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The Efficacy of Learning Communities in Assisting Developmental Students in Achieving Graduation and Accumulation of Credit Hours in a Southern Metropolitan Community College

William J. Ashley

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The efficacy of learning communities in assisting developmental students in achieving
graduation and accumulation of credit hours in a southern metropolitan community
college

By

William J. Ashley

A Dissertation
Submitted to the Faculty of
Mississippi State University
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy
in Community College Leadership
in the Department of Leadership and Foundations

Mississippi State, Mississippi

August 2012

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2012

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Hinds Community College (HCC) engaged in a study that produced the transitional program. This program was in response to high rates of attrition of the college's freshmen classes because of poor academic performance. This dissertation evaluated the effectiveness of the transitional program's main component—the learning community created by placing students in the LLS 1151 College Life course based on their status as residence hall students. HCC's transitional program is a further elaboration of placement policies that have been a part of the community college landscape for many years. The HCC transitional program incorporates learning communities in combination with HCC's placement policies and provides an element of structure. This research examined the academic progress of a cohort from its inception in the fall semester of 2006 through 4 years until the conclusion of the spring 2010 semester.

This examination included a review and analysis of the performance of the transitional program students who were assigned to learning communities as opposed to the performance of developmental students who were not assigned to learning

communities (those who commuted). Specifically, the research evaluated how many students completed programs of study out of those who initially enrolled as residential transitional students and out of those who initially enrolled as nonresidential transitional students, how many credit hours the two groups accumulated over a 4-year period, and performance in basic English and mathematics courses.

This study used a causal-comparative design that examined a cohort over a 4-year period while at HCC to examine if there were significant differences between those students who were a part of a learning community compared to those students who were not.

Key words: Community colleges, developmental education, remedial education, learning communities, economic benefit, poverty

DEDICATION

I want to dedicate this to my family: Anne Marie Ashley, Sarah Ashley, Carter Ashley, Dorothy Ashley, and Rex Ashley; grandparents Joe A. and Bertha Mae Black and William D. and Bertha Ashley; and my siblings Burt and Ben Ashley, and Elizabeth Ashley Smith.

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CHAPTER I
INTRODUCTION

Statement of the Problem

In *After Admission: From College Access to College Success*, Rosenbaum, Deil-Amen, and Person (2006) explained that “although community colleges offer many choices, we find that they rarely offer one: highly structured programs that curtail choice but promise timely graduation and an appropriate job” (p. 21). The problem at Hinds Community College (HCC) was that transitional (developmental) students accumulate a small number of semester hours during their courses of study and have a low graduation rate. The National Center for Education Statistics analysis from 2008 presented evidence that only 15 out of 100 students entering a community college will graduate within 3 years and 45 will leave college without completing requirements for a credential. The desired outcome of attending HCC is to earn a degree/certificate or to accumulate enough credit hours that will enable students to transfer to a university.

The HCC transition to college committee first met in 2003, began collecting and analyzing data, and found that the first semester retention rate of transitional students was significantly lower than nontransitional students (Hart & McDaniel, 2005). These students were known to have prior academic preparation that was suspect as noted by their low ACT sub-scores in mathematics and English or COMPASS[®] ACT Placement

Test scores. These students whom HCC had enrolled were in the college's academic and technical programs.

Students not prepared for college-level work is a common problem. Nationwide, only 70% of all students in public high schools graduate, and only 32% have achieved college readiness (Greene & Forster, 2003). The level of college readiness of community college students is dependent upon the high schools that students attended. Mississippi high school students had a 64% graduation rate with White, non-Hispanics graduating at a rate of 68% versus 61% for African Americans (Greene & Forster, 2003). Mississippi's high school graduation rate compares favorably to the Southern regional average high school graduation rate of 65%; in addition, White, non-Hispanics graduate at a rate of 72% for the Southern region, and African Americans graduate at a rate of 57% for the Southern region (Greene & Forster, 2003).

These transitional students find gaining admittance to universities difficult. The lesser prepared students eventually seek admittance to community colleges. This reality is not lost on North Carolina-based MDC, the Lumina Foundation, or the Bill and Melinda Gates Foundation. These three entities are collaborating by forming the Developmental Education Initiative and providing the means to expand remedial education programs focused on increasing the completion rates for minorities and low-income students. The Community College Research Center study entitled *Strategies for Promoting Gatekeeper Course Success Among Students Needing Remediation: Research Report for the Virginia Community College System* (Roksa et al., 2009) provided evidence that community colleges' priorities should be to continue to develop programming to improve retention and academic success for students who are—arriving in substantial numbers

underprepared for college work—in developmental coursework. It is imperative that students progress to the college courses in mathematics and English. In addition, it is surprising to note that resources have been allocated for remediation yet little attention has been paid to the evaluation of the effectiveness of developmental/remediation programs (Bailey, Jeong, & Cho, 2010; Tinto, 2003). Remedial courses have been used in postsecondary institutions for some time, yet little is known about their long-term effect on student performance after the prescribed remedial coursework has been completed (Bettinger & Long, 2008).

Purpose of the Study

This study examined how HCC's mandatory placement into the LLS 1151 College Life learning community affected graduation rates and the students' accumulation of semester credit hours. Effectiveness of mandatory structured study sessions (learning communities) on transitional (developmental) students' accumulation of semester credit hours and on their graduation from HCC was evaluated. Also examined were the effects that participation in LLS 1151 College Life had on the grades in ENG 0113/0123 and MAT 0113/0123 for transitional students who were in LLS 1151 College Life compared to transitional students who were not in LLS 1151 College Life. The final item examined was the effect of the grade obtained from LLS 1151 College Life on the transitional students' grades in: MAT 0113 Fundamentals of Math, ENG 0113 Beginning English, MAT 0123 Beginning Algebra, and ENG 0123 Intermediate English. The time period examined was from the August 2006 fall semester and ending May 2010 spring semester. Students were tracked over time, adding to the body of knowledge in an area suffering from a weakness of prior studies of the effectiveness of developmental

education (Calcagno & Long, 2008). Further relevancy is established as policymakers and legislatures are seeking solutions from community college educators that will improve performance of colleges in the area of graduation and/or progress toward graduation in order to justify continued funding. Several examples of performance-based funding are included in the *Complete College Tennessee Act of 2010* (Deaton, 2010); in Louisiana, the *GRAD Act of 2010 HB 1171*; and the Illinois higher education performance-based funding law (SB 1773, 2010 as cited in Berry, 2010). In 2009, Mississippi's House Bill 488 created the Graduation Rate Task Force, and House Bill 1071, in 2011, created Mississippi's Education Achievement Council. This study is relevant as Hughes and Scott-Clayton (2011) indicated in their white paper *Assessing Developmental Assessment in Community Colleges* that remediation has mixed results in improving outcomes of community college students who are assessed and prescribed remedial or developmental coursework.

The purpose of the LLS 1151 College Life class is to assist in increasing the graduation rate of transitional (developmental) residence hall students and to aid the students in accumulating semester credit hours. The vast majority of students who take LLS 1151 College Life do so during the fall semester. The spring semester has very few students in this course. The residence hall students who are transitional are assigned to the same residence hall. This is a learning community because the students are assigned to their section of LLS 1151 College Life based on their room assignments. The student earns his or her course grade by attending class and working on coursework from other courses. The course is a lecture-style environment delivered via the classroom setting and is inclusive of various activities that range from career exploration to coursework from

other courses to guest speakers throughout the first semester that the student is in transition.

The primary coursework the students complete in LLS 1151 College Life class is assignments from their MAT 0113 Fundamentals of Math, ENG 0113 Beginning English, MAT 0123 Beginning Algebra, and ENG 0123 Intermediate English classes. Additional assignments are given by the director/lead instructor. The LLS 1151 College Life assignments enable the students to explore their chosen fields/majors or proposed occupations, the education requirements to work in their chosen occupations, and study skills strategies. The semester concludes with an assembly-style, interactive presentation entitled “Making it Count” by Monster.com. The material presented by Monster.com focuses on revealing tactics to students on how to complete their college studies and their eventual job search process. This assembly-style gathering is interactive with a representative from Monster.com facilitating the program.

The college life facilitators are present in the classroom during each session. The facilitators provide an environment conducive to studying, and they deliver the various assignments that the director/lead instructor assigns to each class. The syllabus is read to all students, who then sign the syllabus to acknowledge their understanding of it. The students have a question and answer period with the director/lead instructor. If there are no questions, the student signs the signature page affirming that he or she understands the college’s expectations. The student signs the roll each class meeting to record attendance. These signatures are kept on file, and attendance is recorded in a spreadsheet. After an absence occurs, a notice of absence (NOA) is sent to the dean of students’ office. The dean of students processes the NOA and enters it into the college-wide student

management software (Datatel's Colleague). If demerits are to be attached to the student's record, the dean of students' office inserts the demerits into the Colleague information management system.

The dean of students' office mails the NOA to the student's home address of record. The NOA is also sent to HCC Housing and hand delivered by a resident assistant (RA) to the students who miss class in their dorm rooms and the RA requires the student to sign for the NOA. The student is advised in the NOA that he or she may be removed from the course and residence hall if he or she continues to miss the scheduled class meeting time. If the student has had previous discipline issues, he or she could be removed from the dorm and class after two absences. The student will be removed from the residence hall after four absences.

Research Questions

1. How many students completed programs of study—graduated with an Associate in Arts (AA) degree, Associate in Applied Science (AAS) degree, Technical Certificate, or Career Certificate—out of those who initially enrolled as residential transitional students (students are mandated to enroll in LLS 1151 College Life) and nonresidential transitional students (LLS 1151 College Life is not mandated) in the fall of 2006 during a 4-year period?
2. How many credit hours have the two groups accumulated during a 4-year period?
3. Is there a difference between the grades of residential transitional students (students are mandated to enroll in LLS 1151 College Life) and nonresidential transitional students (LLS 1151 College Life is not mandated) in the

following: ENG 0113 Beginning English, ENG 0123 Intermediate English, MAT 0113 Fundamentals of Math, and MAT 0123 Beginning Algebra?

4. Is there a difference in student grades in ENG 0113 Beginning English, ENG 0123 Intermediate English, MAT 0113 Fundamentals of Math, and MAT 0123 Beginning Algebra based on the grade earned in LLS 1151 College Life?

Theoretical Framework

Remediation, retention, and degree completion in community colleges have been studied by practitioners and researchers for many years (Cohen & Brawer, 2003). Cohen and Brawer (2003) cited statutes at the state level that have mandated colleges to provide services for students, diagnostic assessments, and evaluation by professional counselors at the time of enrollment. Vincent Tinto's (1975) model of student retention provided a longitudinal model, which offered to explain why many factors influenced an individual's decision to leave a college or a university and how these factors interact to produce attrition. Tinto's work revolves around goal commitment (of the student) and institutional commitment (of the institution) and the varied backgrounds that students bring with them to the postsecondary institution. The college student drops out, according to Tinto (1993), because of both the individual and the institution. It is important that students persist in their efforts to accumulate as many credit hours toward a degree as they can.

Interactions between the academic integration and the social integration of the student cause the student's commitment level to vary, and thus the student progresses through or exits from the college. As Tinto (1997) pointed out in "Classrooms as Communities," participation in a collaborative learning group enables students to form

positive solidarity within their group. Students build solidarity outside the classroom as students encourage one another to continue attending class and to attend co-curricular events as well as to connect their personal experiences to the college. Students who were part of a learning community believed that they gained intellectually, and they did record gains in academic performance as measured by grade point average (Tinto, 1997). In this study the focus is on the comparisons in performance between two different groups. The transitional students who must participate in LLS 1151 College Life are grouped into sections based on their room assignments by dorms. This group has the benefit of being organized into learning communities. The second of the two groups are transitional students who do not have to participate in LLS 1151 College Life.

Human capital theory, developed by Gary Becker, was expounded on by Becker himself in his 1993 book *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*. Human capital is the accumulation of investments in people, such as education, healthcare, and job training. These investments represent knowledge and skill. Education is an important type of human capital investment. The skills that skilled workers may employ in the labor market are because of a previous investment in education made for the purpose of increasing their productivity. Members of the labor force that have acquired more human capital relative to other members earn more, on average, than those who have less human capital (Becker, 1993; Mankiw, 2009).

According to McCabe (2000), 80% of the labor force in the 21st Century will need some form of postsecondary education. The most ominous impediment to this process is the low academic skill level of Mississippi high school graduates as well as the

high school dropout rate. Underprepared community college students are in need of remediation through developmental coursework that will allow them to complete college-level academic or technical programs within the community colleges.

Without remediation, the students would not have a possibility of succeeding in their postsecondary coursework that will allow them to garner the skillset(s) that will allow them access to the global economy to sell their labor. McCabe (2000) predicted that by 2020 only 33% of students entering the postsecondary educational arena will be prepared for college work and the job market will face a labor shortage as only 33% of skilled jobs will be filled and 47% of all jobs will go unfilled (McCabe, 2000).

Rationale for the Study

This study is important because the college expends considerable public resources on transitional students and the effectiveness of structured study sessions and remedial coursework affects the ability of the transitional students to progress through the educational pipeline and into the workforce. This study focuses on what funding sources—the taxpayer(s), the student(s), the Mississippi Legislature, and the federal government are seeking: Outcomes in line with expectations for accountability with public resources which are graduation and accumulation of credit hours. These outcomes enable students (the future workforce of Mississippi) to compete in the modern service economy. The economic future of the state of Mississippi is contingent upon the ability of policymakers to develop a viable and skilled labor force. Human capital development is the service that the community college system offers the state of Mississippi in this process of labor force development. This skilled labor force must be dynamic to adapt rapidly to the turbulent

forces of economic globalization. It is imperative that transitional students have the opportunity to progress toward being skilled workers as the threat to their incomes is very real. It is imperative that transitional students have the opportunity to progress toward being skilled workers as the threat to their incomes is very real. Mankiw (2009) summarized two hypotheses that economists have used in explaining the growing income inequality between skilled and unskilled workers who make up the labor force. The first involves global trading patterns: “The globalization of trade has changed the relative demand for skilled and unskilled labor” (p. 399). Mankiw (2009) stated that imports have risen from 5% of the total gross domestic product (GDP) in 1970 to 14% in 2009. These imports are inexpensive when compared to U.S. domestically produced goods, thus garnering market power. The reason is that the imports were produced in factories that employed unskilled labor. The second hypothesis involves technology and how it affects labor. Skilled labor produces the goods manufactured in the United States. The United States has the most productive manufacturing sector on the globe producing its exports. The manufacturing sector is the most productive because of its reliance on capital/technology, and this reliance on capital requires skilled workers. When the dollar amount of imported goods increases, domestic unskilled labor suffers lower wages, and when the dollar amount of exports grows, skilled labor garners the higher wages. Mankiw (2009) expressed the reliance on technology as “computers raising the demand for skilled workers who can use the new machines” (p. 400). Changes in the application of technology have altered the demand for skilled workers as firms increasingly rely on technology to increase productivity and thus their profitability.

The Beaulieu, Guillory, Rubin, and Teater (2002) report entitled *Mississippi: A Sense of Urgency—Rural Responses to the New Economy* documented that Mississippi's citizens wish to replace the old economic paradigm and propel themselves into the 21st Century. The old economic paradigm in the rural South, inclusive of Mississippi, was organized around a combination of agrarian and low-skilled, low-value-added manufacturing jobs. Education was not perceived by all Mississippians as necessary or highly valuable (Cobb, 1993). This was also the reality on which Cobb (2005) elaborated by quoting Joseph Singal's *War Within*:

Singal's observation that...[a]lmost everywhere he turned in surveying the modern South, Vance [Rupert B. Vance] discovered that the basic patterns of the frontier still prevailed. The region continued to make its living by exploiting its natural resources heedlessly, applying little capital, skill or technology, with dramatically low levels of income and living standards the result. (p. 123)

The reality of education possessing little value was reflected in the economic base of Mississippi in the middle of the 20th Century (Cobb, 1993). A job was readily available in a field or a factory; however, Mississippians found that they had to compete in a technical, creative, and globalized economy. Education and the use of capital were factors that explained why the United States was the leader among the Group of Eight (G8) countries post World War II. In the last 20 years, since the 1990s, the United States may have become on the verge of losing an amount of economic power; thus, education is an important element in the strategy to remain competitive among the developing countries included in the Group of 20 (G20).

Accountability

The federal government and state government both want students to progress through their programs of study. Federal, state and local governments have resources committed to developmental education through community colleges. This is a concern as legislators think that they are paying for high school coursework twice. This is reflected in House Bill 488. The local, federal, and state legislative bodies that provide funding for community college education seek to improve their respective constituents' communities. The goal of these elected officials is to increase the number of college graduates with marketable skills that are valuable in a modern service economy. The cost that must be paid from the public coffers is high in dollars and time. The funding provided to community colleges from the legislative bodies at the local, state, and federal level is requiring ever increasing accountability standards, and rightfully so. The will of the people holds true in this case as evidenced by the action of the Mississippi Legislature.

The Mississippi Legislature formed the Graduation Rate Task Force (GRTF) during the 2009 regular session. House Bill 488 (law, as of April 6, 2009) section two described the work of the task force:

It is the expectation of each institution of higher learning and community and junior college in the state that all students in such institutions receive a quality education and graduate from such institutions. The Legislature recognizes that annual performance reports show a significant number underperform and fail to meet their goal of graduation. To assist the Legislature in shaping public policy to improve student outcomes and educational opportunities for all students in such institutions, there is established a Task Force to study and report on the graduation

rates in the state institutions of higher learning and junior and community colleges. (p. 4, lines 116–122)

Funding for education is precious, and when public goods like education are funded, it is the citizen who must sacrifice some private good as it is his or her tax dollars being used to fund community colleges. Thus, the public demands that community colleges be good stewards with the tax dollars appropriated for their operation. The performance-based funding methodology has drawn champions. During the Mississippi Legislature's 2010 session, House Bill 1071 was created:

An act to create the educational achievement council to require the council to work toward increasing the educational attainment and skill levels of the state's working-age population benchmark to the national average by 2025; to require the council to prepare an annual state report card and make the report available in certain mediums and at certain locations; and for related purposes. (p. 1, lines 1–7)

Thus, transitional students or rather the community college itself will be held accountable for progress that leads to a community college degree.

Economic Value of a Community College Education

The economic return to individuals is positive for their investment in a community college education. This is one reason for why students need to stay in community college and try to continue to progress through their program of study. The main reason the workers are not available for hire by firms is that the workers do not have the communication or analytical skills that firms require. The reason that they do not possess these sought-after attributes is that these workers generally have a lack of

academic or technical skill because of poor elementary and secondary schooling, thus making them candidates for community college remediation/developmental programs (Bailey, Jeong, & Cho, 2010; Cohen & Brawer, 2003; Greenspan, 2008). The research that analyzed the economic benefits of community college education on incomes provided evidence that community college attendance yields a net benefit (Cohen & Brawer, 2003). W. Norton Grubb in 1999 reported a 54% increase in earnings for associate degree holders, versus only 8% for those who leave the community college with less than 12 semester credit hours, over that of high school graduates. Kane and Rouse (1999) revealed that “the average community college entrant...who enrolls but does not complete a degree, earns 9 to 13 percent more than the average high school student” (p. 73). This was still the case in 2010. In Kolesnikova’s (2010) more recent research, just attending a community college and not graduating still results in economic returns of 5% to 8% of additional salary for each year a student attends a community college. Community college attendance generates better job opportunities with higher salaries and better working conditions.

Economic mobility is improved by attending a community college, yet demand for skilled labor by the U.S. labor market is increasing income inequality between the skilled labor pool and the unskilled labor pool (Greenspan, 2008). Firms in the United States are finding competing globally difficult without a prepared and skilled labor force. According to Greenspan (2008), and echoed in Mankiw (2009), the United States, since 1980, has lost a number of manufacturing jobs because of advances in technology and imports. Firms are seeking higher rates of return. Advancements in technology have driven more firms to seek the most productive capital stock that makes their costs more

competitive within the global marketplace. Manufacturers in the United States are the beneficiary of half of all research and development investments made in the country. This means that the manufacturers are driving the demand for and supplying the means for which capital is developed (National Association of Manufacturers [NAM], 2008).

The United States, as of 2008, is the world's largest manufacturing economy producing 21% of the manufactured products on the globe (NAM, 2008). There are 18.6 million jobs in the U.S. manufacturing sector, and these 18.6 million people are twice as productive as the next 10 leading manufacturing economies (NAM, 2008). If firms are not seeking a cost advantage by improving their capital stock, they are increasingly looking to outsource their production to other countries where they have a competitive advantage. The consumers' perspective is that there is a large amount of imported goods and services that make their incomes go farther. Thus, consumers will choose the imported goods—causing domestic unskilled workers to suffer—because the imports are less expensive relative to domestically produced items. Consumers want low prices.

Firms seek to hire skilled workers so as to use updated capital stock; however, the workers are not skilled enough for firms to hire. The skilled workers who are available can and do command a high wage. Mississippi's population is 2.9 million with an annual growth rate of 0.7% (Sowell, 2007). The number of jobs in the labor force that make up the manufacturing sector in Mississippi is 141,200. The total Mississippi labor force has 1.296 million participants. Unemployment nationally is 8.3%, and Mississippi's unemployment rate as of December 2011 was above the national rate at 10.4% (Mississippi Department of Employment Security [MDES], 2012). The number of unemployed persons is 132,800. It is estimated that there are nearly 70,000

Mississippians of working age who are not participating in the labor force (Sowell, 2007). Of working age Mississippians, 17% has a bachelor's degree, 5.8% of working age Mississippians has a graduate degree, and 20.9% of working-age workers has some college but no college degree (Sowell, 2007). The main reason the workers are not available for hire by firms is that the workers do not have the communication or analytical skills that firms require. The reason that they do not possess these sought-after attributes is that these workers generally have a lack of academic or technical skill because of poor elementary and secondary schooling, thus making them candidates for community college remediation/developmental programs (Bailey, Jeong, & Cho, 2010; Cohen & Brawer, 2003; Greenspan, 2008).

Definitions

ACT is a standardized test that assesses the potential of high school students to complete college work. It tests the student in four subjects: English, mathematics, reading, and science reasoning (ACT, 2006).

COMPASS Test is a system that includes placement tests used by admissions personnel to place students in courses appropriate to their skill levels, diagnostics tests that faculty can use to identify specific subject areas where students may need help, and extensive demographics that advisors can use for a thorough understanding of students' support needs (ACT, 2006).

Mandatory Testing and Placement is mandatory for all degree-seeking students whose declared program of study is academic or technical. Upon his or her first registration at HCC, every student subject to mandatory placement must have complete ACT scores on file, or he or she must, at the time of registration, take placement tests

appropriate to the courses for which he or she enrolls that term. ACT scores or placement test results are used to determine if a student must enroll in courses in one or more developmental areas, and if so, at what point he or she must begin. All such students are required to enroll initially in all prescribed developmental courses and must continue to enroll each semester in all consecutive prescribed developmental courses. A student's developmental mathematics prescription is fulfilled when he or she reaches the first mathematics course required in his or her declared program of study. A student's developmental English prescription is fulfilled with the successful completion of ENG 0123, and a student's reading prescription is fulfilled with the successful completion of REA 0133. All prescribed developmental courses must be satisfactorily completed with a grade of "C" or better. In unusual circumstances, a student may score sufficiently high on the exit criteria to bypass the next developmental course. In such cases, the student's placement level will be entered into the college database to reflect the higher level; however, he or she will receive credit only for the developmental course in which he or she originally enrolled for that term. During the first week of each term, additional testing may be available through the mathematics and English departments for students dissatisfied with their initial placement in English, mathematics, or reading. Tables 1.1 and 1.2 show placement guides and development levels for HCC. Course descriptions are presented in Table 1.3.

Table 1.1 Placement Guide from Hinds Community College Catalog 2006–2007

Course Order	Placement Level	ACT Sub-score	COMPASS Score
1 ENG 0113	1	1–13	0–37
2 ENG 0123	2	14–16	38–70
3 ENG 1113	3	17–36	71–100
4 ENG 1113Honors	4	25–36	83–100
1 MAT 0113	1	1–13	0–35
2 MAT 0123	2	15–16	36–47
3 MAT 1233	3	17–19	48–100
4 MAT 1313	4	20–36	48–100
1 REA 0113	1	1–13	0–43
2 REA 0123	2	10–12	44–62
3 REA 0133	3	13–15	63–71
4 LLS 1413	4	16–36	72–100

Note. From the Hinds Community College Catalog 2006–2007

Table 1.2 Developmental Levels

Developmental Level One	Developmental Level Two
All academic and technical students with an ACT composite of 13 and below and/or placement in three development courses must take the course sequences as listed below:	All academic and technical students who meet one of the following criteria:
Level one students may take no more than thirteen (13) hours composed of the following:	1) Advancement from Level one 2) An ACT composite of 14 or 15 and/or in two development courses.
LLS 0113/0111** MAT 0113** ENG 0113** REA 0113**	Level two students may take no more than thirteen (13) hours composed of the following:
LLS 0123/0121** MAT 0123** ENG 0123** REA 0123**	LLS 0113/0111** MAT 0113** ENG 0113** REA 0113**
LLS/RST/RSV 1312 REA 0133**	LLS 0123/0121** MAT 0123** ENG 0123** REA 0123**
Note: LLS 1151 required for residence hall students.	LLS/RST/RSV 1312 REA 0133**
	Note: LLS 1151 required for residence hall students.

Note. From the Hinds Community College Catalog 2006–2007

Table 1.3 Developmental Courses

Descriptions of Courses

LLS 1151 College Life (Transitional study hall – mandatory study session) offers group experiences in study skills, career exploration, self affirmation, and values clarification. This course is designed to assist the first time student in bonding to the college and to a small group of students.

MAT 0113 (formerly 1103) Fundamentals of Math – Review of fundamental arithmetic operations, integers, fractions, decimals, exponents. Will not substitute for the mathematics requirements in any program of study. Designed for students whose arithmetic skills are deficient.

MAT 0123 (formerly 1203) Beginning Algebra – Signed numbers, polynomials, factoring, first degree equations in one variable, rational expressions. Will not substitute for the mathematics requirements in any program of study. Institutional credit only.

ENG 0113 (1103) Beginning English – Stresses basic communication skills writing sentences and paragraphs with a review of mechanics, sentence patterns, and correct usage. Institutional credit only.

ENG 0123 (formerly 1203) Intermediate English – Basic communication skills, including a general review of grammar and mechanics, with emphasis on vocabulary building, sentence structure, paragraph development, and introduction to the five-paragraph theme.

Note. From the Hinds Community College Catalog 2006–2007

Transitional students are first-time, full-time students who meet all of the following conditions: (a) are first-time, full-time academic or technical students, (b) begin their college studies during or after summer 2004, (c) are developmental level one or two, and (d) have an ACT composite score of less than 18 or an SAT total score less than 870. These students are developmental/remedial students (Hinds Community College, 2006).

Nontransitional students are students who have at least one and not more than two developmental courses (Hinds Community College, 2006).

Residence Hall is a campus housing facility, specifically on the Raymond campus of Hinds Community College.

Residential transitional students are students who must take LLS 1151 College Life because they live in a residence hall on the Raymond campus of Hinds Community College.

Nonresidential transitional students are students who are not required to take LLS 1151 College Life because they do not live in a residence hall on the Raymond campus of Hinds Community College.

LLS 1151 College Life offers group experiences in study skills, career exploration, self-affirmation, and values clarification. This course is designed to assist the first time student in bonding to the college and to a small group of students.

Learning Community – LLS 1151 College Life is required for transitional students who reside in residence halls on the Raymond Campus of Hinds Community College and is linked to ENG/MAT 0113/0123 courses.

Grades for ENG/MAT 0113/0123 courses are on a 4 point scale with A=4, B=3, C=2, and F=0. Developmental coursework at Hinds Community College does not have the D letter grade. The grades in LLS 1151 College Life are based on attendance or lack of attendance (e.g. A= 0-1 absence, B= 2 absences, C=3 absences, and an F=4 absences).

Placement in coursework is based on ACT or COMPASS scores, and students are routed into developmental levels. The lowest levels are developmental levels one and two.

Developmental Education refers to a comprehensive process that focuses on the intellectual, social, and emotional growth and development of all students.

Developmental education includes tutoring, personal and career counseling, academic

advisement, and coursework (National Association for Developmental Education [NADE], 2011).

Limitations

The generalization ability of this study is narrow; thus, the following limitation of this study is recognized:

1. The data were extracted from the HCC database (Datatel's Colleague), and the accuracy of the data (with the exception of the grades from the coursework and the ACT scores) was dependent upon the truthfulness of the information submitted by the students as they completed the process of enrollment and faculty as they completed the grade entering process as well as the accuracy by which the HCC Information Services Department and the Director of Institutional Research extract the data.

Delimitations

The delimitations of this study that limit the scope (define the boundaries) of the inquiry are as follows:

1. Transitional students were divided into two groups by the college (HCC) by the third week of school. The transitional students were those who met all of the following conditions: (a) were first-time, full-time academic or technical students, (b) began their college studies during or after summer 2004, (c) were developmental level one or two, and (d) had an ACT composite score of less than 18 or an SAT total score less than 870. The students were identified as either transitional commuters or transitional dorm residents. The students who

desired to reside on campus were assigned a mandatory study class/hall. This class is entitled LLS 1151 College Life.

2. The study was confined to data from the Raymond campus of HCC.
3. The study was limited to five courses. The study examined the effects of LLS 1151 College Life, MAT 1103/0113 Fundamentals of Math, MAT 1203/0123 Beginning Algebra, ENG 1103/0113 Beginning English, and ENG 1203/0123 Intermediate English on the transitional students' accumulation of semester credit hours during the course of 4 academic years.
4. The data used for this study were limited to HCC-Raymond students over the course of the following semesters: fall 2006, spring 2007, fall 2007, spring 2008, fall 2008, spring 2009, fall 2009, and spring 2010. The accumulated semester credit hours through 2010 contained all summer terms as well.
5. This study was limited to the largest residential campus of the HCC district. The participants do come from various geographic regions; however, the bulk of the students are from the HCC district. This district serves predominantly a metropolitan area.
6. The variables selected are isolated from many probable factors that could affect retention: semester hour accumulation over 4 years, graduation, and performance in remedial coursework.

CHAPTER II

LITERATURE REVIEW

The U.S. Census Bureau (2010) estimated Mississippi's population in 2010 to be 2,967,297 persons. Females and males represented respectively 51.51% and 48.49% of the total population. The median age for all Mississippians was 35 years. The median age for males was 33.2 years, whereas the median age for females was 36.7 years. The working age population (25 to 64 years) comprised 50.6% of the total population. The group of people from ages 10 to 24 years composed 14.9% of the total population. The segment of the population traditionally not in the workforce (people 65 years and older) made up 12.5% of the total population of Mississippi.

White, non-Hispanics comprised 59.1% of the population (percentage change of +0.5% from 2000 to 2010) and Black, non-Hispanics made up 37.0% of the population (percentage change of +6.2% from 2000 to 2010) which is the highest in the nation (U.S. Census Bureau, 2010). The demographics of Mississippi are changing. The state's workforce will be increasingly dependent on people of color. The Black, non-Hispanic group is estimated to grow 15% within the next 15 years, and the Hispanic demographic will grow by 86% (Beaulieu et al., 2002). However, Hispanics or Latinos currently comprise only 2.2% of Mississippi's total population; still, the Hispanic demographic increased 105.9% from 2000 to 2010 (U.S. Census Bureau, 2010).

Community Colleges in the United States

There are 1,167 community colleges in the United States. According to the American Association of Community Colleges (AACC; 2011), there are 993 public institutions, 143 independent institutions, and 31 tribal institutions. The AACC stated in its 2011 *Fact Sheet* that close to half of all U.S. undergraduates are enrolled in community colleges. There are 12.4 million students (7.4 million for-credit students and 5 million non-credit students) enrolled in U.S. community colleges, and 60% of them are enrolled as part-time students. In *Community Colleges: Special Supplement to the Condition of Education 2008*, Provasnik and Planty (2008) stated that in the fall of 2005, 19% of community colleges had minority enrollments of 50% or more of their total enrollment, compared with 15% public 4-year institutions' total enrollment and 10% of private not-for-profit 4-year institutions' total enrollment. The AACC (2011) reported that 44% of all U.S. Black, non-Hispanic undergraduate students attend community colleges and so do 52% of all U.S. Hispanic undergraduate students.

Community Colleges in Mississippi

The state of Mississippi has 14 publicly funded community colleges and one junior college. The 15 local community college districts are composed of counties that provide financial support to the colleges within their districts. Enrollment for the fall 2010 semester was divided into the following categories (headcount): academic parallel transfer, 61,838; technical 2-year, 16,756; and career vocational, 4,616 (Clark, 2011). The total headcount for the fall of 2010 was 83,210. In 2004, there were 67,645 students divided among 49,510 academic parallel transfer students, 14,692 technical students, and 3,443 career vocational students. The majority of the students enrolled in Mississippi

community colleges are academic parallel transfer students. Academic parallel transfer students made up 74.3% of the total credit enrollment for the fall of 2010; 20.1% of the credit enrollment was technical 2-year students, and the final 5.5% was career vocational students.

Remedial and Developmental Education

Remedial education refers to courses that are taught at the postsecondary level but are not generally accepted by universities as college credit. Remedial education is the prescription for the student who has “skill deficits” (Casazza & Silverman, 1996, p. 31) that need to be remediated. The purpose of this coursework is to prepare academically underprepared students to begin their studies in college-level courses. Parsad and Lewis (2003) at the National Center for Education Statistics (NCES) defined postsecondary remedial education as “courses in reading, writing, or mathematics for college-level students lacking those skills necessary to perform college-level work at the level required by the institution” (p. 1).

Developmental education, in contrast to remedial education, is comprehensive. According to Arendale (2005), developmental education is regarded “as a more comprehensive model regarding the student because it focuses on the development of the person in both the academic and affective domains” (p. 72). The National Association for Developmental Education (NADE, 2011) defined developmental education as a comprehensive process comprised of coursework and support. Support consists of tutoring, counseling, and academic advisement.

Across the United States, all community colleges offer some form of remediation. In the 1992–1993 academic year, 78% of public 4-year colleges and 66% of private 4-

year colleges offered remedial instruction (NCES, 1996). In the fall of 1995, 78% of higher education providers offered remedial education courses and 29% of freshmen enrolled in at least one remedial course (Parsad & Lewis, 2003). Of students who first attended a community college between 1992 and 2000, 61% completed at least one remedial course (Wirt et al., 2004).

Developmental Education at Hinds Community College

Community colleges in the United States offer students the opportunity for access to postsecondary training and education. HCC subscribes to an open door policy. This policy at its basic level allows students admission to the college based on credits earned in high school (non-graduate), an earned high school diploma, or a GED. Various programs that the college offers have their own requirements in addition to the college's requirements. The policy at HCC (2006) is that placement is mandatory. The college has established four levels—one, two, three, and four. The levels are assigned based on ACT sub-score or COMPASS mathematics/English scores; according to Bettinger, Evans, and Pope (2011), the ACT sub-score in mathematics and English is a better predictor of academic success than the composite ACT. The highest levels are levels three and four. Students who are level three or four take one or no remedial courses. The remedial prescription for students who are level four is a study skills course (LLS 1413). The lowest levels are levels one and two. Students who are level one or two must take a maximum of three remedial courses in English, reading, and mathematics. In addition, students who are transitional level one or two and who live in the residence hall must attend structured study sessions (LLS 1151 College Life); they are removed from the residence hall if they do not attend.

Students were admitted to HCC during the 2006–2007 school year based on the following from the 2006–2007 catalog:

Beginning freshman students may be admitted on one of the following.

1. Graduated high school with a regular diploma.
2. Graduated high school with an Occupational diploma.
3. Earned a GED diploma.
4. Did not graduate high school but has one (1) unit less than the number of units required for high school graduation with their class. An official signed high school transcript must be submitted.

The following are required for beginning freshman students:

1. Submit an official high school transcript or submit an official GED transcript with passing scores.
2. Submit official ACT scores (typically on the high school transcript).

Students who have no ACT on file at the time of their initial enrollment may substitute the Compass placement tests (English, mathematics, and reading) to satisfy the general admissions requirements of the College.

This must be done prior to registering for classes. No specific ACT or Compass placement test score is required for admittance into the college; however, certain programs of study (majors) do have specific score requirements on the ACT for admission. High school students are highly encouraged to take the ACT while in high school. The College will offer residual ACT test to those students who wish to register with ACT scores, but who have not taken the national ACT.

Mississippi's community and junior colleges have testing and placement policies. However, most offer waivers for students who are recommended for remedial coursework but who choose to disregard the recommendation. HCC offers mandatory testing and placement. HCC is one of the oldest (if not the oldest) community colleges in Mississippi and has been offering developmental coursework for some time. According to Fatherree (2010), former HCC President George M. McLendon established developmental education at HCC in the early 1950s. During the fall of 1952, HCC offered two non-credit courses in reading and an English laboratory. McLendon was inspired by the success of the U.S. military's effort of providing reading courses for recruits (Fatherree, 2010).

Typically, students who are identified as ill-prepared for postsecondary work are offered (in the case of HCC, required to take) a prescribed remedial battery of one or several courses designed to improve their mathematics, reading, and writing skills. In the HCC Catalog 2006–2007, HCC placement policy stated the following:

Placement is mandatory for all degree seeking students whose declared program of study is academic or technical. Upon his/her first registration at Hinds every student subject to mandatory placement must have complete ACT scores on file, or he/she must, at the time of registration, take placement tests appropriate to the courses for which he/she enrolls that term. ACT scores or placement test results are used to determine if a student must enroll in courses in one or more developmental areas, and if so, at what point he/she must begin. All such students are required to enroll initially in all prescribed developmental courses and must continue to enroll each semester in all consecutive prescribed developmental

courses. A student's developmental mathematics prescription is fulfilled when he/she reaches the first math course required in his/her declared program of study.

A student's developmental English prescription is fulfilled with the successful completion of ENG 0123, and a student's reading prescription is fulfilled with the successful completion of REA 0133.

Transitional students residing in campus housing must enroll in 15 semester hours and will be assigned designated residence halls, and will enroll in LLS 1151 where supervised study/college life sessions will be required. Failure to attend LLS 1151 will result in disciplinary action (13 demerits) and removal from the residence hall. In addition to the required academic coursework, transitional students living on campus will enroll in a physical education activity class or band, and may enroll in an orientation class, or a career exploration class.

Students with physical disabilities will be exempt from the physical education activity class. During his/her first fall or spring semester the transitional student is admitted to the College on scholastic probation and must complete seven (7) or more semester hours with a minimum 2.0 term GPA to be placed in good scholastic standing. Those in Good Scholastic Standing following the first semester will no longer fall under the Transitional Program guidelines.

Transitional students who fail to pass seven (7) hours with a minimum 2.0 GPA; including withdrawal from all classes will be placed on scholastic suspension for the corresponding fall or spring semester. Suspended students may return after the absence of one fall or spring semester and will enter on scholastic probation and with the classification of transitional. (p. 55)

Prior Studies

Community colleges' structured, open access model, as explained in Horn, McCoy, Campbell, and Brock (2009), relies on placement into various levels of a developmental regiment and is designed to enable the student to meet the various program requirements upon completion of the developmental coursework. Some scholars view remediation coursework as an impediment to developmental students' progress through both the treatment (remedial coursework) and into college-level coursework (Calcagno & Long, 2008; Levin & Calcagno, 2007). Still, advocates see developmental education as necessary. Robert McCabe's *No One to Waste: A Report to Public Decision-Makers and Community College Leaders* (2000) central focus is on why developmental education is important to the work-force of the United States. According to McCabe (2000), 80% of the labor force in the 21st Century will need some form of postsecondary education.

Learning communities are one tactic that community colleges have used in preparing developmental students for postsecondary study. Gabelnick, MacGregor, Matthews, and Smith (1990) defined learning communities as the following:

A purposeful restructuring of the curriculum by linking courses that enroll a common cohort of students. This represents an intentional structuring of the students' time, credit, and learning experiences to build community, and foster more explicit connections among students, faculty, and disciplines. (p. 5)

Learning communities have two common components: collaborative learning and connected learning (Pascarella & Terenzini, 2005). Collaborative learning occurs when students enroll in common courses (e.g., developmental mathematics). Connected

learning occurs when students are organized into a theme (e.g., Hinds transitional program participants who are in LLS 1151 College Life).

Students who are transitional are housed in the same residence hall (thus required to take LLS 1151 College Life) and are also enrolled in ENG 0113/0123 and MAT 0113/0123 together. This is similar to what Gabelnick et al. stated in 1990 as referenced by Zhao and Kuh in 2004:

Co-enrolling students in two or more course ensures that students see one another frequently and spend a substantial amount of time engaged in common intellectual activities. The experience is even more powerful in terms of learning outcomes when faculty members teaching the common courses structure assignments that require students to apply what they are studying in one course to other courses and assignments. (p. 118)

Lenning and Ebbers (1999) classified learning communities by four types: curricular, classroom, residential, and student-type learning communities. The HCC transitional program incorporates elements from all four types. As Tinto (1997) pointed out in “Classrooms as Communities,” participation in a collaborative learning group enables students to form positive solidarity within their groups. Smith (2001) elaborated the following:

Learning Communities can provide a powerful means of serving an increasingly diverse student population. Learning community approaches, properly constituted, can readily address diverse learning styles. They can be used to dramatically increase student retention, especially among our most vulnerable student populations. Some schools have used them strategically to address the very

serious retention issues in gateway courses or parts of the curriculum that are serving students well. Every school has some of these. Many schools have been emphasizing developmental education since this is an area that is a graveyard for too many students. There are some excellent learning communities explicitly established to support students of color, some around radical collaborations of two and four year colleges such as the Tacoma Community College-Evergreen Tacoma program which has a 90% graduation rate. Learning communities are also an excellent venue for developing a more multicultural curriculum. We've also learned that they will not necessarily attract students of color without a diverse faculty and a curriculum relevant to their needs. (p. 8)

Solidarity is strengthened outside the classroom as students encourage one another to continue attending class and co-curricular events as well as to connect their personal experiences to the college (Tinto, 1997). Students who were part of a learning community believed that they gained intellectually, and they did record gains in academic performance as measured by GPA (Tinto, 1997). Tinto (1997) also found peer interactions within learning communities to be beneficial, and positive interactions between lower achieving students with more advanced students was observed. Murphy (2010) found that students who were involved in a learning community had higher first-year and cumulative GPAs. Learning communities that focus on student–faculty interaction, student–student interaction, and collaboration on coursework are more successful in increasing student engagement and academic performance (Rocconi, 2011). Queensborough Community College and Houston Community college both established learning communities specifically for developmental math students. The goal was two

pronged: assist the students in progressing through the math sequence and earn degrees or certificates (Weissman, 2011). Houston Community College's learning community is very similar to the program at Hinds Community College. Houston's lowest level math course is linked to the student success course (Weissman, 2011). However, there are also possible negative peer effects as evidenced by studies by Sacerdote (2002), Hoxby (2000), and Zimmerman (2003). Further, Stuart (2008) found that the more closed friendship groups do not foster academic performance.

The effectiveness of remedial education is in debate. Bailey et al. (2010) stated that "between 33 and 46 percent of students (depending on the subject area) referred to developmental education actually complete their entire developmental sequence" (p. 256). This research also showed that 60% to 70% of students do not complete the entire sequence of developmental courses. The study performed by Bailey et al. (2010) revealed that many students were allowed to enroll in higher or lower level courses and also in some cases students were allowed to skip remediation completely. Attewell, Lavin, Domina, and Levey (2006) used the National Education Longitudinal Study of 1988 dataset, presented evidence that many college students were referred into remedial coursework. McCormick (1999) examined credit production and progress toward the bachelor's degree:

Except as noted, all findings reported below apply to a restricted population: high school graduates from the class of 1982 who expected to complete a bachelor's degree or higher, first enrolled at a 4-year institution, and completed at least 10 semester credits at 2- and 4-year institutions by September 1993. (p. 5)

McCormick's claim (1999) was that significant milestones may be important in earning a degree. McCormick's study revealed that 10% of the cohort that was studied had earned an average of 18 credit hours from the community college. McCormick also found that bachelor's degree completers (including community college transfers) earned an average of 46 credits before transferring to a 4-year institution.

Martorell and McFarlin (2007) found weak evidence that remedial work improves grades received in college-level mathematics courses; thus, students may not benefit from remedial coursework. Martorell and McFarlin's work focused on the impact college remediation has on student outcomes in the labor market or outcomes in his or her academic coursework. Martorell and McFarlin's study did produce weak evidence that students had made improvements after their first college-level mathematics courses, but there were no long-term improvements in these student outcomes. A more encouraging study by Goldstein and Perin in 2008 provided evidence that students who had taken remedial English had better performance later in psychology. Goldstein and Perin's findings exhibited a positive outcome resulting from underprepared students completing developmental English as these students passed psychology at the same rate as those students who took college English and who did not have to take developmental English.

Moss and Yeaton (2006) questioned whether developmental students were being prepared for college-level studies. Their evidence indicated that colleges with open admission policies did not hinder students who were placed in the lowest developmental English courses from achieving. Sullivan (2010) reported that the more rigorous hierarchical regression model found no significant relationship between institutional variables and a student passing developmental English or reading. Moss and Yeaton

(2006) used a regression model and studied programs that assigned students to developmental programs based on the cut-score criterion. Moss and Yeaton ascertained that colleges can use more rigorous research designs in evaluating the effectiveness of their developmental programs and that data such as grades, assessment scores, and so forth are usually readily available to institutional researchers and administrators. Thus, the data collection does not have to be expensive.

Effective evaluation of community college developmental education programs should follow a systematic and continual process (McCabe, 2000; Tinto, 2006). The results of the evaluation should be used to inform the public, potential students, current students, the board of trustees, faculty, staff, and administration. The results of the evaluation should be used by all decision makers within the college responsible for the governance of the college. The results of the evaluations also could be used by policymakers, like members of legislatures and state coordinating bodies tasked with providing resources to the community colleges. This approach to evaluating the effectiveness of developmental education programs is not widely practiced (Perin, 2005). The reason is that developmental education programs are different in different community colleges. Few community colleges have mandatory placement or course sequencing, and few community colleges have systematic evaluation procedures that are used to judge efficacy. Many community colleges have a suggested placement level for students based on diagnostic testing; however, it may not be mandatory that the student attend the course(s) in which he or she is placed. The key reason for studying how effective developmental education is in graduating and increasing the education level of the workforce is the potential for improving the work, life, and financial future of the

people of Mississippi. Education—more specifically, developmental education—is a weapon to be used against poverty.

Remedial and Developmental Education as a Weapon Against Poverty

Community colleges can do the most good for transitional students by bridging the digital divide with training in technology focused programs, lifetime learning experiences, and offering remediation because of academic deficiencies accrued from prior educational preparation, and providing a buffer between the transitional student and globalization by offering retraining. Community colleges are a key weapon that policymakers can use in the fight against poverty. In 2009, 42.9 million people lived in a household that earned less than the national poverty income level of \$21,834 (Bishaw, & McCartney, 2010). The problem of poverty is magnified, according to Association of Community College Trustees Chair Lynda Stanley (2008), by the following mega-trends: global financial interdependence, globalization, the digital divide, immigration, demographic shifts, aging of America, and the need for academic remediation.

Globalization has stoked the competitive use of capital (e.g., technology) in developed countries and more dramatically in the developing countries. Thus, it is necessary to have an increasing education level in the United States to use technologically advanced capital. The community college, according to Levin's 2001 book *Globalizing the Community College*, can provide a buffer from the forces of globalization that leads to continual training.

Technological advance is a difficult process. Unskilled workers could benefit from developmental education. In order to hope to use the latest technology a person that had low academic ability would benefit from coursework in math and English. In the

short run, labor markets are bid up. The existing skilled workers' wages are bid up by firms (Greenspan, 2008). Workers are attracted to higher wages. They come either from other fields or from other countries to the industry that has higher wages. Demand for skilled labor in the U.S. labor market is increasing the income inequality between the skilled and the unskilled segments of the labor force. Also, firms in the United States are finding competing globally difficult without a competent and well-skilled labor force. Workers are in short supply and are unavailable for firms to hire. Transitional students could benefit from successful programs administered by community colleges. The skilled workers who are available command a high wage. Mississippi's population is 2.9 million people and has grown with an annual population growth rate of 7% (Sowell, 2007). The workforce has 1.2961 million people who participate. Unemployment nationally is 8.3% with Mississippi's unemployment rate at 10.4% (MDES, 2012). The number of unemployed persons in Mississippi is 155,400. Estimates state that nearly 70,000 Mississippians of working age (25 to 64 years) are not participating in the workforce (Sowell, 2007). Of working-age Mississippians, 17% has bachelor's degrees, and 5.8% of working age Mississippians has a graduate degree; 20.9% of working age workers has some college but no college degree (Sowell, 2007).

The bidding up of the wages of the skilled labor may be the result of firms in the United States embracing technological change. This advancement in technology drives the use of capital. As capital evolves, the worker must evolve as well. Thus, more advanced capital will need a well-trained worker. Transitional students need more basic math and English skills that will enable them to have an opportunity to become a well-trained worker. In *No One to Waste: A Report to Public Decision-Makers and*

Community College Leaders, McCabe (2000) pointed out that nationwide 84% of students who enter ninth grade in the United States exit with a diploma or a GED. The pool of possible workers shrinks even further with only 59% of those who have the high school degree or GED progressing into postsecondary study (McCabe, 2000). Further, only 42% of those who do enter postsecondary study are prepared for college work (McCabe, 2000). The skilled labor market needs 80% of the postsecondary graduates, only 33% of students entering the postsecondary educational arena will be prepared for college work and the job market will face a labor shortage as only 33% of skilled jobs will be filled and 47% of all jobs will go unfilled (McCabe, 2000). This is problematic. Demand outstrips supply, thereby creating the market premium paid for skilled workers. This situation is projected to worsen by 2020.

McCabe's central focus was on why developmental education for transitional students is important to the citizens of the United States due to the changing demography of the people who form the basis of the nation's work-force. Projections reveal half of the American youth in 2020 will be non-White. Historically, minority populations have been continually left behind academically. Currently, only 61% of Hispanics graduate with a high school diploma, and only 10% earn 4-year college degrees (McCabe, 2000). Among non-White, non-Hispanic Blacks, the attainment of bachelor's degrees occurs at a rate of 15%. It is expected that by 2020, 82% of students who enter ninth grade in the United States will leave with a diploma or a GED. The pool of possible workers will shrink even further as only 51% of those who have the high school degree or GED are expected to progress into postsecondary study (McCabe, 2000). This reveals the market potential for the HCC transitional program is very great.

Further, it is anticipated that only 33% of those who enter postsecondary study will be prepared for college work (McCabe, 2000). The skilled labor market will need 80% of the postsecondary graduates, and only 33% skilled jobs will be filled with 47% of all jobs will go unfilled. This will continue to drive income inequality between the skilled and the unskilled. The American educational system will not be ready for 2020 unless policymakers embrace reforms, especially in the area of remedial/developmental education (McCabe, 2000).

The Bureau of Labor and Statistics employment report for January 2012 stated that the portion of the civilian labor force with less than a high school diploma has a labor force participation rate of only 45.6% and a very high unemployment rate of 13.1% as compared to the nationwide unemployment rate of 8.3% (U.S. Department of Labor, 2012). The portion of the labor force with an associate's degree has almost half (7.2%) the unemployment rate of the portion that is composed of high school dropouts. The participation rate of those in the civilian labor force who have a bachelor's degree is 75.6%. The unemployment rate that this sub-group of the labor force experiences is 4.2%, and that is close to almost half as much as the national rate of unemployment of 8.3%. It is evident that the more education a labor force participant has, the less likely he or she will be unemployed.

CHAPTER III

METHODOLOGY

Research Design

This study used an ex post facto, causal–comparative (quasi-experimental) design and was longitudinal as a cohort was analyzed during the course of 4 years. According to Fraenkel and Wallen’s (2009) *How to Design and Evaluate Research in Education*, causal–comparative research is based on differences between groups that already exist. This design also explores causation versus prediction and is suited for creating further research opportunities to examine underlying causes. Finally, this design could be used as a less expensive alternative to experiments (Fraenkel & Wallen, 2009). Limitations of this design include a lack of control over threats to internal validity. In addition, causation may not be fully established. The cause may be the effect, and caution must be exercised in the interpretation of the outcomes of causal–comparative designs (Fraenkel & Wallen, 2009). Because there was no randomized selection method used in this design, the major threat to internal validity of this study is subject characteristics threat. Fraenkel and Wallen (2009) suggested creating homogeneous subgroups to mitigate the subject characteristics threat to internal validity. Both groups studied were placed into the transitional program based on their low ACT scores; thus, these groups were homogeneous based on the sorting criteria used in the admissions process employed by HCC. There also is a loss of subjects’ threat inherent in this study as this study is

longitudinal and during the course of 4 years students will drop out. The probable causes for this could be loss of interest, loss of financial aid, and loss of academic standing because of academic suspension.

The comparison groups: transitional students with a mandatory study session course, LLS 1151 College Life; and transitional students without LLS 1151 College Life are homogeneous “in terms of factors” (Fraenkel & Wallen, 2009, p. 366) that cause students to be college dropouts. These students are grouped by HCC based on projected college success as assessed by ACT. During the application process, HCC sorted the studied population on the basis of a predetermined, rule-based, quantitative criterion and assigned students into groups according to the college’s mandatory testing and placement policy. Prior to the admissions process (or simultaneously) students took the ACT or COMPASS. The population studied was not randomly assigned, thus supporting the study as the causal–comparative design. This study is a quantitative study using descriptive statistics and ANOVA. Variables included the following: gender, age, ethnic group, city, state, county, admission status (high school diploma, GED, other), high school, high school city, state, county, fall 2006 final GPA, semester credit hours passed in fall 2006, and student’s status. The student’s status was based on his or her requirement to enroll in LLS 1151 College Life (mandatory study session) or no requirement to enroll in LLS 1151 College Life (transitional students who commute are not required to enroll in LLS 1151 College Life). Other variables included final grade in LLS 1151 College Life in fall 2006, final grade in ENG 1103 (0113) Beginning English, final grade in ENG 1203 (0123) Intermediate English, final grade in MAT 1103 (0113) Fundamentals of Math, cumulative GPA at the end of spring 2010, final grade in MAT

1203 (0123) Beginning Algebra, ACT/COMPASS score, if a degree was earned and type, and cumulative semester credit hours completed at the end of spring 2010.

Participants

The participants studied were students ($N = 485$) on the Raymond campus of HCC during the fall of 2006. These students (called transitional students) were those who met the following criteria: (a) were first-time, full-time academic or technical students, (b) began their college studies during or after summer 2004 (the fall 2006 cohort was studied), and (c) completed developmental level one or two and had an ACT composite score of less than 18 or an SAT total score less than 870. These students were developmental/remedial students. This group of students comprised all of the transitional students for the Raymond campus of HCC. The study tracked the 2006 cohort from the fall 2006 semester through the 2010 spring semester. The participants studied upon entering HCC had an average age of 18.92 years; the median age was 18, and the modal age was 18. Participants were 45.8% male ($N = 222$) and 54.2% female ($N = 263$). Ethnic groups studied were as follows: 413 Black, non-Hispanic participants (85.15%); 56 White, non-Hispanic participants (11.54%), 12 race not reported participants (2.47%); 2 Native-American participants (00.41%), 1 Hispanic participant (00.20%), and 1 Asian participant (00.20%). The participants' average ACT composite score was 14.67. The median score was 15, and the modal ACT score was 15. Each participant's intent (goals to graduate, earn enough hours to transfer, etc.) was collected from the application for admission and was updated (during pre-registration) before a class schedule could be created. The intentions of the participants in this study were as follows: 411 intended to complete 54 hours and earn an associate's degree, 29 intended to earn from 24 to 54

hours, 17 sought a career certificate, 14 intended to earn less than 12 hours, 11 intended to earn less than 12 hours, 2 intended to earn a technical certificate, and 1 intended to take non-credit-only courses.

Procedures

Data were retrieved by the HCC-Raymond Director of Institutional Research. The dataset included all transitional students for fall of 2006 on the Raymond campus of HCC. The dataset was stripped of any personal identifiers before the researcher received it. The dataset also included (coded by the researcher in the SPSS/PASW analysis) the following: individual-level information about students by regions, counties, and cities within and outside of the state of Mississippi and whether or not the student was from a county or city school district. This study examined two groups, and no manipulation of the variables occurred. A descriptive research design was used for questions 1 and 2. The research design for questions 3 and 4 is included in tables 3.1 and 3.2.

Table 3.1 Criterion Group Research Design for ANOVA

Group	Independent Variable(s)	Dependent Variable(s)
C	O	
I	In LLS 1151 College Life	Grade in ENG 0113 Grade in MAT 0113 Grade in ENG 0123 Grade in MAT 0123 Accumulation of Credit Hours Program Completion (Degree/Certificate)
II	Not In LLS 1151 College Life	Grade in ENG 0113 Grade in MAT 0113 Grade in ENG 0123 Grade in MAT 0123 Accumulation of Credit Hours Program Completion (Degree/Certificate)

Table 3.2 Research Design Comparing Performance by LLS College Life Participants in the Prescribed Developmental Courses

Group	Independent Variable(s)	Dependent Variable(s)
	C	O
I	Grade in LLS 1151 College Life	Grade in ENG 0113 Grade in MAT 0113 Grade in ENG 0123 Grade in MAT 0123
II	Not In LLS 1151 College Life	Grade in ENG 0113 Grade in MAT 0113 Grade in ENG 0123 Grade in MAT 0123

The groups were as follows:

1. Transitional students who are dorm residents and must take a mandatory study session (LLS 1151 College Life)
2. Transitional students who are not dorm residents and thus are not required to take a mandatory study session (LLS 1151 College Life)

The independent variables for question 3 were as follows:

1. Participation in LLS 1151 College Life (participant or non-participant)

The dependent variables for question 3 were as follows:

2. Accumulation of semester credit hours after 4 academic years or 8 semesters
3. Accumulated GPA after 4 academic years or 8 semesters
4. Degree/No degree in: academic-A.A., 2-year technical degree-A.A.S., technical certificate-TC, or career certificate-CC
5. Grades in courses: ENG 0113, ENG 0123, MAT 0113, and MAT 0123.

The independent variables for question 4 were as follows:

1. Grade in LLS 1151 College Life

The dependent variables for question 4 were as follows:

1. Grades in courses: ENG 0113, ENG 0123, MAT 0113, and MAT 0123.

Data Analysis

SPSS/PASW software was used to analyze the data. This study is a quantitative study using descriptive statistics and ANOVA. The 95% significance level is used in defining significance. Thus, the significance level in SPSS/PASW is set for .05% chance of not being true or significant (probability of type I error). Descriptive statistics were used to summarize differences between transitional LLS 1151 College Life participants versus nontransitional LLS 1151 College Life participants in graduation rates; accumulation of credit hours; and performance in ENG, MAT, and LLS courses. The tool used in this study (to test for significant differences between the two groups) was a one-way between-subjects ANOVA. ANOVA was also used to determine if there were differences between participants' grades in LLS 1151 College Life and participants' performance in ENG and MAT courses. The data analysis procedure used to answer research question 1: Descriptive statistics-summation of degrees. Data analysis procedure used to answer research question 2: A frequency distribution (descriptive statistics) was created and differences in means of hours accumulated were compared using ANOVA. Questions 3 and 4 were analyzed with ANOVA.

CHAPTER IV

RESULTS AND DISCUSSION

Results

This chapter presents the findings of the research of the efficacy of learning communities on students' academic performance for those who were placed into developmental courses and learning communities as compared to students who were not placed into learning communities but who were placed into developmental courses. Both students who were in LLS 1151 ($N = 280$) and students who were not in LLS 1151 ($N = 205$) were placed into the transitional program based on their low ACT scores; thus, these groups were homogeneous based on the sorting criteria used in the admissions process employed by HCC. Therefore, the descriptive data were for all transitional students ($N = 485$) on the Raymond campus of HCC.

Descriptive Data

Age

Transitional students' mean age was 18.92 years, median age was 18 years, and the modal age was 18, as shown in Figure 4.1.

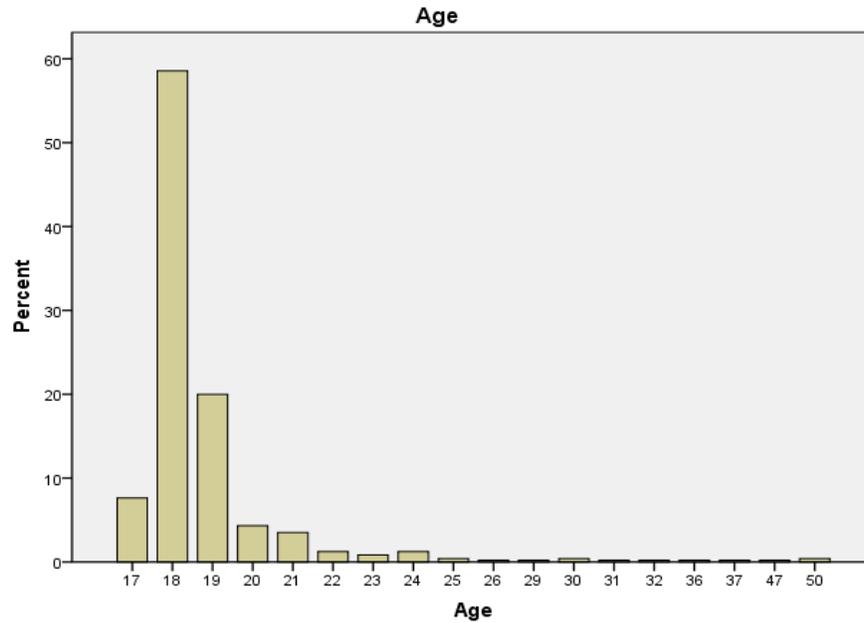


Figure 4.1 Age Bar Graph

Gender

The participants studied were 45.8% male ($N = 222$) and 54.2% female ($N = 263$).

Race

The racial composition of the participants in the study consisted of 413 Black, non-Hispanic participants (85.15%); 56 White, non-Hispanic participants (11.54%), 12 race not reported participants (2.47%); 2 Native-American participants (00.41%), 1 Hispanic participant (00.20%), and 1 Asian participant (00.20%) as shown in Table 4.1.

Table 4.1 Ethnicity of Raymond Transitional Students

Ethnicity	Frequency	Percentage
Black Non-Hispanic	413	85.15%
White Non-Hispanic	56	11.50%
Not Reported	12	0.024%
Native American	2	0.004%
Hispanic	1	0.002%
Asian	1	0.002%

Location

Study participants' county of origin is listed in Table 4.2.

Table 4.2 County of Origin for Transitional Students

County	Frequency	Percent
Hinds	168	34.64%
Unknown	77	15.88%
Madison	30	6.19%
Yazoo	26	5.36%
Rankin	24	4.95%
Warren	22	4.54%
Washington	12	2.47%
Sharkey	11	2.27%
Copiah	9	1.86%
Humphreys	9	1.86%
Bolivar	6	1.24%
Holmes	6	1.24%
Sunflower	6	1.24%

Note. Most numerous counties—not the complete list.

ACT

The participants' mean ACT composite score was 14.67. The median score was 15, and the modal ACT score was 15. The composite bar graph is displayed in Figure 4.2.

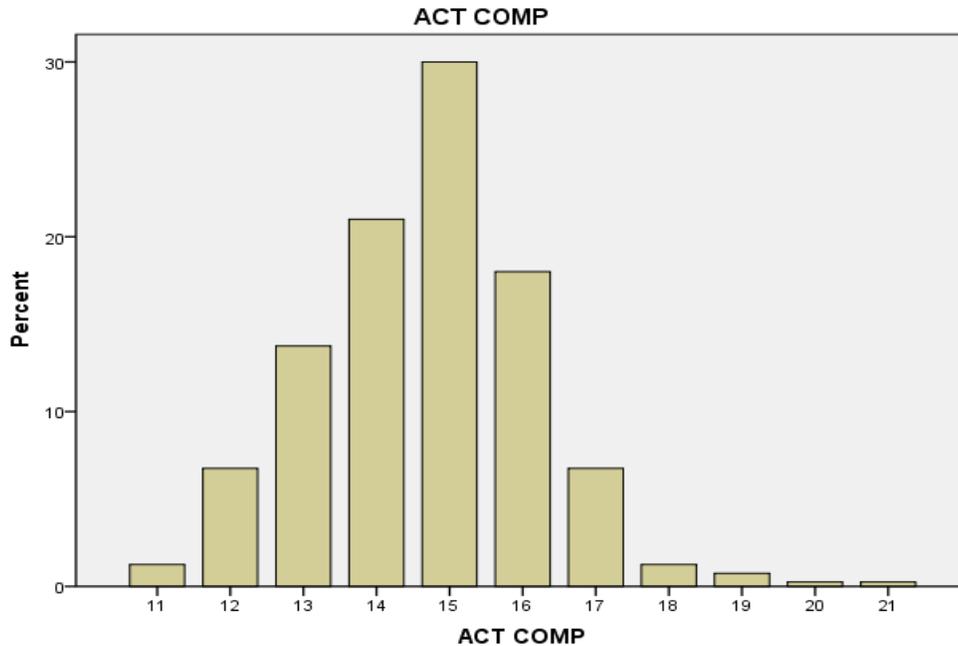


Figure 4.2 ACT Composite Bar Graph

Intentions

The participants' intentions were collected from the applications for admission, and during registration each student's intent code must have been updated before a class schedule could be created. The intents of the participants in this study were as follows: 411 intended to complete 54 hours and earn an associate's degree, 29 intended to earn from 24 to 54 hours, 17 sought a career certificate, 14 intended to earn less than 12 hours, 11 intended to earn 12-23 hours, 2 intended to earn a technical certificate, and 1 intended to take non-credit-only courses, as shown in Figure 4.3.

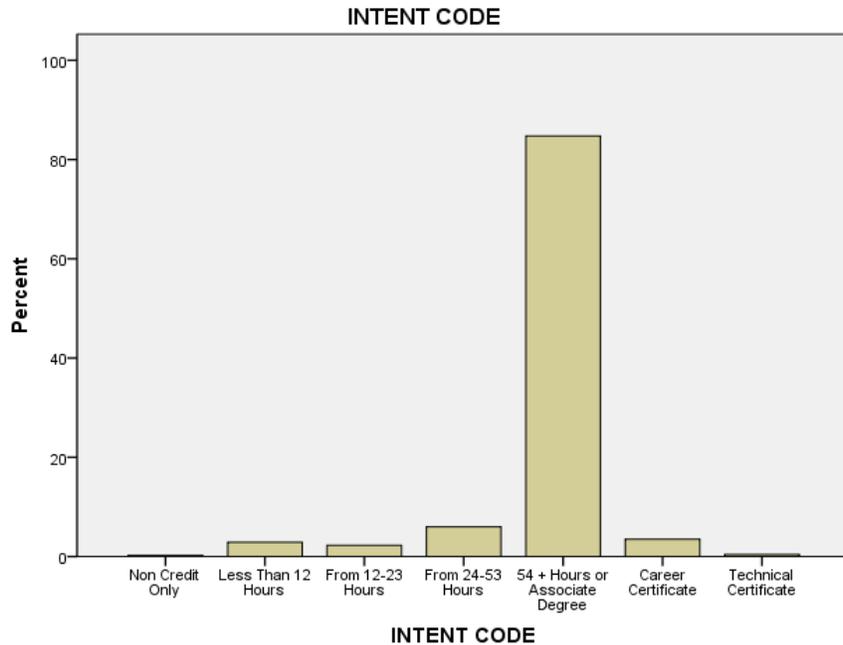


Figure 4.3 Intent Code Bar Graph

Research Questions

This study examined the following research questions:

1. How many students completed programs of study—graduated with an Associate in Arts (AA) degree, Associate in Applied Science (AAS) degree, Technical Certificate, or Career Certificate—out of those who initially enrolled as residential transitional students (students are mandated to enroll in LLS 1151 College Life) and nonresidential transitional students (LLS 1151 College Life is not mandated) in the fall of 2006 during a 4-year period?

The total of completed programs of study, the total of nontransitional completed programs of study, the number of participants who earned at least one degree, and the number of participants who earned more than one degree are tallied in tables 4.3, 4.4, and 4.5, respectively. Table 4.6 displays the degrees earned inclusive of multiple-degree-

earning students. It should be noted that there are participants who earned more than one degree.

Table 4.3 Number of Degrees For All Transitional Students

Degree	Number
AA	27
AAS	15
CC	16
TC	6
Total	64

Note. AA – Associate of Arts, AAS – Associate of Applied Science, TC – Technical Certificate, CC – Career Certificate, $N = 485$.

Table 4.4 Number of Transitional Students with One Degree

Degree	Number
AA	27
AAS	11
CC	14
TC	3
Total	55

Note. AA – Associate of Arts, AAS – Associate of Applied Science, TC – Technical Certificate, CC – Career Certificate, $N = 485$.

Table 4.5 Number of Transitional Students with More than One Degree

Degree	Number
AAS, AAS, TC, CC	1
AAS, CC , TC	1
AAS, TC	1
Total	3

Note. AA – Associate of Arts, AAS – Associate of Applied Science, TC – Technical Certificate, CC – Career Certificate, $N = 485$.

Table 4.6 Number of Transitional Students with One or More Degrees

Degree	Number
AA	27
AAS	11
AAS, AAS, TC, CC	1
AAS, CC, TC	1
AAS, TC	1
CC	14
TC	3
Total	58

Note. AA – Associate of Arts, AAS – Associate of Applied Science, TC – Technical Certificate, CC – Career Certificate, $N = 485$.

There were 280 participants who took LLS 1151 College Life, and from that group 28 participants earned one or more degrees from fall 2006 to spring 2010 for a total of 30 degrees. These students completed the programs of study as described in Table 4.7. Two hundred and five participants did not take LLS 1151 College Life, and this group had 30 students who earned 34 degrees during the same time. These students completed the programs of study as listed in Table 4.8.

Table 4.7 Number of Completed Degrees by Students Who Were in LLS 1151

Degree	Number
AA	17
AAS	4
CC	8
TC	1
Total	30

Note. AA – Associate of Arts, AAS – Associate of Applied Science, TC – Technical Certificate, CC – Career Certificate, $N = 280$.

Table 4.8 Number of Completed Degrees by Students Who Were Not in LLS 1151

Degree	Number
AA	10
AAS	11
CC	8
TC	5
Total	34

Note. AA – Associate of Arts, AAS – Associate of Applied Science, TC – Technical Certificate, CC – Career Certificate, $N = 205$.

- How many credit hours did the two groups accumulate during a 4-year period?

First, the mean number of accumulated hours for ($N = 485$) all HCC-Raymond transitional students was 29.58 hours ($SD = 27.755$) from fall 2006 to spring 2010. The frequency distribution is given in Table 4.9.

Table 4.9 Frequencies and Percentages of Accumulated Hours for All Raymond Transitional Students (2006 Fall to 2010 Spring)

Accumulated Hours	Frequency	Percentage
0–12	179	36.9%
13–24	96	19.8%
25–36	62	12.8%
37–48	29	6.0%
49–64	43	8.9%
65–76	36	7.4%
77–90	24	4.9%
93–132	16	3.3%

Note. $N = 485$.

Second, the mean number of earned hours for HCC-Raymond transitional students enrolled in LLS 1151 College Life ($N = 280$) was 30.30 ($SD = 25.59$) hours from fall 2006 to spring 2010. The frequency distribution is given in Table 4.10.

Table 4.10 Frequencies and Percentages of Accumulated Hours for LLS 1151 Students Cumulative Hours 2006–2010

Accumulated Hours	Frequency	Percentage
0–12	93	33.2%
13–24	59	21.1%
25–36	37	13.2%
37–48	23	8.2%
49–64	29	10.4%
65–76	20	7.1%
77–90	13	4.6%
95–115	6	2.1%

Note. $N = 280$.

The overall GPA for the LLS 1151 Students from the fall of 2006-2010 is summarized in Table 4.11.

Table 4.11 Frequencies and Percentages of GPAs for LLS 1151 Students Cumulative GPA 2006–2010

Cumulative GPA	Frequency	Percentage
0–1.99	133	47.5%
2.0–2.49	73	26.1%
2.50–2.99	56	20.0%
3.00–4.00	18	6.4%

Note. $N = 280$.

Finally, the accumulated mean number of hours for HCC-Raymond transitional students not enrolled in LLS 1151 College Life ($N = 205$) was 28.59 ($SD = 30.502$) hours from fall 2006 to spring 2010. The frequency distribution of accumulated hours is displayed in Table 4.12.

Table 4.12 Frequencies and Percentages of Accumulated Hours for Non-LLS 1151 Students Cumulative Hours 2006–2010

Accumulated Hours	Frequency	Percentage
0–12	86	42.0%
13–24	37	18.0%
25–36	25	12.2%
39–48	6	2.9%
49–64	14	6.8%
65–76	16	7.8%
77–90	11	5.4%
93–132	10	4.9%

Note. $N = 205$.

The GPA for these students is summarized in Table 4.13.

Table 4.13 Frequencies and Percentages of GPAs for Non-LLS 1151 Students
Cumulative GPA 2006–2010

Cumulative GPA	Frequency	Percentage
0–1.99	122	59.5%
2.0–2.49	37	18.0%
2.50–2.99	32	15.6%
3.00–4.00	14	6.8%

Note. $N = 205$.

The mean number of hours accumulated from fall 2006 to spring 2010 by students who took LLS 1151 College Life versus students who did not take LLS 1151 College Life was compared using a one-way ANOVA. The results are in tables 4.15 and 4.16. No significant difference was found ($F(1, 484) = .45, p > .05$). The students did not differ significantly in the number of hours that they accumulated from fall 2006 to spring 2010. Students who had LLS 1151 College Life, as shown in Table 4.14, had accumulated a mean number of 30.30 ($SD = 25.59$) hours during 4 years. Students who did not take LLS 1151 College Life, as shown in Table 4.15, had accumulated a mean number of 28.59 ($SD = 30.502$) hours during 4 years. Tables 4.16 and 4.17 reveal a significant difference between students' mean GPA who were in LLS 1151 as compared to those who were not in LLS 1151.

Table 4.14 Mean Hours Accumulated

	<i>N</i>	Mean Hours Accumulated	<i>SD</i>
College Life	280	30.300	(25.590)
Not in College Life	205	28.585	(30.502)
Total	485	29.575	(27.755)

Table 4.15 ANOVA for Accumulated Hours for LLS 1151 College Life or Not in LLS 1151

	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig.
Between Groups	347.947	1	347.947	0.451	0.502
Within Groups	372498.556	483	771.219		
Total	372846.503	484			

Table 4.16 Mean GPA

	<i>N</i>	Mean GPA	<i>SD</i>
College Life	280	1.938	(0.833)
Not in College Life	205	1.617	(1.022)
Total	485	1.802	(0.930)

Table 4.17 ANOVA for Accumulated GPA for LLS 1151 College Life or Not in LLS 1151

	Sum of Squares	<i>Df</i>	Mean Square	<i>F</i>	Sig.
Between Groups	12.139	1	12.390	14.397	.000
Within Groups	407.253	483	0.843		
Total	419.393	484			

3. Is there a difference between the grades of residential transitional students (students are mandated to enroll in LLS 1151 College Life) and nonresidential transitional students (LLS 1151 College Life is not mandated) in the following: ENG 0113 Beginning English, ENG 0123 Intermediate English, MAT 0113 Fundamentals of Math, and MAT 0123 Beginning Algebra?

ENG 0113 Beginning English

A one-way between-subjects ANOVA was calculated to examine the effect that LLS 1151 College Life had on the grade earned in ENG 0113 Beginning English. The results are displayed in tables 4.18, 4.19, and 4.20. No significant difference was found ($F(1, 165) = 1.506, p > .05$). The students placed in the LLS 1151 College Life course performed no differently (based on grade) in ENG 0113 than students not placed in LLS 1151 College Life. Students placed in LLS 1151 College Life had a mean GPA in ENG 0113 Beginning English of 2.05 ($SD = 1.215$). Students not placed in LLS 1151 College Life had a mean GPA in ENG 0113 Beginning English of 1.81 ($SD = 1.38$). There were 95 students placed into ENG 0113 based on their ACT sub score in math.

Table 4.18 Grade Distribution for ENG 0113 and Participation in LLS 1151

ENG 0113 Beginning English	LLS 1151 College Life		Total
	College Life	Not In College Life	
A	10	7	17
B	23	18	41
C	43	24	67
F	19	23	42
Total	95	72	167

Table 4.19 Mean GPA in ENG 0113

		<i>N</i>	Mean GPA	<i>SD</i>
ENG 0113	College Life	95	2.05	(1.215)
	Not in College Life	72	1.81	(1.380)
	Total	167	1.95	(1.290)

Table 4.20 ANOVA for ENG 0113 Students in LLS 1151 College Life or Not in LLS College Life

		Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig
ENG 0113	Between Groups	2.500	1	2.500	1.506	.222
	Within Groups	274.015	165	1.661		
	Total	276.515	166			

ENG 0123 Intermediate English

A one-way between-subjects ANOVA was calculated to examine the effect that LLS 1151 College Life had on the grade earned in ENG 0123 Beginning English, as shown in tables 4.21, 4.23, and 4.23. No significant difference was found ($F(1, 298) = .020, p > .05$). The students placed in the LLS 1151 College Life course performed no differently (based on grade) in ENG 0123 than students not placed in LLS 1151 College Life. Students placed in LLS 1151 College Life had a mean GPA in ENG 0123 Beginning English of 1.71 ($SD = 1.036$). Students not placed in LLS 1151 College Life

had a mean GPA in ENG 0113 Beginning English of 1.73 ($SD = 1.133$). There were 179 students placed into ENG 0113 based on their ACT sub score in math.

Table 4.21 Grade Distribution for ENG 0123 and Participation in LLS 1151

		College Life		Total
		College Life	Not In College Life	
ENG 0123	A	3	2	5
	B	26	27	53
	C	108	60	168
	F	42	32	74
Total		179	121	300

Table 4.22 Mean GPA in ENG 0123

		<i>N</i>	Mean GPA	<i>SD</i>
ENG 0123	College Life	179	1.709	(1.036)
	Not in College Life	121	1.727	(1.133)
	Total	300	1.717	(1.074)

Table 4.23 ANOVA for ENG 0113 Students in LLS 1151 College Life or Not in LLS 1151

		Sum of Squares	<i>Df</i>	Mean Square	<i>F</i>	<i>Sig</i>
ENG 0123	Between Groups	0.023	1	0.023	0.020	0.888
	Within Groups	344.894	298	1.157		
	Total	344.917	299			

MAT 0113 Fundamentals of Math

A one-way between-subjects ANOVA was calculated to examine the effect that LLS 1151 College Life had on the grade earned in MAT 0113 Fundamentals of Math, as displayed in tables 4.24, 4.25, and 4.26. A significant difference was found ($F(1, 166) = .020, p > .05$) between the students in LLS 1151 compared to the students not in LLS 1151 and the performance in MAT 0113. Students who were placed in the LLS 1151 College Life course performed statistically better (based on grade) in MAT 0113 than students not placed in the LLS 1151 College Life course. Students placed in LLS 1151 College Life course had a mean GPA in MAT 0113 Fundamentals of Math of 1.591 ($SD = 1.076$). Students not placed in LLS 1151 College Life had a mean GPA in MAT 0113 Fundamentals of Math of 0.92 ($SD = 1.171$) There were 93 students placed into MAT 0113 based on their ACT sub score in math.

Table 4.24 Grade in MAT 0113 and Participation in LLS 1151

		College Life		
		College Life	Not in College Life	Total
MAT 0113	A	2	0	2
	B	10	9	19
	C	55	21	76
	F	26	45	71
Total		93	75	168

Table 4.25 Mean GPA in MAT 0113

		<i>N</i>	Mean GPA	<i>SD</i>
MAT 0113	College Life	93	1.591	(1.076)
	Not In College Life	75	0.920	(1.171)
	Total	168	1.292	(1.165)

Table 4.26 ANOVA for MAT 0113 Students in LLS 1151 College Life or Not in LLS 1151

		Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig
MAT 0113	Between Groups	18.715	1	18.715	14.9367	0.000
	Within Groups	207.993	166	1.253		
	Total	226.708	167			

MAT 0123 Beginning Algebra

A one-way between-subjects ANOVA was calculated to examine the effect that LLS 1151 College Life had on the grade earned in MAT 0123 Beginning Algebra, as shown in tables 4.27, 4.28, and 4.29. A significant difference was not found ($F(1, 250) = 1.536, p > .05$). The students placed in the LLS 1151 College Life course performed no differently (based on grade) in MAT 0123 than students not placed in LLS 1151 College Life. Students placed in LLS 1151 College Life had a mean GPA in MAT 0123 Beginning Algebra of 1.76 ($SD = 1.364$). Students not placed in LLS 1151 College Life had a mean GPA in MAT 0123 Beginning Algebra of 1.99 ($SD = 1.488$). There were 162 students placed into MAT 0123 based on their ACT sub score in math.

Table 4.27 Grade in MAT 0123 and Participation in LLS 1151

		College Life		
		College Life	Not in College Life	Total
MAT 0123	A	12	12	24
	B	45	33	78
	C	51	16	67
	F	54	29	83
Total		162	90	252

Table 4.28 Mean GPA in MAT 0123

		<i>N</i>	Mean GPA	<i>SD</i>
MAT 0123	College Life	162	1.759	(1.364)
	Not in College Life	90	1.989	(1.488)
	Total	252	1.841	(1.411)

Table 4.29 ANOVA for MAT 0123 Students in LLS 1151 College Life or Not in LLS 1151

		Sum of Squares	<i>Df</i>	Mean Square	<i>F</i>	<i>Sig</i>
MAT 0123	Between Groups	3.051	1	3.051	1.536	.216
	Within Groups	496.600	250	1.986		
	Total	499.651	251			

4. Is there a difference in student grades in ENG 0113 Beginning English, ENG 0123 Intermediate English, MAT 0113 Fundamentals of Math, and MAT

0123 Beginning Algebra based on the grade earned in LLS 1151 College Life?

ENG 0113 Beginning English

A one-way ANOVA was calculated to compare the final grades in participants' ENG 0113 Beginning English course by examining the effect that each student's performance measured by the grade in LLS 1151 College Life had on the grade in ENG 0113 Beginning English. A significant difference was found among students' grades in ENG 0113 based on their grades in LLS 1151 ($F(3, 91) = 13.06, p < .05$). This analysis revealed that the students who made an A in LLS 1151 earned a higher grade in ENG 0113 than students who made less than an A in LLS 1151, as displayed in tables 4.30 and 4.31. Tukey's was used to determine the nature of the differences between the grades in LLS 1151 College Life and ENG 0113. The Tukey post-hoc revealed that the mean GPA in ENG 0113 was statistically significantly higher when a student's grade in LLS 1151 College Life was an A (2.38 mean GPA in ENG 0113 \pm 1.03 points, $p=0.000$) and a B (2.25 mean GPA in ENG 0113 \pm .452, $p=0.000$) compared an F student (.53 mean GPA in ENG 0113 \pm 1.187, $p=0.000$). There were no statistically significant differences between the C student ($p=.895, p=.975, \text{ and } p=.063$ respectively) and A, B, and F students in LLS 1151 mean GPA's in ENG 0113. There were 95 students placed into ENG 0113 based on their ACT sub score in math.

Table 4.30 LLS 1151 Grade Distribution and Mean GPA in ENG 0113

LLS 1151 Grade	<i>N</i>	Mean GPA ENG 0113	<i>SD</i>
A	64	2.38	1.03
B	12	2.25	0.45
C	4	2.00	1.63
F	15	0.53	1.19
Total	95	2.05	1.21

Table 4.31 ANOVA for ENG 0113 Based on Performance in LLS 1151 College Life

		Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig.
ENG 0113	Between Groups	41.75	3.00	13.92	13.06	0.00
	Within Groups	96.98	91.00	1.07		
	Total	138.74	94.00			

ENG 0123 Intermediate English

A one-way ANOVA was calculated to compare the final grades in participants' ENG 0123 Intermediate English course by examining the effect that each student's performance measured by the grade in LLS 1151 College Life had on the grade in ENG 0123 Intermediate English. A significant difference was found among students' grades in ENG 0123 based on their grades in LLS 1151 ($F(3,175) = 9.326, p < .05$). This analysis revealed that the students who made an A in LLS 1151 earned a higher grade in ENG 0113 than students who made less than an A in LLS 1151, as shown in tables 4.32 and 4.33. Tukey's HSD was used to determine the nature of the differences between the grades in LLS 1151 College Life and ENG 0123. The Tukey post-hoc analysis revealed

that the mean GPA in ENG 0123 was statistically significantly higher when a student's grade in LLS 1151 College Life was an A (1.89 mean GPA in ENG 0123 \pm .95 points, $p=0.005$) as compared the LLS 1151 College Life C student (.83 mean GPA in ENG 0123 \pm 1.03, $p=0.002$) and compared to the LLS 1151 College Life F student (0.81 mean GPA in ENG 0123 \pm 1.109, $p=0.000$). Also, the LLS 1151 College Life B student's mean GPA in ENG 0123 (1.82 mean GPA in ENG 0123 \pm 0.95, $p=0.000$) was statistically significantly higher compared the LLS 1151 College Life F student's mean GPA in ENG 0123 (.53 mean GPA in ENG 0123 \pm 1.187, $p=0.000$). The LLS 1151 College Life C student (.83 mean GPA in ENG 0123 \pm 1.03, $p=0.002$) had a statistically significantly lower mean GPA in ENG 0123 as compared to the LLS 1151 College Life A student (1.89 mean GPA in ENG 0123 \pm .95 points, $p=0.002$) and the LLS 1151 College Life B student's mean GPA in ENG 0123 (1.82 mean GPA in ENG 0123 \pm 0.95, $p=0.016$). There were no statistically significant differences between grades of students who made an F in LLS 1151 College Life and those students who made a C in LLS 1151 College Life ($p=1.00$). There were 179 students placed into ENG 0113 based on their ACT sub score in math.

Table 4.32 LLS 1151 Grade Distribution and Mean GPA in ENG 0123

Grade in LLS	<i>N</i>	Mean GPA ENG 0123	<i>SD</i>
A	118	1.89	(0.95)
B	33	1.82	(0.95)
C	12	0.83	(1.03)
F	16	0.81	(1.11)
Total	179	1.71	(1.04)

Table 4.33 ANOVA for ENG 0123 Based on Performance in LLS 1151 College Life

		Sum of Squares	<i>Df</i>	Mean Square	<i>F</i>	Sig.
ENG 0123	Between Groups	26.313	3.000	8.771	9.326	0.000
	Within Groups	164.581	175.000	0.940		
	Total	190.894	178.000			

MAT 0113 Fundamentals of Math

A one-way ANOVA was calculated to compare the final grades in participants' MAT 0113 Fundamentals of Math course by examining the effect that each student's performance measured by the grade in LLS 1151 College Life had on the grade in MAT 0113 Fundamentals of Math. A significant difference was found among students' grades in MAT 0113 based on their grades in LLS 1151 ($F(3, 89) = 7.894, p < .05$). This analysis revealed that the students who made an A in LLS 1151 earned a higher grade in MAT 0113 than students who made less than an A in LLS 1151 as displayed in tables 4.34 and 4.35. Tukey's HSD was used to determine the nature of the differences between the grades in LLS 1151 College Life and MAT 0113. The Tukey post-hoc analysis revealed that the mean GPA in MAT 0113 was statistically significantly higher when a student's grade in LLS 1151 College Life was an A (1.89 mean GPA in MAT 0113 \pm 0.89 points, $p=0.000$) and a B (1.05 mean GPA in MAT 0113 \pm 1.019, $p=0.043$) compared to an F student (.53 mean GPA in ENG 0113 \pm 1.187, $p=0.043$). There were no statistically significant differences between the C student ($p=.772, p=.993, p=.565$ respectively) and A, B, and F students in LLS 1151 mean GPA's in MAT 0113. There were 93 students placed into MAT 0113 based on their ACT sub score in math.

Table 4.34 LLS 1151 Grade Distribution and Mean GPA in MAT 0113

Grade in LLS 1151	<i>N</i>	Mean GPA MAT 0113	<i>SD</i>
A	61.00	1.89	(0.90)
B	14.00	1.50	(1.02)
C	3.00	1.33	(1.15)
F	15.00	0.53	(1.19)
Total	93.00	1.59	(1.08)

Table 4.35 ANOVA for MAT 0113 Based on Performance in LLS 1151 College Life

	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig.
Between Groups	22.376	3.000	7.459	7.894	0.000
Within Groups	84.097	89.000	0.945		
Total	106.473	92.000			

MAT 0123 Beginning Algebra

A one-way ANOVA was calculated to compare the final grades in participants' MAT 0123 Beginning Algebra course by examining the effect that each student's performance measured by the grade in LLS 1151 College Life had on the grade in MAT 0123 Beginning Algebra. A significant difference was found among students' grades in MAT 0123 based on their grades in LLS 1151 ($F(3,158) = 7.927, p < .05$). This analysis revealed that the students who made an A in LLS 1151 earned a higher grade in MAT 0123 than students who made less than an A in LLS 1151, as shown in tables 4.36 and 4.37. Tukey's HSD was used to determine the nature of the differences between the grades in LLS 1151 College Life and MAT 0123. The Tukey post-hoc analysis revealed

that the mean GPA in MAT 0123 was statistically significantly higher when a student's grade in LLS 1151 College Life was an A (1.92 mean GPA in MAT 0123 \pm 1.312 points, $p=0.000$) and a B (1.90 mean GPA in MAT 0123 \pm 1.291, $p=0.000$) compared to an F student (0.00 mean GPA in MAT 0123 \pm 0, $p=0.000$). There were no statistically significant differences between the C student ($p=0.582$, $p=0.672$, and $p=0.167$ respectively) and A, B, and F students in LLS 1151 mean GPA's in MAT 0123. There were 162 students placed into MAT 0123 based on their ACT sub score in math.

Table 4.36 LLS 1151 Grade Distribution and Mean GPA in MAT 0123

Grade in LLS 1151	<i>N</i>	Mean GPA MAT 0123	<i>SD</i>
A	115.00	1.92	(1.31)
B	29.00	1.90	(1.29)
C	7.00	1.29	(1.70)
F	11	0	(0.00)
Total	162.00	1.76	(1.36)

Table 4.37 ANOVA for MAT 0123 Based on Performance in LLS 1151 College Life

		Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig.
MAT 0123	Between Groups	39.197	3.000	13.066	7.927	0.000
	Within Groups	260.414	158.000	1.648		
	Total	299.611	161.000			

Discussion

The data on students in this study were from the college's first-time, full-time cohort entering the institution during the fall of 2006. The specific students studied were a segment of the total cohort as they were separated out based on ACT sub-scores in mathematics and English. The placement level at HCC is based on a student's ACT sub-score in mathematics and English. This segment (transitional students) of the total cohort (created by ability grouping ACT sub-score in mathematics and English) was called the transitional population. These transitional students were also further divided into two groups: one group was required to be in a learning community called LLS 1151 College Life, and one group was not required to be in a learning community. Tinto (1997) found that students who were part of a learning community believed that they gained intellectually, and they did record gains in academic performance as measured by GPA. Tinto found peer interactions within learning communities to be beneficial and positive interactions between lower achieving students and more advanced students. However, there are also possible negative peer effects as evidenced by studies by Sacerdote (2001), Hoxby (2000), and Zimmerman (2003).

Transitional is the term used to describe the portion of the first-time, full-time cohort that must take many levels of developmental coursework (Casazza & Silverman, 1996; Parsad & Lewis, 2003). Across the United States, all community colleges offer some form of remediation. In the 1992–1993 academic year, 78% of public 4-year colleges and 66% of private 4-year colleges offered remedial instruction (National Center for Education Statistics [NCES], 1996). In the fall of 1995, 78% of higher education providers offered remedial education courses, and 29% of freshmen enrolled in at least

one remedial course (Parsad & Lewis, 2003). Of students who first attended a community college between 1992 and 2000, 61% completed at least one remedial course (Wirt et al., 2004). The proportion of the first-time, full-time HCC-Raymond campus students for fall 2006 who were transitional was 13.68%, or 485 out of 3,544 (Hinds Community College, 2006).

The demographics of the transitional students at HCC-Raymond are not surprising. According to the U.S. Census of 2010, 65% of the citizens of Hinds County are Black, non-Hispanics. The mean age of this population was 18.92 years. However, the modal age was 18 years, so it seems that the population studied is in the parameters listed for first-time, full-time freshmen. The number of females in the study was not surprising (54%) as Hinds Community College in general typically has 65% of its first-time, full-time students being female (NCES, 2010). Of the participants in the study, 85% were Black, non-Hispanics, and the college's enrollment of first-time, full-time students was 54% Black, non-Hispanics (NCES, 2010). The nontransitional group had 50.1% of the total being Black, non-Hispanic. Thus, the Raymond campus has a majority of first-time, full-time students being Black, non-Hispanic. The transitional portion of the total first-time, full-time cohort being 85% Black, non-Hispanic at first would seem abnormal; however, because the total population of the entire cohort is majority Black, non-Hispanic, then this may be, in fact, normal.

Participants in the study had an ACT composite mean score of 15, and the overall ACT mean for the Raymond campus was 17.49 (Hinds Community College, 2006). The participants in the study had to reveal their intentions—as related to their expected number of hours to complete and if they wanted to transfer, earn a degree, and so forth—

to the counseling department as part of the enrollment process. The participants' intentions were no different from the college as a whole; most students wanted to earn 54-plus hours and earn an associate's degree (see Figure 4.3).

There were 64 degrees earned during the 4-year study, and the most prevalent degree earned was the Associate of Arts degree (see Table 4.3). There were at least 55 study participants with one degree and three with more than one degree. Thirty programs of study were completed by students in the LLS 1151 College Life course ($N = 280$). The number of students not in the LLS 1151 College Life course ($N = 205$) completed 34 programs of study. Bettinger and Long (2005) found that developmental students in Ohio community colleges completed programs of study within 5 years at a rate of 17% of the total cohort (758/4406). The percentage of the transitional cohort that completed programs of study within 4 years at HCC was 13.19% (64/485). The percentage of the transitional students in the LLS 1151 College Life course who completed programs of study within 4 years was 10.7% (30/280). The percentage of the transitional students not in the LLS 1151 College Life course who completed programs of study within 4 years was 16.58% (34/205). Thus, transitional students not living on campus completed programs at a higher rate than students living on campus. Bettinger and Long's (2005) finding is similar to the findings for study participants at HCC. Bettinger and Long found the mean number of earned credit hours to be 39.3 hours during the course of 5 years by Ohio's community college remedial students. The mean number of hours completed by transitional students enrolled in LLS 1151 College Life was 30.3 hours during 4 years, and the mean number of hours completed by transitional students not enrolled in LLS 1151 College Life was 28.5. There was no statistically significant difference in the mean

number of hours completed during 4 years for students in LLS 1151 College Life learning community compared to students who were not in LLS 1151 College Life learning community, and this was comparable to the findings of Bettinger and Long (2005). There was a statistically significant difference in the mean cumulative GPA. The mean GPA for LLS 1151 participants was 1.93 as compared to the mean GPA for students who were not in LLS 1151 College Life, which was 1.61. Large numbers of HCC transitional students enrolled in and not enrolled in LLS 1151 College Life have less than 12 hours and less than a 2.00 GPA (See Table 4.1).

A significant difference was observed in performance in MAT 0113 Fundamentals of Math between the students not in LLS 1151 College Life and the students in LLS College Life. This was the only course out of ENG 0113, ENG 0123, MAT 0113, and MAT 0123 that had a statistically significant difference between the performances of the transitional students who were in LLS 1151 College Life and the performances of the transitional students who were not in LLS 1151 College Life. When comparing the performance of the students in LLS 1151 based on grade earned in LLS 1151 and the grade earned in MAT and ENG 0113/0123 courses, there is a statistically significant difference in what students earn in MAT and ENG 0113/0123 based on the higher grade earned in LLS 1151 College Life.

CHAPTER V

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

Summary

This study examined how HCC's mandatory placement into the LLS 1151 College Life learning community affected graduation rates and the students' accumulation of semester credit hours. Effectiveness of mandatory structured study sessions (learning communities) on transitional (developmental) students' accumulation of semester credit hours and on their graduation from HCC was evaluated. Also examined were the effects that participation in LLS 1151 College Life had on the grades in ENG 0113/0123 and MAT 0113/0123 for transitional students who were in LLS 1151 College Life compared to transitional students who were not in LLS 1151 College Life. The final item examined was the (out of the transitional students in LLS 1151 College Life) the effect of the grade obtained from LLS 1151 College Life had on the grades in: MAT 0113 Fundamentals of Math, ENG 0113 Beginning English, MAT 0123 Beginning Algebra, and ENG 0123 Intermediate English.

The problem at HCC was that transitional (developmental students) students accumulate a small number of semester hours during their courses of study and have a low graduation rate. This study is relevant as policymakers are seeking solutions that will improve performances of colleges and universities in order to justify continued funding.

The following research questions were addressed in this study:

1. How many students completed programs of study—graduated with an Associate in Arts (AA) degree, Associate in Applied Science (AAS) degree, Technical Certificate, or Career Certificate—out of those who initially enrolled as residential transitional students (students are mandated to enroll in LLS 1151 College Life) and nonresidential transitional students (LLS 1151 College Life is not mandated) in the fall of 2006 during a 4-year period?
2. How many credit hours have the two groups accumulated during a 4-year period?
3. Is there a difference between the grades of residential transitional students (students are mandated to enroll in LLS 1151 College Life) and nonresidential transitional students (LLS 1151 College Life is not mandated) in the following: ENG 0113 Beginning English, ENG 0123 Intermediate English, MAT 0113 Fundamentals of Math, and MAT 0123 Beginning Algebra?
4. Is there a difference in student grades in ENG 0113 Beginning English, ENG 0123 Intermediate English, MAT 0113 Fundamentals of Math, and MAT 0123 Beginning Algebra based on the grade earned in LLS 1151 College Life?

The theoretical framework in which this study was based included Tinto's 1975 Student Integration Model and human capital theory developed and expounded on by Gary Becker in 1993. McCabe's (2000) publication *No One to Waste: A Report to Public*

Decision-Makers and Community College Leaders examined the trends that have been part of the United States' involvement in the rapidly changing global marketplace for labor. This study is important because the college expends considerable public resources on transitional students. The effectiveness of structured study sessions and remedial coursework affects the ability of the transitional students to progress through the educational pipeline and into the workforce.

Transitional is the term used to describe the portion of the first-time, full-time cohort that must take many levels of developmental coursework (Casazza & Silverman, 1996; Parsad & Lewis, 2003). Across the United States, all community colleges offer some form of remediation. In the 1992–1993 academic year, 78% of public 4-year colleges and 66% of private 4-year colleges offered remedial instruction (National Center for Education Statistics, 1996). In the fall of 1995, 78% of higher education providers offered remedial education courses, and 29% of freshmen enrolled in at least one remedial course (Parsad & Lewis, 2003). Of students who first attended a community college between 1992 and 2000, 61% completed at least one remedial course (Wirt et al., 2004).

The demographics of the transitional students at HCC-Raymond are not surprising. The proportion of the first-time, full-time HCC-Raymond campus students for fall 2006 who were transitional was 13.68%, or 485 out of 3,544 (Hinds Community College, 2006). According to the U.S. Census of 2010, 65% of the citizens of Hinds County are Black, non-Hispanics. The mean age of this population was 18.92 years. However, the modal age was 18 years, so it seems that the population studied is in the parameters listed for first-time, full-time freshmen. The number of females in the study

was not surprising (54%) as Hinds Community College in general typically has 65% of its first-time, full-time students being female (NCES, 2010). Of the participants in the study, 85% were Black, non-Hispanics, and the college's enrollment of first-time, full-time students was 54% Black, non-Hispanics (NCES, 2010). The nontransitional group had 50.1% of the total being Black, non-Hispanic. Thus, the Raymond campus has a majority of first-time, full-time students being Black, non-Hispanic. The transitional portion of the total first-time, full-time cohort being 85% Black, non-Hispanic at first would seem abnormal; however, because the total population of the entire cohort is majority Black, non-Hispanic, then this may be, in fact, normal.

Participants in the study had an ACT composite mean score of 15, and the overall ACT mean for the Raymond campus was 17.49 (Hinds Community College, 2006). The participants in the study had to reveal their intentions—as related to their expected number of hours to complete and if they wanted to transfer, earn a degree, and so forth—to the counseling department as part of the enrollment process. The participants' intentions were no different from the college as a whole; most students wanted to earn 54-plus hours and earn an associate's degree (see Figure 4.3).

There were 64 degrees earned during the 4-year study, and the most prevalent degree earned was the Associate of Arts degree (see Table 4.3). There were at least 55 study participants with one degree and three with more than one degree. Thirty programs of study were completed by students in the LLS 1151 College Life course ($N = 280$). The number of students not in the LLS 1151 College Life course ($N = 205$) completed 34 programs of study. Bettinger and Long (2005) found that developmental students in Ohio community colleges completed programs of study within 5 years at a rate of 17% of the

total cohort (758/4406). The percentage of the transitional cohort that completed programs of study within 4 years at HCC was 13.19% (64/485). The percentage of the transitional students in the LLS 1151 College Life course who completed programs of study within 4 years was 10.7% (30/280). The percentage of the transitional students not in the LLS 1151 College Life course who completed programs of study within 4 years was 16.58% (34/205). Thus, transitional students not living on campus completed programs at a higher rate than students living on campus. Bettinger and Long's (2005) finding is similar to the findings for study participants at HCC. Bettinger and Long found the mean number of earned credit hours to be 39.3 hours during the course of 5 years by Ohio's community college remedial students. The mean number of hours completed by transitional students enrolled in LLS 1151 College Life was 30.3 hours during 4 years, and the mean number of hours completed by transitional students not enrolled in LLS 1151 College Life was 28.5. There was no statistically significant difference in the mean number of hours completed during 4 years, and these means were comparable to the findings of Bettinger and Long (2005). There was a statistically significant difference in the mean cumulative GPA. The mean GPA for LLS 1151 participants was 1.93 as compared to the mean GPA for students who were not in LLS 1151 College Life, which was 1.61. Large numbers of HCC transitional students enrolled in and not enrolled in LLS 1151 College Life have less than 12 hours and less than a 2.00 GPA (See table 4.1).

A significant difference was observed in performance in MAT 0113 Fundamentals of Math between the students not in LLS 1151 College Life and the students in LLS College Life. Queensborough and Houston Community College's learning community students attempted and passed developmental math courses at higher

rates as compared to students at their institutions that were not in learning communities (Weissman, 2011). This is in contrast to HCC as there was only a significant difference in mean GPA in MAT 0113 but not the higher level MAT 0123 course (See tables 4.27 and 4.30). Tinto found that students who were part of a learning community believed that they gained intellectually, and they did record gains in academic performance as measured by GPA (Tinto, 1997). HCC students in the LLS 1151 College Life course had a significant difference in their mean GPA compared to HCC students not in LLS 1151 College Life, so they did experience a gain in academic performance as related to GPA. This was the only course out of ENG 0113, ENG 0123, MAT 0113, and MAT 0123 that had a statistically significant difference between the performances of the transitional students who were in LLS 1151 College Life and the performances of the transitional students who were not in LLS 1151 College Life. When comparing the performance of the treatment group based on grade earned in LLS 1151 and the grade earned in MAT and ENG 0113/0123 courses, there is a statistically significant difference in what students earn in MAT and ENG 0113/0123 based on the higher grade earned in LLS 1151 College Life.

Conclusions

The purpose of this study was to examine how HCC's mandatory placement into the LLS 1151 College Life learning community affected graduation rates and the students' accumulation of semester credit hours. Effectiveness of mandatory structured study sessions (learning communities) on transitional (developmental) students' accumulation of semester credit hours and on their graduation from HCC was evaluated. Also examined were the effects that participation in LLS 1151 College Life had on the

grades in ENG 0113/0123 and MAT 0113/0123 for transitional students who were in LLS 1151 College Life compared to transitional students who were not in LLS 1151 College Life. The final item examined was the (out of the transitional students in LLS 1151 College Life) the effect of the grade obtained from LLS 1151 College Life had on the grades in: MAT 0113 Fundamentals of Math, ENG 0113 Beginning English, MAT 0123 Beginning Algebra, and ENG 0123 Intermediate English. The time period examined was from the August 2006 fall semester and ending May 2010 spring semester. The following conclusions were made in regard to the four research questions.

Research Question One

The first research question asked how many students completed programs of study (graduated with an AA, AAS, Technical Certificate, or Career Certificate) out of those who initially enrolled as residential transitional students (students are mandated to enroll in LLS 1151 College Life) and non-residential transitional students (LLS 1151 College Life is not mandated), during the fall of 2006 over a 4-year period. HCC produced 64 degrees out of 485 transitional students from the Raymond campus between the 2006 fall semester and the 2010 spring semester. There were 30 degrees (10.7% of 280 students) earned among the 280 students mandated to attend the LLS 1151 College Life course. There were 34 degrees (16.58% of 205 students) earned among the 205 students not mandated to attend the LLS 1151 College Life course. Transitional students in the LLS 1151 College Life course were less likely to complete their programs of study at HCC as compared to transitional students who were not in the LLS 1151 College Life class. The conclusion is that LLS 1151 College Life learning community was not effective.

Research Question Two

The second research question asked how many credit hours the two groups accumulated during a 4-year period: the group with LLS 1151 College Life and the group without LLS 1151 College Life. Students in the LLS 1151 College Life class accumulated (during a period of 4 years) 30.3 hours, and the students not in LLS 1151 College Life accumulated 28.58 hours. There was not a statistically significant difference between the students in LLS 1151 College Life as compared to the students not in LLS 1151 College Life. The conclusion is that students in the LLS 1151 College Life course did accumulate more hours on average at HCC as compared to students not in the LLS 1151 College Life class. Further, because there is no statistical significance, it could be concluded that there is no statistical difference in the number of mean hours accumulated during 4 years at HCC by students in LLS 1151 College Life compared to students who did not take the LLS 1151 College Life class. The LLS 1151 College Life learning community is not effective in increasing the mean number of accumulated hours for transitional students who participated.

Research Question Three

The third question asked if there was a difference between the grades of residential transitional students (mandated to enroll in LLS 1151 College Life) and the grades of non-residential transitional students (not mandated to enroll in LLS 1151 College Life) in the following: ENG 0113 Beginning English, ENG 0123 Intermediate English, MAT 0113 Fundamentals of Math, and MAT 0123 Beginning Algebra. There was no difference in performance based on mean grade in the developmental coursework between students in LLS 1151 College Life and students not

in LLS 1151 College Life except for MAT 0113 Fundamentals of Math. The students not in LLS 1151 College Life performed significantly worse in MAT 0113, with a mean GPA in MAT 0113 of 0.92 as compared to 1.59 for students in LLS 1151 College Life. Students' performance in developmental coursework is not affected by participation in LLS 1151 College life except for MAT 0113 Fundamentals of Math. The LLS 1151 College Life is not effective in increasing the grade earned in developmental coursework at HCC except for the lowest level MAT 0113 Fundamentals of Math course.

Research Question Four

The fourth question asked if there was a difference in student grades in ENG 0113 Beginning English, ENG 0123 Intermediate English, MAT 0113 Fundamentals of Math, and MAT 0123 Beginning Algebra based on the grade in LLS 1151 College Life. The grade in LLS 1151 College Life is based on attendance. The conclusion is that as the grade increased in LLS 1151 College Life, there were statistically significant differences in the mean grades for ENG 0113, ENG 0123, MAT 0113, and MAT 1023, respectively. Also, students who performed well in LLS 1151 performed better in ENG 0113, ENG 0123, MAT 0113, and MAT 1023, respectively. It can be concluded the higher the grade earned in LLS 1151, then the higher the mean GPA in ENG 0113, ENG 0123, MAT 0113, and MAT 1023. Student performance in LLS 1151 was effective in increasing academic performance in ENG 0113, 0123, MAT 0113, and 0123.

Recommendations

This study can be used by community college leaders in creating a more structured environment for their students, learning communities where students can

engage faculty and one another, and a better environment for student growth. The following recommendations, based on the literature review and the conclusions of this study, for further research can be made.

1. The LLS 1151 College Life course was based on attendance (A = 0–1 absence, B = 2 absences, C = 3 absences, and F = 4 absences) The effect that LLS 1151 College Life had on the English and mathematics coursework could have been caused by a better attendance record not only in LLS 1151—as it was required—but also in the mathematics and English course as well. Reforms in attendance policies for MAT 0113, 0123, ENG 0113 and ENG 0123 could impact performance.

Recommendation for further research: To what extent do attendance policies differ between developmental courses and college level courses in all community colleges in Mississippi?

2. Continuous support—not just for one semester—should be provided for students identified as needing remedial coursework. Recommendation for further research: To what extent do developmental programs in Mississippi community colleges differ in their continuous support for participants in developmental courses?

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APPENDIX A
INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

May 16, 2011

William Ashley
804 Treeline Dr.
Brandon, MS 39042

RE: IRB Study #11-096: The Efficacy of Development Courses on Graduation and Accumulation of Credit Hours for the Transitional Student in a Southern Community College.

Dear Mr. Ashley:

This email serves as official documentation that the above referenced project was reviewed and approved via administrative review on 5/16/2011 in accordance with 45 CFR 46.101(b)(4). Continuing review is not necessary for this project. However, any modification to the project must be reviewed and approved by the IRB prior to implementation. Any failure to adhere to the approved protocol could result in suspension or termination of your project. The IRB reserves the right, at anytime during the project period, to observe you and the additional researchers on this project.

Please note that the MSU IRB is in the process of seeking accreditation for our human subjects protection program. As a result of these efforts, you will likely notice many changes in the IRB's policies and procedures in the coming months. These changes will be posted online at <http://www.orc.msstate.edu/human/aahrpp.php>.

A signed formal approval letter will only be mailed at your request. Please refer to your IRB number (#11-096) when contacting our office regarding this application.

Thank you for your cooperation and good luck to you in conducting this research project. If you have questions or concerns, please contact Christine Williams at cwilliams@research.msstate.edu or call 662-325-5220.

Sincerely,

Nicole Morse
Assistant Compliance Administrator

cc: Ed Davis (Advisor)

APPENDIX B

COVER LETTER TO APPROPRIATE STAKEHOLDER

May 18, 2011

Dr. Clyde Muse, President
Hinds Community College
P.O. Box 1100
Raymond, MS 39042

Dear Dr. Muse:

I am writing to request data that will be used in my dissertation study to fulfill the research requirement for my PhD. in community college leadership. The topic of my dissertation proposal: *The efficacy of developmental coursework on achieving graduation and accumulation of credit hours for the transitional student in a southern, metropolitan community college.*

I am proposing to conduct a longitudinal study from the fall 2006 to the end of spring 2010. I will be looking at the performance of developmental students over the course of four years in the following areas: graduation, type of degree(s) earned, accumulation of credit hours the initial semester of enrollment and over a four year period.

I am requesting individual student data in a format in which students' identities cannot be ascertained. I am requesting the individual data for all Hinds-Raymond, transitional students (developmental 1 and/or 2, first-time, full-time) for fall 2006 through spring of 2010. I would also like to request a sample of students from the Raymond campus who are first-time, full-time students and who are NOT transitional students (sample size as large as transitional group).

I am requesting (Excel file): Intent Code, Resident Hall/Commuter status, date of birth, Gender, Ethnicity, ACT composite, High ACT Math, Compass Pre-Algebra, High ACT English, Compass English, Admission Status, High School, City (student's), County (Student's), State (Student's), Zip (student's), Fall 2006 ending GPA, Fall 2006 Completed (passed) Credits, Spring 2010 Cumulative GPA, Spring 2010 Cumulative credits, Final grades for the following; ENG 0113, ENG 0123, ENG 1113, ENG 1123, MAT 0113, MAT 0123, MAT 1233, MAT 1313, REA 0113, REA 0123, REA 0133, LLS 0111, LLS 0113, LLS 0121, LLS 0123, LLS 1151, LLS 1413, Degree: AA, AAS, CC, or TC.

Sincerely,

William J. Ashley, M.B.A.-Economics, B.B.A.-Finance
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Instructor of Economics
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