

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Educational Administration: Theses, Dissertations,
and Student Research

Educational Administration, Department of


8-2011

A Study of Factors Related to Success for Nontraditional versus Traditional Aged Students at a Public Urban Community College

Megan McCormick

University of Nebraska-Lincoln, oparasingr@yahoo.com

Follow this and additional works at: <http://digitalcommons.unl.edu/cehsedaddiss>

 Part of the [Community College Education Administration Commons](#), and the [Higher Education Administration Commons](#)

McCormick, Megan, "A Study of Factors Related to Success for Nontraditional versus Traditional Aged Students at a Public Urban Community College" (2011). *Educational Administration: Theses, Dissertations, and Student Research*. 73.
<http://digitalcommons.unl.edu/cehsedaddiss/73>

This Article is brought to you for free and open access by the Educational Administration, Department of at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Educational Administration: Theses, Dissertations, and Student Research by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

A Study of Factors Related to Success for Nontraditional versus Traditional Aged
Students at a Public Urban Community College

by

Megan McCormick

A THESIS

Presented to the Faculty of
The Graduate College at the University of Nebraska
In Partial Fulfillment of Requirements
For the Degree of Master of Arts

Major: Educational Administration

Under the Supervision of Professor Timothy A. Alvarez

Lincoln, Nebraska

August, 2011

A Study of Factors Related to Success for Nontraditional versus Traditional Aged
Students at a Public Urban Community College

Megan McCormick, M.A.

University of Nebraska, 2011

Adviser: Timothy A. Alvarez

Non-traditional students encounter many obstacles in attending college and earning a degree. Many of these obstacles, including work, family, and financial responsibilities have been shown to hinder older students' academic success as well as their campus involvement. The purpose of this study was to determine whether there was a difference using a number of factors that relate to the success of non-traditional and traditional aged students at the Community College of Allegheny County, Boyce Campus. Success was determined by a number of factors including (a) whether a student has formally declared a major; (b) their grade point average; (c) their use of available campus services including tutoring, services for students with disabilities, career services, transfer and personal counseling; and (d) whether a student is involved on campus.

Forty-four non-traditional and 69 traditional aged students participated in this quantitative study at the Community College of Allegheny County, Boyce Campus, located in Pittsburgh Pennsylvania. Participants ranged in age from 18-57 and were classified as either freshmen or sophomores in college. Participants completed a survey instrument created by the researcher and the results were used to determine if there was a difference in their overall academic success and involvement.

Acknowledgements

This project and degree program has been a long and winding road for me. This has been one of the most challenging pieces of work I have ever completed, and at some points I didn't know how I would finish. I thank my Lord and Savior Jesus Christ who shed his blood for me on Calvary for giving me the strength to complete this project. I can do everything through him who gives me strength. –Philippians 4:13

I would like to give considerable thanks to my advisor, Dr. Timothy A. Alvarez, who spent a great deal of time and effort advising me on this research project. I couldn't have done it without you Dr. Alvarez! Next, I would like to thank Dr. Richard Hoover for his consultation and feedback to make my project even stronger. I would like to thank Dr. Charles Bostaph for his permission to complete my research study at CCAC Boyce Campus, as well as CCAC administrators Dr. Charles Martoni and Dean Robert Farinelli for their support. Lastly, I would like to thank statistical consultant Mr. Chaorong Wu for his statistical analysis and advice on my project.

On a personal note, I would like to thank my beautiful mother Susan McCormick for all of her love and support throughout my master's program as well as my entire life. You are an angel in my life and I couldn't have done this without you. I would also like to thank my little sister Corey and her husband Steve as well as my significant other, Harley for helping me to make this dream a reality.

Lastly and most importantly, I would like to thank my late father Daniel McCormick, who passed away between my first and second years of the program, for his love, strength and support over the years. A strong man from a family of limited means, my father never had the opportunity to attend college even though he was the smartest

man I have ever known. He sacrificed much to provide for “his girls” so that my mother, sister and I could have a better life, and taught me to be proud of my working class background. It is this upbringing which has given me the desire to work with college students from humble backgrounds like my own. Before he died, my Dad was so proud to know that his daughter was completing a master’s degree and that my goal was to continue on for my doctorate. I am sorry you did not get to see this Dad, but it is your provision and strength that has made this possible. I love you Dad always and forever, and it is to you dearest Daddy that I dedicate this thesis.

Table of Contents

Chapter I—Introduction.....	1
Context of Research Problem	4
Significance of Study	5
Purpose Statement.....	6
Research Questions	7
Populations Studied	9
Definitions.....	11
Methodology	13
Assumptions.....	16
Limitations	17
Delimitations.....	17
Permissions and Clearances.....	18
Conclusion	19
Chapter II—Literature Review	20
Introduction.....	20
Non-traditional Student Obstacles	21
Student Grade Point Average.....	24
Declaration of Major.....	25
Gender as a Factor in Non-traditional Student Success.....	26
Non-traditional Students with Children	28
Ethnicity Educational Attainment.....	29
First Generation Status.....	30
Student Involvement in Clubs and Organizations	32
Utilization of Tutoring Services.....	33

Utilization of Career Services	34
Utilization of Services for Students with Disabilities	36
Utilization of Transfer Counseling Services	38
Utilization of Personal Counseling Services	39
Chapter III—Thesis Methodology	41
Introduction	41
Research Questions	42
Research Location	44
Study Participants	45
Institutional Review Board Procedures	46
Variables	46
Study Design	47
Setting	48
Population/Sample	49
Data Collection	50
Reliability and Validity of Survey Instrument	51
Assumptions	53
Limitations	54
Delimitations	55
Participants	56
Data Collection Procedures	57
Data Analysis	58
Conclusion	58
Chapter IV—Findings	59
Purpose	59

Participant Population.....	60
Reliability and Validity of Survey Instrument.....	61
Research Questions.....	62
Research Question 1	62
Sub-Questions	62
Research Question 2	63
Sub-Questions	63
Research Question 3	63
Sub-Questions	63
Research Question 4	64
Sub-Questions	64
Results.....	65
Research Question 1	65
Non-traditional Versus Traditional Student Grade Point Averages	65
Male versus Female Non-traditional Student Grade Point Averages	66
Male versus Female Traditional Student Grade Point Averages	67
Non-traditional versus Traditional Student Declaration of a Major.....	67
Research Question 2	68
Non-traditional versus Traditional Student Work Responsibilities	68
Non-traditional versus Traditional Student Family Responsibilities	69
All Campus Involvement of Non-traditional versus Traditional Students.....	69
Research Question 3	70

Non-traditional versus Traditional Student Utilization of Tutoring Services	70
Non-traditional versus Traditional Student Utilization of Supportive Services	71
Non-traditional versus Traditional Student Utilization of Career Services	71
Non-traditional versus Traditional Student Utilization of Transfer Counseling.....	72
Non-traditional versus Traditional Student Utilization of Personal Counseling.....	72
Research Question 4	73
First Generation Non-traditional Student versus Non-first Generation Non-traditional Student Grade Point Average	73
First Generation Traditional Aged Students versus Non-first Generation Traditional Aged Students.....	74
Frequency in Utilization of Campus Support Services between First Generation Non-traditional Student and Non-first Generation Non-traditional Students	74
Frequency of Utilization of Support Services between First Generation Traditional Aged Students and Non-first Generation Traditional Aged Students.....	75
Conclusion	76
Chapter V—Discussion and Implications.....	77
Introduction.....	77
Participant Population.....	78
Summary of Findings.....	79
Discussion.....	81
Research Questions	81
Research Question 1	81
Sub-Questions	81

Research Question 2	85
Sub-Questions	85
Research Question 3	88
Sub-Questions	88
Research Question 4	94
Sub-Questions	94
Recommendations	96
Conclusion	100
References	102
Appendices	116

List of Tables

Table 1	Ethnic Makeup of Study Participants	56
Table 2	Majors Declared by CCAC Boyce Campus Student Surveyed	60
Table 3	Research Question 1a.....	65
Table 4	Research Question 1b	66
Table 5	Research Question 1c.....	67
Table 6	Research Question 1d	67
Table 7	Research Question 2a.....	68
Table 8	Research Question 2b	69
Table 9	Research Question 2c.....	69
Table 10	Research Question 3a.....	70
Table 11	Research Question 3b	71
Table 12	Research Question 3c.....	72
Table 13	Research Question 3d	72
Table 14	Research Question 3e.....	73
Table 15	Research Question 4a.....	73
Table 16	Research Question 4b	74
Table 17	Research Question 4c.....	75
Table 18	Research Question 4d	76
Table 19	Ethnic Breakdown of All Study Participants	79
Table 20	Average Grade Point Average of Non-traditional and Traditional Students	82
Table 21	Average Grade Point Average of Non-traditional and Traditional Students	84
Table 22	Campus Involvement of Non-traditional and Traditional Aged Students.....	86

Table 23	Non-traditional Students With or Without Children.....	88
Table 24	Tutoring Utilization of Non-traditional and Traditional Aged Students.....	90
Table 25	Utilization of Services for Students with Disabilities.....	92
Table 26	Utilization of Career Services.....	92
Table 27	Utilization of Transfer Counseling Services.....	92
Table 28	Utilization of Personal Counseling Services.....	93

List of Figures

Figure 1 Pittsburgh Ethnic Makeup..... 3

List of Appendices

Appendix A	Survey Instrument.....	116
Appendix B	Informed Consent Form.....	120
Appendix C	Class Presentation of Survey	123
Appendix D	Thesis Email Letter to CCAC Faculty	125
Appendix E	CCAC Boyce Campus Dean of Students Approval Letter	128
Appendix F	University of Nebraska Institutional Review Board Approval Letter	130

A Study of Factors Related to Success for Nontraditional versus Traditional Aged
Students at a Public Urban Community College

Chapter I

Introduction

Non-traditional students have historically encountered many obstacles in obtaining a college education such as work, family responsibilities, and other off campus obligations (Ryan, 2003, para. 4). This study was designed to examine whether some of these barriers affect the success of non-traditional students at CCAC Boyce Campus. The purpose of this study was to determine whether there was a difference using a number of factors that relate to the success of non-traditional and traditional aged students at the Community College of Allegheny County, Boyce Campus. Success was determined by a number of factors including: (a) whether a student has formally declared a major; (b) their grade point average; (c) their use of available campus services including tutoring, services for students with disabilities, career services, transfer and personal counseling; and (d) whether a student was involved on campus. Other variables were studied such as gender, employment status and first generation student status when determining the study results.

The urban Pittsburgh area provides an excellent setting for the Community College of Allegheny County. In fact, Allegheny County (where the city of Pittsburgh is located) is home to 1.26 million residents (Carnegie Mellon, 2005, para. 1) with actual downtown Pittsburgh being home to 311,647 people as of July 2009 (City Data, 2010, para. 1). Pittsburgh is also within 500 miles of over half of the United States population, which makes the location ideal for residents (Carnegie Mellon, 2005, para. 2). Although

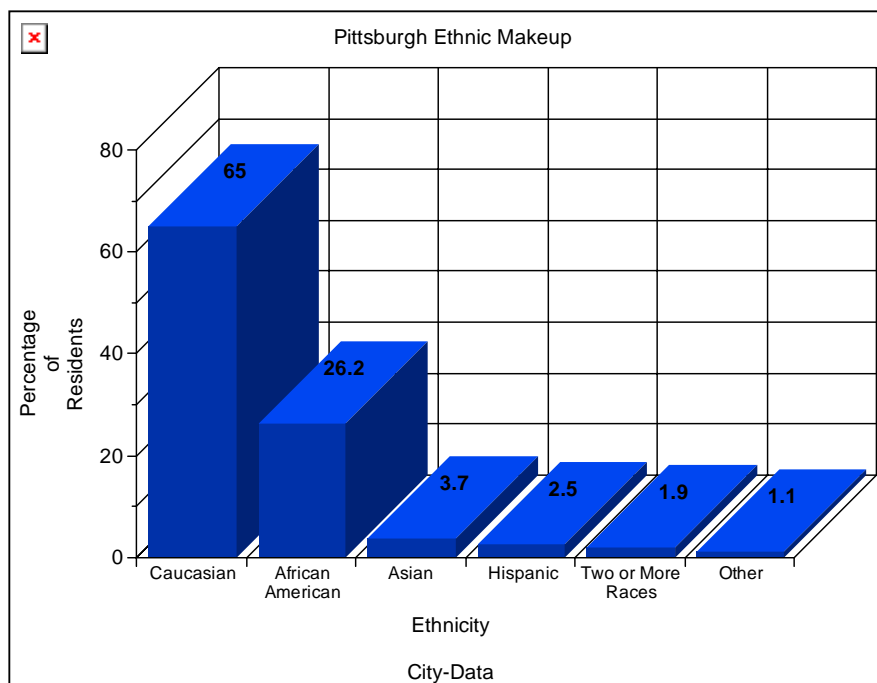
once known primarily for the city's blue collar industries including the Pittsburgh steel mills, today the city is home to many Fortune 500 companies, including Pittsburgh Plate and Glass Company, the United States Steel Corporation, Alcoa, and the Heinz Corporation (para. 4).

CCAC's vocational programs reflect Pittsburgh's original blue collar background by training numerous career program graduates, 95% of which stay in the area and work for local employers upon graduation (CCAC, 2011c, para. 24). Additionally, Pittsburgh is a vital center for hospitals and higher education and is home to the University of Pittsburgh Medical Center, the University of Pittsburgh and Carnegie Mellon University, among many other institutions of higher learning. Despite the advances that Pittsburgh has made from a blue collar town to one full of education and industry, Pittsburgh has not forgotten its blue collar roots.

The city of Pittsburgh's population overall is 52.4% female and 47.6% male with the median resident age being 35.5 (City-Data, 2010, para. 3-4). CCAC's gender makeup somewhat reflects the makeup of the Pittsburgh area, with 57% of CCAC students being female, and 43% being male (CCAC, 2011c, para. 6). The average age of a CCAC student is similar to the average age of a Pittsburgh resident at 28 (para. 6). The median household income of Pittsburgh residents is fairly low, with \$37,461 being the average (para. 6) compared with the 2008 national median family income of \$52,029 annually (US Census Bureau, 2010, para. 5).

With many students' family incomes mirroring the city's lower income bracket, CCAC offers affordable tuition at \$85.25 per credit and provides an opportunity for many students in the Pittsburgh area to attend college who might otherwise be unable. CCAC

also hosts a 22% minority population of students (CCAC, 2011c, para. 6). The population of the city of Pittsburgh is diverse, with the ethnic makeup shown in Figure 1.



(Source: City Data, 2010, par. 11)

Figure 1. Pittsburgh ethnic makeup.

CCAC is a strictly commuter institution, as there are no housing facilities provided by the school. The institution offers in total more than 170 academic programs (CCAC, 2010d, para. 17). Students have the option to earn several degrees and certificates including the Associate of Science Degree, the Associate of Arts Degree, the Associate of Applied Science Degree and various certificates and diplomas (para. 11).

The Community College of Allegheny County is home to four main campuses and six college centers. The first of the main campuses, Allegheny Campus, is located on Pittsburgh's North Shore and the administration there also oversees the East End's Homewood-Brushton Center and the college's Downtown Center located in the center of

downtown Pittsburgh (CCAC, 2011b, paras. 1-6). Boyce Campus, the second primary campus of the Community College of Allegheny County, is located in Monroeville, Pennsylvania. The campus administration also oversees credit and non-credit classes at the Braddock Hills Center, located in the eastern suburbs of Pittsburgh (CCAC, 2011d, paras. 1-2). CCAC's North Campus, located twelve miles north of Pittsburgh in McCandless, also serves students at their smaller West Hills Center located west of Pittsburgh in North Fayette Township (CCAC, 2011j, paras. 1-5). Lastly, the South Hills Center, located in the southern suburbs of Pittsburgh in West Mifflin, also monitors the daily operations of two smaller campus centers, the Bethel Park Center and the Washington County Center, located in Bethel Park and Washington, respectively (CCAC, 2011m, paras. 1-5).

The Boyce Campus of the Community College of Allegheny County is located in Monroeville, PA, approximately 15 miles east of downtown Pittsburgh (CCAC, 2011d, para. 1). Approximately 14,000 full- and part-time students attend CCAC Boyce Campus annually making the school a popular choice for local residents (para. 5). Since the school is on the public transportation lines, it draws in students from both Pittsburgh's urban and suburban areas.

Context of Research Problem

Multiple definitions exist with the purpose of defining a non-traditional student. NCES (n.d.) explained that non-traditional students are considered such when they possess one or more of the following characteristics: (1) being older than the typical student age; (2) attending college part-time; (3) being considered an independent student; (4) working fulltime while in school; (5) possessing dependents; (6) being a single

parent; and (7) holding a high school completion certificate or a GED (para. 10). Niner (2006) described a non-traditional student as one who was 24 years of age or older and who is working and attending college part-time (para. 3). More typically, non-traditional students are classified as students who are 25 years of age or older (Burk & LeBlanc, 1993, p. 5). For the purpose of this study, the only criterion used to determine non-traditional student status is whether a student is 25 or more years of age.

Today, non-traditional students are shown to experience more barriers in obtaining a college education. Non-traditional students also have low completion rates. Overall, the National Center for Education Statistics showed that only 26.7% of non-traditional aged college students completed an associate's degree in a five year period, compared with 53.4% of traditional aged students (Florida Department of Education, 2003, p. 1). Interestingly, non-traditional student retention and completion rates are believed to be influenced by circumstances such as employment, greater family involvement, and financial concerns (Keith, 2007, para. 3). This study was designed to examine whether these barriers affect the success of non-traditional students at CCAC Boyce Campus.

Significance of Study

This research study is significant because the study provided additional insight into the factors that affect non-traditional student success in higher education. The study will attempt to add to the existing literature in order to further higher education institutions' understanding of the various issues that influence the success of non-traditional students. The study will also delineate factors related to success of non-traditional and traditional students.

Purpose Statement

The purpose of this study was to determine whether there was a difference using a number of factors that relate to the success of non-traditional and traditional aged students at the Community College of Allegheny County, Boyce Campus. Success was determined by a number of factors including (a) whether a student has formally declared a major; (b) their grade point average; (c) their use of available campus services including tutoring, services for students with disabilities, career services, transfer and personal counseling; and (d) whether a student is involved on campus.

Research has shown that a student who enrolls in and makes a formal commitment in a for-credit degree program at a college is more likely to be retained in college and thus more academically successful (Cohen and Brawer, 2003, p. 65-66). Regarding a student's grade point average, Noble and Sawyer (2002) wrote that a student's grade point average measures educational achievement and is a good indicator of their academic success. They also explained that a high grade point average could be considered a 3.0 or above, whereas a grade point average of a 2.0 to 2.99 is only considered a moderate level of academic success (p. 6). Arkridge and Ross (1987) suggested that the utilization of various campus services (such as counseling, tutoring, etc.) can help a student's success by improving a student's grade point average and overall college experience (p. 1-14). Lastly, a student's campus involvement is considered positive when a student is involved in one or more clubs, organizations or extra-curricular activities, whether these groups are sponsored through student activities or academic departments, as a high degree of interaction with a student's peers on

campus has shown to have a positive impact on the overall success and retention of college students (Cohen and Brawer, 2003, p. 64-65).

Additionally, the researcher collected data to consider whether variables such as gender, employment status and first generation college student status influence student success. A stratified random sample was obtained from both populations. Surveys were distributed to both non-traditional age and traditional age students and the results were used to determine whether there was a difference in their success and what factors might influence non-traditional student success at CCAC Boyce Campus.

Research Questions

The research questions that were used to determine results for this study include:

1. Research Question 1. Is there a difference among some factors related to the success of traditional and non-traditional students?
 - a. Is there a difference of grade point averages between non-traditional and traditional aged students (freshman and sophomore) at the college?
 - b. Is there a difference in the academic success (as demonstrated by grade point average) of non-traditional male and non-traditional female (freshman and sophomore) students?
 - c. Is there a difference in the academic success (as demonstrated by grade point average) of traditional aged male and traditional aged female (freshman and sophomore) students?
 - d. Is there a difference in the number of non-traditional and traditional (freshman and sophomore) students who have declared a formal major?

2. Research Question 2. Is there a difference in the campus involvement of non-traditional and traditional students?
 - a. Is there a difference in the campus involvement of non-traditional students who work (part-time or fulltime) versus those who do not work?
 - b. Is there a difference in the level of campus involvement between non-traditional students who have children as opposed to those non-traditional students who do not??
 - c. Overall, is there a difference in the level of campus involvement between non-traditional and traditional students, regardless of work and family (spouse and/or children) responsibilities?
3. Research Question 3. Is there a difference in the frequency of utilization of the various support services at the college between non-traditional and traditional students?
 - a. Is there a difference in the number of non-traditional and traditional students utilizing tutoring services?
 - b. Is there a difference in the number of non-traditional and traditional students utilizing services for students with disabilities?
 - c. Is there a difference in the number of non-traditional and traditional students utilizing career services at the college?
 - d. Is there a difference in the number of non-traditional and traditional students utilizing transfer counseling services?
 - e. Is there a difference in the number of non-traditional and traditional students utilizing personal counseling services?

4. Research Question 4. Does first generation status affect the grade point averages of non-traditional and traditional students?
- a. Is there a difference in the overall grade point averages of first generation non-traditional and non-first generation non-traditional students?
 - b. Is there a difference in the overall grade point averages between first generation non-traditional and non-first generation traditional aged students?
 - c. Is there a difference in the frequency of utilization of support services (1) tutoring, (2) services for students with disabilities, (3) career services, (4) transfer, (5) personal counseling that a first generation, non-traditional student as opposed to a non-first generation non-traditional student?
 - d. Is there a difference in frequency of utilization of support services (1) tutoring, (2) services for students with disabilities,(3) career services, (4) transfer, (5) personal counseling, that a first generation traditional aged student as opposed to a non-first generation traditional aged student?

Populations Studied

The two populations studied as part of this quantitative research project were non-traditional and traditional aged students. Creswell (2009) explained that a quantitative research study is “a means for testing objective theories by examining the relationship among variables” (p. 4). One type of quantitative research that can be completed and which was used in this study is survey research. Survey research is able to provide a numeric description of a population by studying a sample of the population and is collected by participants completing questionnaires or structured data collection

interviews (p. 12). This format was used to quantify the differences in factors related to success of non-traditional and traditional community college students.

The first population studied was a voluntary group of 44 fulltime non-traditional students at CCAC Boyce Campus. The second was a voluntary group of 69 fulltime traditional aged students at CCAC Boyce Campus. Based on the most recently available data, the group of 44 non-traditional participants represented approximately 15% of the fulltime Boyce Campus non-traditional student population, and the group of traditional aged students represented approximately 7% of the fulltime traditional aged student population (CCAC, 2010b, p. 52). Study participants ranged in age from 18-57 and were classified as either freshmen or sophomores in the community college. Study participants were part of a random stratified sample, with the intent of obtaining non-traditional and traditional student samples for the study. According to Creswell (2009), stratification “means that specific characteristics are represented in the sample and the sample reflects the true proportion in the population of individuals with certain characteristics” (p. 148). Instructors within each of the eight academic divisions were contacted at random and asked if they were willing to allow the researcher to offer the opportunity to participate in the study to the students in courses they were teaching. During the survey process, every effort was made to obtain an equal number of non-traditional and traditional student surveys; however, the researcher observed there were less non-traditional students eligible and/or willing to participate.

The sample of non-traditional students was compared with the sample of traditional aged students to determine whether non-traditional students at CCAC Boyce Campus are more or less successful based on several factors. These factors were chosen

by the researcher in conjunction with her adviser after observing the two groups of students and determining what information would assist the researcher and college administration in better understanding the non-traditional student population at the institution. These factors were also chosen after reviewing various articles in the literature including Cohen and Brawer, Arkridge and Ross and Noble and Sawyer's work, each noting areas that were factors in the success of college students. The factors being used to determine success were: (a) whether a student has formally declared a major; (b) grade point average; (c) use of available campus services including tutoring, services for students with disabilities, career services, transfer and personal counseling; and (d) whether a student was involved on campus. All students who participated in this study were offered the opportunity to participate in the research study and agreed to do so voluntarily.

Definitions

Terms have been defined for use in this study:

Career Services—The Career Services office offers assistance with choosing a career path, creating a resume, gaining work experience and finding new employment opportunities (CCAC, 2011i, para. 1-5).

CCAC—The term CCAC stands for the Community College of Allegheny County.

Family—For the purpose of this study, a student's family can be defined as their spouse and/or children. When referring to family responsibilities, these are the only family members who were considered.

First Generation College Student—The United States Federal TRIO Program, defines a first generation college student as one whose “parents have never earned a Bachelor’s degree but may have some postsecondary experience” (Los Angeles Valley College, 2004, p. 1). For the purpose of this study, a first generation student is one whose parents have never earned a Bachelor’s degree but may or may not have postsecondary education experience.

GPA—For the purposes of this study, the acronym GPA is used to describe a student’s cumulative grade point average. A student’s cumulative grade point average includes the calculation of all student grades previously completed at CCAC.

Non-Traditional Age and Traditional Aged Students— Non-traditional students are classified as students who are 25 years of age or older (Burk & LeBlanc, 1993, p. 5). A traditional aged college student is between the ages of 18 and 24 (Adelman, 2005, p. xiv).

Personal Counseling—Personal counseling will be defined as academic and personal counseling to address issues such as “careers, loneliness, fear of failure, lack of self-confidence, anxiety, poor study habits, test anxiety, family and relationship conflict, academic probation and suspension, time management and stress” (CCAC, 2011k, para. 2).

Services for Students with Disabilities—Services are offered for students who have a documented physical, medical, cognitive or emotional disability. The office ensures that reasonable accommodations are provided to those qualified students who request them as part of the American’s with Disabilities Act (ADA) and/or the Section 504 of the Rehabilitation Act (CCAC, 2011g, para. 4-7). Common services provided

include extended time on examinations, academic assistance, guidance with assistive technology, access to Braille materials and designated parking spaces for those with a Pennsylvania handicapped license plate (CCAC, 2010d, p. 2).

Transfer Counseling—The role of transfer counseling includes helping students with selecting general education, major courses, and general electives that will transfer to various institutions and various articulation agreements (CCAC, 2011, para. 1-6).

Tutoring Services—Tutoring is meant to provide supplemental instruction for students who may be having difficulty in their courses, and is offered in Math, Biology, Chemistry, Physics, English, and Computer Information Technology to assist students with their non-credit and credit classes. Tutoring is offered in both individual and group study formats (CCAC, n.d., p. 1).

Work Responsibilities—For the purpose of this study, a student who has work responsibilities is classified as one who works on either a part-time or fulltime basis, regardless of the number of hours worked.

Methodology

This research study utilized a quantitative research approach. Creswell (2009) noted that a quantitative study generally follows a similar format to that of quantitative research journal articles and offers an introductory section, a literature review section, a methodology section, a results section and a final discussion section (p. 76). Creswell (2009) also explained that a quantitative study is often used to study a population “with the intent of generalizing from a sample to a population (p. 12). Because the researcher wished to study a large non-traditional student population, the researcher chose the quantitative format to sample a smaller portion of the population to provide her with the

ability to generalize her results. Utilizing the quantitative methodology was also important because this methodology allowed her to narrow her research to slightly over 100 students, rather than surveying the student body of over 14,000 students as that survey method would not be realistic for the purposes of this research study.

At the beginning of the research study, instructors from each of the eight academic divisions at CCAC Boyce Campus were sent an email asking if they were willing to allow the researcher the opportunity to distribute surveys in select courses. The researcher then attended those classes and offered students the voluntary opportunity to participate in the research study. Both non-traditional and traditional aged students were asked to participate from each of CCAC Boyce Campus' eight academic divisions: Communication Arts, Humanities, Mathematics, Sciences, Social Sciences & Education, Business Technologies, Information Technologies, and Allied Health.

As mentioned previously, the methodology used for this research study was quantitative. Creation of the participant surveys was done by the researcher, who considered a number of factors that may possibly affect the success of non-traditional students based on her work with non-traditional students at CCAC Boyce Campus as well as the existing body of literature on non-traditional students. Non-traditional students have classically been known to often face burdens such as family, work and other off campus obligations which can impede their success in college (Calcagno, Crosta, Bailey, and Jenkins, 2006, par. 4; El-Khawas, 2003, p. 51). Due to these factors and the high number of non-traditional students normally enrolled at community colleges (St. John and Tuttle, 2004, p. 7), the researcher chose to create a survey instrument which could assess whether these factors influenced non-traditional student success.

In order to distribute surveys, the researcher obtained formal approval from the Dean of Students at CCAC Boyce Campus. This approval is attached as Appendix E. Before surveys could be administered, the researcher obtained permission from instructors in each of the eight academic divisions by using the attached Thesis Email Letter to CCAC Faculty (Appendix D). After formal permission was obtained, the survey distribution was completed and a standard protocol was followed by reading the Class Presentation of Survey (Appendix C) and requesting student volunteers. Those who agreed to complete the survey received a copy of the Survey (Appendix A) and two copies of the attached Informed Consent Form (Appendix B). Students who agreed to participate were required to sign one copy of the Informed Consent Form for the researcher's records. A student volunteer was selected to collect each survey and a signed copy of the Informed Consent Form in a provided envelope. The student volunteer was also instructed to sign the words "completed surveys" and initials across the seal of the envelope. The researcher left the room immediately after distributing the student surveys and obtained the completed surveys and signed informed consent forms at a later time.

The raw data collected was coded and analyzed with the assistance of the University of Nebraska Evaluation and Research Center Consultant. Both the t-test for the equality of means and the Pearson Chi-Square Correlation methods were used to analyze the data collected.

Gravetter and Wallnau (2009) explained that the Chi-Square Test and Pearson Correlation are techniques used in statistics to "evaluate the relationship between two variables" (p. 629). The Pearson Chi-Square Test was selected due to the method's

ability to compare the frequency of cases that can occur by chance with the actual frequency of cases in a cell (Cramer, 2003, p. 224). The t-test is most frequently used to test any difference between independent groups or to test any difference between dependent groups (Wielkiewicz, 2000, para. 1). When considering an independent variable, one can use the t-test when two independent groups have the same variable and one wishes to know whether there is a statistically significant difference between the two groups. When considering a dependent variable, a t-test is used when one group of people have been assessed in two varying conditions (para. 2).

Assumptions

When creating and conducting this study, the researcher had two primary assumptions.

- First, the researcher assumed that if a student has utilized transfer counseling services that they are considered a transfer student. There is a possibility that students may have participated in transfer counseling (to explore their options or for other purposes) without actually being a transfer student or intending to transfer.
- The researcher also assumed that if a student had utilized services for students with disabilities that they had a disability. While CCAC requires students who receive any accommodations through the Services for Students with Disabilities Office to present recent documentation verifying that they have a documented disability (CCAC, 2011g, para. 10), there is a possibility that students could have utilized the services of the office before the office determined that the student did not qualify for accommodations based on a lack of documentation or other issues.

Limitations

This study has limitations which must be considered.

- First, the challenge associated with self-reported responses from the participants provides the possibility that the participants may have falsely recorded one or more answers. There is a possibility that a student or student(s) could have falsely recorded one or more answers in an effort to appear a stronger or more involved student.
- Secondly, the survey collection manner was a stratified random sample collection. While every effort was made to obtain an accurate representation of CCAC Boyce Campus students, caution should be utilized when attempting to generalize to the whole student body.
- Limitations existed in generalizing to the student body due to the limited number of study participants. When considering whether a student had work responsibilities, the researcher was only able to separate respondents into two groups; those who worked and those who did not. Therefore, a student who indicated that they worked less than 10 hours per week was placed in the same group as one who worked 40 hours per week.

Delimitations

When reviewing this study, there are several delimitations which must also be considered.

- First, although approximately 14,000 full and part-time students attend CCAC Boyce Campus annually (CCAC, 2011d, par. 5), only 116 students chose to participate in the study, and out of that group only 113 useable surveys were

collected. As such, the study was meant to focus on CCAC Boyce students only, rather than focusing on CCAC students from the other campuses in the college system.

- Of students who were part of the classes offered the opportunity to participate in the research study, students who were willing to participate were required to be fulltime students enrolled in at least 12 credits that semester, and the students who met these criteria were also required to have been a previous fulltime student at any CCAC campus for at least one prior semester.
- Those who met the fulltime status criteria were also required to be able to legally provide signed consent for themselves in order to participate in the research study. The age of majority in Pennsylvania is 18 years of age, which allows students to sign contracts as an adult in the state of Pennsylvania (USLegal.com, 2010, para. 6-9). Therefore, all students participating were required to be 18 or older.

Permissions and Clearances

Formal permission to conduct the researcher's study was obtained from the Institutional Review Board at the University of Nebraska-Lincoln. The official IRB approval form is attached as Appendix F. Additionally, permission was obtained from the Dean of Students at The Community College of Allegheny County, Boyce Campus to allow the researcher the ability to administer the surveys to students. Lastly, permission was obtained from instructors in each of the institution's eight academic divisions in

order to administer the survey in their courses. The attached email (Appendix D) was sent to instructors requesting permission to distribute the student surveys.

Conclusion

This chapter provided background information on the Community College of Allegheny County, Boyce Campus as well as provided an outline of the study that was completed to determine whether there was a difference using a number of factors that relate to the success of non-traditional and traditional aged students there. The next chapter will provide a literature review on the topic of non-traditional students, and the following chapters will address the methodology of the study, the study's results as well as the researcher's final recommendations.

Chapter II

Literature Review

Introduction

Non-traditional students have historically faced many obstacles in obtaining a college education such as work, family responsibilities, and other off campus obligations (Ryan, 2003, para. 4). This study was designed to examine whether these barriers affect the success of non-traditional students at CCAC Boyce Campus. The purpose of this study was to determine whether there was a difference using a number of factors that relate to the success of non-traditional and traditional aged students at the Community College of Allegheny County, Boyce Campus. Success was determined by a number of factors including: (a) whether a student has formally declared a major; (b) their grade point average; (c) their use of available campus services including tutoring, services for students with disabilities, career services, transfer and personal counseling; and (d) whether a student was involved on campus. Other variables were studied such as gender, employment status and first generation student status when determining the study results.

For the purpose of this research study, a non-traditional student was defined as one who is 25 years of age or older. Non-traditional students can officially be defined as those college students who are 25 years of age or older (Burk & LeBlanc, 1993, p. 5). Similarly, a traditional student is defined as a college student who is between the ages of 18-24 (Adelman, 2005, p. xiv). Since the study was conducted strictly in the state of Pennsylvania, individuals who participated in the research study were only required to abide by Pennsylvania guidelines that they be 18 years of age in order to provide legal consent for their participation (USLegal.com, 2010, para. 6-9).

For the purpose of this study, non-traditional students are officially classified as those who are ages 25 and above (America.gov, 2008, para. 6). Other characteristics which might define non-traditional students are as follows:

- delayed enrollment in postsecondary education,
- being a part time student for a portion of an academic year,
- working full-time while enrolled in college,
- financially independent status as determined by the results of the Free Application for Federal Student Aid,
- one who has children/dependents,
- a person who is a single parent, and
- one who has completed high school through obtaining a General Education Diploma. (University of Minnesota, 2005, p. 6)

For the purpose of this research study, age is the only characteristic used when determining whether students are considered non-traditional students. Other characteristics were not considered due to the researcher's desire to understand whether age has an impact on student success. Another reason the researcher chose to consider only age as a defining characteristic of non-traditional students is due to the researcher's current work with community college students. Today, community colleges enroll high populations of students over the age of 25 (Ryan, 2003, para. 4), and thus the researcher surmised that there is a need for a better understanding this group of students.

Non-Traditional Student Obstacles

According the National Center for Education Statistics (2008b), community colleges are historically known to enroll high populations of non-traditional students (p. 24). St. John and Tuttle (2004) confirmed this fact, stating that "non-traditional students are more likely than traditional students to attend community colleges" (p. 7). In addition to non-traditional students, community colleges are also known to enroll more students who are classified as low income and minority students than four year

institutions of higher learning (NCES, 2008b, p. 24). As a result, adult, low income and minority students may face more challenges related to educational attainment levels and persistence than students at four year schools.

Ryan (2003) also discussed the changing demographics within American community colleges. He noted that community colleges now serve a larger population of students who are older, first generation students, those who are immigrants and those who are single parents (para. 3). NCES (2010) acknowledged that non-traditional age students are making up an increasing part of the college population. Between 2000 and 2009, non-traditional student enrollment increased by 43%, whereas traditional aged student enrollment only increased 27% during the same period (para. 5). Because of these factors, students at community colleges often face more obstacles hindering their academic success. Calcagno, Crosta, Bailey, and Jenkins (2006) stated that over 1/3 of the current enrollment of students at public two year schools in the United States are made up of non-traditional students (p. 1). Most notably for non-traditional students, this group of individuals often faces added obstacles such as work, family responsibilities and other “off campus obligations” that can impede a student’s academic success (para. 4). Gender is also known to play a role within the academic success of students. Histories of faculty interactions and textbooks which confirm gender stereotypes promoting male success have had a negative affect on female student learning (para. 5).

El-Khawas (2003) argued that many generational differences exist between older adult and younger adult students which are reflected in the “distinctive attitudes and world values” of each generation (p. 51). Consequently, each of these groups of students brings their own distinct perspective to their college campus (p. 51).

Non-traditional students may face obstacles within the classroom which are not as prevalent for their traditional age counterparts. Miller and Lu (2002) stated that one of these challenges is due to the recent surge in the use of technology in higher education. For non-traditional student learners, they are “most likely to find challenges in grappling with the technology and expectations of a non-traditional classroom learning environment” (p. 5). Simply put, non-traditional students may not have as much experience dealing with courses of a highly technological nature they may be required to complete. To that end, they may be at a disadvantage pursuing higher education simply due to their lack of experience with technology. In addition to learning new technologies, reading at the college level has also been an issue for many non-traditional students. Cohen and Brawer (2003) reported that based on a NCES report, half of the non-traditional students testing scores placed at the lowest two of five tiers for reading skills (pp. 421-422).

El-Khawas (2003) assessed that “older students were generally distinctive because of their workplace, family or other life experiences” (p. 51). Older students often face issues which are similar to those faced by part-time students (p. 51). Outside of the classroom, older students may find that institutional services such as the Registrar’s office, financial aid office, library and bookstore are not available at times that are convenient (El-Khawas, 2003, pp. 54-55). Particularly an issue for part-time students due to their less frequent attendance on campus, many institutions have “become aware that part-time students (especially those who are older) have distinct needs and expectations” (p. 54).

Evans, Forney, Guido, Patton, and Renn (2010) explained that a number of unbalanced social structures often play into the natural privilege of college students. Despite students' academic success, factors such as race, social class, gender, age and appearance still play a significant role in the success of students in higher education today (p. 238).

Student Grade Point Average

Glass and Harrington (2002) noted that the grade point averages of students at a community college are a good predictor of their overall academic success. Additionally, the grade point averages that students earn at a community college are likely a future indicator of their grade point averages when they transfer to earn degrees at four year institutions (p. 416).

Glass and Harrington (2002) wrote that the older a transfer student, the higher their overall grade point average was upon graduating. Despite this, they found that the older a student the longer average time frame it took them to complete their degree program (p. 417). Miller Brown (2002) noted that non-traditional students with clear cut career and educational goals were more likely to be retained in college (p. 70). Also a large factor in the retention of non-traditional students is their grade point averages, which can indicate an adult student's ability to persist (p. 71). A student's first semester grade point average, particularly for commuter students, is the best indicator of a student's future persistence (p. 71). A student's grade point average is also commonly known as a good predictor of non-traditional student's persistence, attrition rates, and re-enrollment trends (p. 71).

Declaration of a Major

The formal declaration of a major is also an important factor in the persistence of college students. According to NCES (2003), 89% of first time students enrolled at a community college in the United States were enrolled with the intent to transfer or obtain a degree (p. 8). Nearly 9 out of 10 students who first enroll at a community college list obtaining a degree there or transferring as their primary purpose for attending (National Center for Degree Statistics, 2003, p. 12). Interestingly, older students were more likely to enroll at a community college without declaring a formal major, often with the intent of simply increasing employment skills (p. 12). Moreover, older students were more likely to enroll in certificate programs than younger students and less likely to enroll in liberal arts or similar general studies programs (p. 14).

Declaring a major is important not only for degree completion purposes, but also for the purpose of financial aid. For example, in order for students to receive federal student aid, one must “be enrolled or accepted for enrollment as a regular student working toward a degree or certificate in an eligible program” (Studentaid.ed.gov, 2011b, para. 3). Because the federal government awards a large portion of the money used to pay for college in America each year (\$150 billion in grants, loans, and scholarships), declaring a major will allow students to be considered for various forms of financial aid (Studentaid.ed.gov., 2011a, para. 1).

Students choosing not to declare a major may face additional time necessary for completing their degree programs. Interestingly, the average length of time to complete certificate programs was 2 ½ years and the average length of time to complete an associate’s degree was 3 ½ years (NCES, 2003, pp. 31-32). Another factor in the

extended length of time to complete an associate's program or certificate was due to the fact that many community college students are not enrolled full-time on a consistent basis (p. 31). Other reasons exist for this extended length of completion. Several of these reasons include but are not limited to: (a) academic underpreparedness when entering college, (b) family responsibilities, and (c) the overall lack of time necessary to devote to one's studies (p. 47).

Gender as a Factor in Non-traditional Student Success

Overall, 75% of the single parents enrolled in college are female (Miller, 2010, p. 1). Evans et al. (2010) also noted that "male privilege has been a dominant theme throughout U.S. history" but has been "adamantly challenged" during the latter part of the 20th century (p. 241). Men are often unaware of the privilege that simply being a male in United States society holds (p. 241). Women, on the other hand, are unfortunately still more likely to be economically and socially handicapped than men (p. 241). El-Khawas (2003) argued that the influx of women students attending college has brought forth many changes to school's campus programs and curricula (p. 47). Once primarily relegated to "traditional" female programs such as teaching, many colleges have expanded their traditionally male business, law and communications programs to include more female students (p. 47).

St. John and Tuttle (2004) noted that non-traditional age students may have not previously had the opportunity to attend college due to personal, educational or economic reasons (p. 3). Not surprisingly, non-traditional female students often face unique concerns when attempting to attend or return to college including:

- concerns about childcare,
- concerns about maintaining their role of responsibility at home,

- issues with compromising their careers due to family responsibilities,
- a lack of free time,
- a fear of their credibility being questioned as an adult returning to school, and
- issues with financial support to maintain the household during their time in college. (pp. 3-4)

Although non-traditional female students face significant obstacles based on gender, male students encounter obstacles of their own. Despite their historical presence in higher education, men are less likely to attend college than women, and the number of men enrolled in college has been steadily declining while the number of women attending college continues to rise (United States General Accounting Office, 2000, p. 10).

Perhaps due in part to job opportunities straight out of high school that pay more than female positions and military enlistment, male students' college enrollment is less than female enrollment (p. 10). Overall, men typically seemed more concerned over the financial pressures of returning to college than women (St. John & Tuttle, 2004, p. 4), perhaps due to social pressures to serve as the provider for their families. El-Khawas (2003) found that "attention has recently turned to the way that the college environments affect male students" and that there is concern "that college and university climates are hostile and unsupportive to male students in some systematic ways" (p. 48). Supported by data which suggests that male students are less likely to enroll and make progress towards their degree attainment, male students face obstacles of their own while attending college (p. 48). Additional data supported the fact that male students are achieving Baccalaureate degrees at a slightly slower rate than female students, with male students increasing the number of degrees earned by 32% from 1998-99 to 2008-09 compared with a 34% increase by female students during the same period (NCES, 2010, para. 19).

Non-traditional Students with Children

One significant obstacle often hindering the academic success of non-traditional students is their level of family responsibilities. The National Center for Education Statistics (2003) found that although there was no difference in the rate of community college associate degree or certificate obtainment for both non-traditional and traditional students who did or did not have dependents, students with dependents were less likely to continue on and graduate with a Bachelor's degree than those without dependents (p. 26).

Single parents face many challenges remaining enrolled and graduating from college. In the United States, over 13 million people are single parents (Grall, 2009, p. 1). Approximately 22.4% of white children reside in single parent households, whereas 48.2% of African American children live in single parent households (p. 2). Miller (2010) found that community colleges overall had two times the normal proportion of single parents than at four year institutions (p. 1).

Despite 80% of student parents noting that the availability of childcare was a factor in the decision to attend college, childcare facilities are often not available for everyone on college campuses. Overall, the number of campus childcare centers at community colleges nationwide dropped from 51% in 2001 to 48% in 2008 (Miller, 2010, p. 1). Also, 90% of these schools often maintain waiting lists that make the childcare dilemma an important one for community colleges to consider (p. 1).

In addition to concerns about the care of their children while they are in the classroom, students with children face challenges such as balancing work, school and family responsibilities. Miller (2010) explained that single parents were more likely to work full-time while attending college, and also more likely to attend community college

part-time (p. 2). On one extreme, 11% of single mothers and 8% of single fathers work full-time, go to college full-time and spend at least 30 hours per week taking care of their families (pp. 2-3).

Ethnicity Educational Attainment

Like non-traditional students, minority students face many obstacles of their own. Between 1993 and 2003 alone, minority enrollment at colleges and universities in the United States rose 50.7% (Marklein, 2006, para. 2). When combined, non-traditional students who are also ethnic minority students may have additional concerns. Within higher education overall, African American and Hispanic students have lower educational attainment rates than white students (Hudson, 2003, p. 129). Additionally, Hispanic and African American students who graduated from high school with their class and began college immediately afterward still had lower overall college attainment rates than their Caucasian and Asian counterparts (p. 131). Furthermore, white students were also more likely to graduate from college than their black and Hispanic peers (p. 133). Recently, a study completed in California found that only 15% of African American community college attendees graduated (Thomas & Wingert, 2010, p. 1).

Evans et al. (2010) noted that despite the increase of nonwhite populations in America today, Caucasian citizens hold a “stronger, not weaker, connection” that will “bind whiteness and privilege” (p. 238). Simply put, Caucasian students often are at an advantage simply because they are white. One disadvantage alone that minorities face is that most research conducted is primarily on white students. Likely due to such a high number of Caucasian students attending colleges today, white students often become the “most privileged by the outcomes of this research” (p. 239). Szelenyi (2000) explained

that a student's minority background can present learning obstacles for students since learning styles tend to correlate with their cultural background (para. 5). Duvel (n.d.) wrote that "a key factor in student learning is for the student to be actively engaged in the learning process" (p. 1). African American students in particular may experience a conflict with the learning style taught in the classroom as opposed to their own learning style, which commonly focuses on social interaction, seeking relevant knowledge that can be applied to daily life and prefers the stimulation of multiple senses and frequently use non-verbal communication (p. 3-4). Combined with the fact that many minority students attend lower funded urban schools and white students are more likely to attend higher funded suburban schools, ethnic minority students are often at a disadvantage when beginning college (University of Michigan, 1999, para. 9).

First Generation Status

Evans et al. (2010) clarified that a person's social class was made up of three different areas: the person's class of origin, their current perceived social class and their attributed social class" (p. 240). For example, a student may be born into a working class family but upon graduating from law school may perceive themselves as middle class. While the lawyer may perceive himself as middle class, he may in fact be attributed to being upper class. Despite the myth that social and economic classes do not exist, social class plays a role in students' persistence in college (pp. 239-240). Overall, parents' education and income may have an effect on whether students choose to attend college straight from high school or attend at a later date. St. John and Tuttle (2004) explained about first generation college students: "when considering this population, it is important to understand that income and other socioeconomic factors influence whether students

enter this potential non-traditional student population or go directly to college from high school” (p. 7). Since parental income and education levels have a high level of correlation, students whose parents did not attend college previously are at an additional disadvantage when pursuing postsecondary education (p. 6).

Community college students, both non-traditional and traditional, are more likely to be first generation college students and even more likely to come from families where their parents did not graduate from a four year college or university (Kane & Rouse, 1999, p. 66). Another barrier to success for community college students is the lack of familiarity with the financial aid process. The Advisory Committee on Student Financial Assistance (2008) found that: “to avoid debt, a large share of community college students work an excessive number of hours, which reduces financial aid eligibility, lowers academic performance and undermines persistence” (p. i). Many students choose not to apply because they did not think that they qualified for financial aid (39% of those surveyed); they felt they had enough money to pay for college (35% of those surveyed); and they felt that the financial aid process was too complicated (6% of those surveyed) (p. i).

In 2010, the federal student loan limits for independent students (including subsidized and unsubsidized loans) were \$9,500 for the first year and \$10,500 for the second year of undergraduate study (Studentaid.ed.gov, 2010, para. 13). While this amount is higher than the amount for those students who are considered dependent students (\$5,500 for the first year of undergraduate study and \$6,500 for the second), many students cannot afford to quit working in order to focus on their education (para. 13).

Student Involvement in Clubs and Organizations

Cohen and Brawer (2003) found that “community college student activities programs are difficult to popularize because many students work part-time, few reside on campus, and many high school leaders elect to attend universities instead of community college” (p. 207). Student activities departments support the learning process by providing advising for campus clubs and organizations and leadership programs (Dungy, 2003, p. 353). Cohen and Brawer (2003) argued that connecting student activities more to academic departments may be a way to increase student involvement (p. 209). Involvement in campus clubs, organizations and activities is important because this involvement supports the learning process which allows students to become involved in areas outside of the classroom (Dungy, 2003, p. 353).

In regards to athletic or intramural programs, community colleges have seen a decline in the involvement of intramural sports due to the high percentages of older, part-time students (Cohen & Brawer, 2003, p. 209). Despite the decrease in intramural athletic programs, many schools have responded by providing alternative fitness activities for students such as clubs focusing on hiking, cycling and jogging as well as group exercise classes (p. 209).

One significant negative effect in students beginning education at a community college is the fact that a large number of students who attend community colleges do not live on campus and therefore are less likely to make peer connections which may assist in their retention. Furthermore, those students who begin their postsecondary education at a community college may find the process of transferring to a four year school difficult and overwhelming (Kane & Rouse, 1999, p. 71).

A student's lack of persistence at a community college may also be due to the student's own lack of interest to stay or to become involved. Bers and Smith (1991) surmised that students who begin attending community colleges may be less committed academically since they feel that the institution is of lower caliber from the beginning. Because of this, they do not anticipate the actual level of challenge that the coursework may entail (pp. 552-553).

Utilization of Tutoring Services

Rounds (1984) wrote that research has proven there is a benefit to tutoring. In her research, she referenced a 1971 study which found that students who were tutored in Biology, English or Math performed much better than students who did not receive tutoring services (p. 7). Rounds (1984) found several main benefits to provide tutoring at community colleges. First, students who are having academic trouble in their classes are provided with one-on-one support for their class, which in some cases may lead to the student being retained at the college. Secondly, tutoring assists in providing study skills training such as time management, note taking skills and helping to understand the textbook. Third, tutoring provides supportive opportunities for already disadvantaged populations within higher education, including non-traditional students, while students with disabilities may receive extra support for their courses (p. 4).

Hoover (2010) found that adult learners pursuing higher education have varying needs in regard to learning their actual course material. He explained that some adult learners may be women taking day classes who are poor at math; other adult learners may be blue collar male students who are currently unemployed. Both may need a large number of developmental courses even before beginning college level courses (para. 4).

In response to students' learning needs, many institutions have developed Learning Resource Centers which offer tutoring services, remedial services and online services (Cohen & Brawer, 2003, pp. 182-183). With some of these learning centers providing instruction in areas such as reading and math, others require that students who need remedial assistance complete tutoring appointments to supplement their coursework (p. 266).

Stern (2001) identified components of a strong Learning Center based on a review of Maxwell's 1997 study:

- academic and or diagnostic testing for various learning disabilities;
- programs to assist students study skills and learning strategies;
- peer and professional tutoring done either online or in person;
- supplemental instruction;
- interactive computer assisted instruction;
- developmental/remedial course tutoring and guidance;
- faculty outreach services;
- public relations services;
- regular communication with college administrators concerning program and student needs;
- regular staff development and certification;
- referral to other services, counseling and advising; and
- evaluation (through questionnaires, record keeping and alumni surveys.)
(para. 5)

Utilization of Career Services

The National Association of Colleges and Employers (2009) argued that a good career services program must

support the mission, academic and experiential programs, and advancement of the institution to promote student learning and student development. Within this context, the primary purpose of career services is to assist students and other designated clients in developing, evaluating, and/or implementing career, education, and employment decisions and plans. (para. 1)

Although career services offices generally offer many services, the National Association of Colleges and Employers (2010) ranked the following five services as the most utilized

nationally: (a) help in developing resume (70.1%), (b) job listings (66.2%), (c) job-search assistance (62.3%), (d) career counseling (51.3%), (e) internship assistance (51.2%) (para. 1-2).

Garver, Spralls and Divine (n.d.) argued that career centers have made a transition in recent years from serving primarily as a tool for students to obtain jobs to a retention tool for the institution (p. 2). They continued by explaining that retention rates are important for several reasons, including being used as a performance indicator, as a primary criteria in school ranking systems and as a measure of educational value and quality (p. 2). Although many Career Services Offices have adapted to this new philosophy, simply offering services does not guarantee that students will take advantage of them while at the school. Garver et al. (n.d.) explained that “while these services are essential to developing “career savvy” students, research suggests that many college students make little use of the services provided by their university’s career center” (p. 2).

Although career services offices have many functions, the following functions are also often used by career services departments to help their students throughout the college process. They include:

- identifying potential career paths,
- obtaining information regarding their future career to develop academically and professionally,
- guidance in selecting academic programs which are most closely aligned with career goals,
- considering future career plans or graduate school goals,
- developing job-search skills including interviewing and presentation skills,
- guidance on gaining extracurricular and internship experience in their field,
- connecting students with alumni and other officials for networking opportunities,
- guiding students on the use of technology in the career search process, and
- guidance on managing one’s career upon graduating. (National Association of Colleges and Employers, 2009, para. 2-12)

Tatham (2009) wrote that there are several benefits to Career Services offices. Some of these benefits include: (a) helping to improve retention and the flow between different levels of education; (b) improving the flow for students between higher education institutions and the labor market; (c) increasing opportunities for those who have been out of the learning process to return to school; and (d) increasing the access to higher education for relatively unskilled or underskilled workers (p. 1).

Utilization of Services for Students with Disabilities

American colleges and universities are required by law to provide services which support students with disabilities (Dungy, 2003, p. 346). Typical disability support services may include but are not limited to academic services (such as note taking and interpreters); physical/mobility access services; provide advocacy services for students including advising students of their rights and responsibilities when requesting services, and providing consultation to campus offices and academic departments (p. 346).

The Rehabilitation Act of 1973-Section 504 paved the way for students with disabilities in higher education. The Act provided protection so that students within higher education could not be discriminated against. Furthermore, accommodations that are reasonable and necessary to be available for students with disabilities in higher education must be granted when proper documentation is presented (Western Illinois University, 2010, para. 1-3). The Americans with Disabilities Act of 1990 provided extra support for students with disabilities by making certain that students are able to self-disclose their disability and request reasonable accommodations (para. 10-14).

Bierwert (2002) found two main impediments to students with disabilities obtaining services within higher education. First, instructors frequently lacked

knowledge regarding various disabilities and the actual accommodation process (p. 1). Secondly, some instructors had difficulty talking about these issues with students (p. 1). In 1978, only 2.8% of students in higher education identified as having a disability (Bierwert, 2002, p. 1). Today, a full 11% of undergraduate students reported that they had one or more disabilities (National Center for Education Statistics, 2010, para. 8).

El-Khawas (2003) argued that supporting students within a higher education environment involves more than simply assisting with student's physical access and safety (p. 52). Students with disabilities need more than typical college accommodations, they need guidance in becoming involved in clubs and organizations and assistance with career development to become successful members of society (p. 52). Cohen and Brawer (2003) confirmed these thoughts by writing that students with physical and cognitive difficulties find it very challenging to obtain employment, establish a career and staying self-sufficient (p. 205). McEwen (2003) wrote that "defining, identifying and understanding disabilities is neither an easy nor a simple process" (p. 219).

Normally three kinds of disabilities exist which include visible disabilities which are physical impairments that are easily recognized; hidden disabilities, including learning and psychiatric disabilities and multiple disabilities, which may include several different disabilities or a primary and secondary disability (McEwen, 2003, p. 220). Offering services for students with disabilities is important because students attending college with disabilities are two times more likely to drop out of college than their non-disabled peers (Cohen & Brawer, 2003, p. 205).

Utilization of Transfer Counseling Services

NCES (2008a) wrote that during the 2003-04 school year, over one third of community college students indicated that they intended to transfer to a four year institution (para. 2). Transfer students have their own distinct needs to receive information and guidance from both their current and transfer institution (El-Khawas, 2003, p. 56). Transfer counseling is often necessary to assist students in understanding how their current work will mesh with their program at the new institution (p. 56). Also, transfer counselors often play an important role in articulating what the student can expect at their new school which may not be addressed by new student orientation programs (p. 56).

Historically, transfer students have been known as a disadvantaged group who are more likely to be older, married, have less confidence about their educational goals and have weaker previous educational backgrounds (Andres & Carpenter, 1997, p. 33). Transfer students may choose to begin their education at a community college due to the low tuition costs, relatively easy admissions requirements and the close proximity of the school to their home (p. 33). Furthermore, multiple studies have indicated that many issues can occur during the transfer process and the process has been found to hinder the attainment of degree programs (pp. 33-34).

Cohen and Brawer (2003) explained the articulation or the successful movement of students is an important transfer function which today involves not only the senior institution but also the community college (p. 213). Transfer shock has been known to be quite common amongst community college students, with many experiencing “transfer shock” and a drop of grades when they begin at their senior institution (Andres &

Carpenter, 1997, p. 34). Transfer counselors play an important role in assisting students to understand the articulation procedures between their current and new institutions to not only assist in student's retention at their current institution, but also at their new school.

Utilization of Personal Counseling Services

Cohen and Brawer (2003) wrote that counseling and guidance programs have been a core student service function since the earliest years of the community college (p. 201). Dungy (2003) agreed that "administrators and staff in most American colleges and universities believe strongly in the importance of helping students work through issues that may affect their academic success and personal development" (p. 345).

Normally conducted by licensed counselors, personal counseling services offer counseling and psychological services as well as crisis response services for students and the college community (p. 345). In addition to their primary counseling duties, personal counselors may perform outreach activities with college departments and community agencies (p. 345).

Walther and Ritchie (1998) noted that "the unique counseling needs of adult students are often overlooked by campus counseling programs" (para. 1). They continued by explaining that there are several reasons that adult students may feel intimidated by the process of higher education. For one, an adult student may consider college a secondary priority rather than a first priority due to their adult responsibilities. Next, adult students want to be able to go out and immediately use the knowledge that they have learned (para. 2-3).

Waither and Ritchie (1998) stated that counselors must be aware of the unique challenges that face adult students when working with them. They suggested that

counselors understand that the students they serve have home, work and family obstacles that can often impair their academic success (para. 7-8). Secondly, counselors must be aware that adult students are often wary of attending personal counseling, despite the potential benefits. Matthews (n.d.) argued that in addition to personal counseling, impairment prevention counseling should be offered, which “offers a wide array of benefits to students” (p. 78). Several of these benefits to students include providing them with the ability to better handle life stressors, to promote self growth and self care (pp. 78-79). Waither and Ritchie (1998) stressed that counselors promote short-term counseling for these adult students which may seem less threatening to them, and can assist them in not only dealing with personal issues, but also directing them to the various resources that are necessary on their college campus (para. 13).

Conclusion

This chapter provided an overview of non-traditional students and the obstacles and factors that may impede or improve their success as college students. The literature provided sound evidence that non-traditional students experience many obstacles while attending college such as work, family and other off campus obligations (Ryan, 2003, para. 4). The chapter also reviewed literature which described the benefits and importance of utilizing various campus services and being actively involved on campus. The subsequent chapter will detail the methodology portion of the research study.

Chapter III

Methodology

Introduction

Non-traditional students have historically faced many obstacles in obtaining a college education such as work, family responsibilities, and other off campus obligations (Ryan, 2003, para. 4). This study was designed to examine whether these barriers affect the success of non-traditional students at CCAC Boyce Campus. The purpose of this study was to determine whether there was a difference using a number of factors that relate to the success of non-traditional and traditional aged students at the Community College of Allegheny County, Boyce Campus. Success was determined by a number of factors including: (a) whether a student has formally declared a major; (b) their grade point average; (c) their use of available campus services including tutoring, services for students with disabilities, career services, transfer and personal counseling; and (d) whether a student was involved on campus. Other variables were studied such as gender, employment status and first generation student status when determining the study results.

For the purpose of this research study, a non-traditional student was defined as one who is 25 years of age or older. Non-traditional students can officially be defined as those college students who are 25 years of age or older (Burk & LeBlanc, 1993, p. 5). Similarly, a traditional student is defined as a college student who is between the ages of 18-24 (Adelman, 2005, p. xiv). Since the study was conducted strictly in the state of Pennsylvania, individuals who participated in the research study were only required to abide by Pennsylvania guidelines that they be 18 years of age in order to provide legal consent for their participation (USLegal.com, 2010, para. 6-9).

Research Questions

In a quantitative social research study, data are often collected using surveys where all respondents are asked the same group of questions in order to quantify the participant's responses (Kalof, Dan, & Dietz, 2008, p. 34). Research questions for this study were developed in order to assess whether there was a difference using a number of factors that relate to the success of non-traditional and traditional aged students at the Community College of Allegheny County, Boyce Campus. The research questions that were used to collect data for this study included:

1. Research Question 1. Is there a difference among some factors related to the success of traditional and non-traditional students?
 - a. Is there a difference of grade point averages between non-traditional and traditional aged students (freshman and sophomore) at the college?
 - b. Is there a difference in the factors related to academic success (as demonstrated by grade point average) of non-traditional male and non-traditional female (freshman and sophomore) students?
 - c. Is there a difference in the factors related to academic success (as demonstrated by grade point average) of traditional aged male and traditional aged female (freshman and sophomore) students?
 - d. Is there a difference in the number of non-traditional and traditional (freshman and sophomore) students who have declared a formal major?
2. Research Question 2. Is there a difference in the campus involvement of non-traditional and traditional students?

- a. Is there a difference in the campus involvement of non-traditional students who work (part-time or fulltime) versus those who do not work?
 - b. Is there a difference in the level of campus involvement between non-traditional students who have children as opposed to those non-traditional students who do not?
 - c. Overall, is there a difference in the level of campus involvement between non-traditional and traditional students, regardless of work and family (spouse and/or children) responsibilities?
3. Research Question 3. Is there a difference in the frequency of utilization of the various support services at the college between non-traditional and traditional students?
- f. Is there a difference in the number of non-traditional and traditional students utilizing tutoring services?
 - g. Is there a difference in the number of non-traditional and traditional students utilizing services for students with disabilities?
 - h. Is there a difference in the number of non-traditional and traditional students utilizing career services at the college?
 - i. Is there a difference in the number of non-traditional and traditional students utilizing transfer counseling services?
 - j. Is there a difference in the number of non-traditional and traditional students utilizing personal counseling services?
4. Research Question 4. Does first generation status affect the grade point averages of non-traditional and traditional students?

- e. Is there a difference in the overall grade point averages of first generation non-traditional and non-first generation non-traditional students?
- f. Is there a difference in the overall grade point averages between first generation non-traditional and non-first generation traditional aged students?
- g. Is there a difference in the frequency of utilization of support services (1) tutoring, (2) services for students with disabilities, (3) career services, (4) transfer, (5) personal counseling that a first generation, non-traditional student as opposed to a non-first generation non-traditional student?
- h. Is there a difference in frequency of utilization of support services (1) tutoring, (2) services for students with disabilities,(3) career services, (4) transfer, (5) personal counseling, that a first generation traditional aged student as opposed to a non-first generation traditional aged student?

Research Location

Research for this study was conducted at the Community College of Allegheny County, Boyce Campus in Monroeville, Pennsylvania. Located in the eastern part of Allegheny County, the municipality of Monroeville is 13 miles from downtown Pittsburgh and is considered by some to be the “crossroads of western Pennsylvania” due to the town’s location to several main highways (Municipality of Monroeville, 2010, para. 1-2).

More than 14,000 full- and part-time students attend the Boyce Campus, which is one of four primary campus of the Community College of Allegheny County (CCAC, 2011d, para. 5). In addition to the institution’s academic and student services, the

campus offers numerous extracurricular activities for students including many clubs and organizations, field trips, intramural sports, team athletic sports and volunteer and leadership activities (CCAC, 2011e, para. 2).

Study Participants

Combined, 116 individuals participated in the research study. Of the 116 surveys distributed, 114 were returned, and 113 of these surveys were useable for the purpose of this study. The population selected was a stratified random sample. According to Creswell (2009), stratification “means that specific characteristics are represented in the sample and the sample reflects the true proportion in the population of individuals with certain characteristics” (p. 148). Students were surveyed from courses in each of CCAC Boyce Campus’ eight academic divisions. Of the student participants, 44 were classified as non-traditional students and embodied the following characteristics: (a) age 25 or above, (b) a current full-time student taking 12 credits or more for the spring semester, (c) must have completed at least one previous full-time semester of 12 credits or more at any CCAC campus, and (d) able to legally provide signed consent. The other 69 study participants were classified as traditional aged students and embodied the following characteristics: (a) age 18-24, (b) a current full-time student taking 12 credits or more for the spring semester, (c) must have completed at least one previous full-time semester of 12 credits or more at any CCAC campus, and (d) able to legally provide signed consent for themselves.

The sample population of students represented a variety of majors at the institution and every effort was made to obtain a representative sample of the population by surveying both day and evening classes.

Institutional Review Board Procedures

Before obtaining the official permission of the Institutional Review Board at the University of Nebraska, the researcher completed two research preparation courses. The first, the Collaborative Institutional Training Initiative Course, offered “research ethics training” to prospective researchers. The second course completed was the Responsible Conduct of Research Training course offered through the University of Nebraska, a course mandated by the National Science Foundation for student researchers. Upon successful completion of the two courses, the researcher applied for official study approval through the Institutional Review Board at the University of Nebraska. The Institutional Review Board at the University of Nebraska exists to review all research conducted on human subjects in order to minimize or alleviate any risk to study participants, ensure the protection of their rights, and to guide the informed consent process of each study (University of Nebraska, 2011, para. 2). Once approved, the researcher was permitted to begin the data collection portion of her study. The official Institutional Review Board approval letter is attached (Appendix F).

Variables

Gravetter and Wallnau (2009) defined a variable as “a characteristic or condition that changes or has different values for different individuals” (p. 5). Variables are measured in order to demonstrate change (p. 5). Furthermore, variables can include a number of characteristics such as a person’s height and gender, as well as environmental conditions such as the temperature (p. 5). Variables that were considered for this study included: a student’s gender, student’s work status and first generation student status.

Study Design

The research study was designed to be quantitative. Creswell (2009) explained that one of the primary differences between quantitative and qualitative research methods is that a quantitative research design is framed using numbers, rather than being framed by the use of words, as in a qualitative research design (p. 3). Another difference in the two distinct research styles is the use of closed ended questions (in the quantitative method) rather than a more open ended question format that is typically used in the qualitative method (p. 3).

Upon consulting with her adviser, the researcher chose not to use a research hypotheses for the study but rather used research questions in place of hypotheses due to Creswell's suggestion:

"To eliminate redundancy, write only research questions or hypotheses, not both, unless the hypotheses build on the research questions. Choose the form based on tradition, recommendations from an adviser or faculty committee, or whether past research indicates a prediction about outcomes."
(Creswell, 2003, p. 133)

Information for the study was collected through surveys distributed to students at the Community College of Allegheny County, Boyce Campus. Participants were not influenced in any manner by the researcher and were informed that they would not receive any negative repercussions as a result of choosing or not choosing to participate in the research study. No form of compensation was provided for participants; however, students who were offered the opportunity to participate were informed that their offer to complete the survey would assist the researcher in determining whether there is a difference using a number of factors that relate to the success of non-traditional and

traditional aged students at the Community College of Allegheny County, Boyce Campus.

Setting

The study was conducted at the Community College of Allegheny County, Boyce Campus. The CCAC college system has four large campuses and six smaller campus centers located in the Pittsburgh, PA area. For this study, the research was focused on the Boyce Campus of the Community College of Allegheny County in Monroeville, PA. The Community College of Allegheny County holds a Carnegie Classification of an exclusively undergraduate two year institution with a mixed student body of both full- and part-time students. The school is considered a very large two year associate degree granting institution and is an urban, public serving multi-campus school (Carnegie Foundation, 2010, para. 2). Including the four main campuses and six smaller centers, CCAC overall currently enrolls approximately 31,000 credit students annually (CCAC, 2010d, para. 4). The school awards three degrees: the Associate of Arts Degree, the Associate of Science Degree, and the Associate of Applied Science Degree, as well as various certificates and diplomas to students in a variety of career oriented and transfer fields (para. 6, 11).

The Boyce Campus of the Community College of Allegheny County in Monroeville is one of the four main campuses of the college. The Boyce Campus was chosen to represent the Community College of Allegheny system due to it's similarity with the other system campuses as well as the similarities of the age, ethnic and socioeconomic diversity of Boyce's students and the school's offering of similar academic programs. Each of the four main campuses of CCAC offered courses in eight

distinct academic divisions: (a) Communication Arts, (b) Humanities, (c) Mathematics, (d) Sciences, (e) Social Sciences and Education, (f) Business Technologies, (g) Information Technologies, and (h) Allied Health (Rhodes, 2011). Courses in each division are offered at all of the four main campuses which make up the CCAC system.

Population/Sample

Although full-time status at the Community College of Allegheny County is technically 12 credits per semester (CCAC, 2011h, para. 3), the school does not measure the number of enrolled full-time students by this full-time status. At CCAC Boyce and the institution as a whole, full-time equivalent status is measured for all semesters using 9 credits per semester (Strenkowski, 2011). All enrollments at the college were calculated for the spring semester in which the study was conducted, and the FTE at Boyce Campus for the spring semester was 3,114.2 students (Strenkowski, 2011).

Creswell (2009) noted that a quantitative study is often used to study a population “with the intent of generalizing from a sample to a population” (p. 12). Furthermore, a quantitative approach may use an experimental design or a non-experimental design, such as the use of surveys for gathering information about a particular group (p. 12). Gravetter and Wallnau (2009) wrote that the level of significance or alpha level “is a probability value that is used to define the very unlikely sample outcome if the null hypotheses is true” (p. 235). Alpha levels are commonly selected at the .05, .01 and .001 levels (p. 235). When selecting a .05 level of significance to determine study results, one can usually assume that this relationship would not normally occur by chance (Cramer, 2003, p. 4). Due to these factors, a .05 level of significance was utilized in assessing the statistical results of the research study.

As part of the study, 18 classrooms total were surveyed in all eight academic divisions. In each classroom, every attempt was made to distribute five surveys to non-traditional students (ages 25 and up) in each of the 18 classrooms and 5 surveys to traditional aged students (ages 18-24). In some divisions, there were not enough students willing or able to complete surveys in the first two of the instructor's courses. In this case, the researcher requested that the instructor grant her permission to administer her survey in a third of his or her courses in order to collect the necessary amount of surveys for that particular division. The researcher then collected the necessary remaining surveys in the third course by following her established survey distribution protocol.

Eighteen classrooms in total were surveyed, amongst a total of 8 divisions, with a total of eight instructors. By distributing surveys to random students in each of the 8 divisions, a relative representation of the population was assessed. In addition to surveying day classes at the college, several evening courses were surveyed to fully gain a representative sample of the population. A total of 116 surveys were distributed, of which 114 were returned. Of these, 113 surveys were completed, useable, and utilized to determine the results for this research study.

Data Collection

Once collected, the survey data were coded by the researcher and sent to the University of Nebraska's Nebraska Evaluation and Researcher Center (NEAR) for statistical evaluation. Using the SPSS 19.0 statistical software program, the researcher's data were analyzed using both the Pearson Chi-Square Test and the t-test for equality of means. According to Cramer (2003), the SPSS software program is a computer program which exists to conduct various types of statistical analysis (p. 244). Gravetter and

Wallnau (2009) explained that the Chi-Square Test and Pearson Correlation are techniques used in statistics to “evaluate the relationship between two variables” (p. 629). The Pearson Chi-Square Test was selected due to the method’s ability to compare the frequency of cases that can occur by chance with the actual frequency of cases in a cell (Cramer, 2003, p. 224).

Wielkiewicz (2000) noted that the t-test is used to test any differences between two different means (para. 1). The t-test is most frequently used to test any difference between independent groups or to test any difference between dependent groups (para. 1). When considering an independent variable, one can use the t-test when two independent groups have the same variable and one wishes to know whether there is a statistically significant difference between the two groups. When considering a dependent variable, a t-test is used when one group of people have been assessed in two varying conditions (para. 2).

Reliability and Validity of Survey Instrument

An independently developed survey instrument (see Appendix A) was used to survey student participants at the Community College of Allegheny County, Boyce Campus. The instrument used for the study was created for the purpose of assessing whether there is a difference using a number of factors that relate to the success of non-traditional students versus traditional aged students at the Community College of Allegheny County, Boyce Campus. The survey was created with feedback from several higher education professionals. First, guidance was obtained from her faculty adviser, who provided guidance on selecting survey questions that were relevant to the study. Next, guidance was received from a consultant at the University of Nebraska’s NEAR

Center, to ensure that all items on the survey could be statistically analyzed and were statistically viable. Then, feedback was received from the Dean of Students at the Community College of Allegheny County, to ensure that all questions asked were appropriate for students and to ensure that the confidentiality of students would be maintained. Lastly, the Institutional Review Board at the University of Nebraska reviewed the researcher's survey instrument to make sure that the instrument was ethically and legally compliant.

Before completing the survey, students were provided with two official copies of the attached Informed Consent Form (Appendix B) that explained that while the completion of the researcher's survey is appreciated, their participation was strictly voluntary. Student participants were also assured that all surveys completed would be done so anonymously, and that the data collected would be kept in a locked cabinet to ensure participant confidentiality. Students who were part of this purposeful sample population were able to voluntarily decide whether they wished take part in this study. Students were also free from coercion and were notified that they would not face any repercussions if they decided not to participate in the study. Students were read the attached Class Presentation of Survey Form (Appendix C) before participating, which provided all prospective participants with information on the research study. This protocol provided a background on the study, explained the participant's rights and requested volunteers who were willing to complete the study.

Before returning their surveys participants were required to read and sign the Informed Consent Form (Appendix B) indicating that they were aware that their survey results would be used as part of a published research study. Students were also informed

that no risk was involved in participating in the research study as students were simply completing an anonymous survey instrument and no personally identifiable information was collected. Participants were provided with contact information for the researcher, her adviser, and the Institutional Review Board at the University of Nebraska-Lincoln in the event they had any questions or concerns regarding their participation.

Once distributed, the method of collection for the surveys in each classroom involved the researcher requesting one student volunteer to collect the completed student surveys. The student volunteer agreed to collect the surveys along with one copy of the signed informed consent form from each participant. Once collected, the student volunteer placed all items together in a large envelope provided by the researcher. The student volunteer was given instructions to then seal the envelope and sign “completed surveys” over the seal of the envelope and return the envelope to the instructor. The instructor later returned the signed, sealed envelope to the researcher. The purpose of this method was to ensure the confidentiality of the study participants with both the researcher and the class instructor.

Assumptions

When creating and conducting this study, the researcher had two assumptions.

- First, the researcher assumed that if a student has utilized transfer counseling services that they are considered a transfer student. There is a possibility that students may have participated in transfer counseling (to explore their options or for other purposes) without actually being a transfer student or intending to transfer.

- The researcher also assumed that if a student has utilized services for students with disabilities that they have a disability. While CCAC requires students who receive any accommodations through the Services for Students with Disabilities Office to present recent documentation verifying that they have a documented disability (CCAC, 2011g, para. 10), there is a possibility that students could have utilized the services of the office before the office determined that the student did not qualify for accommodations based on a lack of documentation or other issues.

Limitations

This study has limitations which must be considered.

- First, the challenge associated with self-reported responses from the participants provides the possibility that the participants may have falsely recorded one or more answers. There is a possibility that a student or student(s) could have falsely recorded one or more answers in an effort to appear a stronger or more involved student.
- Secondly, the survey collection manner was a stratified random sample collection. While every effort was made to obtain an accurate representation of CCAC Boyce Campus students, caution should be utilized when attempting to generalize the student body.
- Limitations existed in generalize the student body due to the limited number of study participants. When considering whether a student had work responsibilities, the researcher was only able to separate respondents into two groups; those who worked and those who did not. Therefore, a student who

indicated that they worked less than 10 hours per week was placed in the same group as one who worked 40 hours per week.

Delimitations

When reviewing this study, there are several delimitations which must also be considered.

- First, although approximately 14,000 full and part-time students attend CCAC Boyce Campus annually (CCAC, 2011d, par. 5), only 116 students chose to participate in the study, and out of that group only 113 useable surveys were collected. As such, the study was meant to focus on CCAC Boyce students only, rather than focusing on other CCAC students from the other campuses in the college system.
- Of students who were part of the classes offered the opportunity to participate in the research study, students who were willing to participate were required to be fulltime students enrolled in at least 12 credits that semester, and the students who met this criteria were also required to have been a previous fulltime student at any CCAC campus for at least one prior semester.
- Those who met the fulltime status criteria were also required to be able to legally provide signed consent for themselves in order to participate in the research study. The age of majority in Pennsylvania is 18 years of age, which allows students to sign contracts as an adult in the state of Pennsylvania (USLegal.com, 2010, para. 6-9). Therefore, all students participating were required to be 18 or older.

Participants

The participants for this study were non-traditional and traditional aged students at the Community College of Allegheny County, Boyce Campus in Monroeville, PA. A stratified random sample from the student population was utilized. Within the CCAC system, approximately 31,000 credit students enroll annually (CCAC, 2010d, para. 4). Of this number, 40% or 12,400 students' are full-time (para. 6). Taken as a whole, the average age of CCAC full- and part-time students is 27 years of age. Twenty two percent of the system wide student population are classified as ethnic minorities (para. 6). The study participants were made up of 44 men and 69 women. Additionally, 56% of the overall student body is enrolled in non-transfer career/vocational programs while 44% are enrolled in transfer programs (para. 6). Since Boyce campus and the three other campuses house all eight academic divisions, the Boyce campus provides a fair representation of the system wide student body.

As a stratified random sample, every effort was made to obtain surveys from students that comprise various ethnic groups at the college. The researcher began the study with the intent of comparing various ethnicities of students to determine whether a student's ethnicity played any role in a student's academic performance or overall involvement. As the table below demonstrates, there were several ethnic groups which were only represented by few or no students which made this analysis not feasible. Table 1 illustrates the ethnic makeup of the study's participants.

Table 1

Ethnic Makeup of Study Participants

Student Ethnicity	#
American Indian or Alaskan	1
Asian	2
Black or African American	17
Hispanic/Latino	4
Pacific Islander	0
White	86
Multiracial	2
Other	1
Prefer Not to Respond	0

Twenty seven of the study participants were classified as non-white, and made up 23.89% of those surveyed. Twenty two percent of the CCAC's overall system wide population is made up of minority students (CCAC, 2011c, para. 6); therefore the sample provided an accurate representation of minority groups present in the institution as a whole.

Data Collection Procedures

In order to begin the data collection portion formal approval was obtained from the institutional review board at the University of Nebraska-Lincoln. This approval is attached as Appendix F. Also obtained was formal approval from the Dean of Students at the Community College of Allegheny County, Boyce Campus and is contained in this report as Appendix E. Since all additional data collected was publically available data, no additional permissions were necessary. Of the 113 participants, 44 were non-traditional students who met the following criteria: (a) age 25 or above, (b) a current full-

time student taking 12 credits or more for the spring semester, (c) must have completed at least one previous full-time semester of 12 credits or more at any CCAC campus, and (d) able to legally provide signed consent. The other 69 study participants were classified as traditional aged students and met the following criteria: (a) age 18-24, (b) a current full-time student taking 12 credits or more for the spring semester, (c) must have completed at least one previous full-time semester of 12 credits or more at any CCAC campus, and (d) able to legally provide signed consent.

Data Analysis

Once collected, all data were coded by the researcher. The coded data were sent to the University of Nebraska's NEAR Center for statistical analysis by a NEAR Center consultant. Data were analyzed using the SPSS 19.0 software program, and both the Pearson Chi-Square Test and the t-test for equality of means were used to determine the results. Upon completion of the statistical analysis, the data were reviewed to determine whether any study findings were considered statistically significant. As mentioned previously, a probability of .05 or less was used by the researcher in order to determine the significance of the results.

Conclusion

This chapter addressed the methodology portion of the research study. Overall, the chapter provided information regarding the quantitative study design, research site, participants and data collection procedures. The next two chapters in this study will address the study's findings and final recommendations.

Chapter IV

Findings

Purpose

Non-traditional students have historically faced many obstacles in obtaining a college education such as work, family responsibilities, and other off campus obligations (Ryan, 2003, para. 4). This study was designed to examine whether these barriers affect the success of non-traditional students at CCAC Boyce Campus. The purpose of this study was to determine whether there was a difference using a number of factors that relate to the success of non-traditional and traditional aged students at the Community College of Allegheny County, Boyce Campus. Success was determined by a number of factors including: (a) whether a student has formally declared a major; (b) their grade point average; (c) their use of available campus services including tutoring, services for students with disabilities, career services, transfer and personal counseling; and (d) whether a student was involved on campus. Other variables were studied such as gender, employment status and first generation student status when determining the study results.

For the purpose of this research study, a non-traditional student was defined as one who is 25 years of age or older. Non-traditional students can officially be defined as those college students who are 25 years of age or older (Burk & LeBlanc, 1993, p. 5). Similarly, a traditional student is defined as a college student who is between the ages of 18-24 (Adelman, 2005, p. xiv). Since the study was conducted strictly in the state of Pennsylvania, individuals who participated in the research study were only required to abide by Pennsylvania guidelines that they be 18 years of age in order to provide legal consent for their participation (USLegal.com, 2010, para. 6-9).

Participant Population

The researcher distributed a total of 116 surveys to the participant population, of which 114 were returned, with the response rate being 98.3% of those who received surveys. One hundred and thirteen surveys were completed, useable, and were utilized to determine the results for this research study. Of the 113 participants, 44 were non-traditional students who met the following criteria: (a) age 25 or above, (b) a current full-time student taking 12 credits or more for the spring semester, (c) must have completed at least one previous full-time semester of 12 credits or more at any CCAC campus, and (d) age 18 and up and able to legally provide signed consent. The other 69 study participants were classified as traditional aged students and met the following criteria: (a) age 18-24, (b) a current full-time student taking 12 credits or more for the spring semester, (c) must have completed at least one previous full-time semester of 12 credits or more at any CCAC campus, and (d) age 18 and up able to legally provide signed consent.

The 113 student participants declared a variety of majors. Several areas, including the arts fields, education, health science, science/math/engineering fields and other fields had a low number of participants who had declared a major in those areas. The most popular majors of study participants included the Business/Accounting/Management fields and Nursing. Table 2 indicates the majors chosen by the CCAC Boyce Campus students surveyed.

Table 2

Majors Declared by CCAC Boyce Campus Students Surveyed

Major Name	Number Declared
------------	-----------------

Arts Related	3
Business/Accounting/Management	29
Computer Related	11
Criminal Justice/Law/Social Science	15
Education	3
Health Science Majors	5
Liberal Arts/General Studies	7
Nursing	27
Science/Math/Engineering	2
No Response	7
Other	4

Reliability and Validity of Survey Instrument

A survey instrument (see Appendix A) was used to collect data from participants. The instrument used for the study was a survey created by the researcher for the purpose of assessing whether there is a difference using a number of factors that relate to the success of non-traditional students versus traditional aged students at the Community College of Allegheny County, Boyce Campus. The survey was designed by the researcher with feedback from several higher education professionals. First, the researcher obtained guidance from her faculty adviser, who provided her with guidance on selecting survey questions that were relevant to her study population. Next, the researcher received guidance from a consultant at the University of Nebraska's NEAR Center, to ensure that all items on the survey could be statistically analyzed and were viable. Then, the researcher obtained feedback from the Dean of Students at the Community College of Allegheny County, Boyce Campus, to ensure that all questions

asked were appropriate for students and to ensure that the confidentiality of students would be maintained. Lastly, the Institutional Review Board at the University of Nebraska reviewed the researcher's survey instrument to make sure that the instrument was ethically and legally compliant.

Research Questions

The following results will address the research questions presented in the study. Both the Pearson Chi-Square Test and the t-test for equality of means were used to analyze the data. A .05 level of significance was selected and utilized by the researcher. Gravetter and Wallnau (2009) defined the level of significance as "the probability value that is used to define the very unlikely sample outcomes if the null hypotheses is true" (p. 235). Within quantitative research, a .05 level of significance is considered one of the most common alpha values used and separates the most unlikely 5% of the extreme values from the most likely 95% of the central values (p. 235).

Research Questions

Research Question #1: Is there a difference among some factors related to the success of traditional and non-traditional students?

- a. Is there a difference of grade point averages between non-traditional and traditional aged students (freshman and sophomore) at the college?
- b. Is there a difference in the factors related to academic success (as demonstrated by grade point average) of non-traditional male and non-traditional female (freshman and sophomore) students?

- c. Is there a difference in the factors related to academic success (as demonstrated by grade point average) of traditional aged male and traditional aged female (freshman and sophomore) students?
- d. Is there a difference in the number of non-traditional and traditional (freshman and sophomore) students who have declared a formal major?

Research Question # 2: Is there a difference in the campus involvement of non-traditional and traditional students?

- a. Is there a difference in the campus involvement of non-traditional students who work (part-time or fulltime) versus those who do not work?
- b. Is there a difference in the level of campus involvement between non-traditional students who have children as opposed to those non-traditional students who do not?
- c. Overall, is there a difference in the level of campus involvement between non-traditional and traditional students, regardless of work and family (spouse and/or children) responsibilities?

Research Question #3: Is there a difference in the frequency of utilization of the various support services at the college between non-traditional and traditional students?

- a. Is there a difference in the number of non-traditional and traditional students utilizing tutoring services?
- b. Is there a difference in the number of non-traditional and traditional students utilizing services for students with disabilities?

- c. Is there a difference in the number of non-traditional and traditional students utilizing career services at the college?
- d. Is there a difference in the number of non-traditional and traditional students utilizing transfer counseling services?
- e. Is there a difference in the number of non-traditional and traditional students utilizing personal counseling services?

Research Question 4: Does first generation status affect the grade point averages of non-traditional and traditional students?

- a. Is there a difference in the overall grade point averages of first generation non-traditional and non-first generation non-traditional students?
- b. Is there a difference in the overall grade point averages between first generation non-traditional and non-first generation traditional aged students?
- c. Is there a difference in the frequency of utilization of support services (1) tutoring, (2) services for students with disabilities, (3) career services, (4) transfer, (5) personal counseling that a first generation, non-traditional student as opposed to a non-first generation non-traditional student?
- d. Is there a difference in frequency of utilization of support services (1) tutoring, (2) services for students with disabilities,(3) career services, (4) transfer, (5) personal counseling, that a first generation traditional aged student as opposed to a non-first generation traditional aged student?

Results

Research Question #1: Is there a difference among some factors related to the success of traditional and non-traditional students?

Non-traditional versus traditional student grade point averages. Research

Question: 1a. Is there a difference of grade point averages between non-traditional and traditional aged students (freshman and sophomore) at the college?

Using a two tailed t-test for equality of means and a .05 level of significance, there was no significant difference in the grade point averages of non-traditional and traditional aged students at the CCAC Boyce Campus. Table 3 illustrates the researcher's findings.

Table 3

Research Question 1a

	df	t score	Sig.
t-test for Equality of Means	108	1.805	.074

≤ .05

Degrees of freedom, more commonly known as df, “is the sample size, n, minus the number of parameters, p, estimated from the data” (Crawley, 2005, p. 37). One would normally have (n-1) degrees of freedom if the mean is estimated from the sample size, n (p. 37). In this case, the sample size used would have been 113. A t score, is used to estimate a number's standard deviation from the mean. In this case, a t score of 1.805 indicates a score that is 1.805 standard deviations from the mean. Gravetter and Wallnau (2009) explained that “the mean of deviations is always zero” (p. 110). Because the

mean is always zero, the standard deviation score measures the standard distance from the mean (p. 111). Gravetter and Wallnau wrote “technically the standard deviation is the square root of the average squared deviation. Conceptually, however, the standard deviation provides a measure of the average distance from the mean” (p. 111). A score of 1.805 falls outside of the critical region in the t distribution, thus the score is not considered significant.

Male versus female non-traditional student grade point averages. Research

Question 1b: Is there a difference in the academic success (as demonstrated by grade point average) of non-traditional male and non-traditional female (freshman and sophomore) students?

Using a two tailed t-test for equality of means with a .05 level of significance, there was no significant difference in the academic success (as demonstrated by grade point average) of non-traditional aged male and non-traditional aged female students at CCAC Boyce Campus. Table 4 demonstrates the findings.

Table 4

Question 1b

	df	t score	Sig.
t-test for Equality of Means	42	-.020	.984

≤ .05

Male versus female traditional student grade point averages. Research Question

1c: Is there a difference in the academic success (as demonstrated by grade point average) of traditional aged male and traditional aged female (freshman and sophomore) students?

Using a two tailed t-test for equality of means with a .05 level of significance, there was no significant difference in the academic success (as demonstrated by grade point average) of traditional aged male and traditional aged female students at CCAC Boyce Campus. Table 5 reflects the findings.

Table 5

Question 1c

	df	t score	Sig.
t-test for Equality of Means	1	-.773	.442

≤ .05

Non-traditional versus traditional student declaration of a major. Research

1d: Is there a difference in the number of non-traditional and traditional (freshman and sophomore) students who have declared a formal major?

Using a Pearson Chi-Square Test with a .05 level of significance, there was no significant difference between the number of non-traditional and traditional students who have declared a formal major at CCAC Boyce Campus. Table 6 demonstrates the researcher's findings.

Table 6

Question 1d

	Value	df	p value
Pearson Chi-square	.007	1	0.93

≤ .05

Research Question #2. Is there a difference in the campus involvement of non-traditional and traditional students?

Non-traditional versus traditional student work responsibilities. Research Question 2a. Is there a difference in the campus involvement of non-traditional students who work (part-time or fulltime) versus those who do not work?

Using a Pearson Chi-Square Correlation with a .05 level of significance, there was no significant difference in the level of campus involvement between non-traditional students who work versus those non-traditional students who do not work at CCAC Boyce Campus. It should be noted however, that these results should be interpreted with caution, as one cell had lower than the expected count of 5, with a number of only 4. Table 7 illustrates the researcher's findings.

Table 7

Question 2a

	Value	df	p value
Pearson Chi-square	.650	1	.420

≤ .05

Non-traditional versus traditional student family responsibilities. Research

Question 2b. Is there a difference in the level of campus involvement between non-traditional students who have children as opposed to those non-traditional students who do not?

Using a Pearson Chi-Square Correlation with a .05 level of significance, there was no significant difference in the campus involvement of non-traditional students who had children and those non-traditional students who did not have children at CCAC Boyce Campus. Table 8 reflects the findings.

Table 8

Question 2b

	Value	df	p value
Pearson Chi-square	.355	1	.551

≥ .05

All campus involvement of non-traditional versus traditional students.

Research Question 2c. Overall, is there a difference in the level of campus involvement between non-traditional and traditional students, regardless of work and family (spouse and/or children) responsibilities?

Using a Pearson Chi-Square Test with a .05 level of significance, there was no significant difference in the overall level of campus involvement between all non-traditional and traditional students. Table 9 reflects the findings.

Table 9

Question 2c

	Value	df	p value
Pearson Chi-square	3.537	1	.060

≤ .05

Research Question # 3. Is there a difference in the frequency of utilization of the various support services at the college between non-traditional and traditional students?

Non-traditional versus traditional student utilization of tutoring services.

Research Question 3a: Is there a difference in the number of non-traditional and traditional students utilizing tutoring services?

Using a Pearson Chi-Square correlation with a .05 level of significance, there was a significant difference in the number of non-traditional and traditional students at CCAC Boyce campus who utilized tutoring services. Table 10 demonstrates the researcher's findings.

Table 10

Question 3a

	Value	df	p value
Pearson Chi-square	8.569	1	.003*

*≤ .05

With a Pearson Chi-Square test, this result is considered significant when using a .05 level of significance, because the p value is below .050. A Pearson's p value symbol p is used when referring to the population studied (Lane, n.d., para. 3). The result of .003 indicates that there was a significant difference in the number of non-traditional and

traditional students who have declared a major, with non-traditional students being more likely to declare a formal major.

The result of .003 indicates a significant difference in the number of non-traditional and traditional students utilizing tutoring services with a higher percentage of non-traditional students utilizing tutoring services.

Non-traditional versus traditional student utilization of supportive services.

Research Question 3b: Is there a difference in the number of non-traditional and traditional students utilizing services for students with disabilities?

Using a Pearson Chi-Square Test with a .05 level of significance, there was no significant difference in the number of non-traditional versus traditional students utilizing services for students with disabilities at CCAC Boyce Campus. Table 11 demonstrates the findings.

Table 11

Question 3b

	Value	df	p value
Pearson Chi-square	.301	1	.583

≥ .05

Non-traditional versus traditional student utilization of career services.

Research Question 3c: Is there a difference in the number non-traditional and traditional students utilizing career services?

Using a Pearson Chi-Square Test with a .05 level of significance, there was no significant difference in the number of non-traditional versus traditional aged students utilizing career services at CCAC Boyce Campus. Table 12 illustrates the findings.

Table 12

Question 3c

	Value	df	p value
Pearson Chi-square	3.781	1	.052

≤ .05

Non-traditional versus traditional student utilization of transfer counseling.

Research Question 3d: Is there a difference in the number of non-traditional and traditional students utilizing transfer counseling services?

Using a Pearson Chi-Square Test with a .05 level of significance, there was no significant difference in the number of non-traditional and traditional students at CCAC Boyce Campus utilizing transfer counseling services. Table 13 shows the findings.

Table 13

Question 3d

	Value	df	p value
Pearson Chi-square	1.599	1	.206

≤ .05

Non-traditional versus traditional student utilization of personal counseling.

Research Question 3e: Is there a difference in the number of non-traditional and traditional students utilizing personal counseling services?

Using a Pearson Chi-Square test with a .05 level of significance, there was no significant difference in the utilization of personal counseling services between non-traditional and traditional students at CCAC Boyce Campus. Table 14 demonstrates the researcher's findings.

Table 14

Question 3e

	Value	df	p value
Pearson Chi-square	1.832	1	.176

≤ .05

Research Question # 4. Does first generation status affect the grade point averages of non-traditional and traditional students?

First generation non-traditional students versus non-first generation

non-traditional student grade point average. Research Question 4a: Do first generation non-traditional students have a lower overall grade point average than that of non-first generation non-traditional students?

Using a two tailed t-test for equality of means with a .05 level of significance, the researcher determined that there was no significant difference in the overall grade point averages of first generation non-traditional aged students and non-first generation non-traditional students at CCAC Boyce Campus. Table 15 reflects the researcher's findings.

Table 15

Question 4a

	df	t score	Sig.
t-test for Equality of Means	37	-.882	.383

≤ .05

First generation traditional aged students versus non-first generation

traditional aged students. *Research Question 4b:* Do first generation traditional aged students have a lower overall grade point average than non-first generation traditional aged students?

Using a t-test for equality of means with a .05 level of significance, there was no significant difference between the overall grade point averages of first generation traditional aged students and non-first generation traditional aged students at CCAC Boyce Campus. Table 16 reflects the researcher's findings.

Table 16

Question 4b

	df	t score	Sig.
t-test for Equality of Means	64	-.295	.769

≤ .05

Frequency in utilization of campus support services between first generation non-traditional student and non-first generation non-traditional students. *Research Question 4c:* Is there a difference in the frequency of utilization of support services (1) tutoring, (2) services for students with disabilities, (3) career services, (4) transfer, and (5) personal counseling that a first generation, non-traditional student takes advantage of as opposed to a non-first generation non-traditional student?

Using a Pearson Chi-Square test a .05 level of significance, there was no significant difference in the frequency of utilization of (1) tutoring, (2) services for students with disabilities, (3) career services, (4) transfer counseling, and (5) personal counseling services between first generation, non-traditional students and non-first generation non-traditional students at CCAC Boyce Campus. It should be noted however, that these each of these results should be interpreted with caution, as they each did not meet the expected cell count of 5, as their lowest cell counts were 3,1,4,3, and 3 respectively. Table 17 demonstrates the findings.

Table 17

Question 4c

Pearson Chi-Square	Value	df	p Value
Tutoring	.495	1	.482
Disability	.048	1	.827
Career Services	.692	1	.406
Transfer Counseling	.133	1	.715
Personal Counseling	.074	1	.786

≤ .05

Frequency of utilization of support services between first generation traditional aged students and non-first generation traditional aged students. Research

Question 4d: Is there a difference in frequency of utilization of support services

(1) tutoring, (2) services for students with disabilities, (3) career services, (4) transfer, and (5) personal counseling that a first generation traditional aged student takes advantage of as opposed to a non-first generation traditional aged student?

Using a Pearson Chi-Square Test with a .05 level of significance, there was no significant difference in the frequency of utilization of tutoring, services for students with disabilities, career services, transfer and personal counseling services between first generation, non-traditional students and non-first generation non-traditional students at CCAC Boyce Campus. It should be noted however, that the results for services for students with disabilities, career services and personal counseling should be interpreted with caution, as each had cell counts which were less than the minimum expected count of 5, with their lowest counts being 2, 4, and 4 respectively. Table 18 reflects the findings.

Table 18

Question 4d

Pearson Chi-Square	Value	df	p Value
Tutoring	.434	1	.510
Disability	1.255	1	.263
Career Services	.127	1	.721
Transfer Counseling	.848	1	.357
Personal Counseling	.736	1	.391

≤ .05

Conclusion

This chapter addressed the findings of the research study. In particular, the chapter provided a statistical analysis of the data collection process and provided an explanation as to the methods used to analyze the study data. The following chapter will address final recommendations and conclusions.

Chapter V

Discussion and Implications

Introduction

Non-traditional students have historically faced many obstacles in obtaining a college education such as work, family responsibilities, and other off campus obligations (Ryan, 2003, para. 4). The purpose of this study was to determine whether there was a difference using a number of factors that relate to the success of non-traditional and traditional aged students at the Community College of Allegheny County, Boyce Campus. Success was determined by a number of factors including: (a) whether a student has formally declared a major; (b) their grade point average; (c) their use of available campus services including tutoring, services for students with disabilities, career services, transfer and personal counseling; and (d) whether a student was involved on campus. Other variables were studied such as gender, employment status and first generation student status when determining the study results.

For the purpose of this research study, a non-traditional student was defined as one who is 25 years of age or older. Non-traditional students can officially be defined as those college students who are 25 years of age or older (Burk & LeBlanc, 1993, p. 5). Similarly, a traditional student is defined as a college student who is between the ages of 18-24 (Adelman, 2005, p. xiv). Since the study was conducted strictly in the state of Pennsylvania, individuals who participated in the research study were only required to abide by Pennsylvania guidelines that they be 18 years of age in order to provide legal consent for their participation (USLegal.com, 2010, para. 6-9).

Participant Population

Of the 113 participants, a total of 44 men and 69 women participated in the study. For this study, women made up 61% of the total participant population whereas men comprised 39% of the study participant population. This gender makeup resembles CCAC's overall student body with 57% of the CCAC student body being female, and 43% being male (CCAC, 2011c, para. 6). Of these groups, a total of 44 non-traditional students participated in the research study with 28 non-traditional female students and 16 non-traditional male students participating. Of the 113 participants, 44 were non-traditional students who met the following criteria: (a) age 25 or above, (b) a current full-time student taking 12 credits or more for the spring semester, (c) must have completed at least one previous full-time semester of 12 credits or more at any CCAC campus, and (d) able to legally provide signed consent. The other 69 study participants were classified as traditional aged students and met the following criteria: (a) age 18-24, (b) a current full-time student taking 12 credits or more for the spring semester, (c) must have completed at least one previous full-time semester of 12 credits or more at any CCAC campus, and (d) able to legally provide signed consent.

Twenty two percent of the overall CCAC student body is made up of ethnic minority students (CCAC, 2011c, para. 6). The non-traditional and traditional aged study participants nearly mirrored CCAC's overall minority population, with 24% of survey respondents identifying themselves as a member of a non-white group. This is slightly lower than the 35.4% of Pittsburgh residents who are classified as part of a non-white group (City-Data, 2010, para. 11). Table 19 demonstrates the ethnic breakdown of study participants.

Table 19

Ethnic Breakdown of All Study Participants

Ethnicity	Number of Students	Percent
American Indian	1	1
Asian	2	2
Black	17	15
Hispanic/Latino	4	3
Pacific Islander	0	0
White/Caucasian	86	76
Multiracial	2	2
Other	1	1
Prefer Not to Respond	0	0
Total	113	100

Summary of Findings

A summary of the study's findings is presented below. The surveys results of non-traditional and traditional aged students at CCAC Boyce Campus were compared and the following summarizes the researcher's findings.

- The study findings indicated that fulltime non-traditional and traditional students at CCAC Boyce Campus overall had similar grade point averages. The researcher found no significant difference in the overall grade point averages of non-traditional and traditional aged students. Additionally, no significant difference in the grade point averages of non-

traditional male and non-traditional female students was found or between traditional aged male and traditional aged female students. Although not considered statistically significant, the researcher did find an average of .19 difference in the grade point averages of the two groups. The researcher also found no significant difference in the number of non-traditional and traditional students who declared a major.

- The study findings did not indicate vastly different levels of involvement between fulltime non-traditional and traditional aged students. The researcher found no statistically significant difference in the level of campus involvement between non-traditional students who work versus those non-traditional students who do not work. The researcher also found no significant difference in the campus involvement of non-traditional students who had children and those non-traditional students who did not have children. The researcher found no significant difference in the level of campus involvement between non-traditional and traditional students. Despite no significant statistical difference, the researcher still found that non-traditional students were slightly more likely to be involved on campus than their younger counterparts.
- Altogether, there was not a statistically significant difference in the number of fulltime non-traditional and traditional aged students utilizing services for students with disabilities, career services, transfer counseling, and personal counseling services, although there was some noticeable

difference. The study findings did indicate a significant difference in the number of non-traditional and traditional aged students utilizing tutoring services, with fulltime non-traditional students over twice as likely to utilize tutoring services than fulltime traditional aged students.

- Overall, first generation status was not shown to impact the grade point averages of fulltime non-traditional and traditional aged students at CCAC Boyce Campus. First generation status was also not shown to have an impact on whether students utilized services at the college, including tutoring, services for students with disabilities, career services, transfer counseling, and personal counseling services.

Discussion

The researcher found that overall there was not a significant difference in the academic success or participation in clubs, organizations and campus services amongst non-traditional and traditional aged students at CCAC Boyce Campus. The discussion will compare the researcher's findings with the literature, and present the implications.

Research Question #1 Is there a difference among some factors related to the success of traditional and non-traditional students?

Sub-Questions

- a. Is there a difference of grade point averages between non-traditional and traditional aged students (freshman and sophomore) at the college?

- b. Is there a difference in the factors related to academic success (as demonstrated by grade point average) of non-traditional male and non-traditional female (freshman and sophomore) students?
- c. Is there a difference in the factors related to academic success (as demonstrated by grade point average) of traditional aged male and traditional aged female (freshman and sophomore) students?
- d. Is there a difference in the number of non-traditional and traditional (freshman and sophomore) students who have declared a formal major?

When analyzing the study results, the researcher did not find a statistically significant difference in the grade point averages of non-traditional and traditional aged students. Despite finding no statistically significant difference, there was a slight difference in the overall grade point averages of the two groups, with non-traditional students' grade point average being .19 higher. The following table demonstrates these findings.

Table 20

Average Grade Point Average of Non-traditional and Traditional Students

Non-traditional Students (44 Respondents)	Traditional Students (66 respondents)	Difference
3.34	3.15 GPA	.19

A non-traditional student's grade point average is considered the best indicator of a student's future persistence and academic success (Miller Brown, 2002, p. 71). The literature argued that the older a transfer student, the higher their overall grade point

average was upon graduating (Glass and Harrington, 2002, p. 417). Although no significant difference in grade point averages between the two student groups was found, the researcher's findings do support the literature that non-traditional students have higher overall grade point averages than traditional aged students.

Although there was a .19 overall difference in grade point average between the two groups, the researcher was surprised that this difference was not more favorable for non-traditional students due to their high academic commitment that she has observed in her work at the college. As many non-traditional students are attending college with a specific career goal in mind and are often financing their education from their own financial resources, the non-traditional students she has encountered generally seem to take their academic studies more seriously. The researcher surmises that one of the primary reasons that these students' grade point averages are not higher is due to their significant outside responsibilities such as work and family (Ryan, 2003, par. 4) and issues grappling with technology (Miller & Lu, 2002, p. 5).

No significant difference in grade point average was found between male non-traditional and female non-traditional students. Similarly, no significant difference in the grade point averages of traditional aged male and traditional age female students was found. When considering non-traditional male and female students, the literature suggested that both encounter their own significant obstacles in attending and being academically successful in college. While female students are much more likely to be single parents than male students (Miller, 2010, p. 1), male students are less likely to attend college than female students (United States General Accounting Office, 2000,

p.10), and are more likely to be concerned with the financial pressures of returning to college due to the need to support their families (St. John & Tuttle, 2004, p. 4).

Interestingly, the researcher found that both male and female non-traditional study participants had the same average grade point average, 3.34. Table 21 shows the average GPA between the 16 male and 28 non-traditional female participants.

Table 21

Average Grade Point Average of Non-traditional and Traditional Students

Non-traditional Male Students (16 Respondents)	Non-traditional Female Students (28 respondents)	Difference
3.34 GPA	3.34 GPA	.00

These findings seem to suggest that non-traditional male and female students are performing at similar academic levels. Despite the obstacles that both groups face, each has managed to maintain better than average grades at Boyce Campus. It appears to the researcher that although the literature suggests that these students are likely to encounter obstacles, each group's obstacles are similar enough to balance out their academic success, or one group may have more obstacles but has learned to cope or navigate the system, even in spite of challenging odds.

Lastly, the researcher found no significant difference between the number of non-traditional and traditional students who declared a major. This finding appears to refute the National Center for Education Statistics (2003) finding that older students were more likely to enroll at a community college without declaring a formal major (p. 12). In this study, nearly all non-traditional and traditional aged student participants had formally

declared a major. Because of this, the researcher's findings do not support the literature suggesting that non-traditional students were less likely to declare a major.

Research Question #2. Is there a difference in the campus involvement of non-traditional and traditional students?

Sub-Questions

- a. Is there a difference in the campus involvement of non-traditional students who work (part-time or fulltime) versus those who do not work?
- b. Is there a difference in the level of campus involvement between non-traditional students who have children as opposed to those non-traditional students who do not?
- c. Overall, is there a difference in the level of campus involvement between non-traditional and traditional students, regardless of work and family (spouse and/or children) responsibilities?

The researcher found no significant difference in the campus involvement of non-traditional students who work versus who do not work. This finding was surprising to the researcher, as the literature suggested that work responsibilities often play a role in the attrition and lack of success and campus involvement of students (Ryan, 2003, para. 4). In fact, Cohen and Brawer (2003) suggested that student activities programs at community colleges were difficult to operate due to in part to working students (p. 207).

The study also found no significant difference in the level of campus involvement between non-traditional students who have children versus those non-traditional students who do not have children. These findings are encouraging, as those students who work excessive hours may experience difficulty maintaining eligibility for financial aid. The

study also found no significant difference in the level of campus involvement between non-traditional and traditional students in general.

One should note however, that low levels of involvement were found across the board, with few students participating in campus clubs and organizations at CCAC Boyce Campus. Overall there were no significant differences in the campus involvement of non-traditional and traditional aged students, regardless of work and family responsibilities. This finding supports the literature that overall campus involvement at community colleges is dismal because students do not live on campus (Kane & Rousde, 1999, p. 71), may be less committed academically since they feel that the institution is of lower caliber from the beginning (Bers & Smith, 1991, pp. 552-553), and high school leaders tend to attend universities rather than community colleges (Cohen & Brawer, 2003, p. 207). Of all respondents, 23% of non-traditional students surveyed indicated involvement in one or more campus clubs or organizations, compared with only 10% of traditional aged students. That translates into nearly a quarter of non-traditional students indicating involvement in campus clubs or organizations, with only one in ten traditional aged students being actively involved. Table 22 demonstrates the involvement of both non-traditional and traditional aged students in clubs and organizations at CCAC Boyce Campus.

Table 22

Campus Involvement of Non-traditional and Traditional Aged Students

Participation	Non-traditional Students	Traditional Students
No involvement	29	48

None, but wish to be	4	14
Involved in one	9	5
Two or more	1	2
No response	1	0

The researcher's findings demonstrate that despite the obstacles and busy schedules of non-traditional students at CCAC Boyce Campus, they are still more likely to be involved on campus than their younger counterparts. This finding is encouraging and appears to indicate that older students are making more of an effort to become involved on campus.

Regarding the campus involvement of non-traditional students who had children versus non-traditional students who did not have children, there was no significant difference. The literature suggested that students' with dependents are less likely to be retained in college (National Center for Education Statistics, 2003, p. 26), as many parents work while in school, particularly single parents (Miller, 2010, p. 2), who must balance school, work and home life. Of the 44 non-traditional students who participated in this research study, female non-traditional participants were more likely to have children that reside with them, with 5 female participants having 3 or more children that reside with them, 5 having 2 children that reside with them, 8 having 1 child residing with them. Ten conversely had no children that resided with them. Of the non-traditional aged men who completed the study, 1 had 3 or more children residing with them, 3 had 2 children residing with them, 4 had one child residing with them, while 8 had no children residing with them. The following table summarizes these results.

Table 23

Non-traditional Students With or Without Children

Number of Children	Non-traditional Female Students	Non-traditional Male Students
No children	10	8
One child	8	4
Two children	5	3
Three or more children	5	1

The researcher's findings are important because they indicate that student parents are involved at similar rates as non-traditional students who are not parents. Although non-traditional students are more involved on campus than traditional aged students, their overall involvement on campus is still distressing. Considering extracurricular involvement can have positive affects on students which will assist them in developing as a whole student and improving their resume, the researcher feels that these levels of campus involvement should be fostered and encouraged.

Research Question # 3. Is there a difference in the frequency of utilization of the various support services at the college between non-traditional and traditional students?

Sub Questions

- a. Is there a difference in the number of non-traditional and traditional students utilizing tutoring services?
- b. Is there a difference in the number of non-traditional and traditional students utilizing services for students with disabilities?

- c. Is there a difference in the number non-traditional and traditional students utilizing career services?
- d. Is there a difference in the number of non-traditional and traditional students utilizing transfer counseling services?
- e. Is there a difference in the number of non-traditional and traditional students utilizing personal counseling services?

The researcher found a significant difference in the number of non-traditional and traditional aged students who utilized tutoring services. Hoover (2010) wrote that non-traditional students have many needs in regards to learning their course material and may often require help while in college (para. 4). Sixty-six percent of non-traditional students participated in tutoring at least once per semester, compared with only 38% of traditional aged students. This finding seems to indicate one of two things; either non-traditional students are more in need of tutoring services as the literature suggests or they are simply more academically conscientious as a whole than traditional aged students. Overall, the grade point averages of non-traditional study participants was higher with a GPA of 3.34, whereas the traditional student population had an average GPA of 3.15. Whether non-traditional student GPA's are higher due to greater utilization of tutoring or simply due to higher ambition is unknown. This finding does suggest, however, although no casual affect was measured that students who utilize tutoring services at CCAC Boyce Campus have higher overall grade point averages. Table 24 lists the breakdown of utilization of tutoring services at CCAC Boyce Campus between non-traditional and traditional age students.

Table 24

Tutoring Utilization of Non-traditional and Traditional Aged Students

Participation	Non-traditional Students	Traditional Students
Never	15	43
Once per semester	14	13
Twice per semester	1	5
> Twice per semester	14	8

The researcher found no significant difference in the utilization of services for students with disabilities between non-traditional and traditional aged students. The literature suggested that nationally 11% of undergraduate students, both non-traditional and traditional identified as having one or more disabilities (NCES, 2010, par. 8). The researcher's findings confirmed the literature, with 11% of non-traditional student participants indicated utilizing services for students with disabilities at least once per semester and 9% of traditional aged students indicated participating at least once per semester. Approximately 10% of the CCAC Boyce Campus population identified as having one or more disabilities (Florentine, 2011). The researcher's findings closely mirror the percentage of students who indicated utilizing the Services for Students with Disabilities Office at least once per semester at the institution. Table 25 shows the utilization of services for students with disabilities between non-traditional and traditional aged students at CCAC Boyce Campus.

Table 25

Utilization of Services for Students With Disabilities

Participation	Non-traditional Students	Traditional Students
Never	37	63
Once per semester	2	2
Twice per semester	0	0
> Twice per semester	3	4
No response	2	0

These findings suggest CCAC Boyce Campus students, both non-traditional and traditional, are utilizing services for students with disabilities at approximately the same rate as students nationally. Although a slightly lower number of traditional aged students may utilize these services, the researcher believes this may be due to the fact that non-traditional students with disabilities may delay their return to school, or traditional aged students may feel there is a stigma associated with self-identifying as having a disability.

The researcher found no significant difference in the number of non-traditional and traditional aged students utilizing career services. The literature seems to imply a significant value in students utilizing career services. Career services programs “support the mission, academic and experiential programs, and advancement of the institution to promote student learning and student development” (National Association of Colleges and Employers, 2009, p. 1). Although the researcher found no statistically significant difference, the findings did indicate that non-traditional age students utilized career services at slightly higher rates. Overall, 30% of non-traditional students utilized career services, compared with 13% of traditional aged students. Somewhat troubling, 91 students out of 113 surveyed indicated they did not utilize career services. The following table demonstrates the researcher’s findings.

Table 26

Utilization of Career Services

Participation	Non-traditional Students	Traditional Students
Never	31	60
Once per semester	8	6
Twice per semester	0	1
> Twice per semester	3	1
No response	2	1

The researcher believes that the findings contend that older students find these services more necessary than younger students due to their need to support themselves and their families.

The researcher also found no significant difference in the utilization of transfer counseling services. The literature asserts that transfer students are more likely to be older and married (Andres & Carpenter, 1997, p. 33). Thirty-four percent of non-traditional student participants indicated participating in transfer counseling services at least once per semester, while traditional aged students participation rate was 46%. The study findings denote that non-traditional students are not taking advantage of transfer counseling services at the same rate as traditional aged students.

Table 27 reflects the participation in transfer counseling services by non-traditional and traditional aged students at CCAC Boyce Campus:

Table 27

Utilization of Transfer Counseling Services

Participation	Non-traditional Students	Traditional Students
Never	28	36
Once per semester	12	24
Twice per semester	1	8
> Twice per semester	2	0
No response	1	1

The researcher's findings do not support the literature that transfer students are more likely to be older. Although 44% of all CCAC students are enrolled in transfer programs (CCAC, 2011c, para. 6), non-traditional students at CCAC Boyce Campus still only participated in transfer counseling at a rate of 34%. One might surmise that non-traditional students are less likely to utilize transfer counseling services because they may be more focused on career or terminal programs, due to their need to enter the workforce more quickly.

Lastly, the researcher's findings revealed that there was no significant difference in the utilization of personal counseling services amongst non-traditional and traditional aged students. Waither and Ritchie (1998) suggested that the needs of older students are often overlooked by personal counseling programs on campus. (para. 1) Although a statistically significant difference in participation was not found, 23% of non-traditional students and 13% of traditional aged students indicated utilizing personal counseling services at least once per semester. Table 28 lists the use of these services.

Table 28

Utilization of Personal Counseling Services

Participation	Non-traditional Students	Traditional Students
Never	32	57
Once per semester	6	9
Twice per semester	1	0
> Twice per semester	3	0
No response	2	3

The researcher's findings contradict the literature insinuating that adult students' needs are often not met by personal counseling. Although the overall number of participants was not excessive, non-traditional students did participate in these services at higher rates. The author also surmises that the low overall level of participation in personal counseling services may be due to the possible stigma associated with obtaining personal counseling or therapy. The researcher also believes if students who could benefit from personal counseling are not utilizing these services, they may in turn have more difficulty in the educational process and may have difficulty being retained in college.

Research Question 4. Does first generation status affect the grade point averages of non-traditional and traditional students?

Sub Questions

- a. Is there a difference in the overall grade point averages of first generation non-traditional and non-first generation non-traditional students?
- b. Is there a difference in the overall grade point averages between first generation traditional and non-first generation traditional aged students?

- c. Is there a difference in the frequency of utilization of support services (1) tutoring, (2) services for students with disabilities, (3) career services, (4) transfer, (5) personal counseling that a first generation, non-traditional student as opposed to a non-first generation non-traditional student?
- d. Is there a difference in frequency of utilization of support services (1) tutoring, (2) services for students with disabilities,(3) career services, (4) transfer, (5) personal counseling, that a first generation traditional aged student as opposed to a non-first generation traditional aged student?

The researcher found no significant difference in the overall grade point averages of first generation non-traditional and non-first generation non-traditional students. Additionally, there was no significant difference in the overall grade point averages of first generation traditional and non-first generation traditional students at the college. St. John and Tuttle (2004) contend that first generation college students are automatically at a disadvantage when pursuing postsecondary education (p. 6). The researcher found that first generation status did not have a significant impact on the grade point averages of students. Overall, 37% of CCAC's students enrolled in credit courses are considered first generation college students (CCAC, 2006, p. 12). One could surmise that CCAC Boyce Campus has similar numbers of first generation college students. Of the study participants, 42% self-reported as first generation college students, with neither their parents nor siblings having previously obtained a Bachelor's degree. Since over one-third of all system-wide CCAC students are considered first generation and are normally unable to receive the same guidance as their non-first generation peers, this finding is significant in that it demonstrates that CCAC Boyce first generation students are

performing comparable to their non-first generation counterparts.

Similarly, the researcher found no significant difference in the utilization of campus including (1) tutoring, (2) services for students with disabilities, (3) career services, (4) transfer, (5) personal counseling services between non-traditional first generation students and non-traditional non-first generation students. The researcher also found no significant difference in the utilization of campus services between first generation traditional aged students and non-first generation traditional aged students. This finding is also noteworthy as it proves that CCAC students, both first generation and non-first generation, are utilizing campus services at similar rates. Despite this positive finding, overall participation in campus services across the board was dismal. The researcher's findings indicate that the institution is providing equal services for first generation college students, but also that all CCAC Boyce Campus students could benefit from utilizing these services more frequently.

Recommendations

Ultimately, through this study, the researcher learned that the research process provides learning where the researcher seeks to gain more knowledge not only about the subject matter being studied but also about the research process in general. In retrospect, the researcher would have conducted qualitative research on the firsthand experiences of non-traditional students. The researcher believes this information could have provided rich and meaningful insight into the experiences of non-traditional students at CCAC Boyce Campus.

The researcher also discovered that her relatively small sample of students limited the data analyzing process. If she were to complete the study again, she would have

obtained larger samples of the non-traditional and traditional student groups in order to collect enough data to compare sub-groups. For one, the researcher would have liked to have a clearer understanding of whether a student's work status affects their campus involvement. Rather than analyzing only students who do not work versus students who work anywhere from 1 hour per week to 40 hours per week, she would have been able to more accurately analyze these results. Based on this learning experience, the researcher suggests that CCAC Boyce Campus administration complete additional research into whether there is a difference in the campus involvement and academic success of students who work (1) 1-10 hours per week, (2) 11-20 hours per week, (3) 20-39 hours per week, and (4) 40 or more hours per week.

There is information in this study presented on the topic of a student's ethnicity. Originally, the researcher desired to study whether ethnicity had an affect on student grade point average and campus involvement. The researcher was unable to analyze the ways in which student ethnicity may affect student grade point averages and campus involvement. Although the researcher requested that each study participant voluntarily report their ethnicity, the number of respondents in each ethnic category were too small to analyze. In the future, the researcher would collect a larger number of surveys in order to analyze whether ethnicity has an affect on student grade point average or campus involvement.

Next, the researcher discovered through her research and recommendations from faculty that there would have been a significant benefit to considering whether gender had an influence on the campus involvement of students and the frequency of utilization of services. Since male and female students each face their own unique set of obstacles

when attending college, this information would have been helpful. Based on this learning experience, the researcher suggests that additional research be conducted to determine if there are any differences in the campus involvement and utilization of campus services of male and female students at CCAC Boyce Campus.

Based on the researcher's study findings, she suggests several recommendations for consideration for future research. First, the researcher was unable to locate a significant amount of recent literature regarding the benefits of transfer counseling and career services at colleges and universities today. Because of this lack of literature, the researcher found it was difficult to compare whether students at CCAC Boyce Campus utilized these services at similar rates to other institutions as a whole. The researcher believes that there would be a benefit to additional research being completed to determine whether these services impacted both non-traditional and traditional students' grade point averages at colleges and universities in the United States.

Transfer students makeup 44% of CCAC's overall student population (CCAC, 2011c, para. 6). The researcher found that only 34% of non-traditional students in the study participated in transfer counseling services at least once per semester. This finding seems to counter the literature that transfer students are more likely to be older and married (Andres & Carpenter, 1997, p. 33). Since this number is 10% lower than the overall rate of participation in these services, there may be a benefit to CCAC Boyce Campus completing an additional study to determine whether non-traditional students are truly utilizing these services at lesser rates, or simply whether non-traditional students are enrolled in career programs more frequently than in transfer programs. Most importantly, CCAC administration should continue to advertise and encourage transfer students to

utilize these services so that they are not spending unnecessary time and money on additional courses.

Thirty-percent of non-traditional students indicated participating in career services at Boyce Campus at least once per semester. Only 13% of traditional aged students indicated participating in these services at the college. The researcher surmises that this difference may be due to older students need to locate employment immediately upon graduation due to outside responsibilities. Although this study primarily examined the obstacles that affect non-traditional students, the researcher recommends that Boyce Campus develop better methods to target 18-24 year old students to promote the career services that are offered. Whether these students utilize the services while in college to obtain internships in their field or search for jobs in their final semester of study, they will likely benefit from the variety of career services offered.

The researcher also found limited recent literature on the benefits of tutoring. Many of the existing studies were 30 or more years old and could not provide current insight into the benefits of tutoring college students today. As such, the researcher believes that there would be a benefit to more contemporary studies being created on whether participation in college tutoring services actually positively impacts a student's grade point average. Additionally, the author feels that CCAC Boyce Campus administrators would benefit from completing additional research as to why traditional aged students are not participating in tutoring services at similar rates to their older counterparts. When considering all study participants, 76% of non-traditional students utilized tutoring services when compared with only 38% of traditional aged students. Notably, non-traditional students had a higher overall cumulative grade point average,

3.34, whereas the average grade point average for traditional aged students was a 3.15. The researcher recommends that administration examine whether the utilization of tutoring services at Boyce Campus improve students' overall grade point average.

Campus involvement is shown to support the learning process outside of the classroom (Cohen & Brawer, 2003, p. 353). The researcher found that the overall participation in campus clubs and organizations at CCAC Boyce Campus was meager. Most notably, only 10% of younger traditional aged students are involved in clubs and organizations. Older students were again more likely to be involved with a 23% rate of participation in at least one club or organization per semester. This finding is surprising to the researcher considering that older students traditionally have many demands which take up their time, yet at Boyce Campus non-traditional students have still chosen to participate in organizations more frequently. The researcher suggests additional research be conducted by the campus to determine why traditional aged students are not becoming more involved on campus. Furthermore, the campus may wish to consider new activities and organizations which are recommended by traditional students to encourage greater participation.

Conclusion

For the researcher, this research process was an incredible learning process where she was afforded the opportunity to study a group of students who really interest her; non-traditional students. The study taught the researcher that although current literature may suggest that non-traditional students are less likely to declare a major (NCES, 2003, p. 12), and face more obstacles in the classroom which may impede their success (Miller & Lu, 2002, p. 5), these findings do not hold true in every case. This process has taught

the researcher the importance of not simply relying on the research of others but of conducting her own research to garner her own results.

For non-traditional students at the CCAC Boyce Campus, they have broken the mold. Whether these students are simply exceptional or whether their grades and participation are more common than the literature states is not known. What is known is that despite their obstacles, family, work, finances, etc., non-traditional students at CCAC Boyce Campus are proving that they can excel in a higher education environment. Although these findings relate directly to CCAC Boyce Campus, the researcher hopes that they are promising to other higher education professionals who study or work with non-traditional students to encourage them that despite their many obstacles, these students can and will succeed.

References

- Adelman, C. (2005). *Moving Into Town and Moving On: The Community College in the Lives of Traditional-age Students*. Washington, DC: US Department of Education.
- Advisory Committee on Student Financial Assistance. (2008). *Apply to succeed: Ensuring community college students benefit from need-based financial aid*. Retrieved on November 15, 2010, from <http://www2.ed.gov/about/bdscomm/list/acsfa/applytosucceed.pdf>
- Akridge, S. and Ross, P. (1987). CCC's Success Program: Counseling, Caring and Campus Involvement. From ERIC Database: ED289545.
- America.gov (2008). *Non-traditional students enrich U.S. college campuses*. Retrieved on April 22, 2011, from <http://www.america.gov/st/educ-english/2008/April/200804281212291CJsamohT0.3335382.html>
- Andres, L., & Carpenter, S. (1997). *Today's higher education students. Issues of admission, retention, transfer and attrition in relation to changing student demographics*. Retrieved on June 20, 2011, from <http://www.bccat.bc.ca/pubs/today.pdf>
- Bers, T., & Smith, K. (1991). Persistence of community college students: The influence of student intent and academic and social integration. *Research in Higher Education*, 32(5), 541-553.

- Bierwert, C. (2002). Making accommodations for students with disabilities: A guide for faculty and graduate student instructors. *The Center for Research on Learning and Teaching Casual Papers, The University of Michigan, 17*, 1-2.
- Boston, W., Ice, P., & Gibson, A. (2011, Spring). Comprehensive assessment of student retention in online learning environments. *Online Journal of Distance Learning Administration, IV(I)*, University of West Georgia, Distance Education Center.
- Burk, J. and LeBlanc, H. (1993). Implicit Nonverbal Rules in the Classroom: A Study of Gender and Status Differences. Retrieved on July 10, 2011 from <http://communication.utsa.edu/leblanc/articles/art02.pdf>
- Calcagno, J., Crosta, P., Bailey, T., & Jenkins, D. (2006). Stepping stones to a degree: The impact of enrollment pathways and milestones on community college student outcomes. *Community College Research Center Brief Number 32*. ERIC Database: ED494141.
- Carnegie Foundation for the Advancement of Teaching. (2010). *Carnegie classifications*. Retrieved on September 23, 2010, from http://classifications.carnegiefoundation.org/lookup_listings/view_institution.php?unit_id=210605&start_page=institution.php&clq=%7B%22first_letter%22%3A%22C%22%7D
- Carnegie Mellon University. (2005). *Pittsburgh fast facts*. Retrieved on April 23, 2011, from <http://my.cmu.edu/portal/site/admission/fastfacts>
- City-Data. (2010). *Pittsburgh, Pennsylvania*. Retrieved on April 23, 2011, from <http://www.city-data.com/city/Pittsburgh-Pennsylvania.html>

Cohen, A., & Brawer, F. (2003). *The American community college*. San Francisco:

Jossey- Bass

Community College of Allegheny County. (n.d.). *CCAC Boyce Campus Learning Center*. Pamphlet published by CCAC.

Community College of Allegheny County. (2006). *A tradition of changed lives*.

Retrieved on May 23, 2011, from http://www.ccac.edu/files/PDF_Document/b98cafa6e41a44ff85bf9a9ef94e36c7.pdf

Community College of Allegheny County. (2010a). *Academic progress*. Retrieved on

December 19, 2010, from <http://www.ccac.edu/default.aspx?id=137571>

Community College of Allegheny County. (2010b). *Bottom Lines: Community College of Allegheny County Trends in Planning Data Academic Year 2009-2010*.

Retrieved on July 9, 2011, from

http://www.ccac.edu/files/PDF_Document/b3e83b8dec1049be902795709b47185d.pdf

Community College of Allegheny County. (2010c). *Enrollment steps & application for admissions*. Retrieved on November 4, 2010, from http://www.ccac.edu/files/PDF_Document/3c3ddb856e364614850417c2751c2606.pdf

Community College of Allegheny County. (2010d). *Quick facts*. Retrieved on

December 20, 2010, from <http://www.ccac.edu/default.aspx?id=137345>

Community College of Allegheny County. (2010e). *Supportive services*. Retrieved on

June 13, 2011, from http://www.ccac.edu/files/PDF_Document/ed6c4b94c4344933b21ba2bb88aa8b67.pdf

- Community College of Allegheny County. (2011a). *About CCAC*. Retrieved on April 9, 2011, from <http://www.ccac.edu/default.aspx?id=137107>
- Community College of Allegheny County. (2011b). *Allegheny Campus*. Retrieved July 7, 2011, from <http://www.ccac.edu/default.aspx?id=137123>
- Community College of Allegheny County. (2011c). *At a glance*. Retrieved on May 26, 2011, from <http://www.ccac.edu/default.aspx?id=137345>
- Community College of Allegheny County. (2011d). *Boyce campus*. Retrieved on May 5, 2011, from <http://www.ccac.edu/default.aspx?id=137124>
- Community College of Allegheny County. (2011e). *Boyce campus student life*. Retrieved on May 5, 2011, from <http://www.ccac.edu/default.aspx?id=137456>
- Community College of Allegheny County. (2011f). *College Vision, Mission and Goals*. Retrieved on July 10, 2011, from <http://www.ccac.edu/default.aspx?id=137250>
- Community College of Allegheny County. (2011g). *Disability services*. Retrieved on April 9, 2011, from <http://www.ccac.edu/default.aspx?id=137533>
- Community College of Allegheny County. (2011h). *Frequently asked questions*. Retrieved on May 14, 2011, from <http://www.ccac.edu/default.aspx?id=149725>
- Community College of Allegheny County. (2011i). *Job placement and career services*. Retrieved on April 9, 2011, from <http://www.ccac.edu/default.aspx?id=137481>
- Community College of Allegheny County. (2011j). *North campus*. Retrieved on July 7, 2011, from <http://www.ccac.edu/default.aspx?id=137125>
- Community College of Allegheny County. (2011k). *Personal and academic counseling*. Retrieved on April 9, 2011, from <http://www.ccac.edu/default.aspx?id=137924>

Community College of Allegheny County. (2011l). *Role of transfer counselor*.

Retrieved on April 24, 2011, from <http://www.ccac.edu/default.aspx?id=150291>

Community College of Allegheny County. (2011m). *South Campus*. Retrieved on July

7, 2011, from <http://www.ccac.edu/default.aspx?id=137126>

Community College of Allegheny County. (2011n). *The advisement process*. Retrieved

on April 22, 2011, from <http://www.ccac.edu/default.aspx?id=137733>

Community College of Allegheny County. (2011o). *Tutoring services*. Retrieved on

April 9, 2011, from <http://www.ccac.edu/default.aspx?id=137508>

Cramer, D. (2003). *Advanced quantitative data analysis*. Berkshire, CA: McGraw-Hill

Education.

Crawley, M. (2005). *Statistics: An introduction using R*. West Sussex: John Wiley and

Sons.

Creswell, J. (2003). *Research design: Qualitative, quantitative, and mixed methods*

approaches. Thousand Oaks, CA: Sage Publications.

Creswell, J. (2009). *Research design: Qualitative, quantitative and mixed methods*

approaches. Thousand Oaks, CA: Sage Publications

Dungy, G. (2003). Organization and functions of student affairs. In S. Komives, D.

Woodard, & Associates (Eds.), *Student services: A handbook for the profession*.

San Francisco: Jossey Bass.

Duvel, C. (n.d.). *Understanding the Learning Styles of Minority Students in*

Engineering. Retrieved on July 12, 2011, from

http://region3.ascweb.org/Documents/ASC_R3_04_Papers/Duvel_ASC_04.pdf

- El-Khawas, E. (2003). The many dimensions of student diversity. In S. Komives, D. Woodard, & Associates (Eds.), *Student services: A handbook for the profession*. San Francisco: Jossey Bass.
- ERIC Development Team. (1992). Non-traditional college students. *ERIC Digest: ED 347483*
- Evans, J., Forney, D., Guido, F., Patton, L., & Renn, K. (2010). *Student development in college: Theory, research and practice*. San Francisco: Jossey Bass.
- Florentine, P. (2011). *Email Interview*. Occurred June 20, 2011.
- Florida Department of Education. (2003). *Non-traditional students face barriers to degree completed*. Retrieved on March 15, 2011, from <http://www.fldoe.org/CC/OSAS/FastFacts/ff67.pdf>
- Garver, M., Spralls, S., & Divine, R. (n.d.). Need-based segmentation of university career services: Implications for increasing student participation. *Research in Higher Education Journal*. Retrieved on June 20, 2011, from <http://www.aabri.com/manuscripts/09190.pdf>
- Glass, J., Jr., & Harrington, A. (2002). Academic performance of community college transfer students and “native” students at a large state university. *Community College Journal of Research Practice*, 26, 415-430.
- Grall, T. (2009). Custodial mothers and father and their child support: 2007. *United States Census Bureau: Current Population Reports*. Retrieved on May 26, 2011, from http://singleparents.about.com/gi/o.htm?zi=1/XJ&zTi=1&sdn=singleparents&cdn=parenting&tm=6&gps=432_222_1020_567&f=20&su=p284.

9.336.ip_p504.1.336.ip_&tt=11&bt=0&bts=0&zu=http%3A//www.census.gov/prod/2009pubs/p60-237.pdf

- Graunke, S., & Woosley, S. (2005, June). An exploration of the factors that affect the academic success of college sophomores. *The College Student Journal*. Retrieved on September 22, 2010, from http://findarticles.com/p/articles/mi_m0FCR/is_2_39/ai_n14703161/pg_4/?tag=content;coll
- Gravetter, F., & Wallnau, L. (2009). *Statistics for behavioral sciences*. Belmont: Wadsworth, Cengage Learning.
- Hoover, E. (2010). The many facets of adult students. *The Chronicle of Higher Education Online*. Retrieved on December 21, 2010, from <http://chronicle.com/blogPost/The-Many-Facets-of-Adult-St/23879/>
- Hudson, L. (2003). Racial/ethnic differences in the path to a postsecondary credential. *Educational Statistics Quarterly*, 5(2), 129-133.
- Kalof, L., Dan, A., & Dietz, T. (2008). *Essentials of social research*. Berkshire: Open University Press.
- Kane, T. J., & Rouse, C. E. (1999, Winter). The community college: Educating students at the margin between college and work. *The Journal of Economic Perspectives*, 13(1), 63-84.
- Keith, P. (2007, December). Barriers and nontraditional students' use of academic and social services. *The College Student Journal*.
- Lane, D. (n.d.). Value of the Pearson correlation. *Online Statistics Education: An Interactive Media Course of Study*. Retrieved on May 22, 2011, from <http://onlinestatbook.com/chapter4/pearson.html>

- Ling. (2008). *Tutorial: Pearson's Chi-Square Test for Independence*. Retrieved on May 22, 2011, from <http://www.ling.upenn.edu/~clight/chisquared.htm>
- Los Angeles Valley College Office of Research and Planning. (2004). *First generation college student characteristics*. Retrieved on April 5, 2011, from <http://www.lavc.edu/research/News/FirstGenMar04.pdf>
- Marklein, M. (2006). Minority enrollment in college still lagging. *USA Today*. Retrieved on May 28, 2011, from http://www.usatoday.com/news/education/2006-10-29-minority-enrollment_x.htm
- MathBeans. (n.d.). *The Chi Square statistic*. Retrieved on May 22, 2011, from <http://math.hws.edu/javamath/ryan/ChiSquare.html>
- Matthews, M. (n.d.). Should personal counseling be required for students admitted into counselor preparation programs? *Journal of Counseling Practice Archives*, 78(9). Retrieved on June 16, 2011, from <http://www.ohiocounseling.org/JPC/JCP%20Articles/Archives/article%2013.pdf>
- McEwen, M. (2003). New perspectives on identity development. In S. Komives, D. Woodard, & Associates (Eds.), *Student services: A handbook for the profession*. San Francisco: Jossey Bass.
- Miller, K. (2010). *Childcare Support for Student Parents in Community College is Crucial for Success, but Supply and Funding are Inadequate*. Institute for Women's Policy Research. Retrieved on July 19, 2011, from www.iwpr.org/.../pubs/child-care...in-community-college.../file

- Miller, M., & Lu, M. (2002). Barriers and challenges to serving non-traditional students in e-learning environments. *ERIC Digest: ED 468 117*
- Miller Brown, S. (2002). Strategies that contribute to non-traditional/adult student development and persistence. *PAACE Journal of Lifelong Learning, 11*, 67-76.
- Morra-Imas, L., & Rist, R. (2009). *The road to results: Designing and conducting effective development evaluations*. Washington: The World Bank.
- Municipality of Monroeville. (2010). *About Monroeville*. Retrieved on May 5, 2011, from <http://www.monroeville.pa.us/about.htm>
- Naphsis.org (n.d.). *Race and ethnicity categories*. Retrieved on September 23, 2010, from <http://www.naphsis.org/NAPHSIS/files/ccLibraryFiles/Filename/000000001003/Race%20and%20Ethnicity.pdf>
- National Association of Colleges and Employers. (2009). *Professional standards for college and university career services*. Retrieved on May 28, 2011, from http://www.naceweb.org/Knowledge/Career_Services/Assessment/Professional_Standards_for_College___University_Career_Services.aspx#cadvising
- National Association of Colleges and Employers. (2010). *Top five career services*. Retrieved on June 20, 2011, from http://www.naceweb.org/Publications/Spotlight_Online/2010/0721/Top_Five_Career_Services.aspx?referral=knowledgecenter&menuid=73
- National Center for Education Statistics. (n.d.2). Trends in Nontraditional Student Enrollment. Retrieved on July 11, 2011, from <http://nces.ed.gov/pubs/web/97578f.asp>

- National Center for Education Statistics. (2002). *Special analysis 2002: Non-traditional undergraduates*. Retrieved on November 4, 2010, from <http://nces.ed.gov/programs/coe/2002/analyses/nontraditional/index.asp>
- National Center for Education Statistics. (2003). *Community college students: Goals, academic preparation and outcomes*. U.S. Department of Education, NCES 2003-164. Retrieved on November 15, 2010, from <http://nces.ed.gov/pubs2003/2003164.pdf>
- National Center for Education Statistics. (2008a). Closer look. Retrieved on May 30, 2011, from <http://nces.ed.gov/programs/coe/analysis/2008-sa03.asp>
- National Center for Education Statistics. (2008b). Community colleges: Special supplement to the condition of education 2008. *ERIC Digest: ED 502 349*
- National Center for Education Statistics. (2010). *Digest of education statistics: 2010. Chapter 3: Postsecondary education*. Retrieved on May 29, 2011, from http://nces.ed.gov/programs/digest/d10/ch_3.asp
- Nebraska State Bar Foundation. (2011). *Reaching the age of majority: Your legal rights and responsibilities*. Retrieved on April 27, 2011, from <http://www.nebarfnd.org/images/pdf/aom/NSBF-Age-of-Majority-2011.pdf>
- Niner, P. (2006). *Reaching Non-traditional Students*. Retrieved on July 11, 2011, from <http://universitybusiness.ccsct.com/page.cfm?p=1016>
- Noble, J. and Sawyer, R. (2002). *Predicting Different Levels of Academic Success in College Using High School GPA and ACT Composite Score*. From ERIC Database:ED 469746.

- Ohio Appalachian Center for Higher Education. (n.d.). *Non-traditional students*. Retrieved on April 26, 2011, from http://www.oache.org/assets/A-Srept_IV.pdf
- Paradise Valley Community College. (2002). *Why do we need to train tutors?* Retrieved on December 21, 2010, from <http://www.pvc.maricopa.edu/lsc/staff/training/why.htm>
- Prentice, M. (2002). Serving students with disabilities at the community college. *ERIC Database: 467 984*.
- Rhodes, J. (2011). *Electronic interview*. Conducted on November 29, 2011, at CCAC Boyce Campus.
- Rounds, J. (1984). Tutoring: Essential to community colleges. *The ERIC Database: ED 251 126*.
- Ryan, E. (2003). Counseling non-traditional students at the community college. *ERIC Digest: ED 477 913*
- St. John, E., & Tuttle, T. (2004). *Financial aid postsecondary opportunity for non-traditional age, pre college students: The roles of information and the education delivery systems*. The Education Resource Institute. Retrieved on November 14, 2010, from http://www.teri.org/pdf/research-studies/ReseachReport_StJohn2.pdf
- Stern, S. (2001). Learning assistance centers: Helping students through. *ERIC Document ED 455 901*
- Strenkowski, E. (2011). *Electronic interview*. Conducted on May 10, 2011, at CCAC Boyce Campus.

- Studentaid.ed.gov (2010). *Direct Stafford loans*. Retrieved on November 21, 2010, from <http://studentaid.ed.gov/PORTALSWebApp/students/english/studentloans.jsp#02>
- Studentaid.ed.gov (2011a). *Funding your education*. Retrieved on June 16, 2011, from <http://studentaid.ed.gov/PORTALSWebApp/students/english/funding.jsp>
- Studentaid.ed.gov (2011b). *Student aid eligibility*. Retrieved on June 16, 2011, from <http://studentaid.ed.gov/PORTALSWebApp/students/english/aideligibility.jsp?tab=funding>
- Szelenyi, K. (2000, Winter). Minority student retention and academic achievement in community colleges. *New Directions for Community Colleges Digest, 112*. San Francisco: Jossey Bass.
- Tatham, P. (2009, January). Using career development services to strengthen student retention and attainment. *Career Industry Council of Australia Report*. Retrieved on June 20, 2011, from http://www.ed.psu.edu/educ/cscdpp/policy-papers/CICA_Career%20development%20services%20and%20student%20retention%20Report_feb2009_final.pdf/view
- Thomas, E., & Wingert, P. (2010). Minority report. *U.S. Newsweek*. Retrieved on May 28, 2011, from <http://www.newsweek.com/2010/02/18/minority-report.html>
- United States Census Bureau. (2010). *USA quick facts*. Retrieved on April 26, 2011, from <http://quickfacts.census.gov/qfd/states/00000.html>
- United States General Accounting Office. (2000). *Gender equity: Men's and women's participation in higher education*. Retrieved on June 16, 2011, from <http://www.gao.gov/new.items/d01128.pdf>

University of Michigan. (1999). *The compelling need for diversity in higher education*.

Retrieved on June 16, 2011, from

<http://www.vpcomm.umich.edu/admissions/legal/expert/intro.html>

University of Minnesota Advisory Committee for Adult Learners and Student Parents.

(2005). *Bring non-traditional students into focus: Strategically positioning student parents, adult students, and transfer students 2004-2005*. Retrieved on November 14, 2010, from

<http://www.tc.umn.edu/~alsp/documents/ALSP2005Report.pdf>

University of Nebraska-Lincoln. (2011). *The Institutional Review Board at UNL*.

Retrieved on May 13, 2011, from <http://research.unl.edu/orr/irbatunl.shtml>

USA Today. (2007). Students less engaged at community colleges. Retrieved on

December 4, 2010, from http://www.usatoday.com/news/education/2007-11-12-community-college-engagement_N.htm

USLegal.com (2010). *Pennsylvania age of majority law*. Retrieved on April 26, 2011,

from <http://minors.uslegal.com/age-of-majority/pennsylvania-age-of-majority-law/>

Walther, E., & Ritchie, W. (1998). Counseling the adult college student. *Self Help*

Magazine. Retrieved on November 30, 2010, from

<http://www.selfhelpmagazine.com/article/node/108>

Western Illinois University. (2010). *Disability laws in higher education*. Retrieved on

December 21, 2010, from

http://www.wiu.edu/student_services/disability_resource_center/current/law.php

- Wielkiewicz, R. (2000). The t-test with SPSS. *SPSS Online Guide*. Retrieved on May 15, 2011, from <http://www.mhhe.com/socscience/psychology/runyon/spss/ttest.html>
- Wright, T. (1985). *Raising the grade point average standards at Miami Dade Community College: An impact study*. ED 267 880

Appendix A

Survey Instrument

**Non-traditional and Traditional Students at the Community College of Allegheny County:
Discovering Similarities and Differences**

Instructions: Thank you for taking this brief survey which will help the researcher in determining what similarities and differences exist between non-traditional and traditional aged students at the Community College of Allegheny County, Boyce Campus. For each multiple choice question, please circle the most appropriate response. For the fill-in the blank questions, please respond with the most appropriate answer that applies to you. When complete, please return this survey along with your signed consent form to the student collecting the surveys. Thank you!

1. What is your age?

2. Are you male or female?

a. Male

b. Female

3. What is your ethnicity?

a. American Indian or Alaska Native

b. Asian

c. Black or African American

d. Hispanic/Latino

e. Pacific Islander

f. White

g. Multiracial

h. Other

i. Prefer not to respond

4. Are you married?

a. Yes

b. No

5. Do you have children that reside with you?
- a. No
 - b. Yes, 1 child
 - c. Yes, 2 children
 - d. Yes, 3 or more children
6. Have you declared a major at CCAC or are you currently just taking courses without being assigned to a particular academic program?
- a. I am not planning on graduating from CCAC or transferring
 - b. Yes, I have declared a major
 - c. No, I have not declared a major
7. If you have declared a major, please list your current major:

8. Have any of the members of your immediate family obtained a Bachelor's degree?

Parents

Yes No

Siblings

Yes No

9. Have you previously attended another college or university?
- a. Yes
 - b. No
10. Are you currently employed?
- a. No
 - b. Yes, 1-19 hours per week
 - c. Yes, 20 or more hours per week

11. If employed, are you employed on campus or off campus?
- Employed on campus
 - Employed off campus
12. Are you involved in any clubs and organizations at CCAC?
- No
 - No, but I wish I could be more involved
 - Yes, I am involved in one
 - Yes, I am involved in two or more
13. Please list your current Grade Point Average (GPA) out of a 4.0 when considering all of the credits you have completed only at CCAC:

14. Have you taken advantage of any of the following support services at CCAC?

a. **Tutoring**

Never Once per semester Twice per semester More than twice per semester

b. **Services for Students with Disabilities**

Never Once per semester Twice per semester More than twice per semester

c. **Career Services**

Never Once Per Semester Twice per semester More than twice per semester

d.Counseling (Transfer Counseling)

Never Once per semester Twice per semester More than twice per semester

e.Counseling (Personal Counseling)

Never Once per semester Twice per semester More than twice per semester

The survey is now complete! Please return this survey along with your signed consent form to the "student volunteer" who will be collecting the surveys. Thank you!

Appendix B

Informed Consent Form

Informed Consent for Non-traditional/Traditional Student Study at CCAC Boyce Campus

Identification of Project: Whether non-traditional students at the Community College of Allegheny County, Boyce Campus are more successful than traditional aged students.

Purpose of Research: The purpose of this quantitative research study is to address whether non-traditional students (classified as those 25 years of age and older) are more successful than traditional aged students (ages 18-24) at the college. Success for this study will be determined by several factors including Grade Point Average (G.P.A.), whether the student has formally declared a major, whether students have taken advantage of support services at the college, whether they have been offered membership to the honors program and whether they are involved in any clubs or organizations.

Procedures:

If you choose to participate in this research study, you will be asked to complete a short questionnaire which will take approximately 10 minutes. Questionnaires can be returned to the researcher at the time they are distributed.

Risks/Discomforts:

There are no known risks or discomforts that are expected to occur as part of this study.

Benefits:

The findings of the study will be used to gain a better understanding of the needs of both non-traditional and traditional aged students at community colleges. It is possible that the results of this study will lead to recommendations on ways to address any deficiencies for either category of student in order to better support these students at community colleges. There is no type of compensation that will be provided for participants of this research study.

Confidentiality:

No personally identifiable information will be collected during this study. Individual data will also not be reported as part of this study, since the report will be from aggregated data. All completed surveys will be stored in a locked cabinet, with only the researcher, research advisor or institutional review board having access to individual survey information. This completed study will be part of a public digital commons website at the University of Nebraska-Lincoln and may be published in presentations or in publications. Although CCAC will be permitted to review the researcher's research and completed study, they will not be given access to individual surveys to ensure student confidentiality.

Opportunity to Ask Questions:

It is your right to ask any questions that you feel may pertain to this study. You are able to contact the researcher Megan L. McCormick directly at (412) 302-4390 or by email at oparasingr@yahoo.com. You may also contact Dr. Timothy Alvarez by phone at (402) 472-3755 or by email at talvarez2@unl.edu. In the event you have any additional questions regarding participating in this study, you may contact the University of Nebraska-Lincoln Institutional Review Board at (402) 472-6965.

Freedom to Withdrawal from Study:

You have the right to withdrawal from this study at any point. If you choose to withdrawal from the study, it will not affect your relationship with the researcher or affect your status at the Community College of Allegheny County. Your participation is appreciated; however this study is strictly voluntary.

Consent to Receive a Copy of This Form:

An extra copy of this form will be provided to you by the researcher for your records. Your signature below indicates that you have voluntarily decided to participate in this research study, that you are at least 18 years of age, and that you have both read and understood this consent form.

Signature of Study Participant

Date

*Please return a signed copy of this form with your survey; otherwise your data cannot be used for the research study. Thank you.

Appendix C

Class Presentation of Survey Form

Class Presentation of Survey

Dear Student:

My name is Ms. Megan McCormick and besides being a staff member here at CCAC, I am a full-time graduate student in the University of Nebraska-Lincoln's Educational Administration program. More specifically, I am studying Student Affairs in Higher Education so that I can be an administrator at a college in the future. As part of my degree requirements, I am required to complete a master's thesis. As part of this year long project, I am required to conduct research. The topic I have chosen for my research is whether non-traditional students at the Community College of Allegheny County, Boyce Campus are more successful than traditional aged students.

For the purpose of this survey and study, a non-traditional student is one who is currently 25 years of age or older, and a traditional aged student is one who 18-24 years of age. Your class has been selected as one that I will distribute my surveys to, and your instructor has agreed to allow me to take a few moments to distribute them to you. If possible, I need five current full-time non-traditional age volunteers who have completed at least one full-time semester at the college (12 credits or more) and five current full-time traditional age volunteers to complete the survey who have completed at least one full-time semester (12 credits or more) at the college.

Please note that while I definitely appreciate your participation, it is strictly voluntary. You are not required to complete this survey and will not face any negative repercussions in this course or at the college if you choose not to participate. For those of you who are willing to participate, no personally identifiable information will be collected, which means that no one, not even the researcher will know who completed what survey.

The completed surveys will be kept in a locked cabinet by the researcher, and only the researcher, the researcher's advisor(s) and staff at the Institutional Review Board at the University of Nebraska-Lincoln will be permitted access to these surveys. The results of your surveys will be used to analyze whether non-traditional students at CCAC Boyce Campus are more successful than traditional age students. The research collected may be published in a study to help provide feedback for your campus.

I will be staying in class until the end of the period. If you choose to participate, could you please complete this survey and hand in to me at the end of the period? I will also need a copy of the signed informed consent form so that I have permission to use your survey results. Thank you for your time and I greatly appreciate your assistance.

Appendix D

Thesis Email Letter to CCAC Faculty

Thesis Email Letter to CCAC Faculty

Dear (Insert Faculty Member's Name Here),

My name is Megan McCormick and I work here at Boyce in the Perkins Career and Technical Education Center as a Student Support Specialist. I am presently a fulltime master's student studying Student Affairs in Higher Education at the University of Nebraska-Lincoln. As part of the requirements for my degree program, I am completing a thesis. I have chosen to conduct my research on the topic of whether there is a difference in the success levels of non-traditional and traditional aged students at CCAC Boyce Campus. As a CCAC alumnus and now an employee, I feel that this topic is one that will be beneficial not only for my own personal learning experiences, but also will assist the school in gaining a greater understanding of these two different types of students.

As I am sure you already know, CCAC has a large population of non-traditional students and this research study will help to assess whether there are differences in the overall grade point averages of these two populations of students at CCAC, and whether there is a difference in the levels of involvement of these groups of students. As part of my research, I am required to collect student surveys from each of the nine campus divisions, including collecting surveys from day and evening courses. I have received written permission from Dr. Charles Bostaph, the Dean of Students here at Boyce to conduct my research and administer my surveys. I am also in the process of obtaining formal approval from the institutional review board at the University of Nebraska-Lincoln for my project. I am emailing you in advance of this formal approval since it will likely take several more weeks to obtain. In the meantime, I wanted to secure permission from a willing faculty member from each division to distribute my surveys in a few of their courses.

I am contacting you in the hope that you may be willing to allow me to distribute my surveys to students in two or three of your courses? I have attached a copy of the brief speech I will give to students before administering the survey, explaining the research study and indicating that while their permission is appreciated, it is strictly voluntary. I imagine the total process will take approximately 15-20 minutes for each class that I survey and will involve the following procedures:

- I will introduce myself and give my brief speech discussing the specifics of my survey.
- I will ask if there are (5) fulltime non-traditional students (ages 25 and up) who would like to volunteer to take my survey and (5) fulltime traditional aged students (ages 18-24) who would like to volunteer to complete the survey.
- I will distribute an informed consent form for student's to sign indicating they agree to take part in the study as well as a brief 14 question survey for them to complete.
- For confidentiality reasons, I am required to request that a "student volunteer" in each course collect each completed survey and signed informed consent form and place them into a large envelope that I have provided. This must be done by

another student and not by me or the faculty member so that the student's surveys will remain anonymous.

- Once the surveys have been collected, the student volunteer will sign the phrase "completed surveys" across the seal of the envelope.
- The envelope will be returned to the instructor and I will pick up the surveys in the sealed envelope from the instructor.
- This process will be repeated for a second class of the instructor's. The only reason that surveys would need to be collected from a third class of the instructor would be if there was an insufficient number of surveys for that particular division already completed (i.e. <10 surveys from students ages 18-24 and/or <10 surveys from students ages 25 and up.)

I am hoping to complete this process before the end of the fall semester so that I can begin evaluating my data as soon as possible. I am hopeful that you may be willing to assist me in my research, but if not would you perhaps be able to recommend another faculty member in your division who would be interested?

I thank you sincerely for your time in reading this email and would be happy to answer any questions that you may have regarding this process. Also, if you would prefer to see a copy of my written approval level from Dr. Bostaph before I administer my surveys in your courses, I would be happy to provide that to you.

Again, thank you for your time and support and I look forward to hearing from you.

Sincerely,

Megan L. McCormick

Appendix E

CCAC Boyce Campus Dean of Students Approval Letter



Community College of Allegheny County

BOYCE CAMPUS
595 Beatty Road
Monroeville, PA 15146-1396
Phone: 412.371.8651
or 724.327.1327
www.ccac.edu

October 18, 2010

University of Nebraska-Lincoln
301 Canfield
PO Box 880433
Lincoln, NE 68588-0433

To the Review Board:

RE: Megan McCormick Research Study at CCAC

Please allow this letter to serve as assurance that Ms. McCormick has sought and received my permission to administer surveys to our Boyce Campus students in order to complete the objectives of her Master's thesis.

Sincerely,

A handwritten signature in black ink, appearing to read 'Charles P. Bostaph', written in a cursive style.

Dr. Charles P. Bostaph, Ph.D., NCC, LPC
Dean of Student Development
CCAC Boyce Campus
595 Beatty Road ~ Monroeville, PA 15146
Voice: 724-325-6650
Fax: 724-325-6831

We're More than You Know

Appendix F

University of Nebraska Institutional Review Board Approval Letter



December 20, 2010

Megan McCormick
Department of Educational Administration
5H Jenny Lynn Ct Pittsburgh, PA 15239

Timothy Alvarez
Vice Chancellor for Student Affairs (Department)
106 ADMS, UNL, 68588-0423

IRB Number: 20101211387 EX
Project ID: 11387
Project Title: The Success Levels of Nontraditional versus Traditional Aged Students at a Public Urban Community College

Dear Megan:

This letter is to officially notify you of the approval of your project by the Institutional Review Board (IRB) for the Protection of Human Subjects. It is the Board's opinion that you have provided adequate safeguards for the rights and welfare of the participants in this study based on the information provided. Your proposal is in compliance with this institution's Federal Wide Assurance 00002258 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46) and has been classified as Exempt Category 2.

You are authorized to implement this study as of the Date of Final Approval: 12/20/2010. This approval is Valid Until: 05/31/2011.

1. The approved informed consent form has been uploaded to NUgrant (file with -Approved.pdf in the file name). Please use this form to distribute to participants. If you need to make changes to the informed consent form, please submit the revised form to the IRB for review and approval prior to using it.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:

- * Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
- * Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
- * Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
- * Any breach in confidentiality or compromise in data privacy related to the subject or others; or
- * Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

This project should be conducted in full accordance with all applicable sections of the IRB Guidelines and you should notify the IRB immediately of any proposed changes that may affect the exempt status of your research project. You should report any unanticipated problems involving risks to the participants or others to

<https://nugrant.unl.edu/irb/viewPrintedMessage.php?ID=68643>

the Board.
If you have any questions, please contact the IRB office at 472-6965.

Sincerely,

Becky R. Freeman

Becky R. Freeman, CIP
for the IRB

