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COMMUNITY VALUE: THE EFFECT OF AN URBAN COMMUNITY COLLEGE'S
LEARNING COMMUNITY PROGRAM ON DEVELOPMENTAL ENGLISH
STUDENT RETENTION, ACADEMIC SUCCESS, AND GRADUATION

By

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A DISSERTATION

Submitted to the faculty of the Graduate School of Creighton University in Partial
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Abstract

This dissertation examined Learning Community (LC) programs and how these programs impact college freshmen retention, academic success, and graduation rates at an Urban Community College (UCC). The purpose of this study was to test the hypothesis that enrollment in an LC program during the first semester of college, increases the likelihood that LC students will stay in school and graduate at a higher rate than those who do not participate in an LC during their first academic semester. The researcher compared the college retention rates of two student populations at an UCC— first year developmental English students enrolled in an LC and first year developmental English students not enrolled in an LC. Additionally, the graduation rates of the two populations were compared. The differences in retention rates and academic success based on gender were also explored. The researcher found that developmental English students who participated in an LC during their first semester were not retained at a statistically higher rate after one year. However, LC students did go on to achieve academic success at a higher rate after two years and graduated at a higher rate after four years. There was no significant difference between the retention of LC males and LC females after one year. The study also provides recommendations for UCCs as they consider the utility of LC programs at their own institutions.

Keywords: Learning Communities, developmental English students, academic success, college retention, graduation rates.

Dedication

This dissertation is dedicated to my amazing family. I had some great people behind me throughout this journey. Their constant support and motivation every step of the way helped me more than they will ever know.

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CHAPTER ONE: INTRODUCTION

Background of the Problem

Leaders and innovators in higher education know the importance of student engagement, academic success, and college retention. Research has indicated that the alteration of the college classroom experience, through utilization of learning communities (LCs) and collaborative learning strategies, could enhance student learning and persistence (Tinto, 1987). Student engagement and comprehensive curriculums, such as learning communities, help students succeed in their academics in a variety of positive ways. As Freeman, Alston, and Winborne (2008) noted, “Active engagement in the learning process allows students to create, discover, and deeply understand material in a way that is hard to attain when students are exposed only to traditional passive lectures” (p. 227). LCs model Tinto’s (1987) theory of student retention and Student Integration Model (SIM), which suggest students can succeed and be retained when an academic and social system is in place to help students integrate successfully into college. A college’s formal and informal academic and social systems can serve as a way to help students succeed and be retained after their first year in college.

Multiple researches have focused on institutional practices and formulas that can strengthen student retention (Vander-Schnee, 2007). Community colleges offer developmental programs to assist student who have weak academic skills and offer them developmental programs to help improve their academic skills and college readiness (Bailey, Jeong, & Cho, 2010). LC programs are one approach utilized on college campuses throughout the nation in response to the low retention rates and lack of academic success of developmental students at the community college level.

Developmental students often need more support because they are not academically prepared for college coursework (Huse, Wright, Clark, & Hacker, 2005). The various components of LCs, including social and academic support systems, help students achieve academic success and college retention, and reinforce positive attitudes toward their studies (Tinto, 1997). Researchers in higher education have recently begun to express increased interest in LCs and how they can implement a successful program at their respective colleges with the hope of seeing a positive impact on developmental students' retention and graduation rates (McIntosh, Engstrom, Eatman, & Johnson, 2012).

Introduction and Statement of the Problem

Although community college enrollment of students in need of developmental courses has increased, retention rates, unfortunately, have not (Horn, Berge, & Carroll, 2003; Talbert, 2012; Tinto, 2007). First-year college students drop out for both academic and non-academic reasons (Morrow & Ackerman, 2012) and postsecondary institutions continue to experience relatively low retention and graduation rates, even though enrollment continues to increase (Talbert, 2012). One approach to aid under or marginally-prepared first year college students is the use of developmental courses in a variety of subject areas including English, mathematics and sciences. For example, students who do not qualify for a college-level English course can participate in a developmental English course. Under-prepared students who need additional practice in reading, writing, and thinking are provided with additional guidance and support to help better prepare the student for a college level English course (Hern, 2012). As students continue to struggle with English, there is a need for continued research about how

special programs offered to first-year students in need of developmental English courses are impacting college retention rates (Bailey, et al, 2010).

As enrollment rates of developmental English students continue to increase, there is an even stronger need to explore the effectiveness of LCs on developmental students' academic success at the community college (Hern, 2012). As DiMaria (2012) noted, "Community colleges are an important gateway to higher education. They have given the economic downturn a low tuition cost, accessibility, and open enrollment policy" (p. 21). Low-income students have access to higher education now more than ever. However, they also struggle to complete their degrees when compared to students who are more financially stable (Tinto, 2007). Past research suggests that institutions are very aware of the importance of retention and student income (Bailey, Jenkins, Leinbach, 2005).

Institutions need to stay committed to providing students with the resources they need to attend college. As Tinto (2007) explained, it is how and where students attend college that helps increase the chances of their retention and graduation (Cooper, 2012). Tinto added that special programs such as LCs require maintenance and attention. If a program is not maintained and kept up to date with valuable information pertaining to the success and value of the programs being offered, colleges could redirect resources and funds to other thriving programs.

College open enrollment policies generally allow students, who are underprepared or in need of developmental courses, an opportunity to earn college degrees through a sequence of developmental courses (Bailey, et al, 2010). Levin and Calcagno (2008) noted that many who attempt to earn their degrees will not continue the program past the first year. Usually, when a student has a rough transition into college during the first

semester, the second semester will also be a challenge (Fowler & Boylan, 2010). Based on previous findings, many scholars have called for greater focus on non-traditional predictors of college performance (Maulding & Roberts, 2012). These predictors help determine if a student is at risk for experiencing academic failure or dropping out of college before completing his or her degree.

Community colleges offer at-risk students an opportunity to develop a solid academic foundation necessary for them to continue their studies and move on to four-year institutions or career paths (Troy, 2013). LC programs are a successful way to help students with their academics and developmental courses at the two-year level through student engagement and academic support (Smith, 2010). These program components, along with integrative coursework, help the students understand the material and feel a sense of belonging. Two factors, student engagement and academic support, are emphasized in Tinto's (1993) theory as important in preventing students from prematurely departing from college. LCs, as defined by Smith, MacGregor, Mathews, and Gabelnick (2004), represent "an intentional restructuring of students' time, credit, and learning experiences to build community, enhance learning, and foster connections among students and teachers" (p. 20).

When students' academic needs are met, there will be a significant increase in their grades and retention (Dunlap & Pettitt, 2008). When students experience academic success, their attitudes will also improve (Wawrzynski & Jessup-Anger, 2010). Likewise, students who experience academic success and a sense of belonging are more likely to stay in school than students who do not experience academic success and belonging (Beachboard, Beachboard, Li, & Adkison, 2011). Unfortunately, many

community colleges are continuing to experience low retention rates despite their high enrollment (Talbert, 2012), and are thus starting to explore programs such as LCs and other resources that could further assist these students during their transition into college.

Tinto's (1993) theory of student retention suggests that students go through stages during their transition into college from incoming freshmen to mature continuing students. These stages are influenced by social and academic integration. Fike and Fike (2008) explained how learning communities are one answer to low college retention rates through integrated learning and student engagement. Traditional instruction may help some students, but it does not help all. Cohort programs, such as LCs, offer students a chance to feel a sense of community or belonging (Hill & Woodward, 2013). For example, a study by Lucas and Robinson (2002) found that alienated students tend to feel out of place and lack a sense of belonging. By having isolated feelings over an extended period of time, students are less likely to stay in school and complete their program as opposed to those students who do feel a sense of belonging. Those who feel they are members of the college community are more likely to stay and complete their programs (McIntosh, Engstrom, Eatman, & Johnson, 2012).

Purpose of the Study

The purpose of this quantitative study was to explore the retention, academic success, and graduation rates of developmental English college students who participated in an LC during their first academic semester at an urban community college, compared to developmental English students who did not participate in an LC during their first semester at an urban community college.

The researcher conducted the study at a two-year urban community college and examined retention rates from the Fall 2009 semester to the Fall 2010 semester, academic success two years after the students' first semester, and graduation rates four years later. The independent variable of this study was LC participation (participation vs. non-participation). The dependent variables included students' retention after one year, academic success after two years, and graduation rates after four years.

The LC program consists of three linked courses. All students are presented with the opportunity to enroll in an LC when registering for their first semester; it is an optional program for students of all English levels (developmental English or college level English). Students opt in or out of an LC for a variety of academic and non-academic reasons. For example, a student who is able to participate will enroll in the program because they either see its benefits or their schedule works with the LC schedule. The LC program emphasizes the importance and effectiveness of coursework integration and faculty-student engagement (Visher, Weiss, Rudd & Wathington, 2012). The linked courses consist of the appropriate developmental English course, based on the students' English Assessment Exam, a content course such as a three-credit history, arts, or science course, and a one-credit-bearing Student Development Seminar (SD). The SD course requires students to meet regularly throughout the semester, as a group in the classroom and individually with their advisor, who is also their SD instructor throughout the year.

Each LC has an assigned full-time librarian for each student cohort. The goal of having a set librarian for each cohort is to help the students navigate and successfully utilize the library both on campus, online, and throughout their academic careers. This

ultimately facilitates a culture of constant support from all aspects of the college. Each LC cohort consists of students who all placed at the same English level based on their English placement exam. Through this strategic placement, the instructors can cater to their groups' specific English needs from integrative assignments, to programs such as reading labs and writing tutoring, and conversation groups for those in need. The higher-level English LCs may introduce these resources, but will not require their particular cohort to utilize them. In addition to helping the students improve their academics, LCs offer students a sense of belonging by creating a cohort of their peers who also placed at the same reading level as they did. Therefore, the English course, as well as the linked content course, will move at a comfortable pace for all of the developmental students.

The LC classes are capped at 25 students, whereas non-LC courses can have a roster with over 40 students. The smaller classes, constant support, academic integration, and community feel were created to help the students feel a sense of belonging (Tinto, 1993). A wealth of information is available on why some students stay enrolled at college and why some leave prematurely. Some researchers have found that the academic demands of a first-year college student can become overwhelming, but with the proper resources introduced to them, constant support from faculty and staff, and positive social interactions, students can overcome these challenges (Weiss, Visher, Teres, & Schneider, 2010). This study served as an investigation of how these resources play a role in the learning communities of an urban community college.

Research Question and Hypotheses

The goal of this dissertation was to explore whether LC students' interactions and relationships with faculty, fellow classmates, and the structured linked curriculum will

result in improved academic achievement and college retention. Perlin (2013) noted, “Various reforms have been suggested, including embedding developmental instruction in college-credit course work rather than teaching the skills in stand-alone courses” (p. 120). LCs are one of the reforms utilized in community colleges, nationwide, to cater to the needs of developmental and non-developmental students (Hennessy & Evans, 2006). The literature suggests that there is success with learning communities at the community college level in retention, academic success, graduation, as well as overall positive attitudes and college experiences (Perlin, 2013). However, there is a need to explore how these particular areas of the special program perform and become valuable to the students’ academic careers.

The idea that special programs help enrich students’ education holds true especially for students who struggle with college-level material and are underprepared for the rigor of college work. Astin’s (1985) theory of student involvement explains how integrated course material, a community atmosphere in the classroom, and constant support from faculty and staff can result in higher retention, academic success, and graduation (Beachboard et al., 2011). Astin’s theory discusses how the benefits of co-curricular learning and student involvement are similar to Tinto’s theory of retention. Both theories guided the development of learning communities.

As Manpower Demonstration Research Corporation (MDRC) (2006) reported, it is believed that increased retention and graduation can come from successful participation in a learning community after only one semester of enrollment at the community college. The Longitudinal study followed the students’ academic progress for over the course of six years to determine the long-term benefits of being in an LC.

Primary Research Question

The researcher examined one overarching research question that guided this quantitative study:

1. How do learning communities impact developmental English students' success at an urban community college?

Hypotheses

The following hypotheses were investigated in this study.

- RH 1. LC developmental English students will be retained at a statistically significant higher rate than non-LC developmental English students after one year enrolled at an urban community college.
- RH 2. There will not be a statistically significant difference in retention rates of female LC developmental English students compared to male LC developmental English students after one year. Both males and females will be retained at a similar rate.
- RH 3. LC developmental English students' reading scores will improve at a statistically significant higher rate compared to non-LC developmental English students reading scores after two years enrolled at the community college.
- RH 4. LC developmental English students will graduate at a statistically significant higher rate as non-LC developmental English students after four years of attending the college.

Significance of Study

The significance of this study was to show the effectiveness of LC programs on urban community college developmental English students' retention rates, academic success, and graduation rates. Urban community colleges provide a variety of resources and programs that aim to help students achieve academic success and earn their degrees (Walters & McKay, 2005). LCs emphasize the essential college-level academic skills needed to be successful in college and help prepare developmental students for the challenges they may face while attempting to earn their college degrees. In addition to a focus on retention and graduation rates, many studies have focused on community college enrollment trends (Astin, 1984; Tinto 1993). For example, one study found that students who enroll in community college do so for the purpose of preparing for a four-year school or simply to receive a degree at a lower cost than a four-year degree can provide (Walters & McKay, 2005).

The significance of this study is its investigation of the impact that integrative learning, specifically at the community college level, has on developmental students' academic and social needs. Community colleges are experiencing an increase in enrollment, yet they are not experiencing higher retention rates. Tinto's (1993) theory explained that the most effective programs are those that focus on students' needs and offer social and academic cohort-structured learning. This creates a sense of belonging in college through academic and social integration. Additionally, the economic benefits of special programs also help students achieve and earn college degrees (Tinto, 2007). By further investigating the impact of LCs on student retention, leaders in community colleges might consider creating and implementing LC programs at their schools and

cater to their particular student population's needs. The significance of this study was to identify whether LC programs increase the retention rates of developmental students enrolled at an urban community college.

LC programs provide students with additional resources that have proven to be useful during the students' first semester enrolled in college (Sommo, Mayer, Rudd, & Cullinan, 2012). Therefore, this study sought to provide evidence of and insight into how a comprehensive short-term intervention, such as an LC, impacts college retention rates after two years at an urban community college. Additionally, this research explored how developmental English students' reading scores are affected after two years. Lastly, the study explored the importance of LC programs on the students' graduation rates after four years enrolled at the college. Past studies have suggested that LCs are an effective and powerful pedagogy for first-year students and the benefits continue beyond their time in the LC (Soven, Naynaha, & Olson, 2012). The purpose of this study, then, was to investigate if LC programs significantly affect all aspects of students' learning experience and academic career at an urban community college. The goal was to demonstrate if in fact LCs were effective for college retention, academic success, and graduation. Leaders in education need to be aware of the needs of their students, and LCs are one way institutions can reach their students in variety of positive ways, beginning with students' first semester enrolled at an UCC.

Aim of the Study

The goal of this study was to determine how LCs impact developmental English students' college retention, academic success, and graduation rates after being enrolled in an LC for their first semester at an urban community college. The aim of this study was

to create a set of recommendations about how to improve LCs at urban community colleges. Additionally, based on the findings from this study, the researcher will provide recommendations for conducting future research on how LCs affect developmental English students' college retention, academic success, and graduation rates.

Definitions of Relevant Terms

A variety of research is available that focuses on LC programs' success and effectiveness. Each study defines and investigates this success and effectiveness differently based on the particular study's resources, population, and the institution's needs.

For the purpose of this study, the following terms were defined, as listed below.

Academic Success: Academic success was determined by the students' new score after retesting for the English Assessment Exam within two years of being first enrolled at an urban community college. Students who score a 69 or lower on their English Assessment Exam are placed at the developmental English level. The score is on a 100-point grading scale.

Developmental English Course: This course is required for students who are in need of a developmental reading course. Students who place at the developmental English level score a 69 or lower on the English assessment exam. In order for students to place out of developmental English, they must score a 70 or higher when they retest within two years of being at the community college. The term *developmental* is preferred over *remedial* because developmental is "based on the assumption that one could not remediate what had not been taught in the first place" (Smith et al., 2004, p. 176).

Therefore, this study referred to these particular students as developmental English students.

English Assessment Exam: This standardized entrance exam taken in reading and writing determines a student's English placement into the community college. English placement for students who do not pass the reading component of the exam is determined by reading level. All students entering the community college must have their English level determined.

Graduation Rates: For the purpose of this study, graduation rates were determined after four years of enrollment at the community college for both LC and non-LC students.

Learning Community (LC) Program: An LC program represents an intentional restructuring of students' time, credit, and learning experiences to build community, enhance learning, and create faster connections among students and teachers (Smith et al., 2004, p. 20). The LC consists of three linked courses: English, a content course, and a student development seminar. The LC has a designated librarian for each LC link of courses. LC programs are available for all levels of English, but for the purpose of this study, only developmental English LCs were examined.

Linked Courses: Linked courses consist of three classes that are integrated by course material, classmates, and faculty collaboration during the LC students' first semester enrolled at a community college. Non-LC students' courses are not linked together by material, classmates or faculty collaboration during their first term enrolled at a community college.

Retention Rates: Retention rates are determined by the number of students enrolled at the same community college from the Fall 2009 academic year to the Fall 2010 academic year. Retention rates are affected by both academic and non-academic reasons.

Student Development (SD) Seminar: This course is provided to students in an LC that meets weekly in the classroom and is taught by the students' academic advisor. The SD seminar helps students transition into college and become more familiar with the resources available to them at the college. The SD instructor monitors the students' progress in all three courses and has individual meetings with the students throughout the academic year. The course is taught for one term. However, the instructor remains the students' academic advisor for the full academic year. The SD seminar introduces the students to successful student strategies such as time management, note taking, career exploration, and a variety of other helpful self-exploration and reflection.

Student Engagement: For the purpose of this study, student engagement was defined as students' interactions with their classmates as well as with the faculty. As defined by Troy (2013), engagement can be considered one's willingness to "work collectively and communicate effectively with others and retain a sense of individual responsibility in the ultimate outcome on one's efforts" (p. 46). Student engagement was considered the amount and capacity with which students interact with one another in an LC program. Faculty interaction and support are also considered student engagement.

Delimitations

1. The data provided for this study involved only developmental English students at one urban community college.

2. Students involved in the study were placed at the developmental level for English. There were no LCs for developmental Mathematics.
3. The English Assessment Exam scores are not based on nationwide scoring and only provide the students' accurate placement for this college. Other schools may have other requirements and scoring methods.
4. No specific academic or non-academic reasons were provided for why some students were retained after one year and why others were not. This researcher did not have direct access to the participants and, therefore, was unable to discern or identify why the students left prematurely.
5. A natural disaster struck during the fall 2012 term and directly affected the school and student population.

Limitations

1. The students' self-selected into the LC program. Therefore, the researcher did not randomly assign participants to the LC and non-LC group.
2. Academic success was determined on whether or not students passed the reading exam when retested sometime throughout the two years enrolled at the community college. Success was determined on Pass/Fail and not on numeric scoring.
3. The researcher only investigated one special program and specific college population. However, a number of programs follow this same concept of integrated learning for college-level English students. This study only examined LCs and developmental English students, not LCs for college-level

English students. LC effectiveness results could vary based on the different English levels.

4. This study did not investigate the reasons why some students withdrew from college.
5. This study did not explore whether or not those students who left college early enrolled at another college nor did it learn where they may have graduated from.
6. The study also did not investigate whether or not the students who left enrolled and completed career goals or certificate programs instead. Some students who did not retest may have done so at another college after leaving this specific community college. The researcher could only examine the graduation results from the study site. The researcher did not follow up with the students who were not retained.
7. This study was conducted on incoming college freshmen at one urban community college. Community colleges outside of the metropolitan area may have different student populations with other challenges and needs than the students in this particular study.

Assumptions

1. Learning communities provide students with positive academic experiences during their first semester enrolled at a community college.
2. Developmental English students, both LC and non-LC, struggle to stay enrolled at an urban community college and also struggle to complete their college programs successfully.

3. Students in need of developmental coursework are considered to be academically underprepared and may struggle to achieve academic success and stay in school. Therefore, additional resources and support may help developmental students achieve their academic goals.
4. Students who are enrolled in a learning community will experience continuous and positive support from faculty and classmates throughout their time enrolled at a community college.
5. Despite developmental English students' academic challenges and developmental coursework, linked curriculums benefit developmental students and offer them a sense of acceptance and belonging in college.
6. The data, provided by the study site, is accurate.

Summary

Given the growing demand for developmental coursework at community colleges, leaders and administrators in higher education should continue to explore new and innovative ways to meet this growing population's challenges and needs. It is important that educational leaders understand how college resources and special programs can potentially help developmental students stay in school; achieve academic success, graduate, and move on to either a career or a four-year program.

Evaluating the effectiveness of the LC programs available for these students will help schools learn what works and what does not. Through research, leaders can better identify where schools should be committing their resources and how they can create and maintain programs that show success in achieving students' goals.

CHAPTER TWO: LITERATURE REVIEW

Introduction

A significant amount of literature focuses on the positive impact of integrative coursework at the college level. Integrative learning, commonly known as Learning Communities (LC), allows students the opportunity to work closely with their cohort of peers and faculty through linked coursework. As Crisp (2010) noted, LC programs are a promising resource for students to utilize while attempting to earn their college degrees. Smith (2010) found LCs are valuable because of the supportive pedagogies that participants of LC learning can facilitate with one another.

This form of instruction in higher education provides students with the important skills needed to succeed through their created learning environment with a plethora of resources, support, and constant student engagement. Sink and Edwards (2008) described an LC as a caring, welcoming, positive form of education that provides students with preventative and collaborative learning environments. LCs are based on Tinto's Student Integration Model (SIM). Tinto (1997) believed the "social integration of students, such as devolving cohesive relationships with students and faculty, maintaining appropriate learning environment and engaging socially in school activities, increases their institutional commitments, thereby reducing the likelihood of student attrition" (Talbert, 2012, p. 23). Continued research on the effects of an LC program on developmental and non-developmental college freshmen's academic needs is a way to counteract low retention rates at the community college level and lack of student academic success. With many students entering college at the developmental level and being underprepared, LC programs offer this particular population additional academic

and social support needed to continue their studies successfully and head toward successful completion of their degrees. Tinto's theory of retention and Astin's theory of involvement are often implemented in special programs to help students attempting to complete college degrees (Milem & Berger, 1997).

The following literature review will explore the effects of LCs, developmental English students' needs, differences in gender and retention, and the need for LCs at UCCs. Specifically, the literature review will also focus on the creation and importance of LCs. Further, the literature review will address past research that explored how LCs effect learning outcomes, the need for LCs and the ways LCs impact developmental students. Additionally, the literature review identifies what the differences between male and female students are and how the differences impact the way male and female students learn and learning outcomes. The researcher explored research that focused on retention of students in LCs and non-LCs, developmental English students, and gender. The literature review also provides information pertaining to research on graduation rates of LC and non-LC students, developmental English students and gender.

Learning Communities

Interest in LC programs has grown over the last two decades. "The imperative to assess student learning outcomes developed in parallel with this growing interest in learning communities and the national focus on integrative studies" (Dunlap & Pettitt, 2008, p. 140). The effects of LC are theorized in a variety of ways. Most recently, as community colleges began accepting students who were academically underprepared, the colleges began implementing LC programs as one of the ways to help retain

developmental students from one academic year to the next academic year while achieving academic success (Bailey, et al. 2010).

Leaders in education began to see the benefits of enhanced involvement (Tinto, 1993) through the LC programs (Jackson, Stebleton, & Laanan, 2013) and the increased interest in LCs resulted in more 2-year and 4-year institution offering LC programs (MacGregor & Smith, 2005). Student success, interpersonal relationships, and opportunities for faculty and staff to interact and engage with students more were some of the benefits identified (Jackson et al., 2013).

Some researchers believe that the positive effects of LCs result from students' socialization with fellow classmates. The socialization of students while participating in a learning community can produce positive results in and outside of the classroom. Consistent peer interaction and social integration are benefits that students in LCs experience (Wawrzynski & Jessup-Anger, 2010). Students who experience positive interactions with both faculty and staff during their first term feel a sense of belonging and acceptance at the school. As research has shown, these positive social experiences result in first-year students achieving academic success and college retention (Tinto, 2007).

Another theory of the effectiveness of LCs is that LC faculty-student engagement helps the students achieve academic success and retention. These constant supports from members of the college help students set and achieve academic goals. LC collaboration among faculty and students can build a solid foundation of knowledge students' need to be successful in college, staying in school and completing their degrees. (Freeman et al. 2008). These ideas are similar to the thought that the effectiveness of LC programs is

related to linked curriculums. The goal of this integrative design is to help students with their studies through integration of the course material and by faculty working together. This creates a shared theme and joint assignments that the faculty creates with one another through close collaboration. This integrative style of learning helps to ensure that students are grasping the course material, gaining college credits, and focusing on their English and Mathematics skills. Studies have relied on Tinto's (1987) theory of student departure as well as Aston's (1985) theory of involvement to create the successful approaches that community colleges need to take to offer beneficial programs and resources to their students. For example, Baker and Pomerantz (2000) have identified that students learn best through the interdisciplinary connections that are created via linked courses and student engagement with classmates and faculty about the presented course material in the linked courses (Jaffee, 2007). This style of continuity helps students feel a sense of connection to each other as well to the shared themes in their courses.

A considerable amount of available research (Dudley, 2003; Minkler, 2002; Soven et al., 2012) suggests there is a significant increase in student success and college retention for students who participate in programs geared toward those in need of developmental instruction. In other words, traditional-style instruction is not the most effective approach for untraditional students. Dabney, Green, and Topalli (2006) examined how LCs are a resourceful tool for recruiting students and achieving learning outcomes. The more integration the classroom has, the less likely students will drop out (Sparkman, Maulding, & Roberts 2012). Surprisingly, however, not many courses are

available for underprepared students at colleges, most specifically, four-year colleges (Huse et al., 2005).

LC programs offer integrated developmental coursework for students in need. Students willingly enroll in a developmental LC program hoping to enhance their English skills at the two-year level and continue on to four-year colleges. While the types of developmental LCs differ between higher education institutions, for the purpose of this study, students were eligible to enroll in a developmental English course that is integrated with a credit-bearing subject course and a weekly student development course schedule, or to enroll in a developmental English course and credit-bearing individual subject courses without a student development seminar. A recent study by Stebleton and Nownes (2011) examined the impact of LCs on developmental English students, and how the LCs engaged with and retained underprepared students. Many students do want to continue on to other universities, but must first achieve academically at the two-year level. By linking the coursework and having faculty work together, the students' progress is monitored, constant support is provided, and oversight of the students' progress can be followed more easily. Although there could be LCs for developmental subjects other than English, for the purpose of this study, the researcher only examined the developmental English students.

Over the last few decades, two-year and four-year colleges have started taking an interest in LCs. According to Manpower Demonstration Research Corporation, commonly known as MDRC (2012), The Washington Center at The Evergreen State College expanded its support for LCs nationally in 1996 and by 2005 the directory of the

National Learning Commons had 245 LCs offered at colleges and universities throughout the nation.

Additional research supports the need for integrated learning such as LCs. Milem and Berger (1997) found that integration affects students' perceptions and behaviors and leads to academic and social development. LCs aim to do exactly this: help students build the academic skills and confidence they need to succeed in college. Comprehensive programs designed with an integrated curriculum, such as LC programs, could potentially increase the quality of college experiences when students feel connected with one another, with their studies, and with their school. Researchers Lucas and Robinson (2002) believed providing students with a supportive community feeling will help them transition from high school to college and increase retention rates due to early support. LC programs offer students a cohort of their peers while acknowledging the each student's individuality and personal goals through one-on-one support from faculty and staff.

Developmental Students and College Retention

Extensive research (Bailey et al., 2010; Hern, 2012; McIntosh et al., 2012) has been conducted on implemented programs that were created to increase retention rates of developmental students at community colleges. Years ago, Hudgins and Spies (1977) discussed the importance of instructional programs, specifically for remedial readers. A large number of underprepared students who are accepted into colleges do not properly understand the content of the courses, nor can they handle the rigor of coursework at the college level. Additionally, these students struggle to retain the new material. "The under preparation involves academic skills that are foundational to learning such as those

used in mathematics, reading and writing” (Levin & Calcagno, 2008, p. 181). Therefore, community colleges offer programs, such as LCs, to help developmental students succeed at the two-year level, learn, and grasp the information presented successfully before moving on to their major coursework and four-year programs.

Although LCs are available for all academic levels, the purpose of this study was to investigate the effects of LCs on developmental English students based on their English Assessment Exam scores. The students who were offered the developmental LC program were placed according to their scores of a 69 or lower on the reading component of the college Assessment exam. Minkler (2002) found that students’ interactions and engagement with one another, as well as with faculty, created a sense of community that traditional curricular offerings may not provide the students. These tools are needed to assist developmental students in succeeding.

Research has also suggested that LC programs can impact developmental students’ retention rates significantly through a variety of resources (Dudley, 2003). The constant support in the classroom from peers and professors, the designated librarian, and the assigned academic advisor all work to ensure that developmental students are aware of all the resources available to them at the community college. Such support and resources add to the students’ college experience during their first year. Baker and Robnett (2012) explained how the first year of college is significant in influencing students’ individual success. Successful integration of students’ first-year of college will most likely result in the retention of those students and it will be less likely that they will exit school prematurely.

LC programs offer extra help and knowledge about the college to assist how developmental students transition into the college experience. The LC programs' goal is based on Tinto's (1993) theory which explains that the best way to help all students achieve academic success and college retention is to integrate the coursework and create a cohort of peers (informal) and faculty (formal). Numerous research studies have suggested that social support and linked course structures help developmental students improve academically (Soven et al., 2012). Past studies have found that students who lack the skills needed for college create challenges not only for themselves and their academic progress, but also for faculty and staff at the community colleges who are responsible for these students' development during their studies (Hoyt, 1999). LCs offer a linked curriculum that allows faculty and staff the opportunity to work with each other more closely as well as with the developmental students. The college experience becomes more personal, and in many instances, faculty and staff take on mentorship roles with the developmental students (Rocconi, 2011). The idea of linking the curriculum with more than one course and instructor allows for more oversight and closer monitoring of the developmental students' progress or even the lack thereof.

These formal and informal relationships create a successful learning environment for developmental students who may be underprepared for college-level work. The cohort allows students to work together and with their professors. "Small-group settings have demonstrated potential to foster student development of skills needed in an inquiry-based learning environment" (Hennessy & Evans, 2006, p. 95). Developmental students often lack these skills, and the additional assistance can prove to be beneficial to their retention (Grice & Grice, 2008). Research indicates to academic leaders that special

programs such as LCs can improve student success and increase college retention rates, even for students who are below the average reading and writing level (Grice & Grice, 2008; Hennessy & Evans, 2006; Soven et al., 2012).

As Behringer (2008) explained, remedial education at the community college level helps students complete their degrees and often transfer to four-year institutions. In urban community colleges, students are often the first in their families to attend college, a fact which can create a sense of doubt and the lack of a sense of belonging at the college. Or, as Lucas and Robinson (2002) explained, this can create stress on their relationships outside of school, especially with their family members and friends who have never attended college. These types of stresses could negatively impact the students' academic success and progress. Lucas and Robinson (2002) reported that students who were provided additional support help students build confidence as well as their academic skills. Their study found that students who have a sense of community and belonging, such as being a member of a cohort or student group, also helped them adjust to college life. Students who experienced a sense of belonging were reported to have improved their writing, communication, and critical thinking skills. Finally, the authors found that the students who participated in an academic community improved the skills need to succeed socially and professionally.

In a recent study conducted by Bettinger, Boatman, & Long (2013), the needs of developmental college students and the resources offered by the institution (such as advisement, tutoring, and mentorship) were examined. They found that it is imperative for colleges to offer the proper resources and academic support. The authors explained that almost 40% of incoming freshmen are entering college underprepared. If they are not

provided with necessary funding and support they are less likely to stay in school and move on to college level course work. O’Gara, Karp, and Hughes (2008) also noted that LCs focus on social and academic integration. Using in-depth interviews with students at two year UCCs, the researchers found that student attachment to the institution is related to student persistence and college retention. In other words, students who are connected to their schools are more likely to be enrolled at the two year mark. They concluded that cohort style learning helps students develop academic and social skills.

Gender and Retention

With a growing number of diverse students enrolling in community college, there is a wealth of research conducted on different student groups and college retention. Theories such as Astin’s theory of involvement (1985) explore how student engagement plays a vital role in student success. Astin’s theory and Tinto’s retention theory (1993) are incorporated into the LC structure to effectively provide diverse student populations with equal amounts of support and engagement, regardless of how great their academic and non-academic challenges are. Achieving desirable outcomes such as academic success, persistence, and retention (Astin, 1993) means that leaders in education must identify students’ needs. When the student population is considerably diverse, the needs of the students will vary from one to another. For example, research has suggested that gender could affect the way a student retains new and difficult information (Severiens & Ten Dam, 2012).

Additionally, Hu and Wolniak (2013) found differences in how special programs affect male and female students. The effects of the college experience are not “equally applicable to all students” (p. 212). Specifically, Hu and Wolniak found that the academic

engagement impacted male students' more than female students and found that social engagement impacted female students more than male students. Gender is an important factor to examine when discussing student success and student-faculty interactions. Past research (Severiens & Ten Dam, 2012) has explored the college enrollment trend of male and female students and, more importantly, differences in gender and learning. Severiens and Ten Dam (2012) found gender differences in learning styles, cognitive styles, and in their approaches to studying. As Wolfle (2012) expressed, "diverseness creates students' needs as varied as their differences" (p. 43). Severiens and Ten Dam's (2012) research concluded that male and female students have different learning characteristics such as discipline, motivation, time management, and goals. The results of their study showed that gender differences in retention also had to do with the numerical representation of women and men in course programs. Wolfle also explained how a better understanding of the relationship between diversity and student success can help community colleges create successful programs that will lead to higher retention rates.

Research has also found that there is a difference in college retention based on gender and ethnicity (D'Lima, Winsler, Kitsantas, 2014). Specifically, male students were less extrinsically motivated and master oriented than the female students. Additionally, the researchers found that male students experienced an increase in self-efficacious over the semester more so than female students. Further, the researchers concluded that Caucasian and African American students were more academically self-efficacious than the Asian American students in their study. One of the difficulties community colleges face is creating an environment that caters to all students. LCs are one way community colleges are attempting to reach all students and help them adjust

and succeed in college, whatever their gender or ethnic backgrounds may be. Therefore, offering the students a sense of belonging, as well as personal academic advisement and support that caters to them and helps both male and female students reach their potential.

Another recent study conducted by Tessema, Ready, and Malone (2012) found that gender does directly affect how college students learn. The researchers collected data on male and female students between 2001 through 2009 with a sample size of 5223 participants. The data was collected from five colleges and universities and found that gender had a significant effect on students' satisfaction, ACT scores and GPA. Specifically, the researchers found that female students were found to have slightly lower ACT scores than the male students. The females had higher student satisfaction than males. Additionally, the researchers concluded that female students were more likely to maintain higher GPAs than the male students. The authors' findings determined that gender has a significant effect on student's satisfaction, ACT scores and GPA. Yet, the effect of gender on satisfaction and ACT scores was minimal. The authors noted that there is a definite need to identify gender differences and how students' academic needs, social and cognitive skills vary (Tessema et al., 2012).

Additionally, research suggests that the academic and social needs of college students are different for male and female students (Maceli, Fogliasso, & Baak, 2011). Classroom environment and interaction differ between male and females. Maceli, Fogliasso and Baak (2011) found female students have a tendency to be more verbal, whereas males tend to be more visual. The researchers found that females seemed to have a deeper sense of interpreting body language, while males preferred more activity. A significant amount of literature is available that focuses specifically on gender

differences and academics. Researchers Chee, Pino, and Smith (2005) distributed surveys to college students to explore the relationship between gender and academic achievement. The results indicated that female students possessed academic ethics more than the male students and also tended to have higher GPAs than male students. The social differences showed that female students' involvement extracurricular activities, such as clubs, had a positive impact on their GPA. Male students who were employed experienced a negative impact on the GPA. In short, the social and academic components of LC programs are created to cater to all LC students, both male and female, and of all ethnic backgrounds.

Through consistent support from all aspects of the community college, integrated learning, and academic advisement, students' needs and challenges could potentially be identified and tailored to meet students' individual needs. Continuity among faculty and staff supports the creation of a relationship with students to determine what their specific needs are and how community colleges can offer students the tools they need to succeed (Walters & McKay, 2005). The earlier these needs are identified, the sooner the school can offer the appropriate needed resources. Research has suggested that there is a difference between social integration and institutional commitment for male and female students (Jones, 2010). Jones' study found that male and female students have different reactions to the social integration and support offered. Specifically, social integration has a more positive effect on female students' institution commitment than compared with male students. Jones (2010) explained how female students' benefit more from social support than male students. Similar to Severiens and Ten Dam's (2012) findings, Enochs and Roland (2006) found that the developmental process differs for male and female

students. They found that females are more likely to rely on socialization and interactions with peers and faculty to adjust to and succeed in college more so than males.

An extensive amount of literature focuses on the differences between gender and learning outcomes (Chee et al., 2005; Dunaway, 2013; Jones, 2010). Specifically, the outcomes of gender and learning, group learning, attitudes toward studies, and cognition vary between male and female students (Dunaway, 2013). Research has shown there are differences between how male and female students perform. Another longitudinal study conducted by Xun Liu and LaRose (2008) found no differences in male and female persistence, but did suggest that a confidence gap exists female and male students. Another recent study by Buday, Stake, and Peterson (2012) found there were more similarities among their male and female participants than differences with regard to social support, self-perception, and careers.

LCs offer students a chance to create meaningful relationships and connections so students can have positive experiences during their time in college. These positive experiences can lead to retention, academic success, and graduation. As previously mentioned, Severiens and Ten Dam's (2012) gender comparison found not only differences in learning characteristics, both internal and external, between male and female students, but also different levels of stress factors for male and female students outside of the classroom. Stresses such as finances and family responsibilities vary between male and female students. The study concluded that men perform less well in college and may be less satisfied with the college environment and curriculum because they do not feel "at home in the institution in the way that women do" (p. 479). Special programs help male and female students adjust during their first semester of college,

academically and socially, based on their individual academic and non-academic needs. However, as the literature explained, the challenges male and female students face are unique and different from one another. One of the goals, then, for LC programs is to offer both male and female students the proper support and resources with the hopes of retaining both male and female students equally.

Long-term Effects of Learning Communities

Whether students transfer out of two-year schools to four-year schools, with or without completing their degree, has been seldom tracked. The question of the long-term impacts and effects of LCs was studied by the Manpower Demonstration Research Corporation, commonly known as MDRC (2012). MDRC conducted a longitudinal, six-year study to determine the long-term effects of LC programs on students who participated in an LC during their first semester of college. This was one of the first longitudinal studies to examine the graduation rates of LC participants at a community college. This six-year study found that LCs did show a statistically significant increase in the number of students who earned degrees, compared with students who did not participate in an LC during their first semester.

The MDRC study included students at the developmental English level for writing and reading. The students' grades did show improvement; when students were surveyed, they were found to have had positive attitudes toward their overall academic career and studies. There is evidence that LCs provide developmental English students with the academic support needed in community college in order to set and achieve their short- and long-term academic goals (Sommo et al., 2012). As LCs grow across the nation, there is a continued need to conduct additional research to determine how LC

programs impact students from their first semester onward. Weiss, Mayer, Cullinan, Ratledge, Sommo, Diamond (2014) evaluated the effects of LCs by examining 1,500 students at a large urban college. Their study found that there are positive effects on short-term academic progress such as completion of credits. However, the random assignment found that after seven years there was limit evidence to say the program affected graduation.

Sink and Edwards (2008) suggested that LC programs do help students improve interpersonal relationships with optimism, hope, civility, self-confidence, self-validation, and lifelong learning. Most recently, MDRC (2015) also explored the importance of promoting knowledge, advice, and support, and discussed the need to increase not only enrollment rates but also graduation rates. Many studies have found LC programs are valuable for developmental English students at the beginning of their college careers. It is more than just the academic component of LCs; it is also the social component of LCs that makes them so valuable. Zhao and Kuh (2004) examined the relationship between LCs and student engagement. The authors determined that participating in an LC is positively linked with student engagement and overall satisfaction with college (Zhao & Kuh 2004). Together, this combination can be beneficial for developmental students, both male and female, immediately from the start of their programs. As with MDRC's longitudinal study, LCs can be vital to a student's academic success, retention and ultimately, their graduation. With proper support and resources, such as those provided in an LC, students are introduced to the tools needed to set and achieve their academic goals.

The literature revealed a growing interest in the needs of community college students (Martin, Galentino, & Townsend, 2014), especially those considered nontraditional students (e.g., from low-income households, academically underprepared, and in some cases first-generation college student) which can result in low graduation rates. One study (Martin et al., 2014), which focused on students graduating rather than those who did not, found that students who successfully completed their college degrees possessed a drive to succeed, clear goals, be motivated, and manage both academic and non-academic demands. MDRC's study revealed how LCs can make a positive difference in the students' college experience and results in higher graduation rates than students who did not participate in an LC during their first term.

Academic Challenges for Developmental Students

Research has demonstrated how diverse student populations at community colleges could present issues and challenges that potentially impact students' academic progress, retention, and attitudes toward their studies (Hughes, Gibbons, & Mynatt, 2013). These challenges also affect faculty and staff. When the staff is faced with obstacles that take them away from their regular classroom duties, developmental students may not receive the extra academic and developmental support they need. Community college faculty and staff have various obligations and challenges that often supersede those of faculty and staff from four-year institutions (Troy, 2013). LC programs thus are an effective strategy for faculty at community colleges to engage more effectively with first-semester students who are placed at the developmental English level.

LCs create a form of team teaching so that faculty and staff together can work to prepare students for their reading reassessment exam after they pass the developmental course. The retest should take place at some point within two years of the students' initial enrollment. LCs offers developmental students a comprehensive program that focuses on their academic and personal growth. Engstrom and Tinto (2008) explained LCs is one way to help students succeed through institutional investment in structured and aligned activities aimed toward student success. The authors determined that LCs offer a powerful tool to those who are academically underprepared. Effective LCs requires that faculty to collaborate with one another to construct learning environments that connect students to each other and the faculty, and campus support services.

Students at the developmental level in community colleges are considered high risk because of their lack of preparedness and belonging at the college level. Community colleges are encouraged to investigate the financial and physical resources needed for developmental programs. The goal is to assist students in acquiring the skills needed to survive in college and complete their programs and graduate (Rochford, 2004).

The community feel and continuity between peers and faculty have proven beneficial to developmental and non-developmental students' academic needs. As Tinto (1997) stated, "the greater students' involvement or integration in the life of the college, the greater the likelihood that they will persist" (p. 600). It is important that community colleges find ways to reach their developmental students, during their developmental coursework, early on in their academics. Brothen and Wambach (2012) examined ways colleges could refocus developmental education in higher education and found a need for developmental literacy and writing courses in higher education; moreover, programs

associated with high-risk students are effective resources for retaining developmental English students. However, many developmental courses are not offered even though they are in high demand. Tinto (2007) described the challenges lie not in the creation of a successful program, but in the college's commitment to continue providing resources and support. Even successful programs can slowly lose funding and momentum if they are not properly promoted by the institutions' administration.

As early researchers theorized, the three areas of learning communities—social, leadership, and structural—have positively influenced students' learning outcomes when implemented successfully. The assumptions researchers have made have been that LCs that provide students with exposure to their teachers and peers for more than one class often develop a sense of community and belonging. This sense of community might not have developed through traditional curriculums that have no integration with other courses (Minkler, 2002). In order for LCs to be effective, they must cater to those particular student populations' needs and preferences, socially and academically, because developmental students enter college with many diverse needs and challenges.

Support for Learning Communities

With a growing interest in LC programs nationwide, academic leaders are becoming more curious about LCs and their effectiveness on college retention rates of developmental students in need of developmental coursework during their first academic semester. The growing number of developmental English students has pushed this interest even further (Behringer, 2008; Dudley, 2003; Grice & Grice, 2008). There has been an increase in demand for developmental coursework at the college level, especially

at community colleges, where students are accepted regardless of their level or preparedness and readiness (Levin & Calcagno, 2008).

With research supporting the positive effects of LCs on college students' academic achievement, community college leaders are interested in better understanding LC effectiveness and the ways this style of instruction can help developmental students throughout their academic careers. "LCs which place cohorts of students together in two or more courses for one semester are a popular instructional reform community colleges are implanting to improve the outcomes of developmental education students" (Visher, Weiss, & Weismann, 2012, p. 1). The large increase in enrollment rates of students who are in need of developmental English and underprepared for the rigorous college work have prompted community college leaders to investigate programs such as LCs and how to create and implement LCs at their academic institutions. In fact, the need to improve higher education curriculums has been examined for decades. A recent study by Purdie and Rosser (2011) determined a need to improve students' knowledge, capacities, skills, and attitudes throughout their academic careers from their first semester to their last. LCs are one way to improve these desired areas.

LCs are considered cost effective and comprehensive (Tinto, 1993). Therefore, there is an increasing interest specifically in learning communities. "In the past two decades the interest in LC as a curricular innovation has been fueled in part by its potential for fostering interdisciplinary learning in undergraduate education" (Dunlap & Pettitt, 2008, p. 140). Many community colleges are interested in implementing programs that are both cost effective and comprehensive as well as easy for both students and faculty to participate in. Jehangir, Williams, and Jeske (2012) explained that the

attraction of LCs in community colleges is due to a large amount of evidence from individuals placed in positive learning environments. “Interdisciplinary, collaborative, student-centered learning spaces can shape the process by which students grapple with how they know (cognitive), who they know (intrapersonal), and how they engage in relations with others (interpersonal)” (p. 268).

Research has shown that enrollment in student-created cohorts in conjunction with curricular integration and faculty collaboration allows students to maximize their college experience in academic, social, and personal ways (Weiss et al., 2010). For incoming freshmen who are considered developmental or underprepared, it is assumed that LCs may be an effective remedy to first-semester challenges by way of faculty continuity and structured learning. LCs continues to thrive across college campuses nationwide because of the effective strategy utilized to engage and retain students (Stebbleton & Nownes, 2011). Research findings continue to provide insight into the effects of LC and how the students are impacted by learning communities.

As noted, the research focusing on learning communities, student learning, and specifically academic success is significant (Jaffee, 2007). The National Center for Postsecondary Education found LCs are often employed to improve the success of developmental students. One appeal of LCs for developmental students is its comprehensive curriculum that incorporates faculty collaboration, shared assignments and themes, and additional student support services such as advisement, tutoring, and library resources (Weissman, Cullinan, Cerna, Safran, & Richman, 2012). Since colleges are experiencing an increase in students who are not fully prepared for college-level school work, there is a need to examine ways schools can best meet their needs. Studies

have demonstrated that students provided with the proper resources and tools to succeed, as well as peer and faculty support will be retained at a higher rate than students who do not get the proper resources, tools, and support (Rocconi, 2011). LCs help community colleges address the needs and challenges of their students, such as college retention and graduation rates among underprepared developmental students.

Leadership and Learning Communities

As LCs started to appear on more college campuses, faculty and staff were being asked to participate in a new innovative way of teaching. Findings from one recent study suggested that role of the professional leader and amount of relational trust, do impact the effectiveness of an LC (Thornton & Cherrington, 2014). The collaborative form of instruction aims for students to improve in their studies by working closely with the faculty and staff who are assigned to a learning community. The academic leaders who participate in LCs can produce desired outcomes when successfully working with one another in an LC. “Understanding how school leaders can nourish and sustain passion and commitment is an essential area of research on learning communities. Emotions in leadership should be considered when determining conditions for sustainable learning communities” (Cherkowski, 2012 p. 57). Community colleges are constantly trying to improve the faculty and student connection. The LC form of instruction is one approach that can be taken to support first-year students’ success. Having faculty support can be beneficial to the students. Researchers who have investigated what makes LC beneficial have determined that LCs and small study groups give leaders in education the opportunity to consistently prioritize student needs in a supportive context (Mullen & Schunk, 2010). When teachers are aware of what is a priority for their student cohort, the

program can then create integrative learning that will be of the greatest benefit to their students.

Research has suggested that faculty who support their students tend to create productive relationships that can positively affect college success. Bennett and Gilbert (2009) investigated whether or not effective communication and working relationships can make LCs become “an exceptional learning process” for all parties involved (p. 134). Through successful collaboration and faculty support, students from Bennett and Gilbert’s study completed the degree requirements for graduation and were overall satisfied with their college experience.

MacGregor & Smith (2005) surveyed fifty-six educators regarding the state of LCs. Some of the topics discussed included how successful LCs requires leaders from different areas of the campus to be involved and available to students. Additionally, they discussed LCs success when faculty and staff are able to invest in the program. As the two authors noted, surveying educators regarding the state of LCs helps leaders in education better understand ways to improve LCs and the trends taking place on college campuses nationwide. Murray, Cejda, and Brent (2010) explained how as faculty retires, community college leaders have the opportunity to shape the future of their institution through the hiring process. The authors explains how important it is for leaders to hire the right person to work with the diverse student body. Kuh (2009) summarized the need for student affairs professionals’ commitment to improving undergraduate education through student engagement. Leaders in education need to understand the importance of faculty involvement and enhancing the college experience. It is important to have leaders in the college on board with LCs and to have individual leaders within the LC. One recent case

study (Thomson, 2007) explained the success and challenges of creating LCs. Thomson mentioned the importance of collaboration between faculties. In order to successfully collaborate there needs to be someone who leads the group. Thomson's recommended that faculty and administrators at both the 4-year institutions and community colleges support the creation of LCs, integrated curriculum, and practices.

Student Engagement and Learning Communities

Past studies have suggested that engagement with faculty and staff can help students become more familiar with and knowledgeable about the college and what they want to major in than students who are not so engaged. Lucas and Robinson (2002) explained that when students enter college as a group, they receive a built-in support system. This amount of support can make a significant difference in their adjustment to and success in college. LC programs thus can motivate students to engage more with their peers and become familiar with campus resources.

The teachers who participate in the LC work closely with their cohort of students throughout their first semester in a variety of positive ways. The students' SD instructor, who also is their academic advisor, continues to work with students after their first term in an LC. Because this type of commitment is not for everyone, the faculty who are invited to work in an LC must be willing to go above and beyond the basic duties of the non-LC course they teach. Zumbrunn, McKim, Buhs and Hawley (2014) explored through a mixed method study students' perception, motivation, engagement, and academic achievement. The authors determined through collected data and qualitative follow up interviews that supportive classroom environments led to a sense of belonging and motivation, which increases student engagement and achievement within the course.

According to researchers Mullen and Schunk (2010) “this learning partnership goes beyond assisting and coaching; it brings together seasoned and novice educators, or teachers and students, to creatively problem solve and invest time in learning, leading to such outcomes as enhanced morale and emotions and increased self-efficacy and productivity” (p. 187). Investing the time leads toward successful learning. Student and faculty interaction play a vital role in academic achievement, retention, and successful completion of degrees. The teachers lead the students to become leaders themselves. Rocconi (2011) found that faculty support can positively affect academic success along with positive peer relationship building. As mentioned earlier, students who feel a sense of belonging and worth in their classrooms also build the confidence they need to succeed in college.

LCs are implemented in UCCs nationwide to help improve first-year students’ academic success and retention based on supported evidence that LCs work (Visher, Weiss, Weissman, & Rudd, 2012). Because community colleges allow for developmental students to begin college even without being at the college reading level, the transition into college can be difficult. Therefore, if a college is willing to allow these students to attend college, it should also be committed to offering students additional resources and support once they are enrolled (Wofle, 2012). Leaders in higher education emphasize implementing some form of transitional support program for students’ first semester or first year of college (Purdie & Rosser, 2011). Thus, LCs are effective by catering to LC participants by offering them additional support from faculty and fellow classmates who are also considered to be developmental students. As Wofle’s study pointed out, President Barack Obama has offered to increase funding for community

colleges with the hope that the extra funding will lead to higher graduation rates at the two-year level.

Studies have shown that developmental students need additional academic (formal) and non-academic (informal, social) support and resources (Beachboard et al., 2011), and LC programs offer both. LCs offer collaborative mentoring (Mullen & Schunk, 2010) between faculty, departments, student affairs, clubs, and offices. With such, students become familiar and comfortable with the campus and college environment, which in turn makes them feel a sense of worth and belonging. This is the result of better understanding what resources and tools are readily available for them, not only in their first term but throughout their academic careers. LC programs offer a formal introduction to college and campus life while establishing a solid support group with their peers and faculty.

LCs require faculty to closely work together, create an integrative curriculum, and be responsible for collaboration between classes. Unlike traditional instruction, the team teaching approach is geared toward making students become more familiar and comfortable with the information. “Most importantly, the linked curriculum should implement the most comprehensive course material for the fellow faculty members and LC students to follow” (Bennett & Gilbert, 2009, p. 131). In other words, to enhance student learning, participation in different education methodologies, such as integrative learning like LCs, is significant (Bennett & Gilbert, 2009). Learning outcomes, such as credits earned, improved GPA, and college retention, can potentially be achieved if the LC faculty work together to create and implement an integrative style of curriculum. It is important for faculty to work with students to understand the shared information that is

presented to them in all their linked courses. In this way, the integrative teaching method makes the faculty become almost a team. They develop similar themes and topics and, as past studies have suggested that the trick to this style of interdisciplinary learning is through “the cross-course” integrated class assignments (Yancy, Sutton-Haywood, Dawkins, Rainey, & Parker 2008).

However, some education leaders are not willing to work closely with other faculty and staff in this capacity. Most LCs require weekly faculty link meetings and constant “checking-in” with one another, as well as sharing updates with each other on student progress (Cherkowski, 2012). Clearly, some faculty members choose not to work in an LC because they cannot fulfill the required time that goes into building a linked course. Some LCs may not require the weekly meetings, but the study site’s LC does.

As the developmental student population at community colleges continues to grow, administrators are emphasizing the importance of offering curricula that focus on helping students learn and retain new and difficult information, and creating positive college experiences. This recipe for success could help students stay in school, improve their grades, and complete their degrees. The LC program has been shown to be a successful way to help students with their academics and developmental courses at the two-year level through student engagement and academic support (Smith, 2010). The reality, however, is that as community college enrollment increases, retention does not. Recent data has suggested that the number of students completing two-year degrees is only 20% (DiMaria, 2012). Additionally, about 40% of college students will complete an average of 10 college credits and leave school before completing their degrees

(McGlynn, 2011). Research continues to be needed that will help reverse this trend through effective learning communities.

Summary

LCs are purposely structured to form a unity among students, faculty, and curriculum. It is theorized that students' participation in an LC does play an important role in the successful completion of their first semester in a community college and helps them stay enrolled at the college after a full academic year. "LCs are becoming widely viewed by student affairs practitioners as a powerful opportunity to positively affect a variety of student outcomes including retention and GPA performance of first-year students" (Purdie & Rosser, 2011, p. 96). Studies that have examined the effectiveness of LCs on developmental students have usually explored the theories that peer interaction, faculty interaction, and integrated course material play a significant role in achieving desired learning outcomes such as retention, academic success, and graduation. "Many studies have provided evidence indicating that participants had better learning outcomes, learned better than non-participants, took more responsibility for their own learning, got higher grades, and demonstrated greater persistence or retention" (Beachboard et al., 2011, p. 854). As more studies are being published on the effectiveness of LC programs and developmental learning, the more evidence will be provided to determine the most effective way to help these particular students achieve their learning outcomes and keep these successful programs a priority.

As this review of the literature revealed, much research has demonstrated that the combined integration of course material, peer cohort, and faculty working together supports developmental English students to do well in their first term in college and all

subsequent terms. Research has investigated the impact of social and academic forms of instruction (Tinto, 1997, 1998, 2007). Investigation on the most valuable learning strategies for first-year college students should continue examining LC effectiveness. LC programs are growing in popularity on college campuses nationwide because they help developmental students gain positive college experiences and academic success (Sommo et al., 2012). When they achieve this success, students are more likely to be retained in the second year, improve their grades, and complete their two-year degrees. Community colleges offer at-risk students an opportunity to develop a solid academic foundation necessary for them to continue their studies and move on to four-year institutions or career paths (Troy, 2013). The skills and knowledge they gain about themselves, their peers, and the college help them to experience positive and successful college careers even after only one semester in an LC program (Weiss et al., 2012). LCs are designed to make students feel comfortable and confident at the college level. As mentioned, studies have shown that these student characteristics often go hand in hand with retention, academic success, and graduation and the present study sought to contribute to this literature.

CHAPTER THREE: METHODOLOGY

Introduction

This quantitative research examined the effects of a learning community (LC) program for developmental English students on one-year retention, two-year academic success, and four-year graduation rates at an urban community college. Past research, reviewed in Chapter Two, has focused on the effects of LCs on community college students. LCs are offered to different English-level students in college. In many higher education institutions, LCs vary from developmental English to college level English. LCs are also offered for other subjects such as mathematics. However, for the purpose of this research, the investigator specifically explored developmental English students and LC program effectiveness at an urban community college. After reviewing past literature on developmental students, it was clear that the developmental student population is growing at the community college level. The present researcher felt there was a need to investigate further how special programs such as LCs are relevant to this particular population's needs. Moreover, although community college enrollment is increasing, retention is not (DiMaria, 2012). Past research has found that roughly 40% of college students will only complete an average of 10 college credits and prematurely exit the college (McGlynn, 2011).

This quantitative study was designed to test the theory that developmental students who did participate in an LC would be retained, achieve academic success, and graduate at a statistically significant higher rate than developmental students who did not participate in an LC during their first semester.

At the community college level, it is imperative that programs be created and maintained to cater to the students' needs. LC programs are one way colleges can remedy major and minor issues that undergraduate students may face during their transition into college life. Therefore, this study examined how LC programs impact retention rates, academic success, and graduation rates among students in need of developmental coursework.

Restatement of Purpose of the Study

The purpose of this quantitative study was to explore the retention, academic success, and graduation rates of developmental English college students who participated in an LC during their first academic semester at an urban community college, compared to developmental English students who did not participate in an LC during their first semester at an urban community college.

Restatement of Aim of the Study

The goal of this study was to determine how LCs impact developmental English students' college retention, academic success, and graduation rates after being enrolled in an LC for their first semester at an urban community college. The aim of this study was to create a set of recommendations about how to improve LCs. Also, recommendations for conducting future research on how LCs affect developmental English students' college retention, academic success, and graduation rates.

Primary Research Question

The researcher examined one overarching research question that guided this quantitative study:

1. How do learning communities impact developmental English students' success at an urban community college?

Hypotheses

The following hypotheses were investigated in this study.

RH 1. LC developmental English students will be retained at a statistically significant higher rate than non-LC developmental English students after their first year of college.

RH 2. There will not be a statistically significant difference in retention rates of female developmental English students compared to male developmental English students after one year. Both males and females will be retained at a similar rate.

RH 3. LC developmental English students' reading scores will improve at a statistically significant higher rate compared to non-LC developmental English students reading scores after two years enrolled at the community college.

RH 4. LC developmental English students will graduate at a statistically significant higher rate as non-LC developmental English students after four years of attending the college.

Design

The researcher conducted a quantitative study to compare the retention rates, academic success, and graduation rates of developmental English LC students' to developmental English students who did not participate in an LC. The independent variable was LC participation (Participation vs. non-participation) and the dependent

variables were retention rates, academic success (measured by English test after two years) and four year graduation rates. In addition, the researcher also investigated whether there were different retention rates for LC males and LC females.

Additionally, this quantitative study examined the effects of LCs and how they influence students' academic success. Academic success was explored through the students' English assessment exam, which was administered prior to enrolling for classes at the college. Academic success was also examined after two years. Within two years, the students ideally passed their developmental course and were able to retest at some point within the two years. The researcher tested academic success through a series of t-tests.

Moreover, the researcher investigated the graduation rates of the students (LC and non-LC) after four years of being enrolled at the community college. The researcher tested the graduation rates of the two populations through a series of chi-square tests to determine the effectiveness of LCs on college graduation rates. According to the findings from a recent quantitative study on LC effectiveness, MDRC concluded that the graduation rates of learning community students were significantly higher than those of students not in an LC during their first year.

Setting and Sample Population

The study was conducted at an urban community college. The institution selected for this study has an open-enrollment policy which allows students who are underprepared, possess low grades or fail out of their four-year programs the opportunity to enroll at this community college. The college commits resources such as book vouchers, laptop and text book rental, food vouchers and support such as personal

counseling and free tutoring to meet developmental students' needs. It also receives funding from research foundations to provide LCs with the tools needed to work with developmental English students. The college has a strong commitment to helping underachieving students improve their academic and social skills through programs such as LCs.

According to the study site's internal statistics report, during the fall 2009 semester there were 18,204 students enrolled at the urban community college. Of the 3111 first semester, incoming students, 10.86% (338) tested at the developmental English level. Students are placed at the developmental English level if they score a 69 or lower on the English Assessment Exam.

The sample for this study consisted of 338 participants, all of whom were enrolled in the community college starting the fall 2009 semester. All of these participants scored at the developmental English level. The sample was 41.72% female ($n= 141$) and 58.28% male ($n =197$). Of the 338 participants, 134 were enrolled in an LC and 204 were not enrolled in an LC.

Data Collection

The researcher successfully proposed the study and was approved by the Institutional Review Board (IRB) at both institutions prior to accessing any data for this study (see Appendices A and B). The data collected for this study were provided to the researcher directly by the community college. The data from the 2009-2014 academic years had been collected and stored by the Institutional Research Department (IRD) and the IRD removed all student identifiers prior to sharing the data with the researcher. Once received, the data were stripped of all other potentially identifying information and

each participant was randomly assigned a subject number. Only information pertaining to LC participation, gender, English scores, retention, and graduation was collected at the college and retained for the purpose of this study. Other information such as demographic, age, or major were not available to the researcher.

The researcher settled on this total number of participants because she specifically asked for only incoming freshmen who placed at the developmental English level. Data pertaining to the students who placed at college level English were not apart of this study.

Independent and Dependent Variables

The independent variable for this study was the learning community program (participation vs. non-participation). The dependent variables were one academic year retention, two-year academic success, and four-year graduation rates of both LC and non-LC participants.

The retention rates of both LC and non-LC participants were measured after one full academic year of college.

Academic success was measured by the students' reading exam scores after two years. Students included in the study took the reading exams at some time within two years of enrolling in the community college and must have successfully completed the developmental course to be eligible to retest.

Finally, four year graduation rates were measured by whether the developmental English students graduated within four years of enrollment at the community college.

Ethical Considerations

This quantitative study investigated the impact of LC programs on first-year developmental English students' college retention rates, academic success, and

graduation rates. The need to investigate enrollment and retention rates of developmental students was discussed in Chapters One and Two. The data provided for this study remained anonymous to the researcher throughout the study; that is, the identities of all participants and any other identifiable information were stripped and coded. The researcher was limited to only the archived information provided by the college's IRD. After receiving the data, the researcher stored all content on a personal computer in a locked office at her personal residence.

Pass codes were assigned to the electronic devices that stored the data. The computer was locked with access only to the researcher. Only the researcher had access to the locked office where the computer was stored. No direct interaction with any of the participants occurred and the researcher was never in contact with them. The researcher is an employee of the study site institution and took due care to report the data objectively and without bias.

Summary

The study was conducted in response to the need for developmental English students who were enrolled at a community college to experience college retention, achieve academic success, and graduate with completed degrees. As outlined in previous chapters, enrollment for this particular population has increased and it is important that retention, success, and graduation rates also increase. The researcher obtained data from the study site's IRD and the identity of all participants remained anonymous to the researcher.

In Chapter Four, the findings related to the program's success are presented. The findings of the program's effectiveness will be useful for future recommendations and

considerations in moving forward with the program. These recommendations and conclusions will be presented in Chapter Five.

CHAPTER FOUR: RESULTS AND FINDINGS

Introduction

A successful learning community involves collaboration between academic departments and other institutional resources that enhance a student's academic success. The purpose of LCs is to intentionally create a learning environment where students actively engage with each other and faculty (Smith et al., 2004). The goal for community colleges is to create a successful learning community to help students achieve success based on their first-semester experience in an LC. The literature review, presented in Chapter Two, explored the ways in which LCs are effective. Research such as the MDRC (2012) study reported that being enrolled in an LC during a student's first semester of college will result in higher retention and graduation; moreover, students will experience a more successful academic career than those who did not participate in an LC during their first term of college.

It was hypothesized that there would be a statistically significant difference in retention rates after one year, academic success after two years, and graduation after four years between developmental students who participated in an LC during their first term and students who did not participate in an LC during their first term. Additionally, it was hypothesized that the effectiveness of an LC would not differ between male and female students. This chapter presents the analyses and subsequent findings of the study.

To determine what makes a special program such as LCs effective, the researcher relied on past literature and research to identify the traits of an effective program. Retention (Tinto, 1993, 1997; Vander-Schnee, 2007), academic success (Freeman et al., 2008), and graduation (Tinto, Russo, & Kadel, 1994) are common outcomes of successful

and effective programs. For the purpose of this study, the researcher examined whether or not LCs were effective by comparing the LC group to non-LC group. Moreover, she explored how they were effective in terms of retention and gender. This was important to consider because, based on the literature review, there seem to be definite differences in how male and female students learn (Tessema et al., 2012) and the experiences they have while in college (Severiens & Ten Dam, 2012). However, since LCs cater to all students and provide support and resources compatible to individual students' needs, the researcher predicted there would be no significant difference between retention and gender. LCs are designed to help diverse student populations equally by identifying their academic needs and working with the students in the classroom and through one-on-one academic advisement. Students within the LC, both male and female, should experience similar support and guidance.

Review of the Methodology

The institutional data for this quantitative study were collected during the Fall of 2009 through the Spring of 2014 academic years. The institutional research department (IRD) collected the data on all developmental English students, both LC and non-LC. Enrollment in an LC was optional for developmental incoming college freshmen. The IRD director removed all identifiable information from the dataset and provided the researcher with the pertinent information needed to answer the research question and hypotheses for this study.

The researcher explored the differences in the two populations, LC, and non-LC, through z-scores to determine the effectiveness of LCs by comparing the two groups' retention. Additionally, utilizing a chi-square, the researcher examined the differences

between retention rates for all LC developmental English students based on gender. The researcher ran t-tests to determine the difference in the academic success of the two groups, LC and non-LC as defined by passing and non-passing rates on the English assessment tests. Lastly, the researcher utilized a chi-square to determine the four-year graduation rates for all developmental English students.

Summary of the Findings

This quantitative study presents information regarding LC effectiveness on student retention, academic success, and graduation rates. The findings presented below show how LCs impacted a student's retention, academic success, and graduation rates at an urban community college. The students examined were placed at the developmental English level and were either enrolled in an LC or not enrolled in an LC for their first academic term. The data served as a resourceful tool in answering the research question and hypotheses presented below.

Retention

With an ever-growing diverse student population, research continues to be conducted on the needs of these students. However, students who are underrepresented, especially those in need of extra support and academic guidance such as developmental English students, still face challenges, despite this growing interest and continued research on retention (Kiyama, Luca, Raucci, & Crump-Owens, 2014). Regarding retention, research has shown that when student satisfaction increases, so do retention rates (Chib, 2014). Below, Table 1 shows the total number of participants, subdivided into LC and non-LC students, and retention after one year enrolled at the community college.

Table 1

Distribution of One-Year College Retention of Learning Community (LC) and Non-Learning Community (non-LC)

LC Participation	Enrolled Fall 2010		Total
	<i>Yes</i>	<i>No</i>	
LC	114	90	204
Non-LC	93	41	134
Total	131	207	338

Hypothesis 1. LC developmental English students will be retained at a statistically significant higher rate than non-LC developmental English students after one year enrolled at an urban community college.

Null Hypothesis 1. There will be no statistically significant difference between LC and non-LC developmental English students' retention after one year enrolled at an urban community college.

Findings. The first hypothesis states that there would be a difference in retention after one academic year, Fall 2009 through Fall 2010. The researcher compared the two populations, LC and non-LC, and analyzed the data to determine what percent of each group was retained at the one-year mark. The researcher utilized a chi-square to determine the differences in the groups' retention rates to determine if LCs were effective on developmental English students' retention after one semester enrolled in an LC program.

The chi-square test found that the critical chi-square of non LCs was 3.84 (95%). Since the chi-square variable was 6.22, the researcher rejected the null hypothesis that there would be no statistically significant difference between LC and non-LC students

retention after one year enrolled at an urban community college. While there was a significant difference in the number of students retained after one year, it was in the opposite on the hypothesized direction. Specifically, after one year, the non-LC students were actually retained at a higher rate after one year than the LCs. This was an unexpected outcome.

Gender

For the purpose of this study, the researcher evaluated how LCs affected developmental students differently based on gender and retention. Figure 1 presents the breakdown of LC and non-LC male and female students.

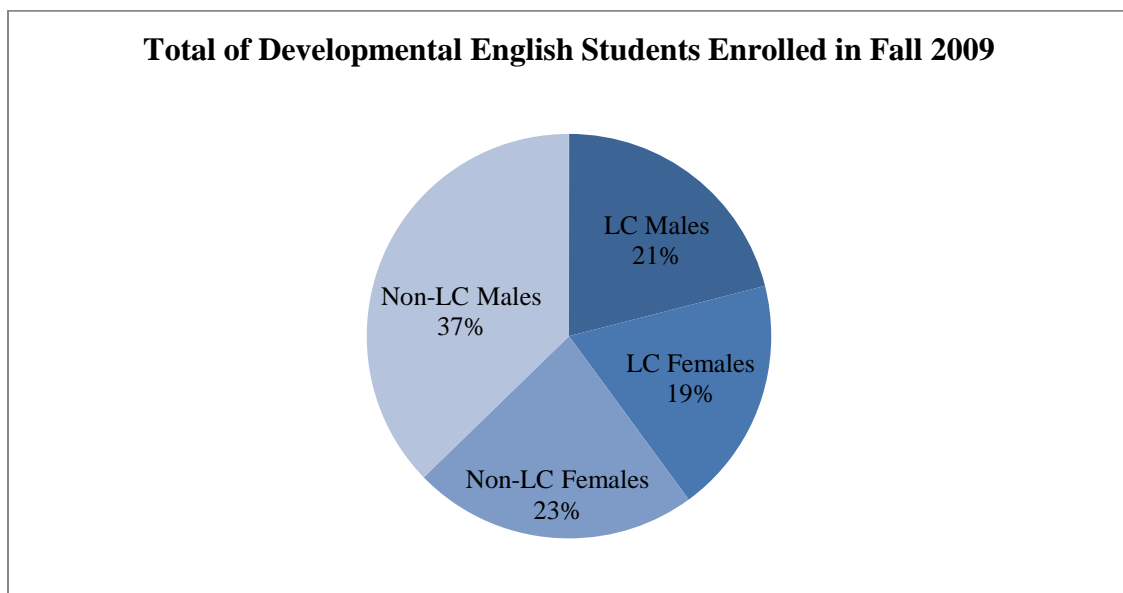


Figure 1. Total of developmental English students' learning community (LC) participation and gender

Research suggests there are many differences and similarities between how male and females learn. The differences in learning can impact the success, retention, and graduation. However, there are no clear and consistent findings that demonstrate one

gender having higher retention than another because of one semester in a learning community. Table 2 shows the total of male and female LC and non-LC participants based on gender. The researcher ran a chi-square test to determine if there was a difference in retention based on gender and Table 3 presents these results.

Table 2

Distribution of Gender and Learning Community Participation

LC Participation	Females	Males	Total
LC	64	71	135
Non-LC	77	126	203
Total	141	197	338

Table 3

Learning Community (LC), Gender, and Retention After One Year

Retention (1 year)	Female	Male	χ^2	<i>df</i>	Φ
Yes	43 (68.3%)	50 (70.4%)	.074*	1	.786
No	20 (31.7%)	21 (29.6%)			
Total	63	71			

Hypothesis 2. There will not be a statistically significant difference in the retention rates of female LC developmental English students compared to male LC developmental English students after one year enrolled at a community college.

Null Hypothesis 2. There will not be a statistically significant difference in the retention rates of female LC developmental English students compared to male LC developmental English students after one year enrolled at a community college.

Findings. Utilizing a chi-square test, the researcher found, $\chi^2(1) = .07, p = .79$. Therefore, the researcher found support for the research hypothesis that male and female LC students would be retained at a statistically similar rate. After one academic year, there was no statistically significant difference between the retention of LC male and LC female students.

Academic Success

LCs are created to help provide students with extra support, resources, and integrative curricula that help students succeed. Research by Romero (2012) found that developmental students who participated in an LC rose to college-level academics. The success was an outcome of a supportive LC program. Additionally, past research has explored the effectiveness of LC participation and student success. As more evidence is presented that demonstrates this effectiveness, educators are more likely to build new LCs and experiment with different ways in which a special program can help students (Atta, 2012).

Hypothesis 3. LC developmental English students' reading scores will improve at a statistically significant higher rate compared to non-LC developmental English students' reading scores after two years enrolled at the community college.

Null Hypothesis 3. LC developmental English students' reading scores will not significantly differ from non-LC developmental English students' reading scores after two years enrolled at the community college.

Findings. The third hypothesis for this study pertained to academic success. For this study, academic success was determined based on whether developmental English students passed the English reading exam after two years enrolled at the community college. An independent t-test was selected because the researcher examined two independent groups to determine if the means score were the same for LC and non-LC developmental students. The mean English exam score for LC students was 21.8 ($SD = 14.4$). The mean English exam score for non-LC students was 24.0 ($SD = 12.5$). The longer the students stayed in school, the more their reading scores improved.

The independent t-test conducted produced $t(126) = .95, p = .34$. The results show that $p > .05$ and thus, the researcher failed to find support for the research hypothesis that LC developmental English students' reading scores would improve compared to non-LC developmental English students reading scores after two years. See Table 4 for means and standard deviations for each group.

The number of students who were enrolled in developmental English was 338. However, at the two year mark some students were ineligible to re-test and therefore only 128 students who were eligible to retest for the reading assessment exam were included in Table 4. One of the requirements for taking the retest is passing the developmental class itself. In order to pass the class, the student must show improve and demonstrate basic reading comprehension skills throughout the semester. The English professor also has a say whether or not he or she believes the student should re-test.

Table 4

Learning Community (LC) and Non-Learning Community (Non-LC) English Exam Re-Test Passing Rates

LC Participation	Passed Reading Exam (2 years)	Mean	Standard Deviation	Standard Error Mean
Non-LC Participation	68	24.02	12.51	1.51
LC Participation	60	21.76	14.43	1.86
Total Passing	18			

Graduation

Research conducted by Romero (2012) concluded there was a relationship between reaching academic goals and participation in an LC. Additionally, reports are available focusing on students in need of remediation and how realistic it is for them to reach their desired educational goals and academic outcomes (Bailey et al., 2010). Leaders in higher education should be aware of the primarily low graduation rates of developmental students (Schnee, 2012). One longitudinal study on LC effectiveness on six-year graduation rates by MDRC (2012) concluded there was a positive effect of LC participation on graduation rates six years after the students' first semester enrolled in an LC.

Students who are underprepared may not have the knowledge of how to navigate through their academics. They may be discouraged with their developmental placement (Schnee, 2012) and may also not know how to complete their degrees and academic goals. LCs are a way to counteract the students' lack of knowledge and skill set needed for successful competition of their college degrees.

No additional information was available on the students who did not graduate. Those students may have transferred to another college or trade school, entered the military, or pursued careers. This is discussed further in Chapter Five, where recommendations are also presented for future research with more qualitative data on this topic. The recommendations include ways leaders in education can create, implement, and maintain LCs at their community college based on the findings from this study and through the literature review.

Hypothesis 4. LC developmental English students will graduate at a statistically significant higher rate than non-LC developmental English students after four years of attending the college.

Null Hypothesis 4. There will be no significant difference in the graduation rates of LC developmental English students and non-LC developmental English students after four years of attending the college.

Findings. The researcher ran a chi-square test to determine the graduation rates of LC students and non-LC students after four years enrolled at the UCC. The findings determined that LC developmental English students do graduate at a statistically significant higher rate than non-LC developmental English students. From the LC student group, 26 of the 134 graduated, which means 19.4% graduated; from the non-LC group, 16 of the 204 graduate, which means 7.8% graduated. Based on the expected count means, 12.4% expected graduates, the LC students clearly graduated at a higher percent than expected, while the non-LC students graduated under the expected count as, presented in Table 5.

Table 5

Developmental English Student Graduation Count and Expected Count

Graduate	Withdrawn	Graduated	Total
LC Participation			
Count	108	26	134
Expected Count	(117.3)	(16.7)	(134.0)
Non-LC Participation			
Count	188	16	204
Expected Count	(178.7)	(25.3)	(204.0)
Total Count			
Count	296	42	338
Expected Count	(296.0)	(42.0)	(338.0)

Utilizing a chi-square test, the researcher found $\chi^2(1) = 9.93, p = .002$. Based on these findings, the researcher rejected the null hypothesis that there is no statistically significant difference between LC and non-LC graduation rates after four years enrolled at the urban community college. LC students graduated at a higher rate after one semester enrolled in an LC at an UCC. Table 6 presents a crosstabulation of the findings of these results.

Table 6

Crosstabulation of Learning Community and Graduation

Graduate	LC	Non-LC	χ^2	df	Φ
Yes	26 (19.4)	16 (17.8)	9.93	1	.05
No	108	188			
Total	134	204			

Note. $p \leq .01$

Research Question

How do learning communities impact developmental English students' success at an urban community college?

The overarching question of this quantitative study explored the effectiveness of LC programs at an urban community college. To understand better the effectiveness of the program, the researcher subdivided the different areas that are considered quality characteristics of a successful program. The study explored ways LCs were effective for college retention, student academic success, and graduation rates of students who were placed at the developmental English level. Although the hypothesis pertaining to gender and college retention did not answer the overarching question of whether or not LCs were effective, the hypothesis did provide deeper insight into how LCs were effective within the program for male and female retention.

Based on the findings of this study, the researcher concluded that there was a statistically significant difference in retention rates between LC and non-LC students after one academic year. However, the non-LC students were retained at a higher rate after one year, and this was an unexpected finding.

Moreover, the findings showed no statistically significant difference in one-year retention of LC male and LC female students, in support of the research hypothesis. Additionally, the researcher concluded there was also no statistically significant difference in academic success after two years for LC and non-LC students when looking at the passing rate of the English reading exam. The researcher hypothesized there would be a statistically significant difference in academic success after two years enrolled at the community college. This finding indicated that the LC students may need more academic

support or English remediation than what is currently offered to them in the LC program. This finding indicated that the challenges developmental students face while attempting their degrees may require more intervention, academic and non-academic support, and other resources than what special programs, such as LCs, currently may offer the students.

Lastly, there was a statistically significant difference in graduation rates after four years enrolled at the community college. LC students did graduate at a higher rate than non-LC students. The number of graduating students in the LC was higher than the expected count. This finding was similar to the findings of the MDRC (2012) study, in which students in the LC program graduated at a higher rate after one semester enrolled in an LC, compared with students who were not enrolled in a first-semester LC.

There was no indication of LCs being effective for retention or academic success. However, there was an indication that LCs are effective for graduation rates after four years. Regarding effectiveness, LCs are most effective for increasing graduation rates than for retaining students after one year or improving their developmental English scores at an urban community college.

Summary

The data collected for this study revealed telling results regarding the effectiveness of learning communities and the realities of the challenges developmental students face while attempting to earn college degrees. The hypotheses presented in the study were formulated based on the available literature on developmental students, learning communities, retention, gender, academic success, and graduation. The researcher believed the LC program would have a profound effect on the academic

progress of developmental English students. The findings of this study led the researcher to conclude that LCs are effective, although not strongly statistically significant, as there was a slight difference between LC and non-LC developmental English students.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

Introduction

The purpose of this quantitative study was to determine if LCs were effective on developmental English students' retention, academic success, and graduation rates at an urban community college. Additionally, the gender differences between retention for the LC participants were explored to provide further insight into how LC experiences differ for male and female students. The researcher explored one main question pertaining to the effectiveness of LCs and hypothesized there would be a statistically significant difference between LC and non-LC students on retention, success, and graduation. The researcher found partial support for the research hypotheses. Based on the findings presented in Chapter Four, this chapter offers solutions for community colleges working with LCs and developmental students and provides implications for action and recommendations for future research.

Analysis of Findings

The researcher found that there were some similarities in the findings of this study and the literature review findings. Some of the similarities were with the graduation rates and academic success findings. Specifically, similar to the literature review (Jackson, et al., 2013; Talbert, 2012; Tinto, 1993) the developmental LC students' academic needs were met and the LC students improved their English test scores and went on to graduate at a higher rate than non-LC developmental students. This finding is similar to the findings of the longitudinal study conducted by MDRC (2012). The findings of this study were similar to the literature review in that the program does lead to higher graduation rates after only one semester of enrollment. Proving that LCs offers the

students a wealth of information and skill sets needed to navigate their degree programs successfully.

One contrast in the researcher's findings and the literature review is that contrary to the findings of Bailey et al., (2010), Hern (2012), and McIntosh et al., (2012), LC participation did not result in higher retention after one year when compared to non LC retention. Past research showed LCs helped student retention. However, this study did not result in LC higher retention at the one-year mark. Another contrast in the researcher's findings and the literature review is in the gender difference and retention. The literature explored the different ways male and female students learn and experience college (Hu & Wolniak, 2013; Severiens & Ten Dam, 2012). The researcher hypothesized that there would not be a difference in gender and retention with the idea that LCs cater equally to all students. The findings from this study showed there is no statistically significant difference between male and female students after one year enrolled at the UCC.

Implications

While exploring the effectiveness of LCs on developmental English students enrolled at an urban community college, the researcher found many more areas worthy of exploration. This study sparked an interest in continued exploration of what exactly makes an LC effective or not effective. Additionally, the findings were telling in that developmental English students do have the potential to succeed and LCs are one way in which colleges can provide those in need with extra support, guidance, and resources. The data were informative and the findings provided insight into how special programs can help students at the developmental level succeed.

Some practical implications the researcher suggests are that LCs continue to provide the LC students with that continued support (Tinto, 1987) and resources (Hill & Woodward, 2013) needed to help developmental students experience academic achievement (Hern, 2012). As the literature explained, students who achieve academic success are more likely to stay in school and go on to graduate (Fowler & Boylan, 2010). Something that LCs at this urban community college could do is providing the students with the resources such as text books and money. Finances play an important role in students' ability to complete their degrees (Singell, 2004).

Additional research implications suggested by the researcher, based on the findings of the study, are to conduct a qualitative study on why developmental students are not retained or graduating. Some students have moved on to other schools, career, relocated, or pursued military service. A follow up survey and investigation into the attrition of students would be helpful in better understanding LC effectiveness.

Recommendations

The aim of this study was create a set of recommendations about how to improve LCs in urban community colleges. Based on the findings of this study, the researcher has composed some recommendations for the study site as well as other community colleges that with LCs. The current response that colleges practice to help poorly prepared incoming student population is to place 35% to 45% of developmental students into special programs such as LCs (Bettinger, Boatman, & Long, 2013). As college enrollment of developmental students' increases, these institutions should also increase the programs and resources available to help those who are particularly underprepared for college.

The findings of this study allowed the researcher to reflect on possible solutions for LC programs to be more effective for developmental students' progress. Special programs such as LCs are the right idea and colleges need to continue to commit resources and faculty to the students who need extra support with their academics. With the proper leadership and funds, LCs can be a valuable and beneficial resource for students. It seems that developmental English students, whether LC or non-LC, have the potential to be successful in academics. The researcher recommends that research on developmental students and special programs such as LCs continue to be undertaken.

One recommendation for the study site is to re-evaluate one-year retention strategies. This study found that LC students were not retained at a statistically significant rate than no LC students after one year. This raises questions about why they are not retained and how LCs can improve one year retention. Another recommendation is to capitalize on increased graduation rates. The success of LC developmental students' graduation rates could be encouraging for incoming developmental English students who are contemplating whether they should or should not enroll in an LC. The graduation statistics show that LCs are effective and promising statistics could lead to increased funding from the college and research grants. Since this study investigated the impact of LCs on gender and found there was a difference in retention, another recommendation would be to investigate LC and non LC retention based on gender. Additionally, the researcher did not investigate the differences in academic success and gender. Being there was a difference in retention; the researcher recommends a future investigation into the academic success and gender.

By exploring the effectiveness of LCs on developmental students, researchers can better identify the needs and challenges of that particular population served by LCs. Additionally, by further evaluating how learning communities are effective, researchers can begin to create, implement, and maintain successful programs. It is important that leaders in education better understand special programs and the populations they serve. Moving forward, leaders in education need to identify the challenges their students face. Each community college has its unique student population, and LCs are one way community colleges can better serve their unique student population. .

There is a need for continued research to be conducted on developmental students' skills and academic needs. Through future studies, leaders will be able to identify the strengths and weaknesses of their programs and the effectiveness of these programs for developmental students. Additionally, each academic year, new students enter college will new challenges. Programs need to be monitored for current and appropriate resources. What may have been an effective tool in the past may not be effective for the current population.

Proposed Future Research

The researcher believes there was a need for more data for studies similar to this one. She raised questions during the data interpretation process about finances, different English levels, and developmental Mathematics. The quantitative study did provide insight into how developmental English students (both LC and non-LC) were performing. However, the researcher realized that many variables are involved in successful and unsuccessful programs. Leaders and innovators in education need to pursue ongoing exploration on the different aspects that can hinder or support an underprepared student.

This study aimed to provide further information on student participation in one special program and academic success in college. Larger samples sizes may have also been another way to explore the effectiveness of LCs. Whether investigating retention, academic success, degree completion, and other areas of academia, LCs are one of many available programs that aim to guide students throughout their studies. LCs would benefit from continued research that focuses on the strengths and weaknesses of the program. Some of the other areas the researcher believes should be explored further to determine the success of LCs are described below.

Funding

The researcher suggests future studies should be conducted to explore the connection between attrition and financial aid. She raised many questions during this study, one specifically on financial aid and retention. The question regarding what happens when there is no more financial aid available and how students' find proper funding to complete degrees were some of the questions raised by the researcher. One study distributed and collected survey data on students who were not retained at the University of Oregon. The study found that the students' decision to drop out depended significantly on their financial aid status (Singell, 2004).

Urban community college students rely heavily on public transportation and city funding. If their funding is limited, so is their access to college and the campus. Future research is recommended on funding and student success. Tinto (1993) reported that financially constrained students are less likely to be retained and more likely to drop out before completing their degrees. In many cases, students rely heavily on the provided financial resources while pursuing their degrees.

English and Mathematics Level and Majors

The researcher suggests future research to explore the effectiveness of learning communities on college-level English students. The findings would be significant in determining if a college's special program affects college-level English students. Future studies on learning communities and the effectiveness of developmental mathematics students should also be investigated. As the literature review explained, there is an increase in developmental students' enrollment at community colleges. Future research should explore how well developmental Mathematics students perform after one semester enrolled in an LC.

Learning communities create a cohort-style learning environment that helps students become engaged and connected through an integrative curriculum. Future research on LC effectiveness on specific majors such as science, technology, engineering, and mathematics (STEM) could also produce findings that leaders can utilize when creating and implementing integrative curricula.

Gender

For the purpose of this study, the researcher explored LC effectiveness for gender and retention. More research should be conducted to explore other areas in which LCs affect male and female students differently. Areas such as academic success, graduation, and overall attitude towards studies are a few ways future research can explore differences in gender and LCs. Research involving student surveys and interviews would also be helpful to answer the question about LC effectiveness. Also, classroom observations may also provide information and insight as to how male and female students interact differently from one another in the classroom.

Population

The researcher of this study focused on the developmental English student population at one urban community college. She believes this study should be conducted on a larger scale with a variety of English levels and other community colleges that also offer learning communities. Community colleges nationwide offer LCs to their students and the number of schools with LCs continues to grow. Each LC program is designed differently, but hold the same foundation and ideologies (Astin, 1993; Tinto, 1993). The sense of belonging through integrative curricula and active student engagement from peers and faculty may differ from one college to the next. A future study pertaining to the different kinds of LCs and differences in effectiveness would produce telling results that can be useful to leaders in higher education. Additionally, evaluating differences in effectiveness and LCs based on ethnicity can also provide leaders in education with useful knowledge.

Qualitative and Longitudinal Study

Moving forward in this research, and as learning communities continue to grow nationwide, more studies need to be conducted on the effectiveness of integrative learning on students' retention, academic success, and graduation. Research on the specific students who participate or do not participate in LCs should be included in surveys, interviews, and follow-ups to provide more helpful information on why LCs are effective or ineffective.

Students starting their academic careers at the community colleges take many different paths to achieve their goals. They face challenges and changes; some specifically face roadblocks or find themselves at a crossroads. It would be interesting to

continue following these same developmental students years afterwards. Similar to the MDRC (2012) study which followed up with a group six years later, more longitudinal studies on community college students would be useful to leaders and policymakers in education.

Summary

Each academic year, community colleges are introduced to a new freshman class. LCs are continuing to evolve and grow in community colleges. Through the literature review and research conducted, this study demonstrated a continued need to understand the effectiveness of LCs. Community colleges are seeing an increase in the number of developmental students enrolling each year. The findings from this study presented the challenges that developmental students face and a possible solution.

The proposed solution is for continued research on this topic and an ongoing effort by the leaders in education to provide proper resources for their students. Leaders need to identify the programs that work and the programs that do not. It is important for colleges to explore and create programs that aim to help students set and achieve their academic goals.

Leaders must continue to identify the challenges their student populations face while attempting to earn college credits. By doing so, they can continue to implement programs that are successful. Community colleges guide students who are at college with specific academic goals they wish to achieve. Through research and leadership, community colleges can continue to use LCs to serve their students in a variety of positive ways. The students entering community college are future leaders relying on productive stepping-stones and foundations which their chosen college can provide. It is

an obligation for community colleges to keep the success of these special programs a priority.

Appendix A

Institutional Review Board Approval Letter, City University of New York

**Human Research Protections Program**

Kingsborough Community College (CUNY) HRPP Office

DATE: November 18, 2014

TO: Paula Risolo

FROM: Kingsborough Community College (CUNY) HRPP Office

PROJECT TITLE: [631901-1] Community Value: The Effects of a Learning Community Program on Retention Rates among Developmental College Freshmen Enrolled at an Urban Community College

SUBMISSION TYPE: HUMAN SUBJECTS RESEARCH

DETERMINATION ACTION: DETERMINATION OF NOT RESEARCH

DECISION DATE: November 18, 2014

Thank you for your submission of the Human Subjects Research Determination Form for this project.

It has been determined that this project does **not meet the definition of human subject research** as defined by the federal regulations (45 CFR 46.102(d) (f)) and therefore no further IRB review or approval is required.

We will retain a copy of this correspondence within our records. If the scope of this project changes, you must return to the Kingsborough Community College (CUNY) HRPP Office for a determination of whether the project continues to not meet the definitions of human subjects research.

If you have any questions, please contact Carmen D. Rodriguez, EdD at 718-368-5029 or carmen.rodriguez@kbcc.cuny.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within the City University of New York's records.

Appendix B

Institutional Review Board Approval letter, Creighton University

Please note that Creighton University IRB-02 Social Behavioral has taken the following action on IRBNet:

Project Title: [632297-1] Community Value: The Effects of a Learning Community Program on Retention Rates among Developmental English Students during Their First Semester Enrolled at Urban Community College

Principal Investigator: paula risolo, Ed.D

Submission Type: New Project

Date Submitted: July 29, 2014

Action: APPROVED

Effective Date: August 7, 2014

Review Type: Administrative Review

Should you have any questions you may contact Patricia Nowatzke at:

nowatzke@creighton.edu.

Thank you,

The IRBNet Support Team

www.irbnet.org

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