn, 1998).

The term Universal Design was coined by Mace (1988) and has its roots in the field of architecture. The original concept centered on making the physical environment accessible to all people, including those with disabilities. Universal Design is defined by the Center for Universal Design at North Carolina State University as "The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design" (Mace, p. 1). This definition and

set of principles were based on Mace's work and are geared to provide guidance in implementing UD in the physical environment. Much of the educational work in UD is based on the above definition and set of principles.

In the late 1990's and early 2000's, educators and researchers began to expand the concepts of barrier-free design from architecture to educational experiences (Burgstahler, 2000; Orkwis & McLane, 1998; Pisha & Coyne, 2001; Rose, 2000; Stahl & Branaman, 2000). The term Universal Design for Learning (UDL) was developed by the Center for Applied Special Technology (CAST) to refer to the use of UD in the learning environment. Silver, Bourke, & Strehorn (1998) developed the term Universal Instructional Design (UID) to refer to UD in the instructional environment. Scott, McGuire, and Shaw (2003) adapted the principles of UD developed by the Center for Universal Design to be used in the instructional environment and adopted the term Universal Design for Instruction (UDI). Central to all of these approaches is the philosophical underpinning of inclusiveness and equity for all students. The approaches are similar in that they all focus on creating teaching and learning environments that incorporate the use of multiple methods and strategies to reach a diverse range of students.

Universal Design for Learning is accomplished by the use of flexible curricular materials that provide alternatives for a diverse range of students. These alternatives are built into the instructional and curriculum design (Orkwis, 1999). UDL as it applies to the educational environment shifts traditional assumptions in three important ways. First, students with disabilities are no longer seen in a separate category. All students are seen as falling on a continuum of learners with differences in learning styles and strengths.

Second, adjustments for differences in learning occur for all students, not just those with disabilities. Third, universally designed curriculum materials are diverse and presented in a variety of formats that include traditional and digital (Meyer & O'Neil, 2000). The move to UDL represents a major paradigm shift from a medical model framework of treating people with disabilities as needing specialized care to a model in which everyone is treated equally (Sandhu, 1995).

Academic Skills Training

Many students are under prepared for the rigors of college and do not know where or how to seek academic support services (Hock, Deshler & Schumaker, 1999).

Academic support services include, but are not limited to, tutoring, study groups, and mini workshops. Many freshmen programs offer similar support systems for their students as part of their initial college experience.

Brandt and Berry (1991) suggest that students with a learning disability lack the skills needed for planning, goal setting, academic preparation, and follow up (Barretti, 1993). Michael Barretti (1993) finds that the use of support services increases the success of students with learning disabilities in their transition to the community college. In addition to support services such as tutoring, research has shown dialogues with students about how they are learning, as well as programs that help students draw connections between their real-world lives and what they have learned in the class, increase the chances of a successful transition (Watson, 2000).

Research (Lotkowski, Robbins & Noeth, 2004) has also shown that mini-workshops aid in student persistence. Workshops effective in enhancing student

academic, social, and independence skills include topics such as self-advocacy, time management, and interpersonal conflict resolution. Additional topics that were found in the research to be useful were learning styles, note taking skills, and test taking (Colton et al, 1999).

A qualitative case study (Perin, 2004) was conducted by interviewing managers of 15 community college learning assistance centers across the country. The study showed that learning assistance centers in community colleges are an important means of increasing students' academic preparedness. Most such academic centers function to provide tutoring support in subject matter, but in a community college, the centers also play a valuable remedial role. The centers provide skills training assistance typically in the form of mini-workshops. The institutions consider the learning centers to be effective and report positive outcomes, including retention in college English and increases in GPA (Perin, 2004).

Academic centers continue to play a vital role in student persistence. Due to the increase in the population of college students with disabilities, these centers need to provide additional training in strategies for students with disabilities. Students with disabilities are in need of instruction in strategies of applying one's learning style, time management, study skills and becoming self-sufficient, rather than just in traditional subject matter tutoring (Brinckerhoff et al, 2002). In addition, the benefits of universal design for learning centers will include additional access to students with learning, cultural, language, age, physical, and sensory differences. One can apply the seven principles of universal design to ensure the styles of multiple learners are being met in the academic centers. These principles are outlined by The Center for Universal Design

(1997) as equitable use, flexibility in use, simple and intuitive use, perceptible information, tolerance for error, low physical effort, and size and space for approach and use.

Student Responsibilities and Self-Advocacy

While colleges have responsibilities to help students succeed in college, students also share in this responsibility. Students who are transitioning to college need to recognize that the course work in college is significantly different from and more challenging than course work in high school. They also must understand that they need to make a greater commitment to academic work and study (Strauss & Volkwein, 2001). College work requires additional time and effort to attain identical grades. As a result, greater academic accountability is placed on the student in college (Rau & Durand, 2000). Commitment and time management become crucial ingredients to the formula for success as a college student. A student with a disability must be his/her own advocate in conjunction with utilizing effective academic study skills to aid in his/her own success (deFur, Getzel, & Trossi, 1996).

Disclosure of disability and self-advocacy skills are vital to setting the stage for accommodations at the postsecondary level (Belch, 2004). Typically these are the first steps of the transition process for high school students with disabilities. No longer are parents and school counselors ensuring that the accommodations are implemented for the student. The student carries the most important responsibility of identifying him/herself as having a disability, requesting particular accommodations, and participating in

providing those accommodations in the classroom. The student needs to be his/her own self-advocate.

Self-advocacy “means that the student understands his/her disability, is as aware of the strengths as of the weaknesses relating to the functional limitations imposed by the disability, and is able to articulate reasonable need for academic or physical accommodations” (Smith et al, 2002, p.496). Students are responsible for clarifying the need for classroom accommodations to professors after they have given the appropriate disability documentation to the support service office for disabilities (Lynch & Gussel, 1996). Belch (2004) cites numerous articles (Aune, 1991; Bursuck & Rose, 1991; Durlak, 1992) that identified “specific skills necessary for successful transitions including: a) being self-aware of social and academic strengths and weaknesses and viable strategies; b) ability to articulate these strengths and weaknesses to staff and faculty; c) knowledge of accommodations and service needs; and d) ability to make requests for information, accommodations, and assistance when necessary.”

Critique and Analysis

The conceptual frames that inform college impact theory, particularly Astin and Tinto’s theories, are not new. The study of college retention for students with disabilities is rooted in these theories. Positive campus experiences are critical for successful inclusion of students with disabilities in the college community. An integral part of student persistence is the ability of the student to develop meaningful relationships in the college community. It is fitting that theories of involvement, student development, and

retention are reviewed to aid in understanding the factors impacting retention of students with disabilities.

Most research presented to date is lacking information on college retention for students with disabilities. Research presented typically looked at students without disabilities and their rate of persistence in the postsecondary setting due to the first year seminar (Davig & Spain, 2004; Engle, Reilly, & Levine, 2004; Fontana, Green, & Diaz, 2006; Grant-Vallone et al, 2004; Hoffman, 2003). The primary limitations with all these studies were the lack of long-term impact and the lack of comparison with students who do not enroll in these seminars. However, Schnell, Louis, and Doetkott's (2003) research avoided these limitations and intentionally designed their study to be longitudinal over four years and to provide control groups. Their results paralleling the results from earlier studies increased the validity of the previous studies.

Other limiting factors are that the few studies on students with disabilities usually utilized a small sample size of students, were not of recent research, and of course, lacked the equivalent comparison groups (Belch, 2005; Colton et al, 1999; Nelson et al, 1993; Serebreni et al, 1993; Stage & Milne, 1996). The studies did demonstrate the need for a positive transition in order to promote persistence. In addition, the studies showed a need to continue with the research and to expand it to include larger groups of students with disabilities as well as a greater number of institutions.

A further drawback was that some of the data examined for students without disabilities was of a limited quantitative nature (Colton et al, 1999; Engle et al, 2004; Grant-Vallone et al, 2004; Schnell & Doetkott, 2003, Serebreni et al, 1993;). One study focused on the utilization of GPA as a measurement of student performance (Engle &

Reilly, 2004; Serebreni et al, 1993). The problem is that good grades do not always equate to persistence, particularly for students with disabilities. Students feeling overwhelmed by the whole transition process and their lack of connection within the college community may be reasons for why they may not persist rather than academic reasons. Using the students' GPA as the sole indicator of success is not enough for students with disabilities.

On the other hand, these studies often utilized student questionnaires as another form of assessment. The most frequently utilized questions were close-ended questions. This type of data provides more information to understanding retention of students with disabilities than is offered just by their GPA. Using quantitative-type questionnaires enhanced the assessment process. Another strength for data collection was the qualitative methodology approach (Belch, 2005; Davig & Spain, 2004; Hoffman et al, 2003; Nelson, 1993; Stage & Mine, 1996). Most of these studies involved students with disabilities. This type of methodology is designed to find information regarding the perspectives of different categories of students, especially for students with disabilities, rather than assuming that their issues and responses are the same as those of the general student population. Typically utilizing open-ended questions, these qualitative methods allow for the examination of the attitudes and opinions of students with disabilities as they enter the college process (Belch, 2005; Davig & Spain, 2004). Focus groups, as well as interviews, are another option to measure student satisfaction and involvement in the college experience (Davig & Spain, 2004; Hoffman et al, 2003; Nelson, 1993; Stage & Mine, 1996).

Finally, both the qualitative and quantitative investigations have led to research data on retention, but the retention data for students with disabilities are still quite limited and out of date. There needs to be more current research on retention for students with disabilities before one can reach definitive conclusions. For instance, colleges need to utilize pre-existing surveys for students without disabilities to be able to make a comparison to the data colleges collect for students with disabilities. The uses of quantitative and qualitative methods coupled with current research are vital in measuring retention for students with disabilities.

Summary

The review of literature demonstrates that there are multiple factors that affect students' persistence/retention in college. These factors include a successful transition to college and identification of key strategies that promote success in postsecondary institutions, especially the community college. These strategies include, but are not limited to, advisor/counselor contact, freshmen seminar, academic skills, and self-advocacy. Focusing on students with disabilities, this review has highlighted literature illustrating considerations to understanding college-related issues of students with disabilities, the laws that support access, and identifying factors that affect both the general population of students and students with disabilities in college. The goal of this study was to provide additional evidence about these factors as well as any other factors that would be important for students with disabilities in regards to transition and persistence. In addition, this vital information can be provided to post-secondary

institutions with the intention that the institutions will have additional information and tools to effectively support the academic achievement of students with disabilities.

CHAPTER 3

METHODOLOGY

Introduction

This chapter describes the methods and procedures used to assess factors contributing to the academic persistence, semester-by-semester, of students with disabilities during their freshmen year at a community college in Massachusetts. The following items are outlined in this chapter: conceptual framework, research questions, research design, research site, participants/data sources, data/measure coding, analysis, limitations, and conclusions.

Conceptual Framework

Community colleges play a crucial role for students with disabilities since more than one-half of the students with a disability attend a community college (Horn & Berkold, 1999). Bailey, Jenkins, and Leinbach's (2005) research showed that of first-time college students who attend a community college, only 36 percent earned a certificate or associate's degree or transferred for a bachelor's degree within six years. Similarly, Braxton et al (2004) showed from the American College Testing Program (2000) data that approximately 45 percent of students who attend a two-year college depart during their first year. These data lead to the conclusion that community college students have low persistence and graduation rates.

Many theoretical perspectives have been developed, but the main pioneering models about persistence and retention include Astin's theory of involvement and the I-

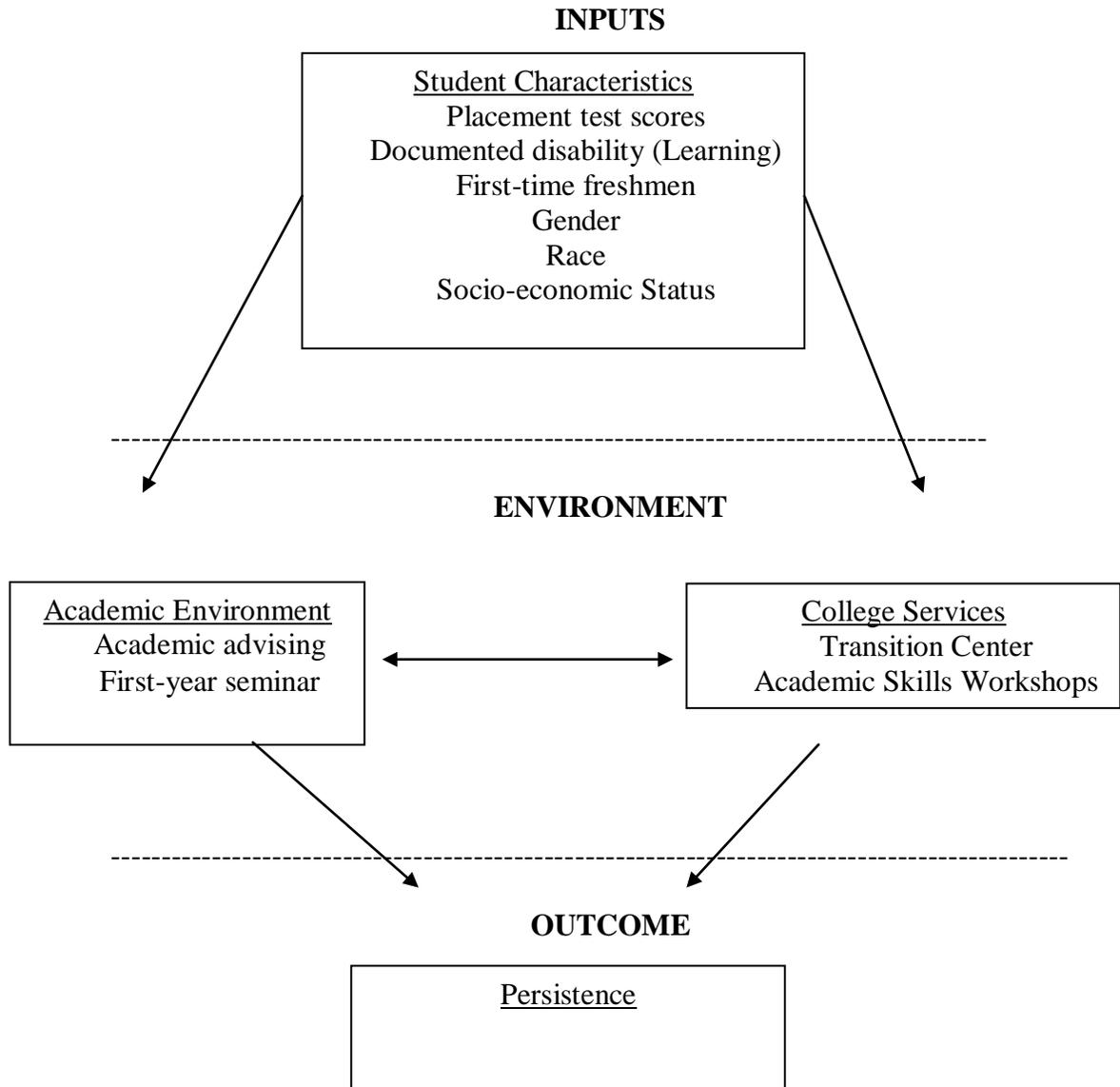
E-O model, as well as Tinto's theory of integration. These models allow researchers to review the effect or impact of student characteristics and the college environment on the college student, but Braxton et al (2004) caution about the appropriateness of applying these theories to community college students since the characteristics of the students served by these institutions are quite different. However, these theories can provide the foundation for first-year experience programs in both four-year and two-year institutions.

Bailey and Alfonso's (2005) report provided an analysis of effective practices that would increase persistence in community colleges. While their research includes many practices, two important areas that match to this study are: 1) social support such as advising, counseling, mentoring, and orientation programs; and 2) developmental education and other tutoring services for academically underprepared students.

Utilizing theoretical constructs (such as inputs, environment, outcome, etc) from these models of persistence, this study considered the placement test scores for English and Math, having a learning disability, and freshmen status to be inputs. As for the environment, Astin (1993) explains that it is the institutional environment that is of interest. This institutional environment will be measured by academic support utilized by freshmen students with disabilities, such as academic advising (based on a developmental model), either in Disability Services or the Advising Center, and first-year seminar, whereas the other part of the environment to be measured is service support. The service support will include Transition Center assistance, as well as workshops offered through the Department of Enrollment and Student Services.

Figure 1

Conceptual Model of Study



In Figure 1, the proposed model depicts the student characteristics as inputs. These inputs will inform the selection of participants for the study. As the data are collected in the study, it will focus on the students' perspectives and the interactions with the college environment. The college environment will include both the academic

environment and college services. These factors will lead to an effective outcome of persistence for students with disabilities specifically learning disabilities.

Research Questions

Given the purpose of this research, this study addressed the following research questions:

- 1) How do successful first-year students with disabilities describe their experiences as they transition into college?
- 2) How do successful first-year students with disabilities describe their experiences with the college academic environment (such as academic advising, first-year seminar course)?
- 3) How do successful first-year students with disabilities describe their experiences with the college support services environment (such as tutoring centers or workshops)?
- 4) How do successful first-year students with disabilities describe college success?

Research Design

This section describes the research problem, the research design, the participants and subject sample selection, as well as the processes for individual interviews and for identifying unknown outcomes in the study.

This study utilized a qualitative approach for the research design. This approach is an appropriate methodological choice given that the aim of this study is to understand the

insider's/emic view (Rossman and Rallis, 2003, p.48) of students with disabilities during the transition into their first year at a community college. This study consisted of multiple case studies of five students, each of whom were interviewed four times (middle and end of the fall semester, winter break, and beginning of the spring semester); a strategy that facilitated cross case analysis. The cases allowed for the investigation and evaluation of the similarities and differences from one student with a learning disability to another student with a learning disability. In addition, the rationale for naturalistic inquiry using a case study approach was strengthened by the lack of current research in this area for students with disabilities. As described in Chapter Two, studies specifically dealing with transition and persistence have focused largely on students without disabilities.

The four main research questions generated prior to the study were influential in determining the types of data collected and the manner in which the data were to be analyzed. These data were employed to gain a greater understanding of the perceptions students hold about the impact of the academic and service components within the college on their success. These components, encompassing an intervention program in which first-year students are involved in at least one of the components, include a first-year seminar, academic advising, Transition Center activities and college workshops. Qualitative research methods, (i.e. individual interviews), were used in order to allow the participants to supply "unquantifiable" data in a manner that allowed themes and categories to emerge naturally. The study relied heavily on the participants to supply reactions and responses to each open-ended question in order to paint a clear picture of the student's experience of participating in the intervention program. Their perceptions will become extremely useful for assisting other students with disabilities who are

attempting to enter college by providing broad insights into factors that influence successful transition and persistence in college. This research began by the seventh week into the Fall, 2009 semester which started with individual interviews.

Research Site

The college selected was established in 1963 to provide access to higher education to residents of Central Massachusetts. Since the early 1960s, enrollment has grown from 300 to over 13,000 full and part-time day and evening students. The college is committed to providing opportunities that meet the diverse educational needs of adult citizens in the Commonwealth of Massachusetts. This diversity includes, but is not limited to, students with disabilities. The Office of Disability Services has received national and international recognition for its efforts and innovations in providing assistance to students with disabilities. Most recently, the Office of Disability Services has seen a 32% increase in students in the Fall of 2009, and is now serving 772 students.

Participants/Data Sources

The study population comprised of 102 students with documented learning disabilities as determined by psycho-educational documentation such as the Wechsler Adult Intelligence- 4th edition (WAIS-IV) and the Wechsler Individual Achievement Test-II (WIAT-II), or the Woodcock Johnson Battery containing both the Intelligence and Achievement Tests (WJ-III). In addition, all of these students disclosed a learning disability as their primary disability during their Disability Services intake at the community college. College transcripts were reviewed for high school graduation dates

of Spring, 2009, and absence of previous enrollment in a college course. Also, placement test (Accuplacer) scores and advising notes were examined to confirm the placement into at least one developmental course. All of these students were sent, either electronically or through mail, an initial letter of introduction (Appendix A) asking them to participate in four individual interviews. All students were volunteers.

Basic demographic information was collected from all participants by the Community College and confirmed in the first interview. Individual interviews were conducted with a self-selected group of the first five volunteer respondents from the population of 102 individuals. The purpose of the individual interviews is to provide rich qualitative information that may not be accessible through traditional survey mechanisms (Krueger, 2002a). The common thread among the participants was that they are first-time freshmen with a learning disability who recently graduated from high school, tested into a developmental course, and are involved in at least one of the components of the academic and support environments outlined as factors in persistence.

Other data sources/artifacts for the participants included tutor trac log reports (a database report that tracks student visits to tutoring centers) and student success plans (a listing of transition skills completion) for students who utilized the Transition Center, GPA retrieved from college reporting, registration schedules for the first-year seminar, placement test scores for Math and English, and number of students who utilized the academic advising model (developmental) with Disability Services coordinators and the Advising Center.

Trustworthiness/Authenticity

The analysis of qualitative results is a different type of knowledge than of quantitative results because one group enjoys detailed interviewing and the other focuses on the apparent compatibility of research methods (Glesne & Peshkin, 1992). Qualitative inquiry requires delving into the lives and for this study the lives of the student participants in order to comprehend their understanding of the key factors that might help them succeed in their first year.

The information obtained from the individual interviews was analyzed using qualitative strategies to support its trustworthiness and authenticity. According to Rossman and Rallis (2003, p.63) “for a study to be trustworthy, it must be more than reliable and valid; it must be ethical”. This research study closely utilized the basic constructs of Astin’s theory of persistence in relation to students with disabilities. The conversation that occurred in the interviews allowed for in-depth questioning and discussion of the specific factors that may contribute to the success of the first- year participants as well as the researcher serving as the instrument for gathering the data. The data was corroborated from the different participants through a process of triangulation. Carol Weiss (1998) defines triangulation as a cross-check through different modes of inquiry (p.263). This triangulation is a means of ensuring reliability, validity, trustworthiness, and authenticity of the participants.

Data/Measuring/Coding

Five participant interviews were arranged at the middle of the Fall semester with three follow-up interviews per participant occurring by the beginning of the Spring

semester. All of the interviews were taped. Open-ended questions were asked to encourage participants to describe their personal experiences during their first semester using preliminary collection during the first interview (Appendix B) and the three follow-up interviews utilized probing questions for specific areas such as academic life, support services, and defining success. The researcher remained open to the possibility of other factors that may surface during the interview.

The protocols for all of the interviews included the following types of questions to detail students' stories and to serve as an analytic framework (the constructs from the conceptual frameworks with the core questions):

Tell me about your experiences with...(academic, support services, success)

What has been most surprising?

What has been most difficult?

What are specific challenges?

What has been the best?

Where have you found support?

What would you change? About the college? About yourself?

What strategies have you used to respond?

Each of these probed the students' beliefs and feelings about their experiences, how it made them feel, and asked them for specific examples. The questions were tailored for each protocol and the interviewer needed to go with the flow of the responses when conducting the interviews.

The interviews were transcribed immediately and merged with interview notes that were taken during the interview. The transcription was checked twice to assure

accuracy and completeness. In the first pass through of the transcripts the researcher located themes and assigned codes for these themes in order to attempt to reduce the large amount of qualitative data into useful categories. Russ-Eft and Preskill (2001) defines open coding as a process of underlining key phrases and pulling these phrases together in an organized manner.

In the second review of the interviews, the researcher focused on the initial codes and add some additional codes if new ideas emerge. The researcher organized the old themes as well as the new themes by identifying key concepts. This style of coding is referred to as axial coding in which data are put back together in new ways by making connections (Russ-Eft & Preskill, 2001). Both the frequency and intensity of the key concepts were recorded and tracked by the researcher.

Another component of the data bank was the material artifacts. These included TutorTrac reports outlining student/interviewee usage hours at the Transition Center, copies of the student success plans at the completion of the first semester, sign-in sheets for student services workshops, participants' registration schedules, mid and final grade reports, placement test results, disability documentation, and advising log notes. These items were used to add to the understanding of the data collected in the interviews.

Analysis

The interviews were structures such that data collected from each interview focused on specific aspects of the students' experiences, including their experiences of transitioning into college (interview one), the academic environment (interview two), the support services (interview three), and their definitions of success (interview four). Data

analysis occurred both during and after the data collection. The researcher provided participants with opportunities to review their responses as a triangulation strategy. As the analysis proceeded, data were evaluated in light of previous data and utilized to guide subsequent data gathering and shape the protocol for interviews two, three, and four.

In analyzing the transcripts the constant comparative method was utilized. Lincoln and Guba (1985) describe the constant comparative method as a means of analyzing data in order to derive theory from data collected in a study. After initial coding, the interview transcripts were transcribed, and small amounts of data were transferred from the transcripts to spreadsheets and analyzed through multiple rounds of theme identification. Comparison of the data from the interviews occurred in order to identify connections between emerging themes, as well as frequency and intensity of statements. Conceptual maps were developed to define themes and relationships. Themes were reviewed for their interconnections over time (Appendices C and D). Lastly, the student voices painted the stories that served as an analytic framework which utilized the constructs (experiences from the academic environment and student supports) from the conceptual framework.

Conclusions

This chapter described the research design, methods, and procedures that were used to conduct a study with incoming freshmen students with disabilities at a local Community College located in Central Massachusetts. The following areas were described 1) conceptual framework 2) research questions 3) research design 4)

participants/data sources 5) data/measuring/coding 6) data analysis procedures and 7) limitations to the study.

CHAPTER 4

FINDINGS

Introduction

This chapter contains a description of the study participants and an analysis of the data gathered during the four rounds of interviews. The analysis of the data for this study clearly identified a seven stage, transitional process from pre-college through persistence into the second semester. In addition, an eighth category, called strategies for success, was constructed from the recommendations from and reported experiences of the five participants. The stages of the transition process are: 1) pre-college experiences that influence academic involvement, 2) initial encounters which created first impressions, 3) transition shock, 4) support-seeking and strategic adjustment 5) prioritizing and balancing of college and non-college commitments, 6) recognizing success, and 7) a sense of belonging to the college community. The chapter begins with a description of the participants and then moves through a presentation of the key findings from the study.

The Participants

The name of each participant/student and every reference a student made to a specific person, institution, or individual title are pseudonyms. The following paragraphs provide a descriptive summary of the students and their relevant background characteristics.

Caroline

Caroline is a first-generation, white student, who was diagnosed with a learning disability in high school. Caroline qualifies for the following accommodations: an audio

recorder, a classroom notetaker, a calculator, extended exam time with a less distracting setting, and assistive technology equipment. She has declared General Studies as her major since the community college does not offer a degree in Animal Studies. She is interested in completing an associate's degree and then transferring to a four-year college. She lived with her boyfriend the first semester and then moved home at the beginning of the second semester to reduce the money stresses associated with living on her own. Her high school GPA was 1.72; her placement test scores placed her into all developmental classes (non-college level classes) for Math and English. She is a full-time day student and works part-time as a waitress nights and weekends.

Jennifer

Jennifer is a first-generation, white mother of a female toddler. She had her daughter while still in high school. She has been diagnosed with a learning disability since middle school and was recently diagnosed during her first semester of college with depression and anxiety. Jennifer qualifies for the following accommodations: preferential seating and extended exam time with a less distracting setting. She lives with her boyfriend's family. During the day she manages the household duties while caring for her daughter and disabled mother. She attends the community college at night. Her major is Business Administration because she would like to own her own business. Her high school GPA was 3.17; her placement test scores placed her into college English and developmental Math.

Jorge

Jorge is a first-generation, Chilean student who has been diagnosed with a learning disability since high school. Jorge qualifies for the following accommodations:

preferential seating, an audio recorder, a classroom notetaker, calculator, extended exam time with less distracting setting, and textbooks on tape. He has not declared a major although he is very much interested in the EMT program or in General Studies with a concentration in history. He lives at home with his family. Starting as a part-time student, he enrolled full-time at the start of the second semester. He works an average of 15 to 20 hours a week at a pizza shop. His high school GPA was a 1.08, and his placement scores placed him into all developmental classes for Math and English.

Rita

Rita is a white student following in the footsteps of her father by attending a community college. She has been diagnosed with a learning disability since elementary school. She qualifies for the following accommodations: an audio recorder, a classroom notetaker, calculator, extended exam time with less distracting setting, a reader, and textbooks in alternative format. She lives at home with her family and has declared Hotel Restaurant Management as her major. After completing her first semester, she was not sure whether she would stay in this food service major. She works an average of 15 to 20 hours during the week and on weekends at a local grocery store. Her high school GPA was 2.79, and her placement scores placed her into all developmental classes for Math and English.

Adam

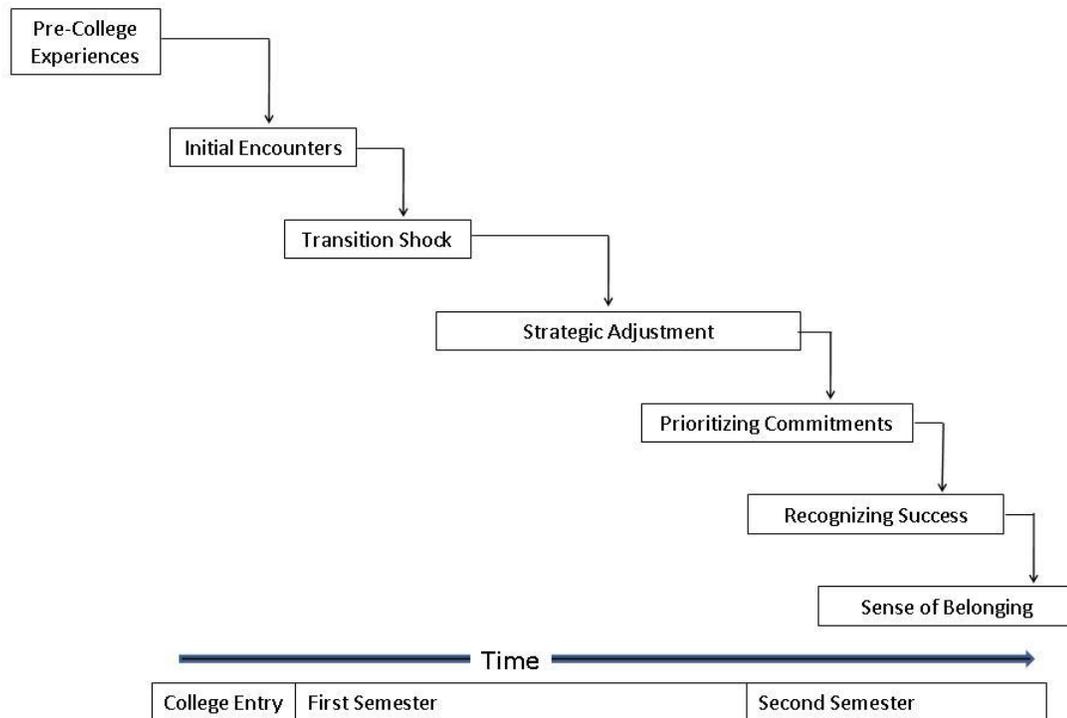
Adam is a white student who is attending a community college because he said he did not try hard enough in high school and needed to have a higher GPA to transfer to a four-year institution. He has been diagnosed with a learning disability since middle school and qualifies for the following accommodations: an audio recorder, a classroom

notetaker, calculator, extended exam time in a less distracting setting, a reader, and textbooks on tape. He lives at home with his parents, who both attended the same four-year state college and were college sweethearts. His major is General Studies with an interest in becoming a history teacher. He works an average of 15 hours per week at a local grocery store. His high school GPA was 1.96, and his placement scores placed him into all developmental classes for Math and English.

Overview of the First-Year Transitional Success Process Model

Figure 2

First-Year Transitional Success Process Model



In Figure 2, the First-Year Transitional Success Process Model illustrates seven stages of individual persistence for students with disabilities throughout the first semester and into the critical second semester of enrollment. This model informs the original research questions by exploring the experiences (academic environment and support services) and thought processes that the participants moved through at different times during enrollment.

The model process commences with students entering college with pre-college experiences such as having a disability, mixed academic performance in high school, and support from staff in high school. As the students embark on their first semester, they encounter their own first impressions, which are shaped by their expectations arising from their goals and previous high school experiences. Students start to hit a wall of frustration, identified as “transition shock” during their first semester as initial encounters with college are perceived to be overwhelming. At this point, students realize just how different college is from their high school experience; for instance, matters such as student-faculty relationships, difficulty of workload, and navigating disability services (just to name a few) are substantively different from their previous experiences and current expectations. In order to move beyond the shock, these successful students make adjustments by seeking supports and developing strategies to cope. As they continue to make this shift, students began to re-examine and re-prioritize college and non-college commitments. Students arrive in their first semester with higher non-college commitments such as work or supporting family and uncertain/low college commitments. As the first semester progresses students begin to question their college commitments. It is during the phase of recognition of success, that students develop a routine and

implement strategies that will make them successful. As a result, these successful students have a better balance of school, work and home. Additionally at the final phase, students review their sense of belonging with much uncertainty and face a crisis of confidence throughout the first semester. By the end of the semester they start to shift internally to an increase in academic self-efficacy and then begin their second semester with a better balance of challenges and supports. Each of these stages is described in greater detail below.

Pre-College Experiences

Fontana, Green, Wright, Diaz, Johnson, Macia, Dainel, & Obenauf (2005) claim the following:

The dream of academic success and a satisfying career is mitigated by dismal statistics regarding the academic preparation of many of those attending an institution of higher learning. Overwhelming obstacles stand in the way of success for many community college students (pg. 203).

All of the participants in this study were identified with a learning disability and utilized accommodations in high school. As these students entered college, they needed to self-disclose to Disability Services and activate accommodations. High schools assist with this process by informing potential students during the last two years of high school that they will need contact college Disability Services themselves. All participants made contact before classes started, but not all knew what the process was once classes began. Rita said, "I've made contact (Disability Services) but that's it." Jorge explained that he doesn't quite know the process after classes began "... I was supposed to pick it (disability packet) up before classes began ... I didn't know until I showed up today (for the interview)." Caroline felt the same way as she expressed it by "I was calling her

(coordinator) all the time before school started just to get things situated with the help of my mom, but I haven't really gone to see her (coordinator)." Participants realized that they needed to continue to make contact with Disability Services as the semester progressed, which was quite different from high school.

Another pre-college experience is their performance in high school. In general, most of the participants struggled in high school. Caroline commented about her past experiences, "I've always struggled even as far back as elementary school 'cause of my learning disability. It's tough, but I'm trying." Adam also spoke to this saying, "I didn't have a stellar high school career. You could say that as part of my disability." In addition, the students who did do well in high school were still not prepared. All students placed below college level and were assigned to developmental Math and/or English classes. Even though the students were not completely successful in high school, they all still wanted to go to college. Jennifer said "I thought I would give it (college) a shot."

Under the auspices of educational laws governing secondary school, high schools must meet the needs of the diverse learners, especially students with disabilities. Teachers adjust and modify their materials to meet disability-related accommodation requests. Jennifer spoke about this experience by saying "in high school like all my classes in general were smaller, and everyone had a disability." She was in a special education classroom where all her coursework was modified. Caroline made reference to an aide in the classroom and the separate support she received because of her disability. "If I had questions in high school, they (aides) would sit there and go through it with me." These types of the classrooms would not be found in college. Instead, colleges employ more of a universal design approach with the style of teaching meeting the needs of all types of

learners. Rather than modifications or adjustments made to level the playing field for college students with disabilities, courses are designed on the principle of inclusiveness whereby every course can be constructed with flexibility. Faculty utilized effective strategies to accommodate student learning and performance.

The college environment is designed to create independence in the students by requiring them to assume responsibility for making the most of the social and academic opportunities as they enter and adjust to college life. In contrast, study participants expected the college environment to be a replica of high school with the front office personnel welcoming them daily with a simple wave or a greeting. In addition, the high school hallways were monitored with principals and teachers observing student movements and making sure students feel welcomed. Participants did receive an overview of processes and expectations only if they attended the college-wide orientation. Two of the five students attended the orientation but still expected a high school environment since it was not a four-year residential school.

Initial Encounters

At the same time that students were entering with pre-college experiences, they were also becoming influenced by first impressions. First impressions for these participants were shaped by their initial goals upon college entry. Several studies that used students as the unit of analysis found that students who are more involved in setting their educational goals are more likely to achieve those goals (Deci & Ryan, 1991; Sheldon, Ryan, Rawsthorne, & Ilhardi, 1997). Initial goals of the participants in this

study ranged from taking prerequisite courses, to increasing GPA, and to obtaining a degree. Their goals are listed below.

- *Caroline* expressed her goal as “to come here and get all those general studies out of the way, and then I can transfer to a four-year school.”
- *Jennifer* wanted to “... get a degree and eventually own two businesses.”
- *Jorge* was more focused on “wanting to get my GPA up, to transfer and get a degree.”
- *Rita’s* focused on her major. “I want to get a degree in cooking.”
- *Adam* commented on his reasons for attending college, “I don’t know... further my education I guess...get a degree and transfer to a state school.”

All of the participants described their ultimate goal as obtaining a degree, whether a two- year degree and/or a four-year degree. In order to achieve the ultimate goals students need to persist from semester to semester. Persistence is seen as a form of student success. Additionally, they discussed improving their lifestyles by earning more money with a degree.

The goals also demonstrated diversity. For example, Jennifer had a specific goal of getting a degree and owning a business. She felt that she has a rudimentary plan for a business that would build on her strengths and skills derived both from being a mother of a toddler and from having a disability. She would like to open a daycare for children with special needs but needs to gain additional knowledge by earning a degree in business. In

contrast, Jorge and Adam know that they want to further their education because that is what is expected of them by their family, but the details are not as clear as they are for Jennifer.

Furthermore, as the participants entered college, they expected to develop relationships and identify with the campus community by the first few weeks. Instead, even at seven weeks into the semester, they all expressed feelings of uncertainty and not knowing if they belonged. “I don’t know... it’s a lot different from high school. I am so used to things (in high school) ... and then I come here; it’s just like no, you can’t do that.” (Caroline). She was unsure of the school routine that she was so accustomed to in high school while Jennifer conveyed her fears and doubts about meeting new people. “I was scared, real scared,” (Jennifer). Jorge discussed his daily routine of coming and going at the college “I walk out of class ... and then I just go to my car” as being indicative of his insecurity about the process of trying to belong to the campus community. He didn’t know the processes of getting involved this early in the semester.

Another expectation for these participants as they entered college was a focus on the academic workload. While any student might be concerned about workload, it is a particular challenge for students with disabilities. Rules of thumb in college is three hours of study time for every one hour of class, but add to this formula a learning disability, and the amount of study time increases steadily. Caroline illustrated her concern by saying, “It will definitely be so much harder than high school.” She explained that her learning disability especially impacted her in math, and she required so much more time than others in her class. Adam, reflecting on his sister’s college experience, commented, “I

thought it (study and do homework) was gonna take a long time ‘cause my sister had a big work load...”

Jennifer’s situation was a little different due to having a young child to tend while attending school, having a disability, and thus needing the support of others. “I do have a sixteen- month-old to take care of and take classes at the same time... and find time to do my homework. I have to depend on other people to help out.” She referred to having an extra teacher in the room in high school that would provide her additional assistance versus being on her own in college. She looked to her aunt, who is a tutor for college students with disabilities, to provide academic support.

These initial goals and first impressions of the participants as they entered college are not reflective of the routines of high school. Their college experiences are quite different from those in high school and can often lead them into shock, transition shock.

Transition Shock

During their first semester the participants experienced transition shock after their first impressions wore off and the differences from high school to college began to overwhelm them. Belch (2004) discusses transition planning by saying “for many college students, the transition from high school to a college setting can be a challenging and formidable task” (pg. 6).

Since college and high school are such very different settings, understanding some of the key variations between them is important for success in college. Some of these differences are: a) high school typical class lengths are 35 to 45 minutes whereas in college the classes vary in length from 50 minutes to 3 hours; b) assignments and tests are fewer in college so every grade counts; and c) for students with disabilities, the laws in

high school are IDEA, which is about success, whereas in college the laws of ADA-AA are about access.

Factors contributing to the transition shock in this study included, but were not limited to, lacking faculty contact, difficulty in adjusting to academic work, not knowing support services, too many demands, and unfamiliarity with navigating disability services. In the discussion about relationships with high school teachers versus with college faculty Caroline expressed disappointment, saying, "I've always had such a great relationship with my teachers (in high school) but like here you don't get that like to like really chit chat with your teachers and become close, and they don't really like acknowledge that you're here...it's just a lot harder, and it's a lot more work definitely." Similarly, Adam felt the faculty expressed a lack of empathy, "...a lot of professors don't care if you don't come 'cause they are gonna teach anyway, and they're not gonna call up and say why weren't you in class, or you're not gonna get a call home from like high school where they made sure you came to school." He misses the strong support of high school but is not sure what to do about the extra independence that college provides.

Rather than improving as students started to spend more time on campus, these feelings of uncertainty increased by the middle of the first semester and led the participants to experience emotions of overwhelming doubt. Caroline expressed her difficulty of keeping up with the workload. "It's hard to just keep pulling yourself more and more and more and pushing yourself to get everything in." Also, Rita spoke about her daily feeling of being weighed down with work. "All of a sudden I have piles of homework every single night." There were some nights Rita did not complete her work on time and started to fall behind. These emotions can drive a student to panic and

depression as Rita expressed her fear in the following way, “I’ve been depressed, but I mean I’m trying to get over that and just try to be like this is what I need to do.”

Participants spoke of their low self-efficacy and low self-esteem during this same time period of the middle of the semester. Many students with disabilities exhibit lower self-esteem levels than do their peers without disabilities in trying to fit in. Jennifer’s self-esteem was not stellar before she entered college as she expressed that she was always in separate and smaller classes in high school classes. Her perspective did not change as she reached mid-semester. “I feel a little out of place still, but that’s the way I’ve always been about my disability and fitting in ...” Caroline described her feelings during this time period as “wicked bummed out (if I fail).. little voices in my head saying school is not the thing for you...” These thoughts lead to a feeling of low self-efficacy (the ability to achieve ones goals) due to the students’ low self-esteem.

More specifically, Adam experienced uncertainty about the larger role he needed to take in achieving his goal. “I don’t know. Just the whole transition from high school to here it’s kind of like I guess responsibility to myself to like whether to actually come to class...” Rita spoke about her doubt in achieving her goals, “I am struggling really hard right now... I am gonna be here much longer (taking classes below college level).” At this time with the participants looking within and questioning whether they belong, they experienced a type of confidence crisis.

As the discussion turned to factors contributing to a lack of confidence, Jorge and others discussed the increases in the academic workload. Jorge said, “In college there is a lot of homework usually like subchapters, and plus the test would be chapters 1- 24, so the tests are like 175 questions.” He was used to the homework being broken into

segments, usually a chapter a week, short weekly quizzes, and tests at the end of each chapter.

The different interviews also highlighted the difficulty of free time in college compared to the daily structure in high school. The single greatest problem faced by the college students was choosing how long and often to go to class, study, eat and sleep. Rita (feeling the pressure as she approached mid-semester) reported, “Now all of a sudden I have piles of homework every single night, and classes are a little harder than what I expected.”

Additionally, the difficulty of the workload was often connected to not knowing the different supports available and too many outside demands as expressed by Jorge and Rita. Jorge commented that “I don’t know much ... usually when I walk out of class I just see kids smoking butts. And then I just go to my car. ...don’t know where tutoring is.” Rita spoke about the demands in her life. “It’s a longer drive for me (the commute)... been too busy working on homework... and I have a job like 15-20 hours a week... trying to concentrate on both school work and a job right now.”

Given this transition shock, the ability to utilize services and assistance for one’s disability becomes crucial for students with disabilities during the middle of the semester. Students need to advocate for themselves, which is a major difference from high school as illustrated by Caroline’s comment: “I haven’t really gone to see her (disability coordinator), but I have been thinking about her because I’m struggling really hard right now in my math class, and I need to talk to her but not sure how to do it.” She is used to the special education teacher checking with her other teachers and telling her what she needs to do or providing the support directly to her. In contrast, college disability

coordinators do not contact professors regarding students on their caseload. The students' rights are protected by FERPA. The coordinator relies on the students to provide information about their semester.

Adam reviewed the ways receiving supports from Disability Services is quite different for him in college. He made reference to retrieving his notes in high school versus college in this reflection: "In high school they took notes and put it in a binder for you, so I didn't really have to go and get the notes. They kind of just did it all for me, I guess."

Retrieving accommodations can be different from high school to high school as well college to college but disclosing to a professor was a big step for all participants. Jennifer discussed the need to talk about her disability with her professor; disabilities are usually not communicated to the teachers by the student in high school but by liaisons (guidance and special education teachers). For example, one of Jennifer's comments was "getting enough courage and actually ask and talk a little bit about my disability with my professors." As the participants started to face the realizations of transition shock, they needed to make adjustments by learning strategies to succeed in a college climate.

Strategic Adjustment

Adjustment after the shock is important toward the end of the semester as students experience their moments of truth. Students start to understand the factors that help and hinder them as they adjust to college in their first year. Grant-Vallone, Reid, Umali, and Pohlert (2003) summarized adjustments as follows:

As students start their careers at universities, their adjustment to the environment is critical for their success and retention at the university. Social and academic adjustment may include a positive perception of

students' own ability, motivation, and academic performance as well as perception of how well he or she fits in on the college campus and is involved socially (pg 256).

This study explored the perceptions of the five participants, particularly their views of the roles of supportive strategies. These strategies influenced the participants as they completed their first semester at college.

Jennifer and Adam shared approaches that showcased their strengths in completing their first semester. Jennifer, overcoming challenges in college, stated, "I usually go through what I do, and I'm like that should have been that, and I find out why. I'll be like maybe next time I'll know that." She is like many other students who tend to learn through their past mistakes. She would review the work, find the correct answers, and re-study it. As she then approached her next assignments/exams, she would utilize her new strategies to complete them.

Adam discussed his college adjustments in schedules, study habits, and other areas he needed to modify compared to those in high school. "...Um, probably study habits. Like now I know how long to do it for and what to study and like stuff like and then the time it takes me to start an assignment to how long it takes me to do stuff." Students are given increased amounts of work but often are not sure how long it will take to complete and how to put everything together. Organizational techniques such as checklists become important as students approach final exams. These strategies often lead to a proficiency in time management skills.

Improved time management became a part of their adjustment as they try to complete their first semester. Jennifer said, "I really had to learn how to buckle down and manage my time. I just couldn't sit there and watch TV shows." It is hard for Jennifer

since no one in her boyfriend's family attended college. They would come home from working all day, eat supper, and watch television. She knew she needed to go into the bedroom to get her work done or leave the house to obtain tutoring. Learning to make this adjustment took time. Similarly, Jorge spoke about his family and their ideas of time management. "My mom told me to get up early and do homework and stuff. It worked!"

Parental support was also identified as an important factor for students in college, especially for students with disabilities. Parents who had prior college experience know even more about college adjustment than do those who had not attended college. Parents who have not attended can still provide the influential support that is needed in their student's first-year while they make the adjustment.

As the students discovered strategies that work for them, the importance of support services and other resources became more apparent to them during this moment of truth - the end of the first semester. Turner and Berry (2000) found that counseled students' academic progress and retention were better than that of the general student body, regardless of academic status. Further, the more support students received, the more success they have in meeting their goals (Munsell & Cornwell, 1994).

The participants conversed about the significance of accommodations and Disability Services. Caroline shared information that her use of an accommodation plan and the distribution to faculty went smoothly. "I didn't really know like what to do with everything (accommodation form). All the faculty was really good with letting me know what I had to do. I had a notetaker for my math class, and I took all my tests in Disability Services. That definitely helped out." In high school the accommodation plan is usually provided by the special education or guidance departments to all the teachers of students

with disabilities. Students are not typically involved in the disclosing process. Caroline was surprised by the fact the faculty were so accepting and by some even explaining the process for obtaining supports at the college. At this college the interaction between support services and academic affairs personnel is strong, which can occur at many other colleges as well.

All the participants found support but in different ways. Jorge felt the support of his disability coordinator was instrumental in his first semester. “She’s like my guide. She like always checks on me, and she asks if I got all my stuff done.” Students are assigned the same coordinator throughout their time at the college. The coordinator’s role is to provide support in their students’ endeavors. All students felt that disability staff reaching out to new students in their first year is vital to their success.

In addition, faculty and tutoring centers provided essential support that promoted persistence and retention. Faculty provide office hours to allow students to meet with them one on one as a form of support. Jennifer did not have much time in her busy schedule to meet with faculty during office hours since her daughter consumed most of her time. She mentioned, “After class I went up to my math teacher for help. Now I go after each class and ask questions. They weren’t in a rush or anything. Nine out of ten times I got an answer from them.” She found the necessary support from faculty and started to develop a relationship with them as well.

Rita, on the other hand, chose to use one of the tutoring centers as a means of academic support. “I actually went up to the Transition Center (tutoring center for first-year students), and I make appointments there, and I get extra help there. The staff have been really helpful.” At this college there are four tutoring centers. Three of the centers

focus on content tutoring while the fourth, the Transition Center, focused on skill development within a tutoring session. All tutoring is free. These students found access to faculty and/or the tutoring centers worked for them. All participants were aware of college supports but generally were too shy to utilize faculty because they wanted to impress them with their knowledge.

Faculty relationships for these students were missing from college entry to midway through the first semester, but by the end of the semester relationships were forming. Initially, students thought faculty would know who they were as they entered into their classrooms, which did not occur for most of the participants. However, during the semester faculty did try to connect with students, but students needed to make the effort as well. Students at first felt contacting the faculty needed to be reserved for emergencies. As the semester progressed they realized faculty were true to their word that they are available for them. For example, Adam was amazed that faculty took the time to respond quickly and accurately. "I emailed my professor a lot about questions, and then she kind of like would email me back the same day with answers to the homework. She would show me how to do it or what I did wrong or like next week." Similarly, Jennifer reflected at the end of the semester about the connection she, as well as her peers, felt interacting with the faculty as the semester progressed. "My teachers like they made us, as far as I could tell, made the class feel like they were part of something good after being nervous at the beginning." Students realized once they adjusted their mindset that they needed to reach out to faculty; then a relationship was formed.

Prioritizing Commitments

While the supports were vital, non-college commitments became a major factor in their adjustment to college. Students who have economic, social, or educational advantages are least likely to leave college. These advantages lead to fewer outside commitments for these students. In a research study by Hoyt (1999), the findings indicate that drop-out rates are higher among students who work full-time and are from lower socioeconomic levels at community colleges. The participants in this study are all engaged in outside commitments, which led to less time for academics. These commitments included employment, childcare, family obligations, living on one's own, and commuting. As the participants entered the college, these commitments were high in priority with an uncertain or low level of commitment to college. As students began their second semester, a better balance between both types of commitments was achieved.

Starting with college entry, Jennifer's home situation was difficult. She lived with her boyfriend's family. In order to maintain a place for her and her daughter, she was expected to care for the house during the day. In addition, her mother expected her to check in on her daily because of her mother's severe medical needs associated with being terminally ill. Jennifer was being pulled in multiple directions. "I can only take courses at night 'cause there is no daycare at the college, only preschool. I live with my boyfriend and his family. His mom takes care of her when I go to school." As she entered college her priority was her outside commitments of daycare and family while her commitment to her college education was much lower.

Other study participants had similar priorities - the need to work, family obligations, and commuting. Adam lived a distance from school and needed a car to

commute. In order to provide this transportation he needed to work and contribute to some of the expenses. “I work 16 to 17 hours, and I need to pay for the gas, half of my insurance, and half of my car payment.” Rita has similar payments for a car and in addition, contributed money to household expenses. “I have a job and work 20 – 25 hours a week to pay bills and have some money for myself.”

Work was extremely important to the participants and their families. All participants worked in high school and did not think that in college they would need to make changes in prioritizing these non-college commitments. Reprioritizing commitments did not occur to them even when mid-term grades were posted. At mid-term students started to make only some small changes. They felt they were still able to handle it all. Why not? This is how they did it in high school.

Not until they learned their mid-term grades and they approached final exams did they realize that they needed to start limiting non-college commitments and increasing their college commitment to achieve success. Jorge and Adam each reduced their work hours. Adam’s work hours were originally set by the store, so he was happy this reduction in hours happened. “Yeah, just ‘cause like sometimes wish I got more hours, but I know I really couldn’t take it ‘cause the workload and here just wasn’t working out. I really can’t handle like a 20 hour work week plus coming here.” Jennifer learned to piece in time during her busy schedule for homework and asked not just her boyfriend’s mother to watch her daughter, but her boyfriend as well. “I have people to watch my daughter, and trying to find time to do my homework was easier.”

As the semester progressed work was still important but education was elevated higher on the scale. Caroline explained, “I am now looking for a job that accommodates

with school, and my school work is way more important to me than work would be. I mean it's kind of hard to say you need the money, but I need an education more." Adam was on the same wavelength saying, "I worked probably like 25 hours a week in high school, and now I'm probably down to like 15 hours a week. I don't make as much money anymore, but I feel like it's a good thing that I'm not always working, so I have time to do my school work and stuff like that."

As they advanced into their second semester, the outside commitments became less important with the time spent on these commitments being reduced. At the beginning of the first semester Caroline was living on her own and paying her bills. "Before I had car insurance to pay for, an apartment to pay for, I had cable, electricity, gas, food, everything." As she began her second semester, she moved home to help cut down on the costs and concentrate on her education. She felt she didn't fail but needed a better balance between non-college and college commitments.

Rita did not have her best semester, but she had reduced her hours and her family became more involved in supporting her educational needs. "Like my whole family just got together and just talked about my first semester and will support me more in this semester. I don't have to contribute as much financially, which allows me to work less hours." This major decision was made by everyone.

Adam spoke it very eloquently about balancing educational commitment and money. "Yeah, like I don't make as much money anymore, but I feel like it's a good thing that I'm not always working, so I have time to do my school work and stuff like that." These external commitments and responsibilities are usually buffered for students on a four-year campus, and some things are provided to students such as including work

which is quite different from a community college. Reducing the outside commitments after their first semester allowed the participants to start to evolve a routine for success.

Recognizing Success

Participants began a stage of self-regulated balance as they started their second semester - a turning point. As they entered college the participants were accustomed to their high school teachers providing the material, motivating them, and taking responsibility for the learning process but as responsibilities shifted towards the students an imbalance was created. By the beginning of the second semester, the participants began to routinize, implement success strategies, and transition more seamlessly to Disability Services. In the process they created a new balance between challenge, support, and individualized their definitions of success.

Participants in this study did not define success in specifics such as getting a particular GPA and/or graduating from community college in two years, but instead success was defined by achieving personal goals, large or small ones. The following were the responses from the participants regarding their definitions of success:

- *Caroline* thought success was “something really great that you achieve. It’s, I mean, if you want to do something, and it’s hard to get to it, I mean, even if it’s little things to do like just achieving it and going for what you want and doing it and knowing you did it.”
- *Jennifer* said, “Success to me is like when you hit a goal. Whether it be something small like being able to pass in a thing of homework or passing a class.”

- *Jorge* defined it as “Success would be having a goal but then reaching that goal without even knowing you did. That would be success.”
- *Rita* explained it is “just working hard to achieve my goals. Big goals. Trying to pass. Graduate from college. Try to figure out what I want to do for a living and then try to build that and work my way up.”
- *Adam* expressed his definition as “probably just passing and knowing that you did it, I guess. Partly like the grades and doing the work. Partly it’s yourself, I guess, like knowing that you did it. Knowing that you can do it.”

In designing and attempting to reach their goals, the participants encountered surprises. Caroline was amazed that she was “able to do the work”, meaning the college work. “I always had low confidence partly ‘cause I learn different.” Adam’s feelings were similar to Caroline’s. He made the Dean’s list and explained that had never happened before, “I didn’t do well in high school.” He learned that he needed to have more confidence in himself and that he could complete his goal of doing well.

Two participants talked about the difficulty in achieving their ideas of success within the first semester. Jennifer mentioned high school being different from college. “I was in a classroom with other students who had educational plans due to their disability. I was never pushed to reach higher. At this community college it was different. It didn’t matter that I was on an accommodation plan for my disability. They tried to push me to a new level. I had to stay focused and push myself. It was hard for me. I didn’t do as well.”

She continued by noting that her reasons for not doing well in college were not because college personnel made her try harder but because she was late in getting academic support and had recently been diagnosed with an additional disability, depression, which contributed to her lack of success. She became excited about the next semester, realized what she needed to do, and was re-inspired to achieve.

Additionally, Rita spoke about her difficulties with staying focused academically and keeping everything on track. “I was more on the home stuff instead of school.” She began to realize that she needed to keep these separate. One of her strategies was to go to academic tutoring on a weekly basis. She explained her initial frustration with tutoring was due to the tutors explaining the material in a way that did not work with her disability. By the end of the semester she learned to advocate for herself and to ask for the type of help that addressed her disability and her needs.

Participants spoke about developing a routine that worked for them. Reviewing daily schoolwork included spending some time assessing classroom notes, the readings, and answering questions. Ideas that were shared by Jorge were “to get in the habit of studying everyday or just reviewing simple stuff. Just reviewing all day and memorize. I will erase some of the answers on my old test and then do the test as a practice test on the bubble sheet.”

Adam also talked about his routine needing to change because he knew his weaknesses. “I used to procrastinate a lot, and I would like do it the day before it’s due, and it’s a lot of work, so I just figured I would get it done right away, so I wouldn’t have to worry about it.” He felt in high school he was able to procrastinate to the last minute,

but now he had too much work for this to happen, which was a common lesson learned by most first-year students.

As their routines developed and became refined, success strategies were implemented by the participants as they began their second semester. Adam spoke about his success needing to count for something such as getting an education. “I have put in the effort. I’ve done what I needed to do so far. Kind of just gone after it, I guess. I got my stuff done on time. I didn’t really dilly dally around ‘cause I kind of have to do good here.” As these thoughts represented more of a global view, Jorge talked about what a successful routine would be his second semester based on lessons learned in his first semester. “So my strategy for this semester (spring) is to just do everything as soon as I’m done with school. Head home and finish it, and then get it done.”

Support services, especially Disability Services, became a part of the routine for success when participants reflected back about their first semester and reflected back as they began their second semester. The second semester was a clear turning point for the students. Students now knew the locations and hours of operation for the various support services and valued the encouragement they received by utilizing the supports. Caroline smiled about Disability Services being one of her best experiences in her first semester. “Working with Disability Services for sure was the best. You have that support, and I know if I called her (coordinator) and was like I’m having trouble in this she would be right there...” The routine, the implemented strategies, and the utilization of Disability Services led the participants to sense a change within themselves.

Sense of Belonging

The feelings of doubt hit a crescendo at seven weeks, and then the students began to report a change. Students addressed this crisis of doubt by starting to make adjustments as they began to learn the college process. According to Hoffman, Richmond, Morrow, and Salomone (2002), that “all things considered, the greater a student’s “sense of belonging” to the university, the greater is his or her commitment to that institution (satisfaction with the university) and the more likely it is that he or she will remain in college” (pg. 228).

As Adam mentioned previously, the shift of responsibility is onto oneself. The students making contacts with peers, faculty, and supports become defining moments. Their perceptions of themselves start to shift, particularly as the first semester comes to a close: they started to feel more hopeful. Jorge discussed the change from fear to hope while taking the time to reflect on the work he had accomplished. “ It’s a lot of work, and I don’t know, ah I was flipping through the pages of my workbook, and I was on Chapter 23, and I did all that work, and all the pages were filled with work that I did, and I was like, wow, I did it! It felt pretty good to look at all my work and all the pages filled with letters and writing and stuff.” He realized students should periodically review their work and be proud of how far they come in the semester.

Students also felt that as they made adjustments with their academic work in the first semester, while faculty relationships were also beginning to develop. They began to understand that faculty members were available to students in a variety of ways such as during class, before or after class, through email, and even in the tutoring centers on campus. Caroline was surprised that you could meet at the tutoring center. “So it was

really nice, she would like take time out and tutor even though she has a real busy schedule.”

All the participants believed that most faculty members were trying their best to make students feel at ease within the college. For example, Adam was pleased about how his professor showed him how to get discount snowboarding tickets for the season. He explained that the professor knew from conversations in class that he loved to snowboard. One day the professor came to class with a college discount coupon for him and showed him how to use it. “It was so cool!” A sense of belonging was felt by Adam.

As the topic moved from faculty-relationship to skill development, all the participants discussed improving their overall skills in the developmental English and Math courses, skills that are needed for the college-level courses. For example, Jorge explained that his developmental English courses aided him in advancing his writing skills. He was proud that he could now write an essay on any topic with his sentence structure, grammar, and spelling no longer being problems. This sentiment was expressed by all participants. They felt their writing and math skills had improved dramatically in the one semester since graduating from high school.

In addition, knowing their goals could be attainable furthered this change to hopefulness accompanied by rising levels of self-esteem and self-efficacy. Jennifer reflected on her feelings about her experiences in high school with her peers because of her disability. She had started to come to the realization that her peers in college are different, which was a surprise for her. “They’re (other students) not necessarily there to make fun of you or make you feel that.” Her goal is more attainable now that she does not feel intimidated to reach out to the people who are there to help, including peers. “I

learned if I open up to people and tell the situation, nine out of ten times they will be open and honest and understanding, and they will find a way to help me 'cause they have the resources, and I don't necessarily have that resource."

Caroline spoke of re-orienting her mindset as she woke up each morning to get ready for a tough day of classes, especially classes that impact her disability, as finals approached. If she could convince herself that she could get through the day, then half of the battle has been won. "I like know finals are coming like I just keep telling myself like if I'm like ah I don't want to go to class today. Now I tell myself like just like get out of bed and you're already awake, and you're gonna miss something. Something big." This strategy worked for Caroline; she attended all her classes.

All the students finished their first semester with a feeling that perhaps they do belong at this campus. This positive feeling continued to develop as the participants entered their second semester, a turning point. As they reflected on their past semester and their internal changes, they came to a realization that one needs a better balance between the challenges and the supports one utilized to survive their first semester and their upcoming semester. Jorge discussed the importance of making a commitment to maintaining a routine to achieve balance. "I know I need to make a commitment to my own schedule. Just to make a commitment and say alright from now on I want to give myself two hours during the day to do my homework and stick to it. I couldn't seem to do that last semester." Similarly, Adam made decisions about the next semester based upon what he did in his first semester. "I did my schedule three days a week 'cause like on Tuesdays all of my friends who are going to like community college we all have Tuesdays off, so we are all going to go snowboarding on Tuesdays. I will study at night

and work on Thursdays and the weekends. If I don't get my work done, I won't go snowboarding until it's done.”

This better balance and commitment to a routine permitted an increased growth in self-esteem that, in turn, promoted self-advocacy skills. For example, Jennifer achieved a sense of belonging and began to take control of her actions. “Standing up for myself is difficult, but by the end of the semester I was making decisions about my services, standing up to my family, and talking to the professors.” In addition, she provided a glimpse of ways she changed internally over the semester. “Just like I came here so sheltered and them helping me, and I was able to actually open up, and now I'm like passing a grade to get to another one, and like it's one step closer to my degree.”

This internal change was noticed by Caroline as well. She liked to remind herself that just like the little engine that could, she could do it, overcoming the large obstacles and increasing her self-confidence. “I've always had kind of a low confidence and then just being able to do it, knowing that I can do it. Something in me tells me I can do it, and guess what, I did it.” She spoke about completing her first semester with a higher GPA than she had in high school. This sense of belonging occurred in all participants.

Strategies for Success

Many first-year students picture college as a new beginning and a great adventure in their life. Others have many fears about this new adventure. Many students with disabilities fall in the second category as they transition into a new phase of their lives and try to come into their own as a college student with a disability.

Throughout the interviews the participants clearly had advice for new students, especially for students with disabilities, regarding their first-year experience at a community college. Important suggestions included owning a computer, taking longer than two years to complete a degree, anticipating an increased workload, and utilizing disability services.

Caroline wanted first-year students to remember that developmental classes are not college-level classes and will not count towards graduation. Also, enrolling in these will take a student longer to complete a degree. “At the rate I am going it will take me three years to complete my degree ‘cause I’m not taking college-level classes.” In addition, she wanted students to remember that they are in college for themselves. “They want to push themselves not only for themselves first and foremost but to prove everybody else wrong that never thought they could do it.”

Jennifer’s advice was in regard to doing homework and attending class. “You know you have to complete the homework in order to pass the class. You know you have to attend class too.” She also wanted to make sure that new students are open to new learning and not afraid to ask for help. “Learning there are new methods to things. You just have to find them. There are solutions to problems. You just gotta. Once you ask people it’s there. You don’t know it. If you don’t ask questions, you’re not gonna know. And I’ve learned to ask questions and not be afraid.” She admitted that this can be difficult, but new students should know that everyone is in the same situation.

Jorge felt it is vital to stay focused and stay on track in order to survive one’s first semester. He would advise new students, “Just to really look at the classes they want to take. Once they pick those classes, really try to stay focused and just do your best and

pass everything in. Just pick what you like.” If students take classes that they are interested in studying, they will stay involved in the subject and enjoy the workload.

Rita reiterated Jorge’s suggestion about being focused about one’s schoolwork. “Stay focused and don’t let things get to you. Just try to stay focused on your goals and stuff. Probably try to see if they can get less hours so they can work on their school work. Try to change their schedule around to work on their school work.” Rita completed a very tough semester and felt quite relieved to have fewer hours of work, which led her to focusing on her education. In addition, family support in college is important for Rita. Students need to keep the family lines of communication open to assist with adjustments.

Adam emphasized the time spent in college is important. He suggested that a new student reach for help wherever possible. “I guess like you gotta know this (getting a degree) counts for something, and you can’t really slack around. You have to get your stuff done. There is support everywhere you look. There is someone that wants to help you. Don’t be afraid to shout out and get some help.” Similar to Jennifer, Adam believed that most new students are in the same predicament. “We are all in the same boat. We come in here like just winging it, I guess, all nervous. Don’t know where we are going, what to do, so we are in a group of not knowing what to do.”

The advice given by the participants in this study is not specific just to students with disabilities but applies to first-year students in general since college is a stepping stone for one’s life whether or not one has a disability. College is a time to come into one’s own as an individual.

Summary

The First-Year Transitional Success Process Model was developed from the analysis of the data from the individual students who participated in this study. Each part of the model interacts and influences other components to produce the main goal of success for the participants. Findings from the study clearly identified seven stages of individual persistence for students with disabilities: 1) pre-college experiences that influence academic involvement, 2) initial encounters which created first impressions, 3) transition shock, 4) seeking support and strategic adjustment 5) prioritizing and balancing of college and non-college commitments, 6) recognizing success, and 7) a sense of belonging to the college community. In addition, strategies for success were identified from the case studies of the five participants.

CHAPTER 5

DISCUSSION

Introduction

The study identified the key features of the transitional journey described by some students with disabilities who successfully navigated their first-year of community college. The participants in this study all provided compelling narratives about overcoming obstacles and reported about their experiences as they moved from enrollment through the beginning of the second of semester. This study built upon Astin's I-E-O model (1993) and Theory of Involvement (1984), as well as Tinto's Student Integration Model (1975, 1987, 1993), as the preliminary conceptual frameworks that guided this research.

As noted in Chapter One, since persistence rates are low for students with disabilities, it has never been more important to create conditions that foster student success. More and more students with disabilities are enrolled in higher education, especially in the community college sector. While these higher risk students have the knowledge base to succeed, often the definition of success differs among the students and institutions. In the eyes of the institutions, student success is especially defined using traditional measures such as GPA, transfer to four-year institutions, and/or degree attainment; whereas, in the eyes of the students, student success is often defined as persistence, returning the next semester.

The findings of this study will inform the research questions and generate recommendations to policy, practice and future research for students with disabilities.

Review of the Research Questions

Given the purpose of this study, understanding the experiences of students with disabilities from their perspectives was particularly important. Four key areas were identified in the literature and developed into the following research questions.

Research Question 1: How do successful first-year students with disabilities describe their experiences as they transition into college?

The participants provided an overview of a dynamic journey in which students undergo major change in a short time throughout the first year. They described their experiences as they transitioned into community college with mixed feelings. At the time of college entry, they were uncertain and hesitant as they started this new adventure but generally their feelings overall were hopeful with some doubts and surprises as outlined below. All of the participants felt their transition from high school to college was successful, and they believed they were doing pretty well in those first seven weeks of school. Topics of concern in this research question were Disability Services and faculty relationships.

Despite mixed academic records in high school the participants felt their high schools had prepared them for the shift into college by making sure they were connected with Disability Services while in high school. Upon arriving at community college, all students knew that they needed to disclose their disability in college, specifically to Disability Services. Some of the participants utilized their coordinators as their academic advisors at the point of the college entry. However, students gradually relied increasingly on Disability Services. By the end of the first semester, all participants chose to register for classes through Disability Services.

These findings are not surprising, given that students with disabilities benefit from making a connection with Disability Services from the beginning of their college experience (Wessel & et al, 2009). Disability Services, particularly through disability related academic advising, offers a bridge to students as they make the transition into college. This group of highly trained academic advisors, who maintain close contact with their advisees, benefits students with disabilities (Vogel & Adelman, 1992). These students reported that key concepts for review during advising included accommodations and services to support students with disabilities in college, the differences between high school and college, course selection, and expectations in college.

Some of the students had initial doubts and fears because they lacked information about college. The students had heard about the increased workload and difficulties navigating resources. However, the biggest surprise for four of the participants was the lack of relationships with faculty in college in comparison to teachers in high school. Participants discussed, as an example, how high school teachers during the first few weeks of school exhibited a presence by greeting them in the hallways, but faculty did not do so in college. The participants added that in high school a bond builds with the different teachers as one sees these teachers daily over the four years. The participants enjoyed these relationships and missed them in the college environment.

The theory of involvement (Astin, 1985) suggests the outcomes of student involvement and learning can be enhanced by student-faculty interaction. According to Milem and Berger (1997), Tinto (1993) supported Astin's theory of involvement and the impact it has on persistence. Tinto notes that "Involvement with one's peers and with the faculty, both inside and outside the classroom, is itself positively related to the quality of

student effort and in turn to both learning and persistence” (Tinto, 1993, p.71). Clearly, the students in this study felt the need to be involved from the beginning; yet struggled to do so in their new and challenging academic environment.

Research Question 2: How do successful first-year students with disabilities describe their experiences with the college academic environment (such as academic advising, first-year seminar course)?

While these students did struggle at first – they eventually overcame the initial challenges and transition shock as they became increasingly involved with their academic environment. Participants identified four ways in which they were most involved with and connected with the academic environment as their first-year of college proceeded over time – these included the first-year seminar courses, faculty involvement, skill development in developmental classes, and academic advising with Disability Services. They felt these were important factors for success in college. This list is not surprising given the findings from Pascarella and Terenzini’s (1991) seminal review of literature on academic achievement that asserts providing academic skills, support services, academic involvement by the institution can aid in the academic adjustment of students. Clearly, the importance of student disability services is a very specific manifestation of support services for this particular special needs population.

The common goal of first-year seminars is to increase academic performance and persistence through academic and social integration (Goodman & Pascarella, 2006). Two of the students took the college’s first-year seminar, which focused on study strategies and career exploration at this community college. Both students’ overall GPAs were the highest for the group of interviewees. They valued the course because it allowed them to

experiment with a variety of skills that would make them successful in college. They discussed the learning evaluations which showcased their strengths and identified ways to improve underdeveloped learning strategies. Another component of the course permitted them “to figure out what you want to do in life,” said Caroline. Students in the class completed career assessments to determine occupations that might be successful career choices. In addition, these careers were matched to programs offered by the community college.

Lastly, the participants preferred to seek academic advising and register for classes with the Disability Services Office. They felt the coordinators in this office understood their disability and the impact it has on selecting courses and faculty, which is essential to remember in advising students with disabilities.

Research Question 3: How do successful first-year students with disabilities describe their experiences with their college support services environment (such as tutoring centers, or workshops)?

Research shows that early intervention for community college students through supports is thought to improve persistence and academic performance (Summers, 2003). The supports identified by the participants in this research study were tutoring, disability-related accommodations, and services provided by Disability Services.

The participants described their experiences with college support services as being different from their high school experiences. In high school, these students would stay after school to receive help. Also, in high school the teachers always checked up on a student with a disability to ensure everything was going well. College was quite different. Students needed to navigate the resources themselves by making tutoring appointments,

making contact with faculty to ask questions, and connecting with Disability Services if they wanted accommodations in the classroom. These were probably the largest steps for students with disabilities to make. One of the participants commented that “everything is right there but you have to activate it yourself.” These students with disabilities learned that they need to be their own self-advocates.

Participants in the study knew tutoring was available on campus. They were informed of it either in an orientation session or by their professors in their classes. Three of the five participants utilized tutoring services at the college on a consistent basis. One of the participants went to tutoring three times a week, whereas the other two utilized the service on a biweekly to monthly basis. Participants did explain that as midterm and final exams approached they were in the centers more often. Of the participants who did not utilize tutoring services one explained that she had daycare issues and was tutored by a family member. The other participant felt he could handle the workload, and if he encountered difficulties, his parents would assist him. All felt they had outside resources such as family or friends to provide additional assistance in addition to the tutoring centers.

All participants requested services and accommodations for their classes with the Disability Services office. Only four out of the five activated the accommodation plan by giving it to the instructor. In order to receive accommodations in the classroom, students with disabilities need to provide the accommodation form to the professor. The one student who did not submit the accommodation form felt he could handle the courses on his own. He did say he would activate the accommodation form in his second semester

because his disability affects him in the area of math, and he is registered to take a math course then.

Research Question 4: How do successful first-year students with disabilities describe college success?

Retention in community college is different than that in four-year institutions because success is defined so diversely among this student population (Berger & Lyon, 2005). Tinto's (1993) work on retention emphasizes the importance of initial commitments – goal commitment to obtaining a degree and institutional commitment to persisting at the campus of initial enrollment. The initial goals and commitments were quite varied for these students – but they all were clear that being successful was defined by persisting and by meeting their own individual goals.

All the participants felt that they achieved some success during their first semester by achieving an essential common goal within the larger set of individualized aspirations - to pass their classes. They all were relieved that they were welcomed back for another semester. Three of the participants were thrilled with their grades while the other two participants felt they achieved success by learning new strategies that would make future courses easier.

Recommendations

This study highlights the successful transition process for students with disabilities during their first-year of college. It is important that the following recommendations related to policy, practice and future research for students with

disabilities are considered as we continue to look for better ways to understand and serve students with disabilities that continue to attend community colleges in growing numbers.

Policy

Offices that support students with disabilities in the postsecondary level need to receive the proper funding to support them. Disability Services provide service to a high percentage of students who attend the college. Their staff often increase access to higher education by advocating for students with disabilities (Wessel et al, 2009). All five participants relied on the office of Disability Services for such items as accommodations (notetaking services, least distracting setting for exams, and extended time on exams), academic advising (enrollment counseling and registration for classes), counseling support, as well as other support services (assistive technology and tutoring). These accommodations/services come with a cost and need to be recognized on a funding level in order to retain them.

Another policy change that would benefit these students includes creating better linkages with high school disability services. Improved communication would enhance college outreach to high schools by informing them about postsecondary documentation guidelines, faculty interaction, increased academic workload, and support services. In turn, this advanced knowledge would reduce the transition shock faced by the participants in the study. Factors that led to transition shock were missing faculty contact, trying to adjust to the academic workload, learning how to use support services, to name a few. Preparing for these factors would allow for a better alignment with the high school.

A campus-level policy change would be requiring a first-year seminar course for all students during their freshmen year. Research suggests that first-year seminars provide strategies needed to transition from secondary to postsecondary education, especially for students with disabilities. Over the years, transition programs have become a cornerstone of new student experiences at four-year institutions. Gardner (1986) found that freshmen who complete orientation courses were retained at a higher rate than those who did not take such a course.

At this particular college the first-year seminar is required only for those students in the General Studies degree because they have not declared a major. In addition, participants viewed the course as one for students who need additional help and had no goals. If the course were required for all freshmen, then a stigma would not be attached. The two students who participated in the course found strategies that were very useful for academics and careers, and it provided them with more direction. These students were in the General Studies major; thus it was required. The inclusion of a universal design, first-year seminar would be an effective means to improve success for all students but especially students with disabilities.

Practice

The results of this study illustrated an itinerary for transitioning successfully through the initial phases of college for students with disabilities. This model can serve as a supportive conceptual map to complement the framework of Astin's I-E-O model. The literature posits the student's high school GPA as a predictor for success in college. Success is more than the measurement of a simple GPA. High school GPA is not

necessarily a good predictor for people with disabilities. In this study those participants with lower high school GPAs had higher college GPAs. Consequently, it is imperative to look for other ways to determine success. Utilizing the model in the study could be a more appropriate way to measure success for students with disabilities than the standard institution measurements might be.

Another recommendation would be to host presentations for area high school personnel who work with students with disabilities and with community college advisors. The information presented would be the research gathered from this study. A workshop, entitled 'Realities/Myths', could serve as a mechanism to dispel myths about the high school to college transition for student with disabilities. A focus for the high school presentations would be the differences between high school and college since understanding some of the key variations between high school and college is important for success in college. Supplemented by data from the participants, the general themes of the differences between high school and college would be 1) success versus access as they relate to different disability laws that the participants encounter, 2) typical class length and lessons learned by the participants in course selection, 3) style of instructors based upon the participants learning style, 4) assignments and due dates that were quite different from the participants' previous experience, 5) study time allotted in college, 6) reduced frequency of tests and some of the participants' associated frustration, and 7) freedom that comes with attending college.

Another important practice would be for high school students to review supports that are needed for students with disabilities to make the transition. Based upon participant data a college support checklist was developed to assist future students in

selecting colleges and to aid in making the transition easier for students with disabilities (See Appendix C). The study participants identified and described key items that were important in the community college that they attended. The main topics included in the academic environment were tutoring, advising, technology, and faculty availability. Additionally, in the area of disability support, the participants needed to learn about documentation guidelines, different accommodations, working with a case manager, and extra services.

All participants confirmed that college advisors are a vital component of a student's connection to the college. Two of the five participants utilized the main academic advising center when entering college, but all five participants sought the support of the advisors in Disability Services to register for their second semester. It is vital for colleges to provide information regarding the main themes extracted from this research study and participants expectations, which included getting a degree/graduate, setting large goals, solidifying academic majors, continuing with the senior year high school mindset, and having independence. Instead, the participants needed to adjust with the support of advisors and disability staff by: developing strategies to utilize supports, reframing their high school mindset, connecting with faculty, developing a routine and becoming their own self-advocates. Lastly, hearing from a panel of first-year students about their experiences and allow for questions and answers would be noteworthy.

The last practical improvement to consider is to encourage students with disabilities to seek trained academic advisors in the Office of Disability Services, especially in their freshmen year. Students with disabilities need consistently individualized advising to address the concerns that relate to transitioning from high

school to a college setting as an individual with a disability as well as a first-year student. For example, a student with a disability may need advising regarding the disability laws and accommodations whereas a student without a disability would not. In addition, the academic advisors need more frequent contact to accommodate these needs. Participants experienced strong support from the disability advisors when they were outreached numerous times throughout the semester about their academic work, mid-term grades, support, and preparation for finals. One participant, Jorge, commented that he liked the phone calls, which let him know that they care about him. All participants changed their advisor from the Academic Advising Center to Disability Services.

Future Research

The model developed in this study will be a valuable contribution to the knowledge base about persistence. This model provided an in-depth view of successful transition for students with disabilities during their freshmen year. The understudied topic of students with disabilities in regard to persistence in community colleges will need further research, particularly replication with larger sample sizes.

An item of specific inquiry could revolve around the discovery that participants in this study knew there was going to be a difference in the workload but they still were not prepared for the increase. It would be useful to examine this topic of workload expectations with high school students to see if their expectations about and the preparedness for the change in workload from high school to college can to be adjusted.

Another topic of research would be the student-faculty relationship. Participants commented on missing the faculty relationships they thought they

would have when they entered college. Since this factor is believed to be instrumental in student success and retention, a study of faculty perceptions and participation in student relationships would be of value.

The structure of the First Year Transitional Success Process model was developed from the research gathered in this study. Interviews were conducted at different times within the first and second semester. This timing may have partially contributed to the stages that were identified in the model and their sequence. Future research should attempt to confirm the stages, sequence, and to examine the extent to which these patterns hold true in other settings for a wide variety of students.

Models need to be tested and studied with other students in other types of community colleges and with other types of disabilities especially since the sample size was small. The study of more participants in different institutions is suggested to see whether the themes are supported with greater numbers and across other types of community colleges. Additionally, do the study themes apply as well to students without disabilities? Investigating this population as well would be useful.

Further research is needed to develop a survey instrument that could be used to identify students' experiences at each stage of transition. The participants discussed in depth the different stages they experienced, and these stages could set the framework for the survey. Also useful would be a longitudinal follow-up on the participants in this study; did they persist to graduation?

An added suggestion would be to repeat this study with students with disabilities who did not persist from first to second semester. These participants made it. What about the ones who did not? Discovering the stages at which these students withdrew from the college and the reasons why these students' experiences were so different from those of the successful participants.

Conclusions

The purpose of this qualitative study was to examine factors that contribute to semester-by-semester success of students with disabilities during their freshmen year at a community college. A review of the literature identified theories of involvement, student development, and retention to aid in understanding the factors impacting retention of students with disabilities. Within this theoretical framework, a seven-stage model of the transition process was identified as a result of the research. The stages include: 1) pre-college experiences that influence academic involvement, 2) initial encounters which created first impressions, 3) transition shock, 4) support-seeking and strategic adjustment 5) prioritizing and balancing of college and non-college commitments, 6) recognizing success, and 7) a sense of belonging to the college community.

This study focused on the first-semester experiences of students with disabilities in a community college. In the literature this topic has been understudied, if not ignored. In addition, research (Belch, 2004; deFur et al, 1996) reveals that persistence rates are low for students with disabilities; they are attending community colleges more often than four-year institutions (Upcraft et al, 2005; National Center for Education Statistics, 1999); and they are frequently enrolled in at least one developmental English and/or

Math class (Horn & Berktold, 1999). Therefore, this study is a small first step in our efforts to better serve this significant, growing and under-served college population that has been ignored for far too long in existing studies and literature.

The participants in this study persisted from first semester to second semester of their freshmen year. Their remarkable stories demonstrated that persistence required a holistic, systemic approach. This study provides the literature with an in-depth narrative of five students with disabilities during their most critical time at college, their transition. For these students not only to enroll, but also to be successful, means that staff and faculty must understand the needs of the students, particularly as the students perceive them.

APPENDIX A
INFORMED CONSENT LETTER

Dear Student,

I am a doctoral student at the University of Massachusetts. I am asking you to participate in my research project. The focus of the project is learning more about students with disabilities transitioning into a community college and the use of the academic/student services at [REDACTED] Community College.

Your participation will involve two interviews each lasting about half hour and one group interviews lasting one hour in length. The topics I will want to explore will include factors that contribute to the success of community college students with learning disabilities. With your permission, I may record the interview; the recordings will be erased and the files deleted after transcription.

In any papers I may write for this research your identity will be protected and a pseudonym will be utilized if needed. You should understand, however, that I may quote directly from our interviews but will not use your name in any part of the report.

I appreciate your willingness to participate. If at any time you wish to withdraw, you may do so with no negative consequences. If you have any questions, please feel free to ask me, or to call me at 508-854-7429. In addition, you may contact [REDACTED] Community College's Institutional Research Office at 508-854-7545.

Thank you,

Lori Corcoran

The study has been explained to me, and I understand the conditions described above. I freely agree to participate.

(Signature) _____ (Date) _____

APPENDIX B

INTERVIEW QUESTIONS

Transition/Integration

1. What helped make the decision for you to attend college? (Prompts: Did friends, family, or high school teachers contribute to the decision? Was cost and location a part of your decision? How did you decide on QCC? How did you select your major/program and the courses to take first semester?)
2. Tell me about your experience as a new student. How would you describe your first semester so far as a college student?
3. As a new student just starting your college experience, what can you tell me about your concerns, doubts, or fears you have about the college experience? And have they changed throughout your first semester?
4. What has been the best aspect about attending college? Most surprising? Most negative?
5. Most new students have a “transition” to college. I mean the adjustments that you made from what you did before starting college to what you are doing now. Please tell me about your transition to college.
6. Was there anything else the college could have done to help you adjust or transition into college more easily?

Academic Environment

1. What can you tell me about your successful or enlightening academic experiences that stood out as a new student just starting your college experience?
2. What can you tell me about your contact and relationships with your fellow students so far during your first year?
3. What can you tell me about your contact and relationship with instructors during the semester? With staff?
4. Tell me about how you think you “fit” in college.
5. What can you tell me about meeting with your advisor when you selected your classes? Was it in the Advising Center or with Disability Services? What was most helpful about it? Least helpful?
6. Are you currently enrolled in a freshmen seminar course such as ORT 110 or Psy 115? Do you find it helpful? Why or why not?

College Services

1. What can you tell me about activities outside of the classroom, specifically those at the college, and how they affect your college experience?
2. Have you attended any of the tutoring centers (ILC, Writing Center, Math Lab, and Transition Center)? How did they help you? How could they have been more helpful to you?

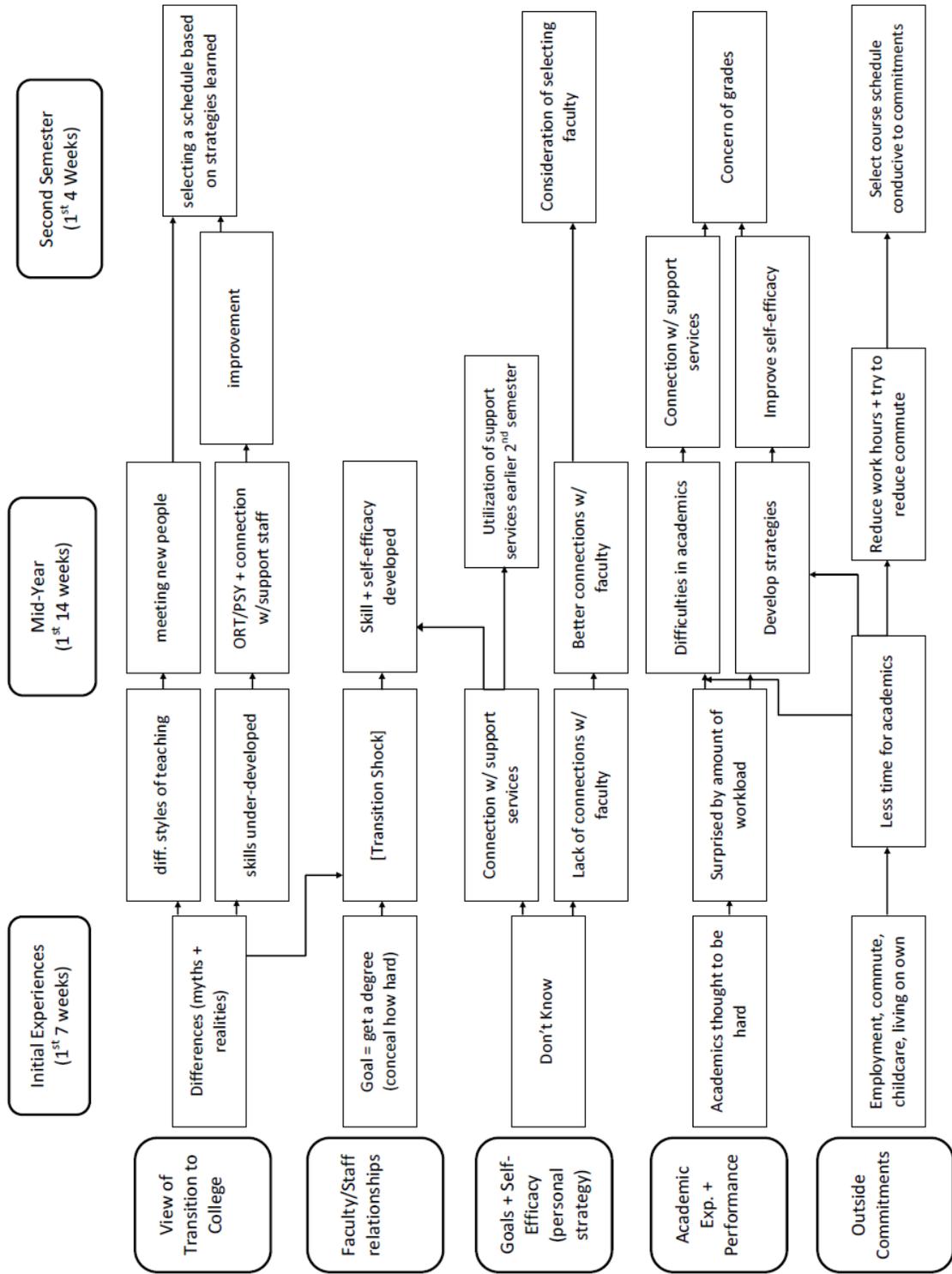
3. Are you planning to attend any of the series of workshops to assist with both academic and nonacademic skills offered by the Enrollment Student Services Department? If so, which ones? Or why not attend? If you have attended any, which ones and how did they help you?

Persistence

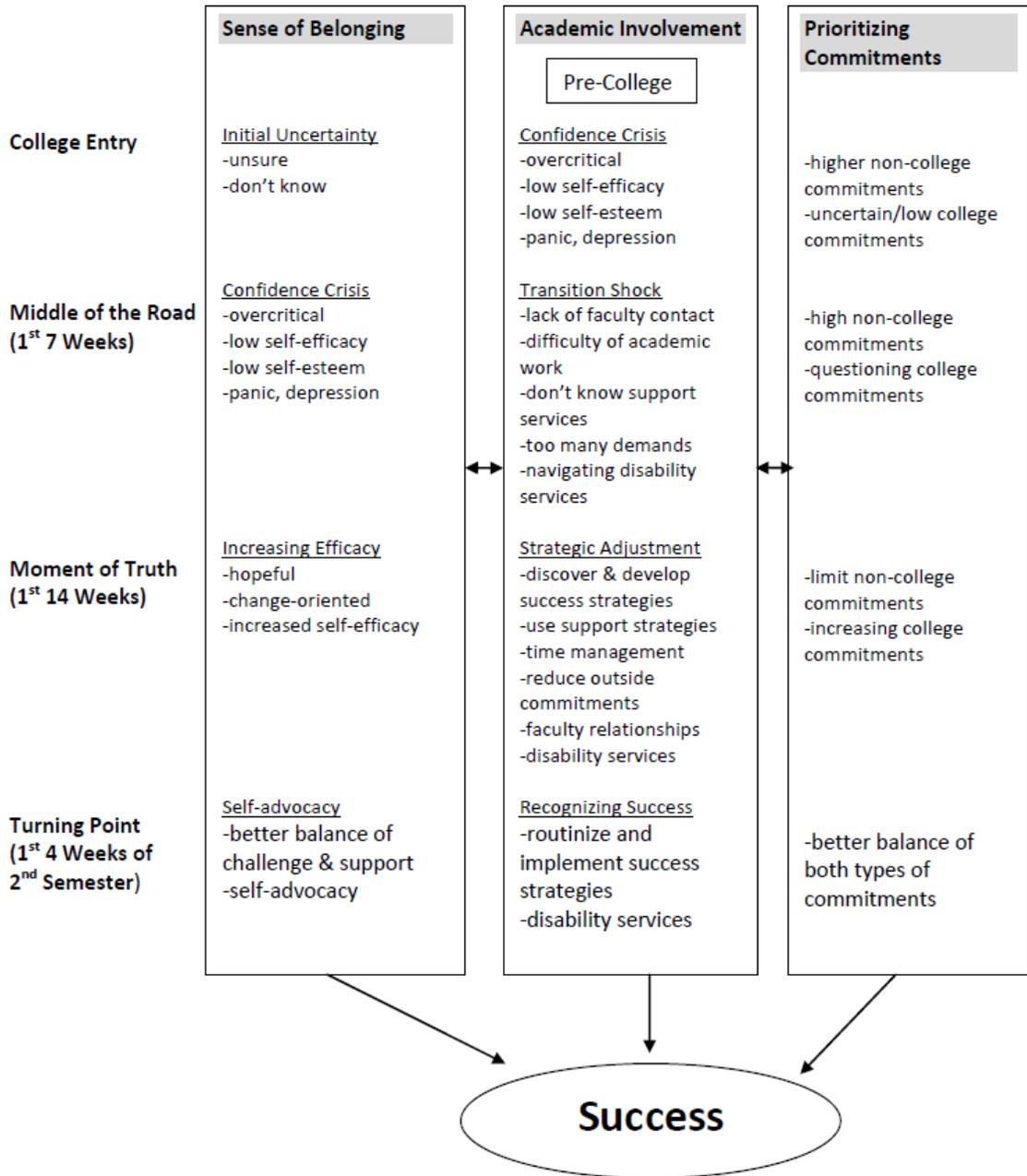
1. What is your goal in coming to college?
2. What can you tell me about any doubts or concerns you have about whether you will succeed, make it through, or stay in college until you reach your goal in college?
3. How committed to your educational goal were you when you started college and now?
4. What, or what else, could the College do to improve your chances of attaining your goal in college?

APPENDIX C

CONCEPT MAP 1



APPENDIX D
CONCEPT MAP 2



APPENDIX E

COLLEGE SUPPORT CHECKLIST

Academic

Tutoring

- Free Paid
- Hours: _____
- Online tutoring available
- Drop in/ appointment needed
- First –year success center

Faculty

- Office hours
- Email accessible
- Availability
 - Before/After class
 - By appointment

Advising

- Placement Test
- Priority Registration
- Drop in/ appointment needed
- Assigned advisor on campus
- Specialized Advising Group (honors, 1st generation, etc)
- Disability Services advisor
- Email availability

Technology

- Laptop
- Supported by college
- Internet

Disability Services

Documentation (required)

- 3 years current (see college guidelines)

Accommodations

- Testing room
- Testing with Professors
- Notetaking
 - Adult
 - Student
 - Find own
 - Personal computer allowed
- Calculator
 - Math chart
 - Course restrictions
- Assistive Technology
 - RFBD/Etext
 - Equipment
 - Training Provided
 - Drop in/ appointment needed

Case Manager

- Availability
 - Drop in
 - Appointment
 - Course Registration
 - Email availability

Services

- Free Cost _____
- Tutoring
- Peer Support
- Support Group
- Learning Specialist
- Workshops

BIBLIOGRAPHY

- Adler, K. (1999). Community and technical college drop outs: A survey of students with disabilities (Doctoral dissertation, Seattle University, 1999). *Dissertation Abstracts International*, 61, 468.
- Allen, D. (1999). Desire to finish college: An empirical link between motivation and persistence. *Research in Higher Education*, 40, 461–485.
- American College Testing Program. (2001). *ACT newsroom*.
[www.act.org/news/data/01/data.html]. Retrieved February 22, 2009.
- American with Disabilities Act (ADA) of 1990, Public Law 101-336, 42 U.S.C., 12101-12132.
- American with Disabilities Act Amendments Act (ADAAA) of 2008, Public Law 110-325, 42 U.S.C., 12101-12210.
- Astin, A.W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel* 25, 298-307.
- Astin, A. (1993). *What matters in college? Four critical years revisited*. San Francisco, CA: Jossey-Bass.
- Astin, A. W. (1999). Student involvement: A developmental theory for higher education. *Journal of College Student Development*, 40, 518-529.
- Astin, A. W., & Oseguera, L. (2002). *Degree attainment rates at American Colleges and Universities*. Los Angeles: Higher Education Research Institute, UCLA.
- Aune, E. (2000). Career and academic advising. In H. A. Belch (Ed.), *Serving students with disabilities* (pp. 55-68). *New directions for student services*. No. 91. San Francisco, CA: Jossey-Bass.
- Bailey, T., & Alfonso, M. (2005, January). *Paths to persistence: An analysis of research on program effectiveness at community colleges*. New Agenda Series. Indianapolis: Lumina Foundation for Education.
- Bailey, T., Jenkins, D., & Leinbach, T. (2005, January). *What we know about community college low-income and minority student outcomes: Descriptive statistics from national surveys*. New York: Columbia University, Teachers College, Community College Research Center.

- Barreti, M. R. (1993). *Increasing the success of learning disabled high school students in their transition to the community college through the use of support services* (Doctoral dissertation, Nova University, 1993). Dissertation/These – Practicum Papers
- Beck, H. P., & Davidson, W. D. (2001). Establishing an early warning system: Predicting low grades in college students from survey of academic orientations scores. *Research in Higher Education, 42*(6) 709-723.
- Belch, H. A. (2005). Retention and students with disabilities. *Journal of College Student Retention: Research, Theory & Practice, 6*(1), 3-22.
- Belch, H. (2004). Retention and students with disabilities. *Journal of College Student Retention, 6* (1) 3-22.
- Berger, J. B. (1997). Students' sense of community in residence halls, social integration, and first-year persistence. *Journal of College Student Development, 38*, 441-452.
- Berger, J. B., & Lyon, S. C. (2005). Past to present—A historical look at retention. In A. Seidman (Ed.), *College student retention—formula for student success* (pp. 1–29). Westport, CT: Praeger Publishers.
- Berger, J. B., and Milem, J. F. (1999). The role of student involvement and perceptions of integration in a casual model of student persistence. *Research in Higher Education, 40*, 641-664.
- Bers, T. H., & Smith, K. E. (1991). Persistence of community college students: The influence of student intent and academic social integration. *Research in Higher Education, 32*(5), 539-556.
- Brandt, M. & Berry, J. (1991). Transitioning college-bound students with learning disabilities. *Intervention in School and Clinic, 26* (5), 297-391.
- Braxton, J.M. (2000a) Introduction: Reworking the student departure puzzle. In J.M. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 1-8). Nashville: Vanderbilt University Press.
- Braxton, J.M., Hirschy, A.S. & McClendon, S. A. (2004). *Understanding and Reducing College Student Departure*. San Francisco, CA: Jossey-Bass.
- Braxton, J. M., Sullivan, A. S. & Johnson, R. (1997). Appraising Tinto's theory of college student departure. In J. Smart (Ed.), *Higher Education: Handbook of Theory and Research* (Vol. 12, pp. 107-164). New York: Agathon.

- Brinckerhoff, L. C., Shaw, S. F., & McGuire, J. (2002). *Promoting postsecondary education for students with learning disabilities. Second Edition*. Austin, TX: PRO-ED, Inc.
- Burgstahler, S. (2000). Access to Internet-based instruction for people with disabilities. In L. A. Petrides (Ed.), *Case studies on information technology in higher education* (pp. 76-88). Hershey, PA: IRM Press.
- Bursuck, W. D., & Rose, E. (1991). Community college options for students with mild disabilities. In F. Rusch, L. DeStefano, J. Chadsey-Rusch, L. A. Phelps, & E. Szymanski (Eds.), *Transitions from school to adult life* (pp. 71-92). Sycamore, IL: Sycamore.
- Cabrera, A. F., Nora, A., & Castaneda, M. B. (1993). College persistence: Structural equations modeling test of an integrated model of student retention. *Journal of Higher Education*, 64(2), 123-139.
- Cabrera, A. ft, Castaneda, M. B., Nora, A., & Hengstler, D. (1992). The convergence between two theories of college persistence. *Journal of Higher Education*, 63, 143-164.
- Center for Universal Design (1997). *What is universal design?* Center for Universal Design, North Carolina State University. Retrieved January, 2009: <http://www.design.ncsu.edu/>.
- Chickering, A.W. (1969). *Education and identity*. San Francisco: Jossey-Bass
- Colton, G. M., Connor, Jr., U. J., Schultz, E. L., & Easter, L. M. (1999). Fighting attrition: One freshman year program that targets academic progress and retention for at-risk students. *Journal of College Student Retention: Research, Theory & Practice*, 1(2), 147-162.
- Culbertson, J. L. (1998). Learning disabilities. In T. H. Ollendick & M. Hersen (Eds.), *Handbook of child psychopathology*. (p. 117-156). New York: Plenum Press.
- Dalk, C., & Schmitt, S. (1987). Meeting the transition needs of college-bound students with learning disabilities. *Journal of Learning Disabilities*, 20, 176-180.
- Davig, W., & Spain, J. (2004). Impact on freshmen retention of orientation course content: proposed persistence model. *Journal of College Student Retention*, 5(3) 305-323.
- Deci, E., & Ryan, R. (1991). A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.), *Nebraska Symposium on Motivation: Vol. 38. Perspectives on motivation* (pp 31-49). New York: Plenum Press.

- deFur, S. H., Getzel, E. E., & Trossi, K. (1996). Making the postsecondary education match: A role for transition planning. *Journal of Vocational Rehabilitation*, 6, 231-241.
- Durlak, C. M. (1992). *Preparing high school students with learning disabilities for the transition to postsecondary education: Training for self-determination*. Unpublished doctoral dissertation, Northern Illinois University, DeKalb.
- Engle, C., Reilly, H., & Levine, H. (2004). A case study of an academic retention program. *Journal of College Student Retention*, 5(4) 365-383.
- Feldman, E., & Messerli, C. (1995). Successful transition: The students' perspective. *Conference Proceedings of the American Council on Rural Special Education*, Las Vegas.
- Flick-Hruska, C., and Blythe, G. (1992). *Disability Accommodation Handbook*. Kansas City, MO: Metropolitan Community Colleges.
- Fontana, L., Green, P., Wright, T., Diaz, M., Johnson, E., Macia, J., Daniel, Y., & Obenauf, S. (2006) A strategic model to address issues of student achievement. *Journal of College Student Retention*, 7(3-4) 201-216.
- Gardner, J. N. (1986). The freshman year experience. *The Journal of the American Association of Collegiate Registrars and Admissions Officers*, 61, p. 261- 274.
- Glense, C., and Peshkin, P. (1992). *Becoming qualitative researchers: An introduction*. New York, NY: Longman.
- Goodman, K., & Pascarella, E. (2006). First-year seminars increase persistence and retention: a summary of the evidence from how college affects students. *Peer Review* 26(3).
- Grant-Vallone, E., Reid, K., Umali, C., & Pohlert, E. (2003-4). An analysis of the effects of self-esteem, social support, and participation in student support services on students' adjustment and commitment to college. *Journal of College Student Retention: Research, Theory and Practice*, 5(3), 255-274.
- Habley, W.R. (Ed.). 2004. *The Status of Academic Advising: Findings from the ACT Sixth National Survey (Monograph No. 10)*. Manhattan, KS: National Academic Advising Association.
- Hagedorn, L. S., Maxwell, W., and Hampton, P. (2002). Correlates of retention for African-American males in community colleges. *Journal of College Student Retention*, 3, 243-263.
- Halpern, A. (1994). *The Transition of Youth with Disabilities to Adult Life: A Position Statement of the Division on Career Development and Transition, The Council for*

- Exceptional Children. *Career Development for Exceptional Individuals*, v17 n2 p115-24.
- Harris, L., & Associates, Inc. (2000). *N.O.D./Harris survey of Americans with disabilities*. New York: Author.
- Heisserer, D.L. & Parette, P. (2002). Advising at-risk students in college and university settings. *College Student Journal*, 36 (1), 69-84.
- Henderson, C. (2001). *College freshmen with disabilities: A biennial statistical profile*. Washington, DC: American Council on Education/HEATH Resource Center.
- Higbee, J. L. (2001). Implications of universal instructional design for developmental education. *Research and Teaching in Developmental Education*, 17(2), 67–70.
- Hock, M. F., Deshler, D. D., & Schumaker, J. B. (1999). Tutoring programs for academically underprepared college students: A review of the literature. *Journal of College Reading and Learning*, 29(2), 101-122.
- Hoffman, M., Richmond, J., Morrow, J., Salomone, K. (2003). Investigating “sense of belonging” in first-year college students. *Journal of College Student Retention*, 4(3), 227-256.
- Horn, L., and Berktold, J. (1999). *Students with disabilities in postsecondary education: A profile of preparation, participation, and outcomes*. National Center for Education Statistics, U.S. Department of Education, Statistical Analysis Report No. 1999-187. Washington, DC: U.S. Government Printing Office.
- Hossler, D. (1996). From admissions to enrollment management. In A. Rentz & Associates (Eds.), *Student affairs practice in higher education* (pp. 56-85). Springfield, IL: Charles C. Thomas.
- Hoyt, J. E. (1999). Remedial education and student attrition. *Community College Review*, 27(2), 1-72.
- Hunter, M. (2006). Fostering student learning and success through first-year programs. *Peer Review*, 8(1) 4-8.
- Iaccino, J. F. (1991). Assessment and Comparison of Advising for Freshmen and Upperclassmen. *Journal of the Freshman Year Experience*, 3(2), 75-90.
- Individuals with Disabilities Education Act Amendments of 1997. (P.L. 105-17). (1997). 20 U.S.C. 1400 *et seq.* (Congressional Record 1997).

- Jay, G. M. & D'Augelli, A. R. (1991). Social support and adjustment to university life: A comparison of African-american and white freshmen. *Journal of Community Psychology* 19(2), 95-108.
- Jensen, J. M., McCrary, N., Krampe, K., & Cooper, J. (2004). Trying to do the right thing: Faculty attitudes toward accommodating students with learning disabilities. *Journal Postsecondary Education and Disability*. 17(2).
- Krueger, R. A. (2002a). *Designing and conducting focus group interviews*. Unpublished manuscript. St. Paul, Mn: The University of Minnesota.
- Lane, K. L., & Carter, E. W. (2006). Supporting transition-age youth with and at-risk for emotional and behavioral disorders at the secondary level: A need for further inquiry. *Journal of Emotional and Behavioral Disabilities*, 14, 66-70.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. Newbury Park, CA: SAGE Publications, Inc
- Lotkowski, V. A., Robbins S. B., & Noeth, R. J. (2004), *The Role of Academic and Nonacademic Factors in Improving College Retention*. ACT Policy Report (ERIC Document Reproduction Service no. ED485476).
- Lynch, R. T., & Gussel, L. (1996). Disclosure and Self-Advocacy Regarding Disability-Related Needs: Strategies to Maximize Integration in Postsecondary Education. *Journal of Counseling & Development*, 74(4), 352-57.
- Mace, R. L. (1988). *Universal design: Housing for the lifespan of all people*. Rockville, MD: U. S. Department of Housing and Urban Development.
- Mahon, Robert Lee. (2003, June). "Rethinking Retention," *Community College Week*, 15(22), p 4.
- McCabe, R. H., & Day, P.R., Jr. (Eds.). (1998). *Developmental education: A twenty-first century social and economic imperative*. Mission Viejo, CA: League for Innovation in the Community College, The College Board.
- Milem, J. F., & Berger, J. B., (1997). A modified model of college student persistence: Exploring the relationship between Astin's theory of involvement and Tinto's theory of student departure. *Journal of College Student Development*, 38, 387-400.
- Meyer, A., & O'Neill, L. (2000). Beyond access: Universal design for learning. *Exceptional Parent*, 30 (3), 59-61.
- Miles, M.B. & Huberman, M.A. (1994). *Qualitative Data Analysis, Second Edition*.

- Morse, J. M., & Richards, L. (2002). *Readme first for a user's guide to qualitative methods*. Thousand Oaks, CA: Sage
- Mull, C. Sitlington, P. (2003). The role of technology in the transition to postsecondary education of students with learning disabilities. *The Journal of Special Education*, 37(1), 26-32.
- Murray, C., Goldstein, D.E., Jourse, S., & Edgar, E. (2000). The postsecondary school attendance and completion rates of high school graduates with learning disabilities. *Learning Disabilities Research & Practice*, 15, 119-127.
- National Joint Committee on Learning Disabilities. (1994). *Learning disabilities issue on definition*. In Collective perspectives on issues affecting learning disabilities: Position papers and statements (pp. 61-66). Austin, TX: PRO-ED.
- National Resource Center for the First-Year Experience and Students in Transition – Monograph Series Number 29, 1999. *Solid Foundations: Building Success for Year Seminars through Instructor Training and Development*. Mary Stuart Hunter.
- National Science Foundation, Division of Science Resources Statistics. *Women, Minorities, and Persons With Disabilities in Science and Engineering—2002*. Arlington, VA (NSF 03-312) [<http://www.nsf.gov/statistics/nsf03312/c2/c2r.htm>] Retrieved February 2, 2009.
- Nelson, B. (1993). Effects of Learning Style Intervention on College Students' Retention and Achievement. *Journal of College Student Development*, 34(5), 364-69.
- Noel, L., Levitz, R., & Saluri, D. (Eds.) (1985). *Increasing student retention: New challenges and potential*. San Francisco: Jossey-Bass.
- Nutt, C. L. (2000). One-to-one advising. In V.N. Gordon & W.H. Habley (Eds.), *Academic advising: A comprehensive handbook* (pp.220-237). San Francisco: Jossey-Bass.
- Orkwis, R. (1999). *Curriculum access and universal design for learning*. Arlington, VA: ERIC Clearinghouse on Disabilities and Gifted Education. ERIC/OSEP Digest Number E586.
- Orkwis, R., & McLane, K. (1998). A curriculum every student can use: Design principles for student access. *ERIC/OSEP Topical Brief*. Reston, VA: ERIC/OSEP Special Project on Interagency Information Dissemination. (ERIC Document Reproduction Service No. ED423654). Retrieved July 15, 2009 from http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED4_23654

- Pascarella, E. T., & Chapman, D. W. (1983). Validation of a theoretical model of college withdrawal: Interaction effects in a multi-institutional sample. *Research in Higher Education*, 19(1):25-48.
- Pascarella, E. T., & Terenzini, P. T. (1980). Predicting persistence and voluntary dropout decisions from a theoretical model. *Journal of Higher Education*, 51, 60-75.
- Perin, D. (2004). Remediation beyond developmental education: The use of learning assistance centers to increase academic preparedness in community colleges. *Community College Journal of Research and Practice*, 28(7), 559-582.
- Phillippe, K.A. (Ed.). (1997). *National profile of community colleges: Trends and statistics 1997-1998*. Washington, DC: Community College Press.
- Pisha, B. & Coyne, P. (2001). Smart from the start: The promise of universal design for learning. *Remedial and Special Education*, 22(4), 197-203.
- Rau, W., & Durand, A. (2000). The Academic Ethic and College Grades: Does Hard Work Help Students to "Make the Grade"? *Sociology of Education*, 73(1) 19-38.
- Reh fuss, M. & Quillin, A. (2005). Connecting students with hidden disabilities to resources. *The Journal of the National Academic Advising Association*, 25(1), 47-50.
- Repetto, J. S. & Correa, V. I. (1996). Expanding views on transition. *Exceptional Children*, 62 (6), 551-563.
- Roueche, J. E., Roueche, S.D., & Ely, E. (2001). Pursuing excellence: The Community College of Denver. *Community College Journal of Research and Practice*, 25, 517-537.
- Rose, D. (2000). Universal design for learning: Associate Editor column. *Journal of Special Education Technology*, 15(4).
- Rossmann, G. & Rallis, S. (2003). *Learning in the field: An introduction to qualitative research*. Thousand Oaks, CA; Sage.
- Russ-Eft, D. and Preskill, H. (2001). *Evaluations in organizations: A systematic approach to enhancing learning, performance, and change*. Cambridge, MA: Perseus Publishing.
- Ryser, J., & Alden, P. (2005). Finessing the balance: Developmental advising for college students with learning disabilities and Attention Deficit Hyperactivity Disorder. *National Academic Advisors Association Journal*, 25(1).
- Sandhu, J. (1995). *A holistic approach to the design for all concept*. Newcastle.

- Schnell, C. A., Louis, K. S., & Doetkott, C. (2003). The first-year seminar as a means of improving college graduation rates. *Journal of the First Year and Students in Transition, 15*(1), 53-76.
- Schrader, P. G., & Brown, S. W. (2004). *Developing the first year experience battery: Evaluating the transition to post-secondary education*. Unpublished manuscript, University of Connecticut.
- Scott, S. S., McGuire, J. M., & Shaw, S. F. (2003). Universal design for instruction: A new paradigm for adult instruction in postsecondary education. *Remedial and Special Education, 24*(6), 369–379.
- Serebreni, R., Rumrill, P., Mullins, J. & Gordon, S. (1993). Project excel: a demonstration of the higher education transition model for high-achieving students with disabilities. *Journal on Postsecondary Education and Disability, 10*(3).
- Sheldon, K., Ryan, R., Rawsthorne, L., & Ilhardi, B. (1997). Trait self and true self: Cross-role variation in the Big Five traits and its relations with authenticity and subjective well-being. *Journal of Personality and Social Psychology, 73*, 1380-1393.
- Siedman, A. (1996). Retention revisited: R = E, ID+E & In, Iv. *College and University Journal, 71*(4), 18-20.
- Silver, P., Bourke, A., & Strehorn, K. C. (1998). Universal instruction design in higher education: An approach for inclusion. *Equity & Excellence in Education, 31*(2), 47-51.
- Smith, B. L. (1991). Taking Structure Seriously. *Liberal Education 77*(2).
- Smith, J. S. (2002). First-year student perceptions of academic advisement: A qualitative study and reality check. *The Journal of the National Academic Advising Association, 22*(2), 39-49.
- Smith, S., English, R., & Vasek, D. (2002). Students and parent involvement in the transition process for college freshmen with learning disabilities. *College Student Journal, 36*(4), 491-503.
- Stage, F., & Mine, N. (1996). Invisible scholars: students with learning disabilities. *Journal of Higher Education, 67*(4) 426.
- Stahl, S., Branaman, J. (2000). Automatic accommodations: The potential of online learning for all students. *Student Affairs Online, 1* (1). Retrieved July 15, 2009 from: http://www.studentaffairs.com/ejournal/Spring_2000/article3.html

- Story, M., Mueller, J., & Mace, R. (1998). *The Universal Design File: Designing for people of all ages and abilities*. The Center for Universal Design, NC State University.
- Strauss, L. C. & Volkwein, J. F. (2001). *Predictors of student commitment at two-year and four-year institutions*. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Richmond, VA. (ERIC Document Reproduction Service No. ED 458854).
- Summers, M. (2003). Attrition Research at Community Colleges, *Community College Research*, 30 (4), 64-85.
- Thomas, S. (2000). College Students and Disability Law. *Journal of Special Education*, 33(4), 248-257.
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45, 89-125.
- Tinto, V. (1982). Limits of theory and practice in student attrition. *Journal of Higher Education*, 53, 687-700.
- Tinto, V. (1987). *Leaving college: Rethinking the causes and cures of student attrition*. Chicago: University of Chicago Press.
- Tinto, V. (1988). Stages of student departure: Reflections on the longitudinal character of student learning. *The Journal of Higher Education*, 59(4), 438-455.
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.), Chicago: University of Chicago Press.
- Turner, A. L., & Berry, T. R. (2000). Counseling center contributions to student retention and graduation: A longitudinal study. *Journal of College Student Development*, 41(6), 626-636.
- Upcraft, M.L., Gardner, J. N., & Barefoot, B. O. (2005). *Challenging and supporting the first-year student: A handbook for improving the first year of college* (pp.469-485). San Francisco: Jossey-Bass.
- U.S. Department of Education. National Center for Education Statistics. (NCES). 2001. *High School Academic Curriculum and the Persistence Path Through College*, NCES 2001-163, by Laura Horn and Lawrence K. Kojaku. Project Officer: C. Dennis Carroll. Washington, DC.
- U. S. Department of Education. National Center for Education Statistics. (NCES) [<http://nces.ed.gov/ipeds/glossary/index.asp?id=772>]. Retrieved March 21, 2009.

- U. S. Department of Education. National Center for Education Statistics, (NCES). (1999-2000). *National Postsecondary Student Aid Study*. [http://nces.ed.gov/surveys/npsas]. Retrieved March 11, 2009.
- U. S. Department of Education. National Center for Educational Statistics. (NCES) (1996). *Remedial education at higher education institutions in fall 1995* (Report No. NCES 97-584). Washington, DC.
- U. S. Department of Veterans Affairs. [http://www.gibill.va.gov/]. Retrieved December 6, 2006.
- U. S. National Archives and Records Administration. [http://www.archives.gov/education/lessons/civil-rights-act/]. Retrieved March 7, 2009.
- Vogel, S. A. & Adelman, P. B. (1992). The success of college students with learning disabilities: Factors related to educational attainment. *Journal of Learning Disabilities, 25* (7), 430-441.
- Vogel, S.A., Leonard, F., Scales, W., Hayeslip, P., Hermansen, J., & Donnell, L. (1998). The national learning disabilities postsecondary databank: An overview. *Journal of Learning Disabilities, 31*(3), 234-247.
- Wasley, P. (2006). Nessie data help spur changes at several colleges. *The Chronicle of Higher Education, 53*(13), A40.
- Watson, L. W. (2000). Working with schools to ease student transition to the community college. *New Directions for Community Colleges, 111*, 53-58.
- Weiss, C. H. (1998). *Evaluation: Methods for Studying Programs & Policies Second Edition*. Prentice Hall.
- Wessel, R. D., Jones, J. A., Markle, J., Westfall, C. (2009). Retention and graduation of students with disabilities: Facilitating student success. *Journal of Postsecondary Education and Disability. 21*(3), 116-125.
- Windham, P. (1995). The Relative Importance of Selected Factors to Attrition at a Public Community College. *Journal of Applied Research in the Community College, 3*(1), 65-78.
- Winston, R., Miller, T., Ender, S., Grites, T. & Assoc. (1984). *Developmental Academic Advising*. San Francisco : Jossey-Bass, Inc.
- Yocum, D. J., & Coll K. M. (1995). Community college students with learning disabilities: A national survey of perceptions and procedures. *Community College Journal of Research and Practice, 19*, 571-581.

Yuker, H. E. (1986). The Effects of Contact on Attitudes Toward Disabled Persons: Some Empirical Generalizations. *Attitudes Towards Persons with Disabilities*. Chapter 19, New York: Springer Publishing.