A University-wide Student Support Program: Comparative View on Student Success

Kevin Patrick Thomas
Western Kentucky University, kevin.thomas@wku.edu

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A UNIVERSITY-WIDE STUDENT SUPPORT PROGRAM: COMPARATIVE VIEW ON STUDENT SUCCESS

A Dissertation
Presented to
The Faculty of the Educational Leadership Doctoral Program
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education

By
Kevin Patrick Thomas

March 2012
A UNIVERSITY-WIDE STUDENT SUPPORT PROGRAM:
COMPARATIVE VIEW ON STUDENT SUCCESS

Date Recommended  March 20, 2012

Barbara Burch
Barbara Burch, Ed.D., Director of Dissertation

Dean R. Kahler
Dean Kahler, Ph.D.

Pamela Petty, Ed.D.

Kath K. Deemer  6-April-2012
Dean, Graduate Studies and Research  Date
I dedicate this to my family.

Toni, you have been my strength and support throughout this educational journey. Thank you for your love, patience, persistence, and understanding. I love you and thank you for being an incredible wife and mother. You are my rock and my world.

Braden, it is my hope that you will never remember the nights and weekends Dad wasn’t home. I look forward to the evenings at home with you and the opportunities to share in more of the precious moments life brings as I watch you grow up. You are the light of my world and I love you more than words can truly express.
ACKNOWLEDGEMENTS

First, I want to thank Dr. Barbara Burch for her support and guidance during this educational journey. Throughout this process there were many peaks and valleys, but you provided a steadiness in mentoring me to successful completion. Through you I have gained insight, wisdom, and patience not only to be a better student, but also a more effective administrator. Your praise and support through this process was needed, and I truly appreciate all the work you did to help me achieve this goal.

To the other members of my committee, I appreciate the knowledge each of you shared to ensure that I complete this degree with the quality it so richly deserves. Dr. Pamela Petty, I thank you for agreeing to serve on this committee. Your understanding of student support, and in turn student success, proved invaluable. Thank you for holding me to a high standard and providing me a tremendous learning opportunity through this journey. Dr. Dean Kahler, I thank you for your ability to push me to find success and to always be able to speak honestly and openly regarding any roadblocks you see in my way. Thank you for your time in conversation about higher education and how to be a more effective professional.

I would be remiss if I did not thank Dr. Ellen Bonaguro. For the past 10 years, it has been my goal to earn my doctorate. You taught me to strive for greatness not only in my professional and educational life, but also my personal life. You have truly been a mentor, and your support for the past five years is greatly appreciated. Thank you for taking a chance on me and for pushing me to reach levels I wasn’t sure I could reach.

There are so many additional people to thank for their contribution to this process. Dr. Tuesdi Helbig, thank you for providing support and knowledge with all things data. I
could not have done it without you. Thank you to Jessica Staten for not only being supportive professionally, but also for serving as an editor. I also need to thank the countless number of faculty and staff at WKU who supported me.

This educational process is a journey. The journey is one I would not have completed if it weren’t for the support, guidance, and relationships established with the other 23 members of the Vanguard cohort. Special thank you to Dr. Matthew Constant, Dr. Dan Costellow, Mr. Wes Cottongim, Dr. Kelly Davis, Dr. Cindy Ehresman, Dr. Angela Gunter, Dr. Tracy Inman, and Mr. Jace Lux for not only the support and guidance a cohort provides, but for becoming the friends you don’t expect to find throughout the journey. It was an adventure with each of you; and I would do it again, but only if you came along!

To my parents, Jerry and Diane, I appreciate your support, your sacrifices, and the values you instilled in me. I can only hope to instill those same values with my family. Dad, thanks for listening to me when I didn’t know if this day would come and always asking questions about how everything was going with the classes and dissertation. Mom, thanks for getting me here. I always say I would have never made it through my undergraduate degree without you as my advisor. I work with great advisors every day, but in my life I had the best advisor, you. I hope that this step in my life makes you proud. I love you both dearly.

Finally, to my teachers and professors throughout my time in the Sparta, Illinois, School District; at Murray State University; and at Western Kentucky University, thank you for choosing to educate. You truly left an impact on me, and I carry the experiences and education you provided with me each day.
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Student support programs occur throughout the country in various forms at colleges and universities. The STEPS program at Western Kentucky University provides support to students who are required by state mandate to enroll in developmental or supplemental education courses. This program tracks the individual interventions utilized by students such as tutoring, intrusive advising, and supplemental education seminars. Through an analysis of retention and graduation data, this study compared the success of STEPS participants to eligible students who are non-participants of the program. The study also compared the STEPS participant population with eligible students within other four-year public Commonwealth of Kentucky institutions with regard to student retention success. Eligibility for the STEPS program is determined by the use of the ACT and SAT standardized tests. Students, through the process of a chi-square analysis for significance, were found to have had various levels of significance with retention and graduation when comparisons between STEPS participants and non-participants were made through the fall 2006 and 2009 semesters. Significance was found for three of the four years of the STEPS program when compared to eligible students within the other four-year public Commonwealth of Kentucky institutions.
CHAPTER 1: INTRODUCTION

For many students, graduating from high school is just the first step in their educational journey. They leave institutions of secondary education in hopes that their teachers, fellow students, and life experiences have prepared them for whatever next steps will occur in their lives. While some students will move directly into the work force, many will make the decision to pursue a form of postsecondary education. Students who pursue an education after high school often find their P-12 educational experiences have not adequately prepared them for the rigor and work needed to be successful at an institution of higher learning. It is the expectation of colleges and universities that students who successfully complete the requirements of a P-12 education should be prepared to enter institutions of higher education. An unacceptably large number, however, are entering higher education in need of developmental courses (Jones, 2006).

Nationally, nearly one out of four bachelor’s degree-seeking students must take at least one developmental education course upon entering college (Strong American Schools, Rockefeller Philanthropy Advisors, The Eli and Edythe Broad Foundation, and Bill and Melinda Gates Foundation, 2008). Much of the literature in the past has referred to students who are underprepared as needing remedial education. Remedial courses imply that a student has educational weaknesses or deficiencies (Casazza, 1999). Martha E. Casazza states that with regard to remedial education courses, there is an implication of fixing or correction of a deficit with the student. It may be more appropriate to use the term developmental education to describe the needs of underprepared students. Developmental education is a comprehensive process that focuses on the intellectual,
social, and emotional growth and development of learners. It promotes the cognitive and affective growth of all learners, at all levels of development. It is sensitive and responsive to individual differences and special needs among learners (National Association for Developmental Education, 2012). Students who need to address this growth could be required to enroll in developmental coursework.

Critics of developmental education at the postsecondary level argue that an investment in students who are skill deficient is a negative use of American taxpayer dollars. Supporters state that developmental education can have positive and lasting effects on the advancement of society. The successful completion of these courses, according to supporters, helps prepare these students for a place within a global workforce (McCabe, 2000).

The Commonwealth of Kentucky is not exempt from this higher education issue. According to the Securing Kentucky’s Future: A Plan for Improving College Readiness and Success from the Kentucky Developmental Education Task Force report, “more than half of the first-time freshmen entering Kentucky’s colleges are underprepared in at least one subject” (Kentucky Council of Postsecondary Education, 2007, p. 5). Alarmingly, within Kentucky, the first-year drop-out rate of underprepared students is twice the rate of academically prepared freshmen (Kentucky Council on Postsecondary Education, 2007).

Within higher education policy briefs from the American Association of State Colleges and Universities (AASCU), college readiness has been listed as one of the top 10 issues facing higher education since the lists began in 2008 (2008, 2009, 2010, & 2011). The 2010 AASCU report states that, “many students can pass all required tests for
high school graduation, but still need remedial (developmental) work in college; many of these students will not ultimately reach their education goals” (p. 5).

Thomas Benton (2011) states:

Undergraduates are not prepared adequately in any academic area but often arrive with strong convictions about their abilities. So professors routinely encounter students who have never written anything more than short answers on exams, who do not read much at all, who lack foundational skills in math and science, yet are completely convinced of their abilities and resist any criticism of their work.

As Benton (2011) states, often times this leads to “tears and tantrums” of “but I earned nothing but A’s in high school,” and “your demands are unreasonable” (Benton, 2011, para. 8). Benton further states this combination of false understanding regarding the student’s own academic ability and convictions of those abilities leaves the student “nearly un-teachable” (Benton, 2011, para. 8).

**Purpose of the Study**

The purpose of this study is to determine the academic achievement of students who participated in the Success Through Evaluation, Placement, and Support (STEPS) program in comparison to various other populations of college students. STEPS is a support program offered at Western Kentucky University (WKU) and is required of students entering the institution with developmental or supplemental needs in English and reading.

**STEPS Program**

The student support program used in this study is the STEPS program at Western Kentucky University. This program is designed for first-time, first-year students who do
not meet state mandates on college entrance exams. Specifically, these students are required to enroll in a developmental or supplemental English and reading course within their first two semesters at the university. During six academic years beginning with fall 2004 and ending with fall 2009, the STEPS program was a one-semester program that only occurred during the fall semester. In the fall of 2010, the STEPS program expanded to a full academic year.

At WKU, students are required to enroll in a developmental or supplemental course in English if they have an ACT assessment sub-score below 18 or SAT Verbal/Critical Reading score below 450. Students who score below 13 in English on the ACT and below 340 on the SAT are required to take an enhanced section of the developmental course. Enhanced sections meet one hour more than the non-enhanced sections and are different than supplemental education sections of a course. For example, a student could have an enhanced section of a developmental reading course if the ACT or SAT was low enough to be placed in that course. A student is required to enroll in a developmental or supplemental course in reading if the ACT assessment sub-score is below 20 or SAT Verbal/Critical Reading score below 470. From 2004 through 2007, students qualified for the STEPS program by having reading and English sub-scores below 18. In 2008, qualifications changed based on the Council on Postsecondary Education (CPE) recommendations, and students qualified for the STEPS program by having a reading ACT sub-score below 20 and an English ACT sub-score below 18 or by having a SAT verbal/critical reading score below 450. While each participant qualified, not all students participated in the program.
Students who qualify for the STEPS program are notified in their admittance mailing from the Office of Admissions that contains an acceptance letter and a profile sheet. The profile sheet includes academic information for the student to review. Each student who attends WKU is required to participate in the Academic Transitions Program (ATP) during the spring or summer prior to the fall of enrollment. During the ATP process, parents and students meet with staff of the Academic Advising and Retention Center (AARC) to learn more about the STEPS program. During this meeting, students who qualify for the STEPS program and their parents learn why the student is in the program and what will be required while participating.

Pre-registration of incoming students is part of the ATP process at WKU. The Academic Advising and Retention Center pre-registers students into courses as determined by the various colleges and departments within the university prior to the student’s arrival for ATP. If a student qualifies for the STEPS program, he or she is pre-registered for the appropriate developmental or supplemental courses as well as any other courses that would be beneficial. For example, if the student has a developmental need in reading, he or she is not likely to be pre-registered into a history course that has a large amount of reading.

As previously stated, placement into the STEPS program is determined by the students’ ACT or SAT scores in reading and English. It is possible for a student to have a developmental need in mathematics as well, but that does not factor into the qualifications for the STEPS program. Students graduating from WKU are required to complete at least one college credit-bearing math course. Depending on the field of study, a student may need to take General Mathematics (MATH 109), which does not
require any developmental course prerequisites. In theory, a student could score a 12 on the ACT; and if the major required the General Mathematics course, the student could immediately sign up for it. If a student with the same score of 12 on the ACT chooses a major that requires College Algebra (MATH 116) or higher, at least one developmental course may need to be taken. In many cases, two developmental courses would be required. With these complications with mathematics, STEPS placement is not affected by a developmental or supplemental need in the subject area. Students whose scores place them in the English and reading developmental courses are required to participate in the STEPS program.

To qualify for the STEPS program during 2008 and 2009, students had to have the following score:

- Reading ACT sub-score below 20 and an English ACT sub-score below 18 or,
- SAT verbal/critical reading score below 450.

From 2004 through 2007, to qualify for the STEPS program, students had to have a score of the following:

- Reading ACT sub-score below 18 and an English ACT sub-score below 18 or,
- SAT verbal/critical reading score below 450.

These students are required to take a developmental or supplemental reading and English course during their first semester at WKU.

Participation in the STEPS program includes the following:

- attend an initial group meeting to learn about the program and sign a contract with the requirements of the program. This meeting is coordinated by the Retention Coordinator at WKU;
• attend six study hours in The Learning Center (a monitored academic study center located in the campus study union);

• attend three Peer Intrusive Advising appointments. Peer Intrusive Advisors are student staff at WKU who meet one-on-one with individuals in the STEPS program to provide valuable information to aid in achieving good academic progress. Peer Intrusive Advisors must have a 3.25 overall grade point average to be selected for employment. At the Peer Intrusive Advising meetings, academic progress, academic issues, class attendance, grades, etc., are discussed. Within the fall semester, STEPS participants meet with a Peer Intrusive Advisor in September, October, and November;

• attend two Academic Advantage Series: Workshops for Success. These workshops are a series of seminars provided by the Academic Advising and Retention Center that bring in an expert faculty or staff member from within the institution to discuss topics such as time management, financial literacy, fear of mathematics, college reading strategies, finals preparation, etc.;

• attend the Majors and Minors Fair held annually during the fall semester. This event allows students to learn about the various majors and minors available at WKU;

• utilize tutoring available at The Learning Center. An initiative of the Academic Advising and Retention Center, The Learning Center offers a quiet place to study as well as tutoring in hundreds of courses and supplemental instruction for students during their college career at WKU;
• compose a reflection paper detailing the student’s experience in the STEPS program; and
• allow parents to inquire about academic progress, grades, and attendance through contacting STEPS staff.

The Peer Intrusive Advisor position has evolved during the span of the program. In 2004 and 2006, AARC employed four to six Peer Intrusive Advisors for the STEPS program. In 2009, AARC employed 12 Peer Intrusive Advisors to meet with students in support programs. While STEPS is the focus of this study, Peer Intrusive Advisors also meet with students in other retention type programs housed in the Academic Advising and Retention Center. During each of the three intrusive advising appointments, different academic information is discussed. For the specific questions asked of students in the STEPS program, see Appendices A – C.

Significance of the Problem

Diminished funding for higher education, increased student enrollments, diverse student demographics, and increased importance on accountability from key stakeholders and policymakers have signaled the “perfect storm” facing higher education (Levinson, 2005, p. 24). This leaves colleges and universities facing the expectation of accomplishing more than previously with fewer resources such as funding, personnel, and support from within the institution. The number of unsuccessful students in college has made student persistence and retention a serious challenge for many universities. The importance of students graduating is also viewed as a major contributor to economic and social well-being (Levinson, 2005).
Nationally, college bound students are not being adequately retained within the higher education system as a whole. According to a 2010 ACT Report, within private and public institutions in 1989, the retention rate of first-year students who returned for a second year was 74.7% (ACT, 2010). In 2010, the retention rate of the same population was 72.9%. A noticeable difference is noted between public and private colleges and universities over the past 21 years. Within public institutions, the retention rate of the first year to second year was 70.7% in 1989. Twenty-one years, later the retention rate of public institutions was 73.9%, according to the 2010 ACT Report. This was a moderate increase during this time period. During the same time, the retention rate at private institutions had originally been 76.4%, but 21 years later the rate fell to 72.4%, below the rate of public institutions (ACT, 2010). With more college requiring developmental courses, colleges are faced with increased spending targeted at academic support in an attempt to increase retention beginning with the first year for a student.

Universities are spending time, money, and resources on improving their retention rates but seldom have definitive data relative to the long term successes of the efforts. The Alliance for Excellent Education (2011) estimates the cost of developmental courses to be $5.6 billion annually. The estimates are based on students who entered higher education in the 2007-2008 academic year at either a two-or four-year institution and had taken one or more developmental education courses. With institutions facing many rising costs, students who require developmental courses inhibit the progress many universities are attempting to make to improve their retention and graduation efforts (Alliance for Excellent Education, 2011).
College retention is important for several reasons. Financially, there are many factors to consider. The federal government provides money for financial aid, incentives, and loans to help students attend college and also to operationally help institutions. For many state schools, funding is also provided by the state. WKU received $6,509 per full-time fully-enrolled student in 2002 from state appropriations. In 2009, that number had fallen to $4,839 (WKU, 2010a).

A major need exists to find ways to help more students be successful in their college pursuits, and it is especially critical for these initiatives to be both effective and efficient. As more college degrees are obtained, students can attempt to advance further in society than previous generations (College Board, 2004). A large number of jobs require completion of a college degree. Colleges need to have a plan for success that allows students to take financial advantage of the opportunity available to them to capitalize on opportunities an earned college degree can provide.

As money is being spent on student support programs, institutions have not provided a great deal of research regarding institutional efforts to support spending. Even more noticeable in the research is a lack of university initiatives proactively aimed at identifying students in need of academic support prior to entering the institution. Throughout the research, a large number of institutions have existing programs for students if struggles occur or to intervene after failure has already occurred.

Sam Houston State University (SHSU) has a reactive intervention program called Help Eliminate Probation (HELP) designed for students placed on academic probation for deficiency in their cumulative grade point average. Students in this program must be re-advised, attend a six-week group study skills series, and mentored in the SHSU
Mentoring Center. Twice each semester students are encouraged to submit a grade check form to each professor. This allows mentors from the Mentoring Center to track performance and intervene with new strategies and techniques if needed (SHSU, 2011).

The University of Southern California Rossier hosts a SummerTIME program that provides incoming students with practical and academic tools for their success upon entering college. The program helps students through integration with campus issues and even helps them to become better writers and editors of their work. Students must apply for the program, and about 200 are accepted. This program helps a great deal with their transition to the university (Hernandez, 2011).

Programs such as the Summer Academic Success Academy at Coppin State University address the issue of students who need developmental education support. This program requires incoming freshmen to attend a six-week summer pre-college program before being able to enroll in the fall semester. The 184 identified students needing developmental work are required to attend the program. These students wake up at 7 a.m. each day to go through classes based on their developmental needs, attend tutoring and study hall, and participate in events throughout the evening as well. The university decided to make this initiative mandatory after years of having a similar optional program. The goal of this program is to improve its 20% graduation rate. This initiative began in 2010, and no data are available on the outcomes (Stuart, 2010). Programs such as those at SHSU, the University of Southern California Rossier, and Coppin State University are in place to provide support to specific populations of students.
Background

The majority of students enrolled in developmental education courses never reach the end of the sequence for those courses, much less move on to college credit-level courses or degree completion (Bailey, Jeong, & Cho, 2010; Jenkins, Jaggers, Roksa, Zeidenberg, & Cho, 2009). Sequence of a course refers to a student taking a developmental English course and then finishing the sequence by completing a college credit-bearing English course. Mathematics and reading also have similar sequencing for courses.

With this concern regarding developmental education courses, it is critical to view what colleges and universities are doing to support students. Universities have programs and models that are used to help students succeed. According to McCabe (2000), an unacceptably high proportion of underprepared students who enter a college or university are in need of assistance. This is an issue of student readiness as well as one that will affect student success and economic factors.

Public institutions within the Commonwealth of Kentucky function under the umbrella of the Council on Postsecondary Education (CPE). The CPE “coordinates change and improvements in Kentucky’s postsecondary education system as directed by the Kentucky Postsecondary Education Improvement Act of 1997” (Kentucky CPE, 2011a). Kentucky Senate Bill 1 (Kentucky CPE, 2010a), renamed Unbridled Learning, legislated change and improvement within higher education in Kentucky. This bill, signed into law by Kentucky Governor Steve Beshear in March of 2009, also aims to improve the assessment and accountability system for P-12 education in Kentucky. The bill calls for Kentucky Department of Education and CPE collaboration to develop a
unified plan to reduce the need for college developmental education rates and, therefore, increase collegiate graduation rates of students with developmental needs (Kentucky CPE, 2009).

According to the 2010-2012 CPE Senate Bill budget, institutions are called upon to have unified strategies to promote retention and graduation rates through development of accelerated developmental courses, supplemental coursework, intrusive advising and mentoring programming, early alert programming, tutoring, and other student support and tracking services (Kentucky CPE, 2010a). In viewing the various requirements of the STEPS program, several of the identified areas fit into the strategies suggested by the legislation, such as intrusive advising and mentoring programming, early alert programming, tutoring, and other student support. These efforts were in place prior to the passage of the Unbridled Learning Bill (Kentucky CPE, 2010a).

Research Questions

To examine the success of students who participated in the STEPS program versus those who did not, this study raised the following questions:

Research Question 1: What is the retention rate from year one to year two of WKU students who participate in the STEPS program compared to the retention rate of WKU students who are eligible to participate in STEPS but do not?

Research Question 2: What is the graduation rate of WKU students who participate in the STEPS program compared to the graduation rate of WKU students who are eligible to participate in STEPS but do not?
Research Question 3: What is the retention rate from year one to year two of WKU students who participate in the STEPS program compared to first-year students at Kentucky four-year public institutions who would qualify for the program if enrolled at WKU?

Research Question 4: What is the graduation rate of WKU students who participate in the STEPS program compared to the graduation rate of students at Kentucky four-year public institutions who would qualify for the program if enrolled at WKU?

**Definition of Terms**

The following terms require explanations for the purposes of this study:

*Academic success* is defined as a student having successfully earned a grade of A, B, or C in a credit-bearing college course that may apply toward graduation.

*Academically underprepared student* is defined as a student entering a college or university who is not prepared for college-level coursework based on performance in either high school course work or on standardized admissions exams such as the ACT and SAT.

*Credit-bearing course* is a course offered by a college or university that may apply to the requirements for graduation of an associate or baccalaureate degree.

*College readiness* is defined by the CPE as the level of preparation a first-time student needs in order to succeed in a credit-bearing course at a postsecondary institution (Kentucky CPE, 2011b).

*Developmental education* is a comprehensive process that focuses on the intellectual, social, and emotional growth and development of learners. It promotes the cognitive and
affective growth of all learners at all levels of development. It is sensitive and responsive to individual differences and special needs among learners (National Association for Developmental Education, 2012).

*Enhanced sections* are courses that meet more often and utilize extra support in time and resources than the non-enhanced sections. Enhanced sections allow for more time to cover specific topics of information than the typical schedule of a college class. For example, a student in an ENG 100 type course may meet on Monday, Wednesday, and Friday for 55 minutes; but a student in an ENG 100 enhanced section may have the same meetings but also a separate 1 hour and 20 minute additional section.

*Level of development* is the number of developmental courses that students are required to take before moving on to college-level courses. Students in the Commonwealth of Kentucky can be required to take developmental courses in English, mathematics, and reading.

*Need* is defined as the requirement, as prescribed by the Kentucky CPE, for a student to take one or more developmental courses within a college or university.

*Persistence* is the retaining of a student until successful completion of the requirements of a program or degree.

*Remedial education* refers to a student having educational weaknesses or deficiencies that imply a deficit that needs to be corrected or fixed (Casazza, 1999).

*Retention* is defined as the continuance of student enrollment from one semester to the next. Often, retention is viewed in year-to-year rates of success. For this study, retention was measured by the number of STEPS program eligible students enrolled in a fall
semester and the STEPS eligible students who then were enrolled in the following fall semester.

*STEPS program* is the student support initiative at WKU that provides academic support to students with needs in two developmental areas of English and reading.

*Supplemental course* is defined as a college credit-bearing course that a student takes in order to supplement a minimal amount of knowledge the student may lack in a specific subject area.

*Support programs* are programs provided by the college or university for the academically underprepared student in order to provide support beyond the classroom instruction being conducted by the institution in hopes of finding the student academically more successful. Often, universities may have support programs for students who have had previous collegiate academic failures.

**Overview of Methodology**

Primary data was collected from Western Kentucky University through the Academic Advising and Retention Center (AARC) and the Office of Institutional Research for comparing participants in the STEPS program versus non-participants. The retention rates from first to second year, as well as graduation rates, were compiled. Data was requested from the Council of Postsecondary Education through the WKU Office of Institutional Research to make a comparison of each of the four-year public institutions to comparable students in the STEPS program at WKU. Data collection ranged from the fall of 2004 through the fall of 2010. Results were analyzed through use of the statistics software package SPSS v.18.
Summary

The purpose of this study is to determine the success of students who participated in the STEPS program in comparison to various other populations of college students. College readiness is an issue that is prevalent on college campuses throughout the country and is an issue facing higher education in Kentucky, both in number of students needing developmental courses and in retaining those who need them. With the increasing need for developmental education courses in colleges and universities, this topic is important to study due to the nature of funding and allocation of resources. It is even more important to be accountable for the ultimate success of a support program.

Beyond these issues, students are attending institutions and are underprepared for college-level courses. Universities have a responsibility after admitting these students to support their growth and success. The goal of a university should be to have graduates that can leave the institution as good stewards of education and ready to contribute to society in a socially, educationally, and financially positive way. Support programs are being implemented at a considerable expense to the universities. If these programs are not helping those students in need of developmental courses, higher education as a whole should reevaluate and search for alternative ways to improve plans to help future success. This study of the STEPS program sheds light on the value and impact of such programs.

Chapter 2 will provide a review of literature surrounding developmental education, college retention, and student support programs to provide further support to the study. Chapter 3 will focus on the methodology used for the study of this support program. In Chapter 4, the results of the analysis of the study will be shared to determine the answers to the research questions provided earlier. Chapter 5 will provide
conclusions as well as discussion on the potential for future research and other considerations from this study.
CHAPTER 2: LITERATURE REVIEW

The primary purpose of this study was to evaluate the success of the STEPS program. This program was designed to provide support to students entering Western Kentucky University with two developmental education needs in English and reading and help them succeed at a higher academic level through their first semester, and ultimately, through to graduation. Chapter 2 was divided into sections that revolve around the topics involved with such a support program. The first section includes an overview of programs and current literature about programs designed for student success. The second section contains an overview of developmental education and access. The final section contains a brief examination of retention within higher education, as the effectiveness of the STEPS program was dependent upon the successful retention of students from their first to their second year of college and then, ultimately, to graduation.

Support Programs for Student Success

Programs of support for academically at risk students vary. While many institutions had support programs, very few had research or statistical information regarding their effectiveness. Due to the lack of published research regarding student support programs, institutional initiatives were highlighted to provide information on current programming efforts for incoming college students. Community college institutions receive a large number of students in need of developmental education courses, and programs instituted by these institutions were included in this review.

With the variation of programs available throughout the country, a need emerged to look at campus structure and support for programs with regard to retention. Habley and McClanahan (2004) surveyed 401 college and university respondents on behalf of
ACT to determine the impact of campus practices on college student retention and degree completion. The researchers found that only 51.7% of campuses had identified an individual or office responsible for the coordination of retention strategies. Of those campuses surveyed, only 47.2% had established a goal for improvement in first to second year retention rates, and 33.1% had established a goal for degree completion. Nearly two-thirds of all university administrators surveyed did not have goals for graduation rates within their own institutions (Habley & McClanahan, 2004).

Daley College, a two-year community college in Chicago, began a program in the spring 2011 academic semester titled “Comprehensive Academic Support and Help to Return on Investment” or (CASH-to-ROI). Within this program, students who needed developmental courses were divided into study groups of 7 to 10. This program did not replace the developmental course, but it provided work as a supplement for those needing the developmental education courses (Quizon, 2011).

The students participating in this program met eight times during the semester and reviewed assignments and readings. The group meetings also served as a way for students to connect with each other. For those participating in this program, 80% - 90% earned a passing grade in math, English, and reading comprehension courses. The range of 80% - 90% was provided due to the level of success in all three course areas. This gain was in comparison to the 40% earning a passing grade among those who did not participate (Quizon, 2011).

Beyond the efforts previously mentioned, organizations such as the Southern Regional Education Board (SREB) have studied college readiness and student success throughout the country. In a 2010 report entitled *Promoting a Culture of Student*
Success, several aspects of support programs were highlighted for consideration. SREB suggested that faculty and staff within an institution should be passionate about the state of the work that developmental studies offers to students. The SREB cited The City University of New York (CUNY) as an example of promoting student success. The faculty and the staff at CUNY find the failing of students in need of developmental courses as personal failures of their work (SREB, 2010a).

Tutoring on campuses also was highlighted by each of the 15 institutions selected as Promoting a Culture of Student Success by the SREB. Investing in professional staff, peer tutors, and faculty tutoring provided students the extra steps to be successful upon entering college. The report found that 50% - 60% of incoming students at California State University, Long Beach (CSULB) were required to take developmental courses to remain enrolled. Of those students 70% - 80% succeeded in the developmental courses, and 85% persisted through the first year. Tutoring played a major role in this success, according to the report. The number of student contact hours was critical. At three hours of contact, 55% of the students succeeded in the developmental math course. At four hours of contact, 65% succeeded. When just one more hour of contact was added, bringing it to five total hours, 80% passed the developmental math course. Along with tutoring, Supplemental Instruction (SI) was utilized by schools to achieve greater success. With SI, a graduate student or a selected successful undergraduate attended class lectures and sessions and conducted outside review sessions before the next class (SREB, 2010a).

Vincent Tinto (2010), distinguished professor at Syracuse University, served as a keynote on Enhancing Student Retention: Lessons Learned in the United States. During his presentation, held in Dublin, Ireland, Tinto spoke on the importance of integrating
programs such as Supplemental Instruction to aid in student retention. Tinto stated that, "virtually all institutions make available a variety of support programs, what seems to matter was not simply the presence of support but whether the support, especially academic, was connected to or aligned with the classrooms in which students find themselves" (2010, p. 3). The connection between the support program and the actual class was important, according to Tinto, and he later stated, "for no student(s) does it matter more than those who enter the university insufficiently prepared for the rigors of university study" (2010, p. 3).

Beyond tutoring, supplemental instruction, and an invested faculty, the SREB report provided several themes observed throughout each institution. The importance of first-year experience type programs could provide an integral role in a student’s transition to higher education. Along with those programs, the use of learning communities and early alert systems within the institution provided faculty and staff multiple opportunities to provide initial support to all students, including developmental students. Another common initiative, briefly mentioned above, was that of student success or persistence task forces or committees (SREB, 2010a).

A holistic college or university effort provided more commitment throughout the campus than having only one office lead the efforts to help students succeed. Many universities were divided into various silos, but one common type of division was an area of academic affairs and an area of student affairs. Within this structure, persistence and success efforts likely were being administered in the specific areas of campus. For example, a campus Housing and Residence Life area could provide a persistence program very similar to one conducted by the College of Education at a university. With the
formation of student success or persistence task forces, these efforts could be strengthened by working together (SREB, 2010a).

**Developmental Education**

Much of the literature referred to developmental education as remedial education. Remediation courses referred to the student’s knowledge as broken or needing to be fixed. When students were placed in developmental courses, it was due to placement scores. Developmental courses were designed to help foster growth as the student was able to read, write, and participate in the educational system; there was a need for the student to develop further in a particular area. Students who needed to address this growth were required to enroll in developmental course work. For many years, the term developmental courses replaced the description of remedial courses; however, there was a difference.

While the name had changed and had been dependent on the universities in which it was housed, scholars have contributed with definitions as well. Boylan (2002) defined developmental education as “courses or support services a university provides for the direct purpose of helping college students who are underprepared so they may be more equipped to reach their academic goals” (p. 12). Many scholars argued that the term developmental was used to avoid the stigma that was associated with the term remedial within the education field. Many within higher education argued that any term other than remedial education was a tactic used to avoid the negative stigma attached to remedial education (Roueche & Roueche, 1999). An awareness of the differences between remedial education and developmental education will be continually needed.
The need for developmental education was not new to higher education. The University of Wisconsin offered the first developmental education course to its students in 1849 with courses in reading, writing, and arithmetic. In the 1940s, Harvard began the Harvard Course in Reading and Study Strategies, which was designed for students who needed to read more and found themselves disengaged or overwhelmed with reading. Harvard described the course as helping readers develop a greater range of reading rates and a broader arsenal of strategies for approaching the text of their courses (Harvard University, 2011).

The National Center for Education Statistics (NCES, 2003a) reported that developmental courses were more likely offered by public two-year colleges than any other type of institution. In fact, 98% of two-year colleges offered developmental courses. NCES also reported that 80% of four-year public institutions were likely to offer developmental courses, compared to 59% of four-year private institutions. The report found that approximately 76% of Title IV degree-granting institutions that enrolled freshmen during the fall 2000 academic year offered at least one developmental reading, writing, or mathematics course. Among the Title IV degree-granting institutions, 71% offered a developmental course in mathematics, 68% in English, and 56% in reading. Of the other 24% that are Title IV degree-granting, the following reasons for not providing developmental courses were cited: developmental courses were not needed, courses had to be completed elsewhere, and institutional policy did not allow developmental courses at their institutions (NCES, 2003a).
Higher Education Access

Higher education changed dramatically with the creation of the Morrill Land Grant Acts of 1862 and 1892, that provided a foundation for access to higher education. Institutions, referred to as land-grant institutions or colleges/universities, were places of education where the working class person could attend school. While the initial intention of the acts revolved around agriculture, mechanics, and teacher training, the Morrill Land Grant Acts provided an opportunity for those students who were not a part of the social and economic elite. The act required each state to demonstrate that race was not a criteria of admission to a university. States also could designate a separate land-grant institution for minority students (Bogue & Aper, 2000).

The G. I. Bill, or Servicemen’s Readjustment Act of 1944 (Servicemen’s Readjustment Act, 1944), played a critical role in enrollment and access to higher education for many American soldiers. After World War II, the nation’s military personnel returned home and were given the opportunity to enroll in higher education. Veterans were provided money for tuition, living expenses, books, and other supplies. During the years of 1944 through 1951, 2.3 million of the 8 million veterans attending colleges and universities needed developmental courses at the beginning of their college careers. This expansion of socioeconomically and ethnically diverse veterans not only provided a spark to higher education, but it also provided a huge need for developmental education (Levinson, 2005).

A primary obstacle for many potential students striving to further their educational goals was that of access. Beginning in 1947 with the Truman Commission Report, access began to change for those who wanted to attend colleges and universities.
Other important policies such as the Higher Education Facilities Act of 1963, the Higher Education Reauthorization Acts of 1965 and 1972, and the Civil Rights Act of 1964 were all critical to opening up points of access to more hopeful college students (Levinson, 2005).

The Truman Commission Report of 1947 mandated certain steps for the improvement of and access to education. The Commission stated that high school education must be improved in facilities and in the diversity of curriculum in order to raise the caliber of students attending postsecondary institutions. While many of the brightest students were already attending college, the report not only called for better high school education to raise the caliber of students attending college but also to provide the best training and education to those who end their formal education after college (Higher Education for Democracy, 1947).

The Truman Commission Report also called for tuition-free education in public institutions for all traditional students during their freshmen and sophomore years. The report did not define “traditional” as anything other than “any able and otherwise qualified young person” (Higher Education for Democracy, 1947, para. 71). One of the major aspects of this report was the inclusion of minorities and women to access higher education. In focusing on freshmen and sophomores, the report’s statement led to the creation of the community college system. The Truman Commission Report also stated a commitment to making higher education more financially feasible for students, thus, helping with access. The final aspect of the report that affected access was the call for equality in accessibility without regard to race, creed, sex, or national origin. In 1947, this was a revolutionary policy, enough so that two members of the commission had their
names printed to indicate they were against this part of the report (Higher Education for Democracy, 1947).


During the latter part of the 20\textsuperscript{th} Century, junior colleges controlled much of developmental education, while four-year institutions focused on other academic programs. Higher education experienced a change when access to higher education was available to more students as a result of the Higher Education Act of 1965, after which greater accessibility to American colleges or universities was available. President Lyndon B. Johnson signed the law to provide financial assistance for students who wanted to attend a college or university but were unable to handle the financial burden. This law also provided more funds for college and university use for the creation of scholarships, opportunities for low-interest loans, and the establishment of the National Teachers Corps (Higher Education Act of 1965, 2008) and led to an increase in the
overall demand for developmental education. Much of this change in enrollment was aimed at a more socioeconomically diverse group, but gender and ethnicity growth also played a major role as students came who had never before gained entrance to institutions of higher learning sought admission (Bogue & Aper, 2000).

After the implementation of the Higher Education Act, more institutions were faced with offering developmental education courses. More students than ever before were attending college, and many were not college-ready (Breneman & Haarlow, 1998). The 1970s brought even higher enrollments to universities and colleges, thus, producing greater need for developmental course work. This need continued to grow during the 1980s, with an increased focus on standardized testing methods. The standardized testing methods did not cause the increase in needed developmental courses, but it did serve as a greater predictor of students who needed the course work. At that time, about 30% of students entering higher education were taking developmental course work (Breneman & Haarlow, 1998). Several laws and policies played a major role in the changing landscape of postsecondary education.

Higher education also faced a growing change in population as a result of immigration. Often, immigrants entered postsecondary education in need of developmental education in courses such as English and reading (Goldschmidt & Ousey, 2011). According to the 2010 Resident Population Report from the U. S. Census Bureau, 308,745,538 lived in the United States, an increase of nearly 30 million from 2000 (U. S. Census Bureau, 2010). Looking back 100 years earlier, the population of the United States was 92,228,496 (U. S. Census Bureau, 2010). The unanswered question here was what portion of that figure were immigrants.
Coordinating and Regulatory Agencies Impact on Developmental Education

Within the Commonwealth of Kentucky, a governing entity called the CPE exists. The CPE is responsible for coordinating and guiding educational reform, with the following key responsibilities: development and implementation of a strategic agenda for postsecondary education, monitoring and approval of tuition rates and admissions criteria, approval of academic programs at institutions, coordination of statewide efforts to improve college and career readiness, access to postsecondary education, and student success. This governing body had a great deal of insight and influence on all aspects of higher education within Kentucky (Kentucky CPE, 2011b).

In 2009, the Kentucky legislature passed Senate Bill 1, a piece of legislation that revised the assessment and accountability system for P-12 education. This bill had an effect on postsecondary education within the Commonwealth. The bill called upon the Kentucky Department of Education, in collaboration with the Council on Postsecondary Education, to develop a strategy to reduce the need for college-level developmental education courses and increase graduation rates of students who entered higher education with developmental needs. The plan, presented in 2010, focused on several areas including bridge programs, dual credit, expansion of Advanced Placement, and student support and intervention systems (Kentucky CPE, 2010b).

Each institution was affected by different forms of regulation. Regardless of being public or private, institutions throughout the country had concerns regarding their accreditation. For example, the Southern Association of Colleges and Schools (SACS) Commission on Colleges (COC) served as a regulatory entity for many colleges and universities in the south. It mandated that “an institution must comply with the standards
Failure to follow the policies resulted in penalties and possible loss of accreditation.

Beyond the accreditation issues were multiple federal commissions and committees that provided policies for higher education. Many of these agencies reported directly to the Department of Education and have created policies such as the American Recovery and Reinvestment Act, No Child Left Behind, and multiple implements regarding financial aid (U.S. Department of Education, 2011). These regulations on a federal and state level, along with accreditation guidelines left colleges and universities with an increased burden to meet the regulations placed in front of them for continued funding, support, and growth allowed through the various agencies.

Assessment and Placement into Developmental Education

Legislative changes over the past 65 years changed the educational landscape of higher education in regard to accessibility for veterans of wars to immigrants in the United States. Beyond the accessibility and diversity changes of the country, assessment tests played a role in assessing students entering institutions of higher education.

The ACT and SAT tests taken by college students each year helped determine acceptance to a college or university and were common sources for assigning placement into a developmental course. Other tests to determine placement in developmental courses existed such as the Accuplacer and Compass (Bailey, 2009; Kirst, 2007; Brown & Niemi, 2007). Former President of the National Association for Developmental Education Rosemary Karr stated that “college readiness encompasses far more than a cognitive assessment” (Diaz, 2010, p. 5). Karr went on to state that measures of
assessment were discussed by attendees at the recent National Center for Postsecondary Education Conference. Many questioned the measures and suggested higher emphasis on factors such as high school grade point average (Diaz, 2010).

Testing for access to higher education was a process with a high cost (Bailey, 2009). Some students did extremely well on ACT or SAT tests and earned scholarships of some sort to a college or university. Poor test scores on these assessments, however, led to enrollment in costly developmental courses and potentially delayed progress in the students’ college careers. College Board is a company that provided tests such as Advanced Placement (AP), College-Level Examination Program (CLEP), Accuplacer, and the SAT. According to College Board, “you cannot ‘pass’ or ‘fail’ the placement tests, but it is very important that you do your very best on these tests so that you will have an accurate measure of your academic skills” (College Board, 2011a, para 2).

The score a student earned provided a faster path toward graduation compared to those who earned a path toward developmental courses, thus, a potentially more difficult path toward graduation. As an example, a student who earned a higher ACT or SAT sub-score in English would not need the developmental course before advancing to the college credit-bearing English course. A student who earned a lower ACT or SAT sub-score in English would need enroll in and pay for a developmental course; and after passing the course, would have to enroll in and pay for the college credit-bearing English course. Students in the developmental courses, however, may not be able to pass the college credit-bearing course without first taking the developmental course.

In 2010, ACT released information regarding the last five years of assessment of the ACT Test (ACT, 2010). From 2006 to 2010, an increase in students taking the
assessment was noted. Sub-scores for each of the areas of the ACT did not drastically change in any way. Reading, which was the highest sub-score among all test takers, increased from a 21.4 in 2006 to 21.3 in 2010. The science sub-score on the assessment remained at 20.9. Mathematics saw a slight increase from 20.8 to 20.9. English, the lowest testing area, dropped from a 20.6 to a 20.5 average for students taking the assessment. Overall, the average ACT composite score increased from 20.8 in 2006 to 20.9 in 2010 (ACT, 2010a)

The 2010 ACT report revealed some critical information regarding the completion of the high school core curriculum. The core curriculum is made up of four years of English, three years of mathematics, three years of science, and three years of social studies (ACT, 2012). According to the report, high school graduates who completed a core curriculum earned higher composite test scores ranging from 2.2 to 3.1, scores higher than those who did not complete a core curriculum. When broken down by sub-scores, the ACT organization found the following information regarding those who completed the core curriculum in high school as compared to those who did not: the English sub-score was 2.5 - 3.5 points higher, mathematics sub-score was 2.3 - 3.0 points higher, reading was 2.2 - 3.0 points higher, and science sub-score was 2.0 - 2.7 points higher (ACT, 2010a).

The ACT provided information indicating successful attainment of college readiness benchmarks. Based on the report, ACT benchmarks were as follows: 18 English composite score, 21 reading composite, 22 mathematics composite, and 24 science composite. In considering the students who took the assessment in 2010, only 24% who took the ACT met all four college readiness benchmarks. On the science
section of the ACT, 29% of the students met the benchmark. For mathematics, 43% taking the ACT met the benchmark; Reading had 52% who met the college readiness benchmark. Students were most successful on the English section, with 66% meeting the college readiness benchmarks.

When considering an assessment on which one or two points on the ACT test can determine if a student was college ready, the ACT organization took into consideration information regarding how close students were to reaching the benchmark level. In 2010, while the above mentioned 43% met the mathematics college readiness benchmark, another 9% who were within two ACT score points of doing the same on the assessment. The percentage of students within two scale points in the other areas were 10% in English, 13% in reading, and 15% in science. Perhaps what was more troubling was the number of students not meeting multiple benchmarks. Of students taking the ACT in 2010, 28% met no benchmarks; 15% met only one; 17% met two; and 15% met three benchmarks.

In terms of assessment, standardized assessments such as the ACT and SAT did not measure college readiness but served as a gauge in determining success of a student in college. In a 2010 report, the SREB stated that standardized tests were valued for their prediction of collegiate success but did not measure student success of specific college readiness skills. The standardized tests were generic in nature and not set to the standards each state had developed toward actual college readiness (SREB, 2010b)

**Developmental Education within Kentucky**

Graduates from within the Commonwealth of Kentucky had issues with developmental education as well. Half of the Kentucky high school graduates entering
Kentucky public colleges were underprepared in at least one subject area. Kentucky’s CPE estimated that the annual cost for providing developmental education to students attending public colleges was roughly $34 million (Kentucky Legislative Research Commission, 2008; Applegate, 2007).

Kentucky public institutions were facing a large number of students entering with developmental needs. For the fall 2008 enrollment period, these institutions each welcomed between 153 to 2,967 first-year students to their campuses from Commonwealth high schools (Kentucky CPE, 2010c). Table 1 indicates that during the six-year period from 2002 to 2008, each of the four-year public institutions saw a decline in students entering with developmental needs. While the decrease was encouraging, six of the eight public four-year institutions in the Commonwealth still had more than 25% of their students needing developmental courses in one or more subjects.

Table 1

Percentages of Students Not Ready in One or More Subjects 2002 and 2008

<table>
<thead>
<tr>
<th>Institution</th>
<th>Not ready in one or more in 2002</th>
<th>Not ready in one or more in 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Kentucky</td>
<td>44.8%</td>
<td>40.3%</td>
</tr>
<tr>
<td>Kentucky State</td>
<td>84.8%</td>
<td>80.3%</td>
</tr>
<tr>
<td>Morehead State</td>
<td>59.8%</td>
<td>49.2%</td>
</tr>
<tr>
<td>Murray State</td>
<td>37.0%</td>
<td>27.7%</td>
</tr>
<tr>
<td>Northern Kentucky</td>
<td>57.2%</td>
<td>35.3%</td>
</tr>
<tr>
<td>Univ. of Kentucky</td>
<td>13.9%</td>
<td>12.1%</td>
</tr>
<tr>
<td>Univ. of Louisville</td>
<td>22.2%</td>
<td>14.4%</td>
</tr>
<tr>
<td>Western Kentucky</td>
<td>45.8%</td>
<td>40.2%</td>
</tr>
</tbody>
</table>
The ACT 2010 report on Kentucky provided a disturbing trend regarding students meeting college readiness benchmarks. In comparing state and national percentages of meeting benchmarks, Kentucky was drastically falling behind. In 2006, 67% of Kentucky graduating classes met the college readiness benchmark compared to 69% nationally. In 2010, 55% of the Kentucky graduating classes met the college readiness benchmark compared to the national percentage of 66. In the mathematics area, 28% of Kentucky graduates met the benchmark compared to 43% nationally. The national percentage for the reading benchmark was 52%, compared to 40% for Kentucky. In science, the gap was not as large, with Kentucky having 21% of the 2010 graduates meeting the benchmark, compared to 29% nationally. While the national percentage for students meeting all four benchmarks had grown over the past five years from 21% in 2006 to 24% in 2010, the Kentucky percentage had decreased from 18% in 2006 to 16% in 2010 (ACT, 2011).

The scores in every area of the ACT test had dropped in the past five years for Kentucky. In 2006, the average composite score was a 20.6, compared to the 2010 average of 19.4. No single component of the test provided a score of 20 or higher in the Kentucky average. A key statistic, again, was the importance of the core curriculum of high schools students. For those who completed the core curriculum within Kentucky, the students scored a 20.6 on the ACT, compared to those who did not complete the core and scored a composite of 17.4 (ACT, 2011).

It should be noted that, beginning during the 2007-2008 academic year, all Kentucky public school students were required to take the ACT standardized tests.
Students in the eighth grade took the Explore test, students in the 10th grade took the PLAN test, and students in the 11th grade took the ACT (Kentucky Department of Education, 2011).

The benchmarks for college readiness provided further cause for concern when reviewing the breakdown by race. In English, 55% of students in Kentucky met the benchmark. When broken down by race, however, the numbers were disheartening. Only 30% of African-American students met the English benchmark, compared to 59% of Caucasian American students. Of the Asian American students, 71% meet the English benchmark; 40% of Hispanic students met the benchmark; and only 38% of American Indian/Alaska Native met the English benchmark (ACT, 2011).

Mathematics was no stronger for Kentucky students, with only 28% overall obtaining the college readiness score of the ACT. For Caucasian American students, 30% met the mathematics benchmark, while 10% of African-American students met it. Asian American students were the highest within the state, with 60% meeting the college readiness score. Twenty percent of Hispanic students and 13% of American Indian/Alaska Native students met the benchmark (ACT, 2011).

On the reading section of the ACT, 40% met the benchmark score set by the ACT. Across the races, the following rates were found: 18% of African-American students, 28% of American Indian/Alaska Native students, 44% of the Caucasian American students, 31% of Hispanic students, and 54% of Asian American students. This meant that 60% of all Kentucky students who took the ACT scored a 20 or below on the ACT section of reading (ACT, 2011).
Science also was an issue among Kentucky students taking the ACT. Overall, 21% met the science college readiness benchmark of 24. This meant that 79%, according to the ACT, were not college ready to enroll in a basic biology college course. Across the races, the following rates were found: 6% of African-American students, 11% of American Indian/Alaska Native students, 23% of the Caucasian American students, 13% of Hispanic students, and 41% of Asian American students. For the 2010 graduating class in Kentucky, only 16% of students were college ready by meeting the ACT college readiness benchmark scores (ACT, 2011).

Based on the 2010 ACT Report, college readiness standards affect a diverse group of students entering college. Table 2 displays the information from the ACT 2010 report for the graduating class of 2010 in Kentucky (ACT, 2011).

Table 2

<table>
<thead>
<tr>
<th>Race</th>
<th>English</th>
<th>Reading</th>
<th>Mathematics</th>
<th>Science</th>
<th>All 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>34%</td>
<td>21%</td>
<td>13%</td>
<td>6%</td>
<td>4%</td>
</tr>
<tr>
<td>Am. Indian/Alaska</td>
<td>50%</td>
<td>39%</td>
<td>26%</td>
<td>17%</td>
<td>12%</td>
</tr>
<tr>
<td>Asian American</td>
<td>76%</td>
<td>61%</td>
<td>68%</td>
<td>44%</td>
<td>39%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>46%</td>
<td>34%</td>
<td>27%</td>
<td>14%</td>
<td>11%</td>
</tr>
<tr>
<td>Caucasian</td>
<td>77%</td>
<td>62%</td>
<td>52%</td>
<td>36%</td>
<td>30%</td>
</tr>
</tbody>
</table>

Table 2 provided information regarding the developmental education needs of specific races of those graduating from Kentucky high schools (ACT, 2011). Specifically, a noticeably low percentage of success existed for African-American students who
planned to continue within higher education. Across the five areas, only 34% of Kentucky African-American students met college readiness scores in English, 21% in reading, 13% in mathematics, 6% in science, and only 4% met all four college readiness standards based on the ACT test. While a high level of difference was found in the races, overall the scores were low. Even when considering the highest level in the subjects, a large percentage of students still failed to meet the college readiness scores. In English, 76% of Asian American/Pacific Islanders met the college readiness score, the highest among all races. Those high scores were found for mathematics, science, and across the four subject areas for the Asian American population. Out of the 45,763 students who took the ACT in 2010, the Asian American population included only 549 students in Kentucky (ACT, 2011).

While the percentages for the Asian American students were higher, the number of Asian American students taking the ACT was considerably lower in Kentucky. The race breakdown on the assessment was as follows: 4,051 African-American, 178 American Indian/Alaska Native, 36,245 Caucasian American, 915 Hispanic, and 549 Asian American/Pacific Islander. The Caucasian American student population led the reading sub-score area, with 62% meeting the college readiness score, one percentage point higher than the Asian American student population at 61% (ACT, 2011).

The Condition of College and Career Readiness report produced by ACT in 2010 indicated the number of students in developmental education courses was of national concern. While this was just one of the two primary standardized tests used for entrance to a college or university, 47% of all graduating high school students, or 1.57 million, took the ACT in 2010. In comparison, nearly 1.6 million students took the SAT in 2010.
From 2006 to 2010, the average ACT score increased slightly for all races, except African-American which dipped from 17.1 in 2006 to 16.9 in 2008, 2009, and 2010. Nationally, just below one in four students (24%) met all four college readiness benchmarks established by the ACT. In what was very similar to the Kentucky test takers, nearly three out of every four high school graduates nationally were not college ready, according to the ACT benchmarks (ACT, 2010a).

**Growth in Developmental Education**

As retention and graduation rates continue to be critical to colleges and universities, the growth in the need for developmental courses had to be alarming to all involved with education. At community colleges alone, nearly a million students took developmental courses each year (Supiano, 2006). Of more concern was that studies clearly indicated that developmental students were most likely to drop out of college regardless of support (Bowler, 2009).

Nationally, 42% of students enrolled in a community college as freshmen and 20% of freshmen at four-year institutions enrolled in at least one course of developmental education (NCES, 2004). According to the *Closing the Gap between High School and College* report produced by the Blackboard Institute (2011), nearly one million students would enroll in a developmental education courses at two-year schools.

The 2008 *Diploma to Nowhere* (Strong American Schools, 2008) report stated that 995,077 students in a two-year public institution needed at least one course of developmental education. The same report stated that 310,403 four-year public college students needed developmental courses. One-third of all college students needed developmental courses in English, mathematics, or reading in order to meet basic
academic skill levels the student should have received in high school. Data from the report also listed that nearly four out of five developmental students had a high school grade point average (GPA) of 3.0 or higher. Within the survey, those students described themselves as “good students who worked hard and nearly always completed their high school assignments” (Strong American Schools, 2008, p. 4). This called into question the rigor of high school courses and curriculum. Of those surveyed, 59% of the students with developmental needs described their high school classes as easy, and half wished their courses had been harder so they were more prepared for the collegiate course loads.

**Costs of Developmental Education**

College graduates can expect to earn more than high school graduates. Earning potential was a primary reason for high school graduates to move on to college. The Bureau of Labor stated that, in 2008, the mean annual earnings of a high school graduate was $32,136. For those who attended some college but did not earn a degree, the mean annual earnings was $36,348. An associate’s degree provided the mean annual earnings of $39,364. If the student graduated with a bachelor’s degree, the mean annual earnings was $52,624 (Bureau of Labor Statistics, 2009). Students can expect the college degree to allow a path to a financially better life for their families after successful completion of their degree requirements.

Figures regarding the actual cost for developmental education were continually changing as the need for developmental courses increased. Breneman and Harlow (1998) found in 1998 that colleges and universities spent more than $1 billion annually on developmental education (Bailey, 2009). The “Diploma to Nowhere” report estimated the cost to be $1.9 to $2.3 billion in the community college system and another $500
million within four-year institutions (Strong American Schools, 2008). According to a report from the Alliance for Excellent Education, college developmental courses cost $5.6 billion a year. This report broke the information down to include $3.6 billion in providing developmental courses at two-year and four-year colleges and an additional $2 billion in lost lifetime wages because developmental students were unlikely to graduate from college. Bob Wise, president of the Alliance for Excellent Education and former governor of West Virginia, stated that, “remediation [developmental education] is paying for the same education twice. It is a wasteful use of public and private dollars and an unrealistic solution to closing the preparation gap between high school and college” (Alliance for Excellent Education, 2011, para. 2).

Beyond the financial cost to the institution and state was a financial concern for students as well. Many times students were paying for developmental courses that were not college credit-bearing courses. Students were enrolled in the courses due to the previously mentioned placement requirements and were then paying for courses that slowed their path to graduation (Bailey, 2009; Horn & Nevill, 2006; Horn & Carroll, 1996). Students enrolled in developmental courses were faced with the probable situation of needing a longer time in an institution to reach degree completion. While that could be viewed as a financial plus for the institution, that was not typically the case. Institutions gain from graduation. Individuals that graduate from an institution enter society as educated and contributing members of a community. Graduates also were likely to give back to a university that helped them succeed. The longer it takes to reach the degree, the greater the chance of failure in their collegiate pursuit. Since developmental courses were typically not college credit-bearing, they delayed reaching
the goal of graduation and the goal of being a productive and educated member of society (Bailey, 2009; Horn & Nevill, 2006; Horn & Carroll, 1996).

Degree completion for those students who need developmental courses was often a harder accomplishment. According to a 2007 report by the NCES (2007), 57% of students who took no developmental courses graduated within eight years. For those who needed one or two developmental courses, only 29% graduated within eight years. Students who needed four developmental courses had a 19% graduation rate within eight years. These percentages indicated that students who needed developmental education courses were less likely to persist to graduation than those who did not.

In 2010, an estimated two-thirds of college seniors who had reached graduation had student loan debt. The average of this debt was $25,250, which was up 5% from the previous year. The highest average state debt levels for the Class of 2010 were the following states: New Hampshire at $31,048, Maine at $29,983, Iowa at $29,598, Minnesota at $29,058, and Pennsylvania at $28,599. The lowest average state debt levels for the Class of 2010 were the following: Utah at $15,509, Hawaii at $15,550, New Mexico at $16,399, Nevada at $16,622, and California at $18,113. Kentucky’s average debt level fell into the lower amount at $19,375 (The Project on Student Debt, 2011).

Overview of Retention

American colleges and universities have existed for approximately 300 years (Seidman, 2005). This time period provided substantial changes within mission, curriculum, students, and financing to the higher education system. According to Seidman (2005), these drastic changes affected the nature of retention in terms of
patterns, institutional concerns, the methods of conceptualization and study, and the types of strategies used to improve retention.

Two models dominated research on retention. The first was Vincent Tinto’s Student Integration Model (1975) that was created to provide a perspective explaining the factors that influence a student’s decision to depart from a college or university. Tinto considered academic failure, permanent and temporary dropout, voluntary withdrawal, and transfer. Tinto’s model was founded on the principles of Durkheim’s Theory of Suicide, which stated that suicide was the willful withdrawal of oneself from existence. This theory was based on the assertion that a person’s suicide could accurately be predicted by the level of their integration into society (McCubbin, 2003).

Tinto (1975) stated that withdrawing oneself from society was similar to withdrawing from a college or university. In this analogy, higher education was obviously only representing one aspect of society, as described in Tinto’s theory and model. While there are many factors affecting college students, Tinto’s model narrowed the two most important aspects of higher education dropout to academic and social factors. He stated that dropout occurs when a student does not successfully integrate into the various aspects of the college or university life. Thus, if social or academic integration did not occur, the student would be at a much higher risk of leaving the university (McCubbin, 2003).

In 1988, Tinto expanded the view of student persistence to include a three-stage process. The first stage, separation, referred to the student parting from past behavior and patterns of association. Tinto suggested that in order for students to become a part of the collegiate community, they must leave their former communities and old ways of
thinking behind (Swail, Redd, & Perna, 2003). Each fall semester, colleges and universities host orientation and welcome week activities for incoming students. The hope of the administration was that these orientations would help a students’ integration to the campus and become part of the campus community. Keeping students from reverting back to their old ways of thinking and to their former communities was crucial to form a quicker embrace of the new community, or in this case, the college or university experience (Swail, Redd, & Perna, 2003).

The second stage Tinto (1975) mentioned was transition. In this stage, students learned to cope with the stress of departing from the comfort of their home environments. They must also learn to handle the uncertainty of not having a complete understanding of the new environment they recently entered (Swail, Redd, & Perna, 2003). Institutions again attempt to combat this step by providing as much information and as many resources as possible to help in the transition stage. When a syllabus was provided to students at the beginning of the semester, it helped with the transition stage by helping them understand the expectations for the academic structure.

The third stage Tinto (1975) described was incorporation, which represented the change in the student as he or she acquired a new identity. When they reached this stage, they became incorporated into the college or university community. (Swail, Redd, & Perna, 2003). This expansion of Tinto’s original model suggested that those students were unable to integrate fully into the college or university community and would have an inability to separate themselves from past associations and thinking. If this happened, a full transition into the new community would not occur, or in this case, the student would never fully be a part of the college or university culture (Tinto, 1986).
In 1993, Vincent Tinto revisited his model and introduced several characteristics that may predispose some students to drop out sooner than others. Commitment to degree completion and to the particular institution the student had chosen plays a role in retention in higher education (Tinto, 1993). Other factors that played into that commitment included individual attributes such as academic ability, race, sex, pre-college experiences such as academic and social attainments, high school grade point average, and family background defined as expectations of success, social status, and value of accomplishment (McCubbin, 2003).

The second research that dominated retention was Bean’s Synthetic Model (1982), which enhanced Tinto’s model using several aspects of Tinto’s academic and social integration theory. In this enhancement, Bean and Eaton (2000) focused on the psychological rather than the sociological aspects previously mentioned (Swail, Redd, & Perna, 2003). Factors within the five categories of variables included background, organizational, environmental, attitudinal, and outcome variables. As Bean (1982) described, this model was not intended to serve as a full explanation of why students drop out, but was to serve as a guide to help administrators ask the right questions to identify those students at risk and why they might be specifically at risk for dropout (Bean, 1981). The synthetic model identified four categories of variables, with each set having direct or indirect effects on the student’s intention to leave. Twenty-three variables made up the four categories.

Robbins et al. (2004) conducted a comprehensive meta-analysis that included over 109 studies with 150,000 students to determine the relationship between non-cognitive factors and college success. Researchers divided the non-cognitive factors
from the previous 109 studies into nine broad categories of: achievement motivation, academic goals, institutional commitment, perceived social support, social involvement, academic self-efficacy, general self-concept, academic-related skills, and contextual influences. These areas were evaluated on their ability to predict academic success. For the purpose of Robbins’ et al. research, this was defined as grade point average or persistence through either continued enrollment or degree completion (Robbins et al., 2004). The meta-analyses suggested that persistence was moderately related to academic goals, self-efficacy, and related skills. Researchers also found that GPA had a moderate to strong relationship to self-efficacy and achievement motivation. The researchers suggested that those students measured early enough could be saved from the potentials of dropout or academic underperformance (Robbins et al., 2004).

Pascarella and Terenzini (1980) expanded upon the work of Tinto (1975, 1986, 1993); Alexander Astin (1970, 1975, 1985, 1993); and Bean (1980) in regard to student persistence. Pascarella and Terenzini posited that social and academic integration formed the basis of a theory designed around student intent and persistence. Through the perspective of the student, Pascarella and Terenzini found that interaction with faculty and fellow peers provided a causal relationship model addressing effects of involvement and interaction. They also found that the amount of time students spend with faculty, both within and outside the classroom, strongly factored into their intent and persistence within a college or university.

**Importance of Retention to Higher Education**

Institutions view retention as critical to the success of the university. Seeing students through to graduation is the ultimate goal of enrollment. Economically, students
who were retained provided the institution with continuous financial support until graduation. While the process of fundraising was important to all universities, institutions that were truly tuition-driven viewed the financial incentives of retaining their current students as critical to success.

The current environment of higher education did not afford institutions leeway for losing students or the associated fees they bring to a university. “Each student who leaves before degree completion costs the college or university thousands of dollars in unrealized tuition, fees, and alumni contributions” (DeBerard & Spelmans, 2004, p. 66). Throughout the country, universities faced external questions from regulatory and legislative agencies regarding retention rates and, ultimately, graduation rates. These agencies placed an importance on degree completion and student retention.

Retention was crucial to higher education and, in turn, society as well. Having a strong work force for societal success came through the successful completion of college degrees. Through September of 2011, the median weekly full-time wage of high school graduates with no college was $643, compared to those with the college degree who earned $1,043 (U. S. Department of Labor, 2011). This number may not seem drastic; but when compared over a year, the difference starts to become more obvious. The high school graduate with no college earned $33,436 in one year. In five years, this same individual earned $167,180 and over 10 years earned $334,360. For the baccalaureate level college graduate, the one-year earnings were $54,236, nearly $21,000 more than the high school-only graduate. In five years, the college graduate earned $271,180, or $114,000 more than the high school graduate, and $542,360 in 10 years, which was over $200,000 more than the high school graduate (U. S. Department of Labor, 2011).
The college degree provided more financial opportunity for graduates compared to the high school diploma, but also it helped when comparing with students having some college or an associate degree. The median weekly full-time rate of pay for this population was $743. When the same time frame of one, five, and 10 years was calculated, the college degree again provided a greater financial stability for its graduates. For those with some college or an associate’s degree, he or she earned $38,636 in one year, $193,180 in five years, and $386,360 in 10 years. Worth noting was that students who attended or graduated from college typically paid a large sum of money to earn the degree, which left them with a debt upon entering the workforce that the high school graduate may not have incurred (U. S. Department of Labor, 2011).

According to the College Board (2011c), to attend a public four-year institution, the tuition and fees for in-state students averaged $7,605 per year. If no rate increases occurred, this would equate to a cost of $30,420 to graduate in four years and $45,630 to graduate in six years. For that student who attended a college or university out of state, tuition on average was $11,990 per year. For the four-year graduate, this represented a total cost of $47,960; in six years, it was $71,940. The decision to attend a private nonprofit four-year college held an average annual cost of $27,293 for tuition and fees. The graduate of a private institution incurred $109,172 if graduating in four years and $163,758, if it took six years to graduate (College Board, 2011c). While the earning potential for college students was higher than those with some college or only a high school diploma, a significant initial cost must be considered. Even with this consideration, the economic impact of retaining students with earning potential provided
great incentives for universities to help them persist toward graduation and aspire to the goal of graduation.

Beyond the financial impact of retention to the student and the previously mentioned impact to the institution, other losses occurred when a student was not retained. “For institutions, attrition represents a direct loss of tuition income and, other things being equal, a failure to accomplish their educational mission” (Bean, 1990, p. 170). Regardless of how monies were budgeted, enrollment and continued enrollment of students played an important role in institutional well-being. External entities such as federal and state government legislators often looked at retention and graduation rates as reason for funding. Failure in these areas provided a more difficult decision to direct funds toward a struggling institution.

**Change in Retention Rates**

Retention rates were generally figured from first-year students to becoming second-year students within an institution. In 2004, the national first-year retention rate of full-time students (from fall 2003) was 76.5%. The states of California, Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New Jersey, Pennsylvania, Rhode Island, and Washington earned retention rates over 80%. California topped the rates with 83.2% overall. South Dakota had the lowest retention rate in 2004 of 64.0%. South Dakota was joined by New Mexico, West Virginia, Nevada, Arizona, Arkansas, Montana, Idaho, Oklahoma, and Alaska in falling below 70% retention rate (The National Center for Higher Education Management Systems, 2009).

The national retention rate in 2009 had fallen slightly to 76%. Iowa, New York, and Virginia joined the states with over 80% retention rates, while New Hampshire and
Delaware slipped below the 80% rate. Massachusetts had the highest retention rate as a state at 82.7%. Idaho had the lowest state retention rate of first-year to second-year students with 64.4%, 3.1% lower than any other state. Wisconsin, South Dakota, New Mexico, Nevada, Montana, Hawaii, Colorado, West Virginia, Alaska, and Oklahoma fell below a 70% retention rate (The National Center for Higher Education Management Systems, 2009).

The goals of each institution and the retention rates achieved varied. In the annual U. S. News & World Report for 2010, first-year to second-year retention rates were reported for institutions throughout the country. This report listed the average proportion of first-year students returning for their second year from fall 2005 through fall 2008. The top 50 colleges and universities with highest retention rates were institutions such as Yale University (99%), Stanford University (98%), University of Virginia (97%), Wake Forest University (94%), and University of Texas – Austin (92%) (U. S. News & World Report, 2010).

Summary

The basis for developmental education, and in turn retention, may have been in the forefront of national conversations regarding higher education, but it was not a new idea within the field. Information and data shared in Chapter 2 provided a look inside support programs for incoming students, developmental education both across the country and throughout the Commonwealth of Kentucky, and retention and its importance to a university’s growth. In covering the foundational aspects of these subjects, and by reviewing the works of Tinto and Bean, it was possible to view the changes in each aspect. In reviewing aspects of access over the past 40 years, it was
possible to view the path of retention and where it could go in the future. Student support programs, especially those intended for incoming students needing developmental courses, need more research for consumer review and feedback.
CHAPTER 3: METHODS

This study examined the STEPS program at Western Kentucky University to determine the success of students who participated in the program in comparison to various other populations of college students. The following issues were addressed through the study: (a) successful retention from first year to second year of STEPS students who participated in the support program compared to those who were eligible but did not; (b) successful retention through graduation of STEPS students who participated in the support program upon entering the institution, compared to those who were eligible but did not; (c) successful retention from first year to second year of STEPS students who participated compared to similar developmental students at other Commonwealth of Kentucky institutions; and (d) successful graduation of STEPS students who participated in the support program compared to similar developmental students at other Commonwealth of Kentucky institutions. This chapter outlines the research methods used to study the STEPS program and its role in student success.

Participants

The study was conducted by collecting data regarding students from Western Kentucky University who were eligible for the STEPS program during 2004 through 2010. Students from the Kentucky four-year public institutions who would have qualified for the STEPS program if attending WKU also were included. The other institutions included were Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, University of Kentucky, and the University of Louisville.
From the fall of 2004 through the fall of 2009, the STEPS program was a one-semester program at WKU. Students who qualified were required to participate in the program during their first semester of admittance to the institution. For example, if a student began his or her college career in the spring semester and qualified for the STEPS program, participation in the STEPS program would occur in the spring semester. In the fall of 2010, new admissions standards to WKU molded the STEPS program into a full-year academic support program.

Within WKU, students were required to enroll in a developmental or supplemental course in English if they had an ACT assessment sub-score below 18 or an SAT Verbal/Critical Reading score below 450. Those who scored below 13 were required to take an enhanced section of the developmental course. Enhanced sections met for four hours weekly to assist students in becoming college ready. An individual was required to enroll in a developmental or supplemental course in Reading if the ACT assessment sub-score was below 20 or SAT Verbal/Critical Reading score below 470. Those who scored below 13 were required to take an enhanced section of the developmental course. From 2004 through 2007, students qualified for the STEPS program by having reading and English sub-scores below 18. In 2008, qualifications changed based on CPE recommendations and students qualified for the STEPS program by having a reading ACT sub-score below 20, an English ACT sub-score below 18, or a SAT verbal/critical reading score below 450. While each participant qualified and was required to participate in the program, not all students participated.

Western Kentucky University is a public institution located in the Commonwealth of Kentucky that offers associate, bachelors, masters, and doctoral programs. According
to the WKU Fact Book (2010), WKU enrolled 17,645 undergraduate students and 3,067 graduate students in 2009 for a total enrollment of 20,712. First-year, full-time student growth increased during each of the years between the fall 2005 and fall 2009. The WKU 2010 Fact Book recorded WKU as having 3,229 first-year, full-time students.

Each of the participants attended an Academic Transitions Program (ATP) prior to arrival on campus during the upcoming fall semester. During this process, each was placed into general education courses, potential courses for the major or minor, University Experience/freshmen seminar, and developmental or supplemental courses. The developmental courses were determined based on ACT or SAT scores. WKU’s average ACT score for first-year, full-time students in the fall of 2009 was 21 (WKU Fact Book, 2010).

Students in this study were identified for the program to address their need for a developmental or supplemental course in English and reading. It was possible for a student to have a developmental need in mathematics as well, but that did not factor into the qualifications for the STEPS program. Those graduating from WKU were required to complete at least one college credit-bearing math course. Depending on the field of study, General Mathematics (MATH 109) may have been required. This course had no developmental prerequisites. In theory, a student could score a 12 on the ACT; and, if the major required General Mathematics, the student could immediately sign up for the course. If the same individual chose a major that required College Algebra (MATH 116) or higher, the student would take at least one developmental course, and in many cases two, prior to taking Math 116. This left mathematics not being figured into STEPS program placement due to the institutional requirements in place. Students with scores
that placed them in the English and reading developmental courses were required to participate in the STEPS program at WKU.

To qualify for the STEPS program during 2008 and 2009, students scored the following:

- Reading ACT sub-score below 20 and English ACT sub-score below 18, or
- SAT verbal/critical reading score below 450.

From 2004 through 2007, to qualify for the STEPS program, students scored as follows:

- Reading ACT sub-score below 18 and an English ACT sub-score below 18, or
- SAT verbal/critical reading score below 450.

These individuals were required to take a developmental or supplemental reading and English course during their first semester at Western Kentucky University.

Participation in the STEPS program includes the following:

- attend an initial group meeting to learn about the program and sign a contract with the requirements of the program. This meeting is coordinated by the Retention Coordinator at WKU;
- attend six study hours in The Learning Center (a monitored academic study center located in the campus study union);
- attend three Peer Intrusive Advising appointments. Peer Intrusive Advisors are student staff at WKU who meet one-on-one with students in the STEPS program to provide valuable information to aid students toward good academic progress. Peer Intrusive Advisors must have a 3.25 overall grade point average to be selected for employment. At the
Peer Intrusive Advising meetings, academic progress, academic issues, class attendance, grades, etc. are discussed. Within the fall semester, STEPS participants meet with a Peer Intrusive Advisor in September, October, and November;

- attend two Academic Advantage Series: Workshops for Success. These workshops are a series of seminars provided by the Academic Advising and Retention Center that bring in an expert faculty or staff member to discuss topics such as time management, financial literacy, fear of mathematics, college reading strategies, finals preparation, etc.;
- attend the Majors and Minors Fair held annually during the fall semester. This event allows students to learn about the various majors and minors available throughout WKU;
- utilize tutoring available at The Learning Center. An initiative of the Academic Advising and Retention Center, The Learning Center offers a quiet place to study as well as tutoring in hundreds of courses and supplemental instruction for students to utilize during their college career at WKU;
- compose a reflection paper detailing the experience in the STEPS program; and
- allow parents to inquire about academic progress, grades, and attendance through contacting STEPS staff.

Participation in the program had already occurred prior to this study, and the data regarding participation was present within the Western Kentucky University Office of
Institution Research and the Academic Advising and Retention Center (AARC). The AARC coordinated and ran the STEPS program. Data was requested from the CPE through the Office of Institutional Research at WKU to gain information on students at the other four-year public institutions within the Commonwealth of Kentucky.

Due to the nature of the study and involvement of human subjects (students), all appropriate steps were taken to achieve approval through the Western Kentucky University Human Subjects Review Board process. Acceptance was formally granted on July 19, 2011, with no known risks to participants (see Appendix D).

Measures

Institutions throughout the country determine retention rates in varying ways. For the purpose of this study, retention was measured by the number of incoming eligible students who qualified for participation in the STEPS program and was broken down into participants and non-participants. The participant and non-participant population retention rates were determined by the continued enrollment in the institution during the following fall semester. This was called first-year to second-year retention. The STEPS program was designed to provide support to help students succeed academically during their transition from high school to college. Success was determined by the student earning a 2.0 grade point average or higher. In turn, this measurement allowed the researcher to determine if the program helped students who participated compared to those who did not in terms of retention. A similar measurement was made for students at WKU in comparison to those from other four-year public institutions who would have qualified for the WKU STEPS program.
Institutions typically determine graduation rates in intervals of four-, five-, and six-year graduation rates. For the purpose of this study, four-year, five-year, and six-year graduation rates were considered for the fall 2004 and 2005 incoming students. Four-year and five-year graduation rates were considered for the fall 2006 cohort of students at WKU and the Kentucky institutions. With the fall 2007 cohort of WKU and Kentucky institution students, only the four-year graduation rate was to be considered. To determine the graduation rates, a similar method in comparison to calculating the retention rate was used. Eligibility in the STEPS program was determined and students were categorized as either participating or non-participating. Those in each category were tracked at the four-year, five-year, and six-year graduation rates from the institution. The graduation rate was the number of participants or non-participants who graduated compared to the fall freshmen course they entered at that time. Students who participated in the STEPS program and those who did not were compared for Research Question 2. For Research Question 4, participants of the STEPS program were compared against eligible students at other four-year public Kentucky institutions.

**Research Design**

This study involved the use of non-experimental research. According to Johnson and Christensen (2000), this type of research can be classified into one of the following three designs: (1) descriptive, (2) predictive, or (3) explanatory. Johnson and Christensen also stated that this type of research could be classified by time dimensions of cross-sectional, longitudinal, or retrospective. With this information in mind, this study was designed as a predictive and retrospective non-experimental research study. Predictive research explains how a model, or in the case of this study a program, might predict
factors that produce the results found by this research. Retrospective data are collected at the end of a time period, and comparisons are made in retrospect. STEPS data existed and was collected at the end of a specific time period, after which comparisons between various populations were made.

**Procedures**

A request for the existing institutional data of WKU students was made to the Office of Institutional Research for retention and graduation of the STEPS participants and non-participants. A request for data also was made to the AARC for information on participants versus non-participants for each of the semesters being studied. A request was made to the CPE through the Office of Institutional Research for data on students who qualified for the STEPS program if they had attended WKU rather than the other Kentucky public institution they had attended. In addition to retention and graduation information, requests were made for ACT scores in English, reading, and mathematics as well as high school and college grade point average.

The data sought from the Academic Advising and Retention Center contained the following variables:

- Attendance or non-attendance in group meeting
- Attendance or non-attendance in Peer Intrusive Advising Appointment (All three appointments were documented.)
- Attendance or non-attendance in Academic Advantage Series: Workshops for Success (All workshops were documented.)
- Number of visits and hours logged in The Learning Center for studying, tutoring, or other supplemental instruction opportunities
Data were requested from the WKU Office of Institutional Research on first year students who had the qualifying scores to be eligible for the STEPS program. Data also were also gathered for Research Question 1 regarding the retention of the students who met the qualifications. For Research Question 2, data for the fall 2004 through fall 2007 cohorts of WKU students being studied were sought regarding the students’ four-, five-, and six-year graduation rates.

Research Questions 3 and 4 had implications to institutions outside of WKU. Data from the CPE were gathered for Research Question 3 for the cohorts of students from fall 2004 through fall 2010 who were first-time, full-time baccalaureate degree-seeking students. These individuals also had placement scores that would qualify them for the STEPS program (Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, University of Kentucky, University of Louisville, and Western Kentucky University). The following variables were requested:

- Institution ID
- Reading ACT sub-score
- English ACT sub-score
- SAT verbal/critical reading score
- Cohort term (fall 2004 – fall 2010)
- Retained to next fall (Y/N)

The reading ACT sub-score, English ACT sub-score, SAT verbal/critical reading score, and cohort term (fall 2004 – fall 2010) were determined to be independent variables. The retention of eligible participants and non-participants of the STEPS
program was determined to be the dependent variable for Research Questions 1 and 3. The graduation rate of eligible participants and non-participants was determined to be the dependent variable for Research Questions 2 and 4. Math ACT and SAT scores and ACT and SAT composites scores were not requested, as neither factored into eligibility for the STEPS program.

All identifying information was removed from the data. Access to the data was granted only to the Office of Institutional Research and the researcher.

**Hypotheses**

Based on the information from the research design and the research questions, the following hypotheses were stated:

Research Question 1: What is the retention rate from year one to year two of WKU students who participate in the STEPS program compared to the retention rate of WKU students who are eligible to participate in STEPS but do not?

- Hypothesis 1: Students who participate in the STEPS program at WKU will be retained at a higher rate from the first to the second-year than those who were eligible but did not participate.

Research Question 2: What is the graduation rate of WKU students who participate in the STEPS program compared to the graduation rate of WKU students who are eligible to participate in STEPS but do not?

- Hypothesis 2: Students who participate in STEPS at WKU will graduate at a higher rate than those who were eligible for the student support program but did not participate.
Research Question 3: What is the retention rate from year one to year two of WKU students who participate in the STEPS program compared to the first year students at Kentucky four-year public institutions who would qualify for the program if enrolled at WKU?

- Hypothesis 3: Students who participate in the STEPS program at WKU will have higher retention rates from their first to their second-year than those who enter a four-year public institution within the Commonwealth of Kentucky and have similar qualifying ACT or SAT scores.

Research Question 4: What is the graduation rate of WKU students who participate in the STEPS program compared to the graduation rate of students at Kentucky four-year public institutions who would qualify for the program if enrolled at WKU?

- Hypothesis 4: Students who participate in the STEPS program at WKU will have higher graduation rates than those students who enter a four-year public institution within the Commonwealth of Kentucky and have similar qualifying ACT or SAT scores.

Data Analysis

This study was conducted with data for students from the seven public four-year institutions within the Commonwealth of Kentucky. Data were analyzed to determine if the STEPS program was successful in aiding students from first year to second and then, ultimately, to graduation. To analyze the graduation rate, a four-year, five-year, and six-year rate was observed for the fall 2004 and fall 2005 incoming class of students. A four-year and five-year graduation rate was utilized for the fall 2006 class. For the fall of
2007, only a four-year graduation rate could be requested because this cohort was scheduled to graduate in May 2011. The five-year graduation rate would occur in May 2012, and the six-year graduation rate would occur in May 2013.

For data collection and entry, all data were entered into an Excel spreadsheet and then exported from the spreadsheet and imported into SPSSv.18 for analysis. A chi-square analysis of significance (Spatz, 2008) was used to answer each of the four research questions. This type of analysis was used because it determines the independence of two variables being studied which, in this case, were participants against the various other populations such as non-participants and Kentucky equivalent students. The chi-square analysis was based on a comparison (retention and graduation) of the STEPS participants from fall 2004 through 2010 to eligible but non-participants at WKU and throughout the Commonwealth of Kentucky. An acceptable level of significance within the chi-square analysis was determined to be $p < .05$.

For Research Question 1, a statistically higher percentage of students retained from first to second-year indicated the success of STEPS. For Research Question 2, a statistically higher graduation rate over four-, five-, and six-year time periods in comparing participants and non-participants would be used to measure the success of the program. Research Question 3 was measured in the same way as Research Question 1 except non-participants of STEPS were eliminated and replaced with eligible students at four-year public institutions in Kentucky who would qualify for STEPS. Research Question 4 was measured in a similar way to Research Question 2, except the non-participants were replaced with eligible students at four-year public institutions in Kentucky who would qualify for STEPS.
Limitations

For this study, the comparison of STEPS students to various other populations of eligible students occurred. Ideally, this study would compare one student support program, like STEPS, to other student support programs at public institutions throughout Kentucky. When institutions were contacted, many mentioned having services for student support but stated that the ability to provide data for a specific population, such as developmental education students, was not possible.

After the request for data was made to the Office of Institutional Research, AARC, and CPE, data for participants and non-participants of the STEPS program during the fall 2004 and 2005 cohorts was found to not be usable. Data availability restricted the number of years from admission to graduation that could be tracked and, therefore, eliminated the opportunity to determine six-year graduation rates. Due to this circumstance, the study only focused on the fall 2006 through fall 2009 cohorts of STEPS students for each of the research questions.

For Research Questions 2 and 4, data were confined to the limitation of cohort years. A four-year and five-year graduation rate could be provided for the fall 2006 cohort of STEPS eligible students. A four-year graduation rate also could be provided for the fall 2007 cohort of STEPS eligible students. Data from the CPE could not be retrieved for any of the Kentucky STEPS eligible students due to the fact that the six-year graduation time period had not occurred for any of the cohorts being studied.

Summary

Chapter 3 has set forth the methodology associated with the study with regard to Research Questions 1 – 4. This chapter included information on who and why the
participants of this study qualified for the STEPS program. The research design was discussed with the use of a non-experimental approach. The procedures were listed from data collection on STEPS eligible students at WKU through the Office of Institutional Research and the AARC were listed. Data collection also occurred from the CPE for eligible students of the STEPS program at other Kentucky institutions. Data analysis was discussed with statistical significance determined for each of the research questions. Limitations of data also included in Chapter 3 because of its affect on the depth of each of the research questions.
CHAPTER 4: RESULTS

Introduction

This study addressed the success of STEPS, a student support program for incoming students with developmental or supplemental course needs in regard to retention and graduation rates. Data were obtained from Western Kentucky University through the Office of Institutional Research and the Academic Advising and Retention Center as well as from the Council on Postsecondary Education. The results of the existing data were analyzed to determine the success of students in the STEPS program with regard to retention and graduation rates.

Initially, data was sought was for the fall 2004 through 2010 cohorts of students at WKU and the other four-year Kentucky public institutions. After the data had been requested, the researcher made a determination that fall 2004 and fall 2005 could not be used due to the condition of the data. For the fall 2004 and fall 2005 WKU cohorts, the information regarding participants and non-participants was inaccurate. There was no way to identify who actually participated and who did not.

The fall 2010 cohort data also could not be collected for this study. When universities report fall-to-fall retention rates, the final number of enrolled students does not occur until near the mid-point of the following fall semester. Due to this method of collection, the fall 2010 data for retention also were not available. With this known information, the decision was made to gather data for the fall 2006 through fall 2009 cohorts, allowing the study a four-year time period of data.

Data were collected for the fall 2006, fall 2007, fall 2008, and fall 2009 cohorts of incoming students who would qualify for the STEPS program at WKU, as well as those...
who would be STEPS eligible at other public four-year institutions in the Commonwealth of Kentucky. In 2006 and 2007, students qualified for the STEPS program by having reading and English sub-scores below 18. In 2008, qualifications changed as a result of CPE recommendations, and students qualified for the STEPS program by having a reading ACT sub-score below 20, an English ACT sub-score below 18, or a SAT verbal/critical reading score below 450.

While each participant qualified, not all participated in the program (Table 3). The number of eligible students for the STEPS program remained between 206 – 245 students during the four-year period. More than 245 students needed a developmental course. The STEPS program, however, was for students who needed English and reading. It was possible for a student to have two developmental needs in mathematics and reading, but this would not qualify the student for the STEPS program based on the requirements of the program.

Also noticeable during the time period were the growth in those who participated and a decline in those who did not. Many factors could have played into this change. As with any program, learning the methods to communicate student involvement was sometimes a bit of trail and error. For example, how were the program participants notified of their required participation? Email, face-to-face communication, phone calls, and letters sent home were available options and could account for the growth in participation. Along this line of thought, what was the tone of the communication to the student? If the program was said to be strongly suggested in fall of 2006 but required in fall of 2009, that could possibly explain the growth in participation.
Table 3

**WKU Participant Information**

<table>
<thead>
<tr>
<th>Participation Status</th>
<th>Fall 2006</th>
<th>Fall 2007</th>
<th>Fall 2008</th>
<th>Fall 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n)</td>
<td>(n)</td>
<td>(n)</td>
<td>(n)</td>
</tr>
<tr>
<td>Participant</td>
<td>97</td>
<td>139</td>
<td>150</td>
<td>185</td>
</tr>
<tr>
<td>Non-Participant</td>
<td>148</td>
<td>92</td>
<td>56</td>
<td>47</td>
</tr>
<tr>
<td>Total Participants</td>
<td>245</td>
<td>231</td>
<td>206</td>
<td>232</td>
</tr>
</tbody>
</table>

Females comprised a majority of the STEPS eligible students (Table 4). A variety of ethnicities were noted but were primarily African-American and Caucasian.

Table 4

**Demographic Information of Eligible STEPS Students at WKU**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>102</td>
<td>105</td>
<td>88</td>
<td>110</td>
<td>405 (44.31)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>143</td>
<td>126</td>
<td>118</td>
<td>122</td>
<td>509 (55.68)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Nonresident Alien</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>9 (.009)</td>
</tr>
<tr>
<td></td>
<td>African-American</td>
<td>73</td>
<td>68</td>
<td>91</td>
<td>101</td>
<td>333 (36.43)</td>
</tr>
<tr>
<td></td>
<td>American Indian/Alaska Native</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>5 (.005)</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>3</td>
<td>19 (2.07)</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>14 (1.53)</td>
</tr>
<tr>
<td></td>
<td>Caucasian</td>
<td>157</td>
<td>137</td>
<td>102</td>
<td>117</td>
<td>513 (56.12)</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>11 (1.20)</td>
</tr>
</tbody>
</table>
Analysis of Research Question 1

Research Question 1: What was the retention rate from year one to year two for WKU students who participated in the STEPS program compared to the retention rate of WKU students who were eligible to participate in STEPS but did not?

Data were gathered for Research Question 1 from the fall 2006, fall 2007, fall 2008, and fall 2009 cohorts of students at WKU who were eligible for the STEPS program. Data sets were received by the researcher for each of the fall semesters being studied. Data collected helped answer the question of what the retention rates were from first to second year of STEPS program participants compared to those who did not participate but were eligible at WKU. Table 5 provides information regarding the success of STEPS students being retained from first to second year.

Table 5

*STEPS Participants (P) and Non-Participants (NP) Retention Percentage*

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Retained (P)</th>
<th>Retained (NP)</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Fall 2006 – Fall 2007</td>
<td>64</td>
<td>65.98</td>
<td>88</td>
</tr>
<tr>
<td>Fall 2007 – Fall 2008</td>
<td>84</td>
<td>60.43</td>
<td>56</td>
</tr>
<tr>
<td>Fall 2008 – Fall 2009</td>
<td>100</td>
<td>66.67</td>
<td>29</td>
</tr>
<tr>
<td>Fall 2009 – Fall 2010</td>
<td>125</td>
<td>67.57</td>
<td>21</td>
</tr>
<tr>
<td>Total Percentages</td>
<td>373</td>
<td>65.32</td>
<td>194</td>
</tr>
</tbody>
</table>

Table 5 indicates the percentage of retention from first to second year for the fall 2006 – fall 2009 cohorts of incoming STEPS students who were retained the following fall semester. During each fall-to-fall time period, over 60% of participants were retained
to the following semester. Non-participants had only one semester, with over 60% retention which occurred during the fall 2007 semester. Students who did not participate during this semester were retained at 60.87%, as compared to the 60.43% STEPS participants that year. With the exception of the fall 2007 cohort, the retention rate of participants ranged from 65.98% in 2006 to 67.57% for the fall 2009 cohort. In the fall of 2006 and 2007, the retention rate of non-participants was similar at 59.46% in 2006 and 60.87% in 2007. A decrease in the retention rate was seen in 2008 and 2009 from the previous year to 51.79% in 2008 and 44.68% in 2009 for non-participants.

In comparing each year and the cumulative retention over the period of the study, the following information emerged:

- 9.89% more 2006 participants of the STEPS program were retained than non-participants;
- 0.73% more 2007 non-participants of the STEPS programs were retained than participants;
- 22.32% more 2008 participants of the STEPS program were retained than non-participants;
- 33.88% more 2009 participants of the STEPS program were retained than non-participants;
- Overall (fall 2006 – fall 2009), the retention rate was higher by 13.41% for students who participated in the STEPS program than non-participants.

A chi-square analysis was conducted on the significance of differences between retained participants and retained non-participants. The analysis was run to verify that the results were not by chance. Significance in the results of retention would indicate that
the STEPS program likely helped students to be retained from one fall semester to the following fall semester.

In the fall of 2006, 9.89% more STEPS participants were retained than non-participants; no statistical significance was found when the chi-square was run. Based on these results, the success of STEPS participants retained compared to non-participants retained was likely not associated with the STEPS program. No statistically significant relationship existed between participants and non-participants of the STEPS program in retention from first to second year within the fall 2006 incoming class, $\chi^2 (1, N = 245) = 0.30, p > .05$.

In the fall of 2007, non-participants of the STEPS program were retained at a 0.73% higher rate than participants. The results of the chi-square analysis indicate the STEPS program likely did not contribute to retention success for the fall 2007 cohort. No statistically significant relationship existed between participants and non-participants in retention from first to second year within the fall 2007 incoming class of students, $\chi^2 (1, N = 231) = 0.95, p > .05$.

For the fall of 2008, participants of the STEPS program were retained at a 22.32% higher retention rate than non-participants. The results of the chi-square analysis indicated the success found in retention was likely due to the STEPS program. A statistically significant relationship was found between participants and non-participants who were retained from first to second year within the fall 2008 incoming class of students, $\chi^2 (1, N = 206) = 0.05, p < .05$.

In the fall of 2009, there were 33.88% more participating STEPS students retained than non-participants. Again, the chi-square analysis for this portion of Research
Question 1 produced data that indicated this result to be potentially linked to the role of retention success in the STEPS program. A statistically significant relationship was determined between participants and non-participants in retention from first to second year within the fall 2009 incoming class of students, $\chi^2 (1, N = 232) = 0.00, p < .05$.

Over the four years (2006 – 2009), there were 13.41% more participating STEPS students retained than non-participants. A chi-square analysis for the 2006 – 2009 time period was run for WKU participants and non-participants. The analysis produced data that showed this result to possibly be linked to the role of retention in the STEPS program. A statistically significant relationship emerged between participants and non-participants during the 2006 – 2009 academic years from fall to fall, $\chi^2 (1, N = 914) = 0.00, p < .05$.

**Analysis of Research Question 2**

Research Question 2: What was the graduation rate of WKU students who participated in the STEPS program compared to the graduation rate of WKU students who were eligible to participate in STEPS but did not?

As mentioned prior to the analysis of Research Question 1, the data were limited due to incomplete data for the fall 2004 and fall 2005 STEPS participation information. This affected the gathering of data regarding graduation time periods. Graduation data were gathered from the fall 2006 and fall 2007 cohorts of students. For the fall 2006, the four-year and five-year graduation rates were analyzed. Data for the fall 2007 cohort included the four-year graduation rate for students eligible for the STEPS program. Graduation data for the fall 2008 and fall 2009 cohorts were not available, as the four-, five-, and six-year graduations for these cohorts had not occurred.
Information regarding participation in the STEPS program was collected from the AARC, and data were gathered from the Office of Institutional Research regarding graduation information for each of the graduation time periods. A chi-square analysis was conducted on the cohorts of STEPS eligible students for the graduation rates available.

**Fall 2006 four-year graduation rate.** Data sets were received by fall semester of the academic year and included four-year graduation occurring during or before May 2010. Results answer the question of what the graduation rate was after four years of enrollment for participants of the STEPS program compared to those who were eligible but did not participate. Data in regard to STEPS participation were collected from the AARC while data regarding graduation were collected from the Office of Institutional Research at WKU. Table 6 provides information about the number of participants and non-participants that had graduated within a four-year time frame. While the number of non-participant students graduating in the four-year period was greater, a higher percentage of participating STEPS students graduated.

Table 6

*Four-year Graduation Percentages of 2006 STEPS Eligible Students at WKU*

<table>
<thead>
<tr>
<th>STEPS Status</th>
<th>Participants</th>
<th>Non-Participants</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Graduated</td>
<td>8</td>
<td>8.25</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>7.35</td>
<td></td>
</tr>
<tr>
<td>Not Graduated</td>
<td>89</td>
<td>91.75</td>
<td>138</td>
</tr>
<tr>
<td></td>
<td>227</td>
<td>92.65</td>
<td></td>
</tr>
<tr>
<td>Total Students</td>
<td>97</td>
<td>39.59</td>
<td>148</td>
</tr>
<tr>
<td></td>
<td>245</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
In the fall of 2006, 97 students participated in the STEPS program. Of the 97, 8.25% graduated within the four-year time period. Non-participants included 148 students, and 6.76% of those graduated within the four-year time period. There were 18.06% more participants graduating within the four-year time period than non-participants of the STEPS program. Even with participants having a higher graduation rate than non-participants, the chi-square analysis findings indicate this was by chance. Results of the chi-square test for independence indicated that no statistically significant relationship existed between participants and non-participants in the STEPS program and graduation within four years at WKU, $\chi^2 (1, N = 245) = 0.66$, $p > .05$.

The data provided for this part of Research Question 2 aided the researcher in understanding the statistical significance of the STEPS program from the first year to reaching the four-year graduation time period. For this part of Research Question 2, no statistically significant relationship was found between graduation and participation in the program. The same process of data collection was conducted for the five-year graduation rate for the fall 2006 cohort.

**Fall 2006 five-year graduation rate.** Data sets were received by fall semester of the academic year and included five-year graduation occurring before or during May of 2011. Data collected helped answer the question of what the graduation rate was after five years of enrollment for participants of the STEPS program compared to those who were eligible but did not participate. Table 7 provides information about the number of students who graduated within the five-year time frame.
Table 7

*Five-year Graduation Percentages of 2006 STEPS Eligible Students at WKU*

<table>
<thead>
<tr>
<th>STEPS Status</th>
<th>Participants</th>
<th></th>
<th>Non-Participants</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Graduated</td>
<td>29</td>
<td>29.90</td>
<td>20</td>
<td>13.51</td>
<td>49</td>
<td>20</td>
</tr>
<tr>
<td>Not Graduated</td>
<td>68</td>
<td>70.10</td>
<td>128</td>
<td>86.49</td>
<td>196</td>
<td>80</td>
</tr>
<tr>
<td>Total Students</td>
<td>97</td>
<td>39.59</td>
<td>148</td>
<td>60.41</td>
<td>245</td>
<td>100</td>
</tr>
</tbody>
</table>

In the fall of 2006, 97 students participated in the STEPS program. Of the 97, 29.90% graduated within the five-year time period. Non-participants were made up of 148 students, and 13.51% graduated within the five-year time period. In comparing the graduation rate of participants and non-participants, 54.82% more graduated in the five-year time period. Results of the chi-square test for independence indicated a statistically significant relationship between participants and non-participants and graduation within five years at WKU, $\chi^2 (1, N = 245) = 0.00$, $p < .05$.

The data provided for this part of Research Question 2 aided the researcher in understanding the statistical significance of the STEPS program from the first year to reaching the five-year graduation time period. For this part of Research Question 2, a statistically significant relationship existed between graduation and participation in the program. The same process of data collection was conducted for the four-year graduation rate for the fall 2007 cohort.

**Fall 2007 four-year graduation rate.** The next data set helped answer the question of what the graduation rate was for STEPS participants compared to non-
participants for the fall 2007 cohort. Table 8 provides information about the number of students who graduated within the four-year time frame.

Table 8

Four-year Graduation Percentages of 2007 STEPS Eligible Students at WKU

<table>
<thead>
<tr>
<th>STEPS Status</th>
<th>Participants</th>
<th>Non-Participants</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Graduated</td>
<td>11</td>
<td>7.91</td>
<td>3</td>
</tr>
<tr>
<td>Not Graduated</td>
<td>128</td>
<td>92.09</td>
<td>89</td>
</tr>
<tr>
<td>Total Students</td>
<td>139</td>
<td>60.17</td>
<td>92</td>
</tr>
</tbody>
</table>

During the fall of 2007, 139 students participated in the STEPS program. Of the 139, 7.91% graduated within a four-year time period. Non-participants were made up of 92 students, and 3.26% graduated within the four-year time period for the fall 2007 cohort. In comparing graduation rates between participants and non-participants, 58.79% more graduated in a four-year time period from the fall 2007 cohort. Results of the chi-square test for independence indicated no statistically significant relationship existed between participation of eligible students in the STEPS program and graduation within four years for the 2007 incoming class of students, $\chi^2 (1, N = 231) = 0.15, p > .05$.

The data provided for this part of Research Question 2 aided the researcher in understanding the statistical significance of the STEPS program from the first year to reaching the four-year graduation time period. For this part of Research Question 2, no statistically significant relationship was found between graduation in four years and participation in the program.
Analysis of Research Question 3

Research Question 3: What is the retention rate from year one to year two of WKU students who participate in the STEPS program compared to first year students at Kentucky four-year public institutions who would qualify for the program if enrolled at WKU?

Data were gathered for Research Question 3 from the fall 2006, fall 2007, fall 2008, and fall 2009 cohorts of students at WKU who participated in the STEPS program and were retained compared to STEPS eligible students from the other four-year Kentucky public institutions. Information regarding the participation in the program was collected from the Academic Advising and Retention Center. Data collected on the Kentucky eligible for STEPS population were provided to the Office of Institutional Advancement from the Council on Postsecondary Education. A comparison of percentages on retention was run for each of the fall cohorts as well as a chi-square analysis for each.

Data sets were received by fall semester of the academic year. Data collected helped answer the question of what the retention rates were from first to second year of STEPS program participants compared to those who would have been eligible at four-year public institutions within the Commonwealth of Kentucky. Table 9 provides information regarding the success of STEPS students being retained from first year to second year and those retained from the Kentucky institutions.
Table 9

*STEPS Participants (P) and Kentucky Eligible (KE) Retention Percentage*

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Retained (P)</th>
<th>Retained (KE)</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Fall 2006 – Fall 2007</td>
<td>64</td>
<td>65.98</td>
<td>652</td>
</tr>
<tr>
<td>Fall 2007 – Fall 2008</td>
<td>84</td>
<td>60.43</td>
<td>643</td>
</tr>
<tr>
<td>Fall 2008 – Fall 2009</td>
<td>100</td>
<td>66.67</td>
<td>617</td>
</tr>
<tr>
<td>Fall 2009 – Fall 2010</td>
<td>125</td>
<td>67.57</td>
<td>420</td>
</tr>
<tr>
<td>Total Percentages</td>
<td>373</td>
<td>65.32</td>
<td>2,332</td>
</tr>
</tbody>
</table>

Table 9 indicates the percentage of retention from first to second year for the fall 2006 – fall 2009 cohorts of incoming STEPS students and STEPS eligible students from four-year public Kentucky institutions. During each semester, at least 60% of participants were retained to the following semester. Kentucky eligible students did not have a semester over a 58.48% retention rate during the four-year period of the study. From the 2006 to 2007 cohorts, a decrease was noted in the retention rate from 65.98% in 2006 to 60.67% in 2007. After the decrease, the fall 2008 cohort increased to 66.67% and the 2009 cohort to 67.57%. The peak retention rate for the Kentucky eligible student population was for the 2008 cohort, with 58.48% being retained. In the fall of 2006, the retention rate was 53.27%, which was followed by a drop for the 2007 cohort to 50.59%. The previously mentioned 58.48% retention rate of the Kentucky eligible students happened just prior to the low of 44.68% for the fall of 2009 cohort.

In comparing each year and the cumulative retention over the period of the study, the following was found:
• 19.26% more 2006 participants of the STEPS program were retained than eligible four-year public Kentucky students;

• 16.28% more 2007 participants of the STEPS program were retained than eligible four-year public Kentucky students;

• 12.28% more 2008 participants of the STEPS program were retained than eligible four-year public Kentucky students;

• 15.32% more 2009 participants of the STEPS program were retained than eligible four-year public Kentucky students;

• Overall (fall 2006 – fall 2009), the retention rate was higher by 16.66% for students who participated in the STEPS program than for eligible students for the STEPS program within the four-year public Kentucky institutions.

A chi-square analysis was conducted on the significance of retained participants and eligible four-year public Kentucky institutions. Significance in the results of retention would indicate that the STEPS program helped students be retained from one fall to the next. In the fall of 2006, 19.26% more STEPS participants were retained than Kentucky eligible students. A statistically significant relationship emerged between participation of students in the program and retention from first to second year within the fall 2006 incoming class of students compared to other four-year Kentucky public institutions, $\chi^2(1, N = 1321) = 0.02, p < .05$. Based on these results, the success of STEPS participants retained compared to Kentucky STEPS eligible retained was likely. The program likely was a contributing factor in retention success.

In the fall of 2007, 16.28% more STEPS participants were retained than Kentucky eligible students. A statistically significant relationship was found between participation
of students in the STEPS program and retention from first to second year within the fall 2007 incoming class of students compared to other four-year Kentucky public institutions, $\chi^2(1, N = 1410) = 0.03, p < .05$. Based on these results, the success of STEPS participants retained compared to Kentucky eligible retained was significant. The program likely was a contributing factor in retention success.

For the fall of 2008, 12.28% more STEPS participants were retained than Kentucky eligible students. No statistical significance existed between participation of students in the STEPS program and retention from first year to second year within the fall 2006 incoming class of students compared to other four-year Kentucky public institutions, $\chi^2(1, N = 1205) = 0.06, p > .05$. Based on these results, the success of STEPS participants retained compared to Kentucky eligible retained was not statistically significant.

In the fall of 2009, 15.32% more participating STEPS students were retained than Kentucky eligible students. A statistically significant relationship was noted between participation of students in the STEPS program and retention from first year to second year within the fall 2009 incoming class of students compared to other four-year Kentucky public institutions, $\chi^2(1, N = 919) = 0.01, p < .05$. Based on these results, the success of STEPS participants retained compared to Kentucky eligible retained was significant. The program likely played a role in the retention success of participants.

Over the four years (2006 – 2009), 16.66% more participating STEPS students were retained than eligible four-year public Kentucky institution students. A chi-square analysis for the 2006 – 2009 time period was run for WKU participants and eligible students at other four-year public institutions within the Commonwealth of Kentucky.
The analysis produced data that showed this result to possibly be linked to the role of retention in the STEPS program. A statistically significant relationship existed between participants and non-participants during the 2006 – 2009 academic years from fall to fall, $\chi^2 (1, N = 4,855) = 0.00, p < .05$.

**Analysis of Research Question 4**

Research Question 4: What is the graduation rate of WKU students who participate in the STEPS program compared to the graduation rate of students at Kentucky four-year public institutions who would qualify for the program if enrolled at WKU?

This data were sought from the Council on Postsecondary Education but the data were not available for this question. Graduation rates are submitted in six-year increments. Due to the cohorts of STEPS eligible students being studied, only four-year and five-year graduation rates had occurred. Therefore, no data had been submitted from any of the Kentucky four-year public institutions on the cohorts of students included in the study.

**Summary of Findings**

The analysis presented in this chapter was used to determine student success of STEPS participants when compared to non-participants as well as students who were eligible for STEPS but attended another four-year public institution within the Commonwealth of Kentucky. In answer to the first question of STEPS participants being retained at a higher rate than non-participants, evidence indicated this could be true. In answer to the second question of STEPS participants graduating at a higher rate than non-participants, evidence indicated this could be true. The number of students graduating
during this period who were STEPS eligible was small. In answer to the third question of STEPS participants being retained at a higher rate than STEPS eligible students from other four-year public institutions within the Commonwealth of Kentucky, evidence indicated this could be true. Each succeeding year found a greater number of STEPS participants being retained in comparison to STEPS eligible from other institutions in Kentucky. In answer to the fourth question of STEPS participants graduating at a higher rate than STEPS eligible students from other four-year public institutions within the Commonwealth of Kentucky, data were not available for analysis. The findings, along with conclusions and recommendations, will follow in Chapter 5.
CHAPTER 5: DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

Introduction

Graduating from high school is the first step for many students in their educational journey. In transitioning to college, many students will attend a college or university and be successful. Many, however, are entering colleges and universities underprepared and in need of developmental education courses in important subject areas such as English, mathematics, and reading. Western Kentucky University has a student support program in place for students with developmental education needs in English and reading, which is called Success Through Evaluation, Placement, and Support (STEPS). This program determines success of students earning a 2.0 GPA or higher as well as retaining the student to the institution. The unique aspect of this program is the tracking of students. While in the program, students are monitored for participation in services such as peer intrusive advising, tutoring, study hours, success seminars, and several other initiatives. These strategies are in the place to aid in the success a student can have while at WKU.

Each of the previous chapters has provided information for this study and its relationship to the impact of a student support program (STEPS) for retention and graduation of students in need of developmental education courses. A literature review was conducted in Chapter 2 on student support programs, developmental education, and retention. The third chapter provided the research questions along with the methodology to be used to answer each. This study was designed as a predictive and retrospective non-experimental research study. Predictive research explains how a model might predict factors that produce the results found (Johnson & Christensen, 2000).
of the analysis were presented in Chapter 4. Based on availability of data, this study was framed during a four-year time span covering the student cohorts. The final chapter briefly reviews the rationale for this study and its importance of before reviewing significant findings, possible conclusions, and recommendations for future research.

This study of the STEPS program sought to determine the academic achievement of students who participated in the program in comparison to various other populations of college students. Students in the STEPS program are required to participate in Peer Intrusive Advising, monitored study hall, attendance of success seminars, attendance of the Majors and Minors Fair, a concluding reflection paper, and a signed release form allowing staff of the program to talk to parents regarding their academic progress. In determining the academic achievement of students, retention and graduation rates were viewed and compared. This study asked and hypothesized the following research questions:

**Research Question 1:** What is the retention rate from year one to year two of WKU students who participate in the STEPS program compared to the retention rate of WKU students who are eligible to participate in STEPS but do not?

- Hypothesis 1: Students who participate in the STEPS program at WKU will be retained at a higher rate from first to second year than those who were eligible but did not participate.

**Research Question 2:** What is the graduation rate of WKU students who participate in the STEPS program compared to the graduation rate of WKU students who are eligible to participate in STEPS but do not?
Hypothesis 2: Students who participate in STEPS at WKU will graduate at a higher rate than those who were eligible for the student support program but did not participate.

Research Question 3: What is the retention rate from year one to year two of WKU students who participate in the STEPS program compared to first year students at Kentucky four-year public institutions who would qualify for the program if enrolled at WKU?

Hypothesis 3: Students who participate in the STEPS program at WKU will have higher retention rates from their first to their second year than those who enter a four-year public institution within the Commonwealth of Kentucky have similar qualifying ACT or SAT scores.

Research Question 4: What is the graduation rate of WKU students who participate in the STEPS program compared to the graduation rate of students at Kentucky four-year public institutions who would qualify for the program if enrolled at WKU?

Hypothesis 4: Students who participate in the STEPS program at WKU will have higher graduation rates than those who enter a four-year public institution within the Commonwealth of Kentucky and have similar qualifying ACT or SAT scores.

Review of Findings

Research Question 1: What is the retention rate from year one to year two of WKU students who participate in the STEPS program compared to the retention rate of WKU students who are eligible to participate in STEPS but do not?
This question was answered with data indicating that, overall, STEPS participants were retained to the following semester at a higher percentage than those who did not participate in the program but were retained. Although the overall percentage was higher, the fall 2006 and 2007 cohort retention rates were not statistically significant when comparing retention for participants and non-participants; however, the 2007 and 2008 cohorts were found to be retained at a statistically significant level when compared to non-participant retention rates.

Research Question 2: What is the graduation rate of WKU students who participate in the STEPS program compared to the graduation rate of WKU students who are eligible to participate in STEPS but do not?

This question was answered with data indicating that STEPS participants graduated at a higher percentage than non-participants. The four-year graduation rate for the 2006 and 2007 cohorts of graduating students was not statistically significant when comparing graduation rates of participants and non-participants. The five-year graduation rate for the 2006 cohort was found to be statistically significant for STEPS graduates.

Research Question 3: What is the retention rate from year one to year two of WKU students who participate in the STEPS program compared to first year students at Kentucky four-year public institutions who would qualify for the program if enrolled at WKU?

This question was answered with data indicating that, overall, STEPS participants were retained to the following semester at a higher percentage than those who were STEPS eligible at other four-year public institutions within the Commonwealth of
Kentucky. The fall 2006, 2007, and 2009 cohorts were all found to have had statistically significant differences in retention rate when compared with the rate of eligible STEPS students at other Kentucky public institutions. The fall 2008 cohort rate was not statistically significant in the differences.

Research Question 4: What is the graduation rate of WKU students who participate in the STEPS program compared to the graduation rate of students at Kentucky four-year public institutions who would qualify for the program if enrolled at WKU?

This question was unanswered. Data were sought from the Council on Postsecondary Education but were not available for this question. Graduation rates are submitted in six-year increments. Due to the cohorts of STEPS eligible students being studied, only four-year and five-year graduation rates had occurred; and, therefore, no data had been submitted from any of the Kentucky four-year public institutions.

Discussion of the Findings

Retention and graduation rates have been moved to the forefront of higher education during the past three years. Previously, it appeared that enrollment at an institution mattered just as much, if not more, than students actually being retained and graduated from the institution. With the increased emphasis on retention and graduation, the efforts for providing student support to those with developmental course needs are even more important.

As noted in the findings within the first research question, STEPS participants were retained at a higher percentage overall than non-participants. While statistical significance for the individual cohorts of students varied, finding an almost consistently
higher percentage of students being retained among those who participated in the STEPS program was meaningful. Those responsible for determining resources, not only in terms of funding and staffing but also commitment to the program, could be reasonably comfortable in knowing that the retention rates for students participating are likely to be higher due to participation in the program. The findings in this study would indicate that the STEPS support program was a good use of resources to aid in student success.

Within the findings for Research Question 3, STEPS participants were retained at a higher percentage overall than students at four-year Kentucky public institutions who would be eligible if they attended WKU. Again, statistical significance varied, but finding that a higher percentage of STEPS participants were retained suggests that STEPS is helpful in supporting student success.

Worth noting from the findings was the comparison between retained non-participants of the STEPS program and those students eligible for STEPS at other four-year public institutions within Kentucky. Table 10 indicates that, while each year had a difference of percentage, a minimal difference exists in the overall rate of retention for STEPS non-participants and eligible students within Kentucky four-year public institutions.
Table 10

*STEPS Non-Participants (NP) and Kentucky Eligible (KE) Retention Percentage*

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Retained (NP)</th>
<th>Retained (KE)</th>
<th>Difference</th>
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<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
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<tr>
<td>Fall 2006 – Fall 2007</td>
<td>88</td>
<td>59.46</td>
<td>652</td>
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<tr>
<td>Fall 2007 – Fall 2008</td>
<td>56</td>
<td>60.87</td>
<td>643</td>
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<tr>
<td>Fall 2008 – Fall 2009</td>
<td>29</td>
<td>51.79</td>
<td>617</td>
</tr>
<tr>
<td>Fall 2009 – Fall 2010</td>
<td>21</td>
<td>44.68</td>
<td>420</td>
</tr>
<tr>
<td>Total Percentages</td>
<td>194</td>
<td>56.56</td>
<td>2,332</td>
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</table>

The findings of Research Question 2 provided information that showed STEPS participants were graduated during the four-year and five-year time period at a slightly higher rate than non-participants. While this information was helpful, it was not possible to provide the six-year rates over the various cohorts of STEPS participants, and it is the six-year graduation rate that would provide a more helpful avenue to determine the appropriate contribution of the program in graduation success. The lack of data available to answer Research Question 4 left unanswered the question regarding graduation contributions of STEPS eligible students within Kentucky four-year public institutions.

During this study, success was determined by higher percentages of retention or graduation rates. Reasons for percentages being used to measure success were the lack of benchmark standards as well as the wide variance in the number of the population. Students eligible for the STEPS program were entering college with a need for two developmental or supplemental courses. As noted earlier, many students may need a
third or fourth development course, depending on their particular situation. Regardless, there is no benchmark standard to measure success of this student population.

Noted during the literature review was the success of certain states within the United States for their retention rates. The higher rates were above 80%. It would be unreasonable to hold students in need of developmental education courses, who are not college ready, to the 80% goals of many institutions. These students were more at risk than students who enter an institution who do not need developmental courses. These students have a lengthy and, at times, more difficult path toward graduation. Ideally, the end result of this study might be helpful in providing a success measurement standard for students in need of developmental education courses. Ultimately, however, more research with developmental students is needed to determine the standard to measure this population of students.

Several times throughout this study, the oversight of the Council on Postsecondary Education was discussed. The STEPS program is consistent with the goals for Unbridled Learning, formerly known as Senate Bill 1 (Kentucky Department of Education and Kentucky Council on Postsecondary Education, 2010) that addresses many of the issues of the Bill. A primary desire within the Bill was for institutions to develop a strategy to reduce the need for college level developmental courses and increase graduation rates of those students who entered colleges and universities with developmental needs (Kentucky CPE, 2010a).

The Bill addressed a primary issue with students in need of developmental courses that an increase in graduation rates is needed. If there is a delay in four, five, or even six years in reporting the successes or even the failures through graduation rates of
this student population, an opportunity may be lost to determine how effectively institutions support the student needs in a way that positively affects retention and graduation success. The need for annual review of student support programs should be as critical as the data gathered annually for first-year to second-year retention or every six years for graduation.

**Conclusions**

Based on the findings of this study, the following conclusions were drawn:

- The STEPS program contributes to student success in terms of retention from first year to the following fall semester for students needing developmental or supplemental courses in two subject areas.
- The STEPS program appears to contribute to student success in terms of graduation at the four-year and five-year time periods.

**Recommendations**

Based on the results of this study, the following recommendations are made for consideration:

- Monitoring systems are needed to assess progress toward retention and graduation for student support programs. This would not only provide an opportunity to determine the programs that are most successful, but also an opportunity to hold institutions accountable for programs in place to support student success. The various methods used to assist students with developmental needs are a national issue, not just an institutional issue. Finding the best ways to support students who need developmental education courses would benefit all in higher education.
Monitoring systems need to track use of support systems. Providing a support system for students but not tracking who uses it does not benefit the expansion of support or the effectiveness of an individual program. Tracking systems available for advising, tutoring, and other student support services can be costly but can help support the student who may be at risk of leaving an institution.

- Institutions should be able to provide information for students, parents, and others regarding the success rate of students needing developmental education courses who participate in student support programs.

- Continual assessment of support programs is needed, especially with regard to six-year graduation rates. The six-year graduation rate is what serves as a principal measure of student success.

- Institutions should be prepared to accommodate the needs of students they admit, with particular attention focused on students with developmental needs. Many institutions limit the number of students admitted with developmental needs. For those institutions who decide to admit students with developmental needs, support systems must be in place to aid in student success. Access to higher education is more readily available to students; in providing that access, college and university administrators must be prepared to aid in student success through intervention and support.

**Future Research**

Based on the results of the study and the research of the STEPS program, the following recommendations are made for consideration:
• The STEPS program includes many intervention types such as Peer Intrusive Advising, tutoring, workshops, and others. The tutoring and study hour requirements can be viewed as an academic intervention for the STEPS students. However, other interventions such as the Peer Intrusive Advising appointments and Academic Advantage Series Workshops could be viewed as motivational intervention strategies. Future research could be conducted with regard to the intervention strategies that are academic in practice as well as those that focus more on the motivational issues of a student’s success.

• With the interventions of the STEPS program, additional research is needed to determine which particular strategy is most beneficial in helping students improve grades, be retained at a higher level, or reach the goal of graduation. Several strategies are being implemented with the STEPS population, and future research could address issues for administrators on effective interventions.

• Finally, the STEPS program is designed for students who have developmental English and reading needs. Further studies determine whether the program’s success applies to everyone as opposed to only those students who need developmental education courses.

Conclusion

The STEPS program provided a framework for college and university administrators to apply when assessing the needs of their own institutions. The aim of the STEPS program was to provide academic support to students entering the institution with developmental needs. This study provided a review of students in the STEPS program as compared to various other student populations not in STEPS. Hopefully, it will provide a
measure for higher education leaders to consider in developing and implementing their own student support programs for those with developmental needs. In the end, higher education leaders must make the determination of how to best support students who are admitted to the university and are at risk.
REFERENCES


Kentucky Council on Postsecondary Education. (2010b). *CPE Senate Bill 1 budget.* Frankfort, KY. Council on Postsecondary Education.


APPENDIX A: PEER INTRUSIVE ADVISING APPOINTMENT

MONTH 1

ACADEMIC ADVISING & RETENTION CENTER

STEPS Programs

Peer Intrusive Advising Appointment #1

Fall

Name: ___________________________________________ Date: ____________

I. D. #: ___________________________ Time In: _________ Time Out: _________

• Look at the unofficial transcript to see the student’s previous grades.
• Introduce yourself to the student.
  o “Hello. My name is __________ and I will be your Peer Intrusive Advisor for the
    semester. This is the first of three appointments for the semester. Before you leave
    today I will make your second appointment which will be in October.”
  • FOR STEPS STUDENTS
    “Your participation in this program is not long-term. As a student in the
    STEPS program, you are required to participate in this program your first
    semester at WKU. The success of the program is up to you. We want to
    help you succeed, but you must communicate to us where you need extra
    assistance or what problems you are having in order for us to help you.”

• Review the requirements of the program. Ask if there are any questions.
• Have the student log into their Blackboard account
  o If the student does not know what Blackboard is or how to use it, please show
    them.

1. What do you think is going to be your most difficult class? Why? Where do you sit in
   that class? Have you made tutor appointments for that class?

2. Have you been completing the required 6 study hours (weekly) at TLC? If not, why?
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<th>Week</th>
<th>Hours Completed</th>
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3. Have you missed any classes so far? Why? Did you talk with your professor(s) about it?

4. Have you introduced yourself to your professors?

5. Have you had problems with attendance in the past?

6. How do you keep track of your assignments, tests, quizzes, work schedule, etc.?

7. When are your first tests? Are you preparing for them now?

8. Do you have a job? If yes, where? How many hours a week do you work?
9. What are your goals for this semester? What do you anticipate you will make in your classes?

Overall GPA_________ GPA Hours_________

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<th>Class</th>
<th>Anticipated Grade</th>
<th>Credit Hours</th>
<th>Repeat?</th>
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Guesstimated Overall GPA_________ Guesstimated GPA Hours_________

REMINDERS:

- Review the important dates sheet.
  - point out the withdrawal date (October 19)
- Compare Academic Advantage Series and class schedule. If they are in class for each workshop inform Alisha via note in her box.
- Remind the students of:
  - to check their email 3x daily
- Schedule the student’s second appointment to meet with you (IN OCTOBER).

Comments:

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

Peer Advisor: ____________________________
APPENDIX B: PEER INTRUSIVE ADVISING APPOINTMENT

MONTH 2

ACADEMIC ADVISING & RETENTION CENTER

STEPS Program

*Peer Intrusive Advising* Appointment #2

Fall

Name: _______________________________ Date: __________

I. D. #: ____________________________ Time In: __________ Time Out: __________

- Check the 5th Week Freshmen Assessment for each student prior to the appointment. If applicable, follow the 5th Week appointment guidelines. Four or more marks will require the student to meet with a professional staff member after the conclusion of their PIA appointment.
- Check the student’s current schedule via Topnet to see which (if any) classes have been dropped. If a student has no classes, contact the Retention Coordinator immediately prior to beginning the meeting.
- Review the Appointment #1 sheet and remind yourself of courses, tests, and other info you may have discussed. Discuss these areas first. Ask the student to demonstrate progress, test scores, etc. in these courses.
- Review the contents of the student’s folder. Make sure the contact sheet and the contract are completed.
- Have the student log into Blackboard at the beginning of the appointment.

1. How are classes going at this point in the semester? Only review marks if student has 3 or less on the 5th Week Freshmen Assessment. If 4 or more marks take to professional staff member via rotation posted in cubicle. Check the student’s grades via Blackboard.

<table>
<thead>
<tr>
<th>Class</th>
<th>Anticipated Grade</th>
<th>D/F Mark on 5th Week?</th>
<th>Absences</th>
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2. Have you missed any classes since we last met? How many in each class? Why? Did you talk with your professor(s) about it?

3. What class are you doing the best in? What are you doing to be successful in it? Can you apply those same concepts/principles to your other classes to ensure success?

4. At this point in the semester, which classes are you most concerned about? (Make tutor appointments if necessary). Be proactive here and get the student help. If necessary, consult with the Retention Coordinator.

5. Have you been attending study hall and tutoring? Why or why not? Review student’s class schedule if having difficulty achieving hours; where can they fit them in?

6. What are your academic goals from now to the end of the semester? Be specific.

7. What specific steps will you take to make sure that you succeed from this point on? Be specific.
REMINDERS:

- Important Date Reminders
  - October 3       Winter Term registration begins
  - October 19     Last day to WITHDRAW from a full semester class
  - October 20     Second bi-term classes begin
  - October 31     Spring registration begins
    - Tell him/her to schedule an advising appointment to meet with their academic advisor.
  - November 18    Last day to remove an incomplete from Summer/Spring

- Remind the student of the upcoming Academic Advantage Series dates.
- Schedule the student’s third appointment to meet with you (in November)
- Inform the student (again) the importance of checking email 3x daily.
- Give the Retention Coordinator a list (daily) of the all students in which the 5th Week Freshmen Assessment was covered.

Comments:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Peer Advisor: _______________________________
APPENDIX C: PEER INTRUSIVE ADVISING APPOINTMENT

MONTH 3

ACADEMIC ADVISING & RETENTION CENTER

STEPS Program

Peer Intrusive Advising Appointment #3

Fall

Name: ___________________________ Date: __________

I. D. #: _________________________ Time In: _________ Time Out: __________

1. Review the student’s finals schedule. Which final do you think will be the hardest? Do you need a tutor?

2. What are you doing to prepare for finals? Be specific.

3. Explain the importance of finals.
   a. Study in advance
   b. Meet with professors before exam to determine grade needed to pass course.

4. Do you have any questions or concerns regarding STEPS, grades, registration?

5. Have you been attending study hall and/or tutoring?

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<th>Week</th>
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<th>Hours Completed</th>
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115
6. What do you anticipate your final grades will be?

Overall GPA_________ GPA Hours_________

<table>
<thead>
<tr>
<th>Class</th>
<th>Anticipated Grade</th>
<th>Credit Hours</th>
<th>Repeat?</th>
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Guesstimated Overall GPA_________ Guesstimated GPA Hours_________

REMININDERS:

- **STEPS** Reflection Paper due before final’s week.
  o Print this paper and turn it in at the AARC (not TLC) reception desk between November 25 and December 6. Late papers will not be accepted.

- Inform the students:
  o AARC will be looking at student’s final grades for evaluation on Wednesday, December 16.
  o Where and when the student will be able to see his/her final grades.
    - Explain that grades will post individually but will not become part of the GPA until Wednesday, December 13, and that academic standings will not be assigned until 1-2 days AFTER grades post to the WKU transcript.
    - Explain the appeal procedures if the student knows his/her fall GPA will be below a 2.0.

- Review the student’s spring schedule
  o If the student has registered:
    - Make sure he/she is not taking several difficult classes.
    - Feel free to answer any GENERAL questions the student may have about the fall schedule. But be careful not to advise the student! Refer to the Retention Coordinator, or to Advising Associate, if necessary.
  o If the student has not registered or been advised
    - Please give him/her a Spring WKU Registration Guide.
- Make sure the student knows who his/her advisor is and where/when to go for advisement.
- If the student is Exploratory/Generally Undeclared make an advising appointment with the appropriate AARC staff member. Don’t let the student leave without a spring advising appointment, advisor information, and/or class schedule!
  - Make sure the student has completed developmental classes
    - Reading (DRDG 080C)
    - English (DENG 055C)

Comments:
________________________________________
________________________________________
________________________________________
________________________________________

Peer Advisor: ________________________________
APPENDIX D: INSTITUTIONAL REVIEW BOARD APPROVAL

In future correspondence, please refer to HS12-006, July 19, 2011

Kevin P. Thomas
cc: Dr. Burch
Educational Leadership
WKU

Kevin P. Thomas:

Your research project, Support Programs Effect on Remedial Student Success, was reviewed by the IRB and it has been determined that risks to subjects are: (1) minimized and reasonable; and that (2) research procedures are consistent with a sound research design and do not expose the subjects to unnecessary risk. Reviewers determined that: (1) benefits to subjects are considered along with the importance of the topic and that outcomes are reasonable; (2) selection of subjects is equitable; and (3) the purposes of the research and the research setting is amenable to subjects' welfare and producing desired outcomes; that indications of coercion or prejudice are absent, and that participation is clearly voluntary.

1. In addition, the IRB found that you need to orient participants as follows: (1) signed informed consent is not required; (2) Provision is made for collecting, using and storing data in a manner that protects the safety and privacy of the subjects and the confidentiality of the data. (3) Appropriate safeguards are included to protect the rights and welfare of the subjects.

This project is therefore approved at the Exempt from Full Board Review Level.

2. Please note that the institution is not responsible for any actions regarding this protocol before approval. If you expand the project at a later date to use other instruments please re-apply. Copies of your request for human subjects review, your application, and this approval, are maintained in the Office of Sponsored Programs at the above address. Please report any changes to this approved protocol to this office. A Continuing Review protocol will be sent to you in the future to determine the status of the project. Also, please use the stamped approval forms to assure participants of compliance with The Office of Human Research Protections regulations.

Sincerely,

Paul J. Moonen, M.S.T.M.
Compliance Manager
Office of Research
Western Kentucky University

cc: HS file number Thomas HS12-006