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## Poverty Levels and Dual Enrollment Demographics and their Effect on Mississippi High School Graduation Rates

Amanda Leigh McCarter Powell

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POVERTY LEVELS AND DUAL ENROLLMENT DEMOGRAPHICS AND THEIR  
EFFECT ON MISSISSIPPI HIGH SCHOOL GRADUATION RATES

By

Amanda Leigh McCarter Powell

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 Instructional Systems,  
Leadership, and Workforce Development

Mississippi State, Mississippi

May 2009

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Amanda Leigh McCarter Powell  
2009

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Despite the fact that education plays a vital role in the success of an individual and society as a whole, it is estimated that 1 of every 4 students will not receive a high school diploma four years after starting ninth grade. In an effort to decrease dropout rates and increase graduation rates of high school students, educators are searching for nontraditional methods to increase student achievement. One such method, dual enrollment, involves community colleges in the role as facilitators.

While preliminary research indicates a relationship between dually enrolled students and high school graduation, additional data is needed on student demographics and achievement. To build and improve upon the dual enrollment programs of Mississippi's community colleges, it will be important to know the participation levels and their effect on graduation rates.

The purpose of this study was two-fold:

- 1) To examine the proportions of students participating in Mississippi Community College Dual Enrollment Programs based on various demographics.
- 2) To determine the degree to which Mississippi Community College Dual Enrollment demographics and poverty levels of Mississippi public schools affect high school graduation rates of Mississippi's Community College Districts.

Data were obtained from the State Board of Community and Junior Colleges and the Mississippi Department of Education. Demographic variables chosen for the study included gender, race, curriculum and poverty level. Data from each public school was grouped according to the corresponding community college district, allowing the researcher to better establish the proportions of students participating in dual enrollment and the poverty level of public school students within the district. These proportions were then analyzed to find correlation between demographics and graduation rates of the community college district.

Results indicate a low overall percentage of students participating in dual enrollment and disproportioned percentages between community college districts. Regression analyses indicate that race, gender and curriculum did not contribute significantly to the prediction of graduation rate. However, high poverty levels did show a significant relationship to lower graduation rates. Additionally, in every district females were dually enrolled at rates higher than males, and students were enrolled in academic courses notably more than technical/vocational courses.

## DEDICATION

To my husband, whose unwavering support and love have been immeasurable. To my daughter who is the joy of my life and can always bring a smile to my face. To my parents who are exemplars of hard work and dedication. Together you have served as the driving force that helped see this project to fruition.

## ACKNOWLEDGEMENTS

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## CHAPTER I INTRODUCTION

In the developed world, the United States ranks 17<sup>th</sup> in high school graduation rates, lagging behind countries such as France, Germany, even Hungary (Hall, 2007). “The high school graduation rate is a barometer of the health of American society and the skill level of its future workforce” (Heckman & LaFontaine, 2008, p. 1). If the U.S. is to compete in the global market, an examination into the causes and consequences of decreased and/or stagnant high school graduation rates and rehabilitation of our educational system in these areas must take place.

In an open letter to the American People, the authors of “The Silent Epidemic: Perspectives of High School Dropouts” communicate the national high school dropout epidemic and the need for change in the following excerpt:

There is a high school dropout epidemic in America. Each year, almost one third of all public high school students – and nearly one half of all Blacks, Hispanics and Native Americans – fail to graduate from public high school with their class. Many of these students abandon school with less than two years to complete their high school education. The tragic cycle has not substantially improved during the past few decades when education reform has been on the public agenda. During this time, the

public has been almost entirely unaware of the severity of the dropout problem due to inaccurate data. The consequences remain tragic.

The decision to drop out is a dangerous one for the student. Dropouts are much more likely than their peers who graduate to be unemployed, living in poverty, receiving public assistance, in prison, on death row, unhealthy, divorced, and single parents with children who drop out of high school themselves.

Our communities and nation also suffer from the dropout epidemic due to the loss of productive workers and the high costs associated with increased incarceration, health care and social services.

Given the clear detrimental economic and personal costs to them, why do young people drop out of high school in such large numbers? Almost every elementary and middle school student reports ambitions that include high school graduation and at least some college. Why are so many dreams cut short? And what steps should be taken to turn the tide?... (Bridgeland, Diuilio, & Morison, 2006, p. i)

The complexity of the issues surrounding student motivations to drop out of school does not make for a quick fix. Dropouts are not a homogenous group (Bridgeland et al., 2006). A single factor can not accurately predict the students at risk for dropping out; the decision to leave school is multi-faceted.

Given that the issues surrounding dropouts are multi-faceted, so needs to be the response. Founder of America's Promise Alliance and former secretary of state Colin L.



Powell emphasizes the need for a more comprehensive approach to the issue of low graduation rates. Lagging graduation rates is not a problem only affecting secondary schools; Powell stated “from the home all the way through high school and college, it’s a connected system” (Hermes, 2008, ¶ 4). The nationwide quest to reduce dropout rates has placed focus on nontraditional methods for reaching potential high school dropouts through the use of all parts of the connected educational system, specifically the postsecondary institutions.

A recent study by researchers at the Community College Research Center at Teachers College, Columbia University found that students in New York and Florida dual-enrollment programs were more likely to earn a high school diploma, to enroll in postsecondary education, and stay in college more than one semester (Karp, Calcagno, Hughes, Jeong, & Bailey, 2007). Dual enrollment may serve as a pathway to graduation for students whom society often has low aspirations for academic achievement. Proponents argue dual enrollment programs provide “the best kind of outreach available – outreach that offers academic enrichment and inspires students to excel” (Hugo, 2001, p. 72).

While dual enrollment programs exist in all fifty (50) states, the target population is generally geared toward the most gifted high school students (Karp, Bailey, Hughes, & Fermin, 2004). Nancy Hoffman, co-author of *On Ramp to College* and vice president of Jobs for the Future, said “most states can build on what they are already doing to improve and expand dual enrollment programs to reach and benefit a more diverse pool of students. This is wise state policy and a sound investment of public dollars” (Hoffman, Vargas & Santos, 2008, p. 2).

In order to build and improve upon the dual enrollment programs of Mississippi's community colleges, it will be important to know who is participating and how high school graduation rates are affected by participation. By ascertaining the proportion of students participating in dual enrollment and the degree to which the demographics of the students enrolled have on high school graduation rates, it is hoped that if change is needed, then community college dual enrollment recruitment methods and curriculum options could be altered to maximize the role of dual enrollment programs in increasing high school graduation rates in Mississippi.

### **Statement of the Problem**

The need for educational reform in The United States was initialized in a 1983 report by President Ronald Reagan's National Commission on Excellence in Education titled *A Nation at Risk: The Imperative For Educational Reform*. Over 25 years later some of the same issues addressed still exist, specifically high dropout rates. Despite the fact that education plays a vital role in the success of an individual and society as a whole, it is estimated 1 of every 4 students will not receive a diploma four years after starting ninth grade (National Center for Education Statistics, 2007), and closer to 1 of every 2 Blacks, Hispanics, and Native Americans (Editorial Projects in Education, 2007). According to the Mississippi Department of Education (2007a), only 60.8% of Mississippi 2001-2002 ninth grade students graduated four years later (2005) with a standard diploma. Graduation rates were astoundingly lower in certain minority groups; 54.1% for Blacks, 46.9% for Native Americans, and 45% for Black males. These

achievement “gaps” among demographics do not allow for an equitable and cohesive educational system.

Fortunately, community colleges have strong roots in serving all segments of society (Vaughan, 2000). Part of that service includes dual enrollment programs, which expose students to college level courses while still attending high school. Preliminary research indicates a significant relationship between dual enrollment students and high school graduation (Karp et al., 2007). Additional dual enrollment data are needed on student demographics and achievement to supplement the tentative positive outcomes already reported (Hoffman, 2003). This study examined the existing relationships of dual enrollment demographics, poverty levels and high school graduation rates in Mississippi.

### **Research Questions**

The following research questions helped the researcher determine the level of involvement of various subgroups in Mississippi Community College Dual Enrollment Programs and the effect of each subgroup’s participation on high school graduation rates in Mississippi:

1. What proportions of students participate in Mississippi Community College Dual Enrollment Programs based on gender, ethnicity, curriculum and Mississippi 11<sup>th</sup> and 12<sup>th</sup> grade public school population?
2. What is the cumulative high school graduation rate and poverty level for high schools within each Mississippi Community College District?

3. To what degree do gender, ethnicity, and curriculum of students participating in Mississippi Community College Dual Enrollment Programs affect the overall high school graduation rate for Mississippi Community College Districts?
4. To what extent does the proportion of 11<sup>th</sup> and 12<sup>th</sup> grade public school students categorized as poverty level affect the overall high school graduation rate for Mississippi Community College Districts?

### **Purpose of the Study**

An examination of the proportions of student participation in Mississippi Community College Dual Enrollment Programs based on various demographics suggests populations that are underserved. In addition, the degree to which Mississippi Community College Dual Enrollment demographics and poverty levels of Mississippi public schools containing 11<sup>th</sup> and 12<sup>th</sup> grade students affect high school graduation rates of Mississippi's Community College Districts suggest new techniques to be used in student recruitment and curriculum options for high school students. The findings of this study provide an impetus for Mississippi high schools and community colleges to establish specific target populations for dual enrollment programs in order to assist the State's initiative for increasing high school graduation rates.

### **Limitations**

The researcher identifies the following limitations of this study:

1. The study is limited to the 15 community college districts within Mississippi.
2. The demographic variables for this study are isolated from other probable factors that might influence high school graduation rates.

3. The data used in the study were obtained from Mississippi's State Board of Community and Junior Colleges (SBCJC) and the Mississippi Department of Education (MDE). The accuracy of the data is dependent on the truthfulness of information submitted by the student, the accuracy of the data submitted by individual high schools and community colleges, and the accuracy of the data maintained by the SBCJC and MDE.
4. Students admitted into Mississippi community college dual enrollment programs in grades 10 or below based on a score of 30 or higher on the ACT were not taken into account.
5. Dually enrolled students categorized as not reported for gender and/or race and students categorized as out-of-district or state were not considered in the statistical analysis.

### **Delimitations**

The researcher acknowledges the following delimitations of this study:

1. The dual enrollment data used for this study are limited to enrollment in Mississippi community college dual enrollment courses for eight semesters, fall 2003, spring 2004, fall 2004, spring 2005, fall 2005, spring 2006, fall 2006 and spring 2007.
2. The high school graduation data used for this study are limited to traditional graduation rate data for Mississippi public school districts during the 2003-04, 2004-05, 2005-06 and 2006-07 school years.

3. The high school poverty level used for this study is limited to data on student eligibility for free lunches under the National School Lunch Act for Mississippi high schools during the 2003-04, 2004-05, 2005-06 and 2006-07 school years. Poverty levels were only obtained from schools containing grades 11 and 12.
4. Demographic data for 11<sup>th</sup> and 12<sup>th</sup> grade Mississippi public school students were obtained from months 1 and 5 of student enrollment during the 2003-04, 2004-05, 2005-06 and 2006-07 school years.
5. This study did not include enrollment data from Mississippi specialty schools, such as the Mississippi School for the Blind and Mississippi School of Arts.
6. Because the dual enrollment data for this study are categorized by the community college of enrollment, the high school graduation rates were also be grouped by the community college district.
7. The number of demographic indicators for high school graduation rates were limited to ten (student poverty level, male dual enrollment, female dual enrollment, Black dual enrollment, White dual enrollment, American Indian dual enrollment, Asian dual enrollment, Hispanic dual enrollment, dual enrollment academic curriculum, and dual enrollment technical/vocational curriculum).

### **Operational Definitions**

1. *Graduate* – A student who has earned a standard diploma – i.e., a diploma that is awarded to a student who has met all of the requirements established by the local board of education and by the State Board of Education. This term does not include special education students who have earned either a certificate of

attendance or an occupational diploma or students who have earned a GED (Mississippi Department of Education, 2007b).

2. *Dropout* – An individual who was enrolled in school at some time during the previous school year, was not enrolled in school at the beginning of the current school year, and has not graduated from high school or completed a State or District approved educational program (GED program). Exceptions include students that transfer to another public school district, private school, or State or District approved educational program (GED program); are temporarily absent due to suspension or school-approved illness; have deceased (Mississippi Department of Education, 2007b).
3. *Completer* – Graduates, special education students earning occupational diplomas, special education students earning certificates of attendance, and students earning a GED through a district or state approved program (Mississippi Department of Education, 2007b).
4. *Event Dropout Rate* - Estimates the percentage of both private and public high school students who left high school between the beginning of one school year and the beginning of the next without earning a high school diploma or its equivalent (e.g., a GED). It can be used to track annual changes in the experiences of students in the U.S. school system (Laird, Debell, Kienzi, & Chapman, 2007).
5. *Status Dropout Rate* - Reports the percentage of individuals in a given age range who are not in school and have not earned a high school diploma or equivalency credential, irrespective of when they dropped out. The rate focuses on an overall

age group as opposed to individuals in the U.S. school system, so it can be used to study general population issues (Laird et al., 2007).

6. *Status Completion Rate* - Indicates the percentage of individuals in a given age range who are not in high school and who have earned a high school diploma or equivalency credential, irrespective of when the credential was earned. The rate focuses on an overall age group as opposed to individuals in the U.S. school system, so it can be used to study general population issues (Laird et al., 2007).
7. *Averaged Freshman Graduation Rate* - Estimates the proportion of public high school freshmen who graduate with a regular diploma 4 years after starting the 9<sup>th</sup> grade. The rate focuses on public high school students as opposed to all high school students or the general population and is designed to provide an estimate of on-time graduation from high school. Thus, it provides a measure of the extent to which public high schools are graduating students within the expected period of 4 years (Laird et al., 2007).
8. *Public School District* - A school district is a geographic area within a state whereby a public school system operates as a governmental entity with responsibility for operating public schools in that geographic area. School districts may be wholly contained in one county or parts of many counties (National Center for Education Statistics).
9. *Traditional Graduation Rate* – Graduation rate calculated by dividing the number of students receiving a traditional diploma in a given school year by the number of students who were enrolled in the ninth grade four years earlier. This rate excludes self-contained special education students, students retained, students



who were enrolled at the end of a school year but who were not enrolled at the beginning of the next school year, state- or district-approved GED program completers, and special education students who earn a certificate of attendance (Mississippi Department of Education, 2007b). It does not track individual students, only data for all students enrolled.

10. *Cohort Graduation Rate* – Data tracking students from 9<sup>th</sup> grade to 12<sup>th</sup> grade are used to divide the number of individual students who receive a traditional diploma by the number in the original class four years earlier (9<sup>th</sup> grade). Adjustment is made for students that transfer (Mississippi Department of Education, 2007b).
11. *Cohort Dropout Rate* – Data tracking students from 9<sup>th</sup> grade to 12<sup>th</sup> grade is used to divide the number of individual students who dropout by the number in the original class four years earlier (9<sup>th</sup> grade). Adjustment is made for students that transfer (Mississippi Department of Education, 2007b).
12. *Dual Enrollment* – Program that allows high school students to take college-level courses while still attending high school (Andrews, 2004; Karp, et al., 2007; Kleiner & Lewis, 2005).
13. *Dual Credit* – Credit for a course is earned in both the postsecondary institution and public high school.
14. *Community College* – A regionally accredited institution of higher education that offers the Associates degree as its highest degree (Vaughan, 2000).
15. *Community College District* - Separate juristic entities and bodies politic and corporate, comprising of the entire counties contained within the district and

having boundaries coinciding with the external boundaries of those counties  
(Mississippi Code §37-29-31).

16. *Poverty Level* – Determined by eligibility for free lunches under the National School Lunch Act. Students from families with incomes at or below 130% federal poverty level are eligible for free lunches.

17. *Underserved Students* - Students who do not receive equitable resources as other students in the academic pipeline. Typically includes low-income, underrepresented racial/ethnic minorities, and first generation students.

## CHAPTER II

### REVIEW OF LITERATURE

This literature review seeks to examine the current state of high school graduation and dropout rates in Mississippi and nationwide. A detailed assessment of the effects of such rates and the Federal and Mississippi programs and policies currently used will follow. A recent study indicating a possible link between Dual Enrollment and graduation rates will set the stage for an examination of the current policies regarding Dual Enrollment in Mississippi's Community Colleges and the role of the community college in serving a diverse student population.

#### **High School Graduation Rates**

##### *National High School Graduation and Dropout Rates*

Varying methods, data sources and definitions used to compute graduation and dropout statistics cause confusion and create discrepancies in the data and in-turn threatens its validity. U.S. high school graduation rates have been estimated to range anywhere from 66 to 88 percent in recent years (Heckman & LaFontaine, 2008). This wide range causes some people to be alarmed at the statistics, while others seem to think a problem does not exist.

The National Center for Education Statistics (NCES) is the main federal organization responsible for collecting and analyzing education data. NCES identifies four methods of calculating high school completion and dropout rates: event dropout rate, status dropout rate, status completion rate, and averaged freshman graduation rate. Table 2.1 identifies the information obtained from each type of indicator used by NCES (Laird et al., 2007).

Table 2.1

Methods of Calculating High School Completion and Dropout Rates

Event Dropout Rate	Estimates the percentage of both private and public high school students who left high school between the beginning of one school year and the beginning of the next without earning a high school diploma or its equivalent (e.g., a GED). It can be used to track annual changes in the experiences of students in the U.S. school system.
Status Dropout Rate	Reports the percentage of individuals in a given age range who are not in school and have not earned a high school diploma or equivalency credential, irrespective of when they dropped out. The rate focuses on an overall age group as opposed to individuals in the U.S. school system, so it can be used to study general population issues.

Table 2.1 Continued

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Status Completion Rate	Indicates the percentage of individuals in a given age range who are not in high school and who have earned a high school diploma or equivalency credential, irrespective of when the credential was earned. The rate focuses on an overall age group as opposed to individuals in the U.S. school system, so it can be used to study general population issues.
Averaged Freshman Graduation Rate	Estimates the proportion of public high school freshmen who graduate with a regular diploma 4 years after starting the 9 <sup>th</sup> grade. The rate focuses on public high school students as opposed to all high school students or the general population and is designed to provide an estimate of on-time graduation from high school. Thus, it provides a measure of the extent to which public high schools are graduating students within the expected period of 4 years.

---

To paint a clearer picture of the dropout epidemic, NCES examined the statistics for graduation and dropout rates for 2005 and trends over the last three decades, from 1972-2005 (Laird, et.al, 2007). Figures 2.1 through 2.2 indicate a slight increase in graduation rates and a slight decrease in dropout rates over the last three decades. However, these figures also show that gaps still exist between groups based on ethnicity/race and income level.

The national event dropout rate has seen a decrease from 6.1 percent in 1972 to 3.8 percent in 2005. However, most of this decline occurred between 1972 and 1990. This downward trend in event dropout rates is also observed in the overall populations

among Whites, Blacks and Hispanics; however, as evidenced in Figure 2.1, even though such an overall decline exists, gaps between different populations still is apparent. In 2005, students from low-income families experienced an event dropout rate six times greater than students from high-income families.

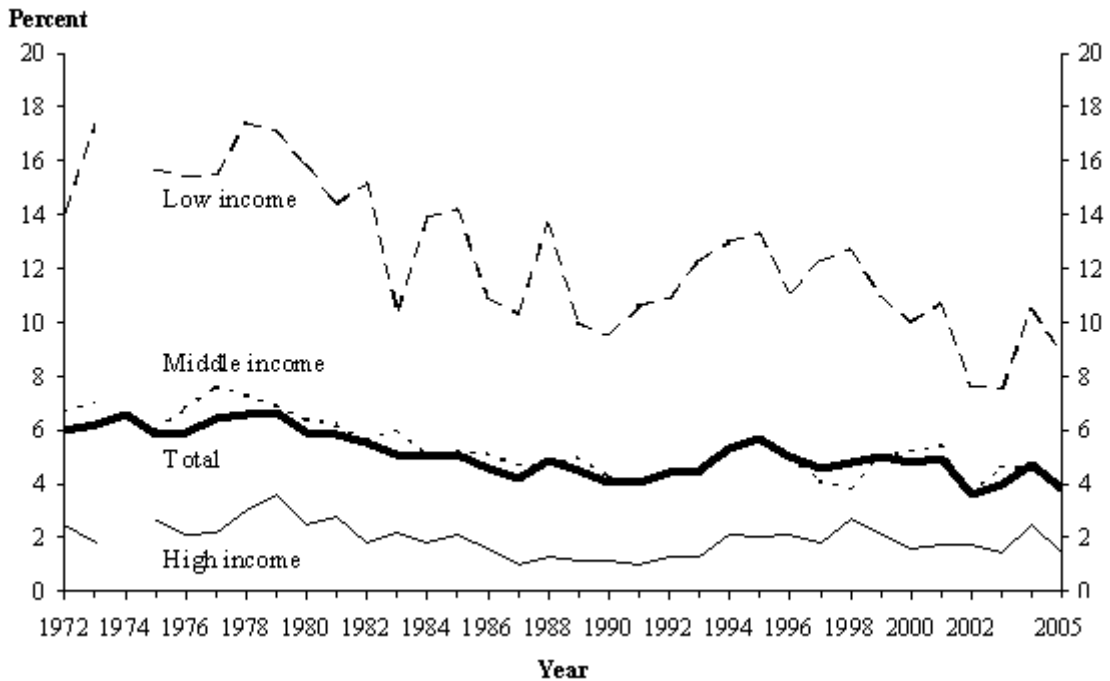


Figure 2.1 Event dropout rates of 15- through 24-year-olds who dropped out of grades 10–12, by family income: October 1972 through October 2005

NOTE: The event dropout rate indicates the percentage of youth ages 15 through 24 who dropped out of grades 10–12 in the 12 months between one October and the next (e.g., October 2004 to October 2005). Dropping out is defined as leaving school without a high school diploma or equivalent credential (for example, a General Educational Development certificate). Low income is defined as the bottom 20 percent of all family incomes for the year; middle income is between 20 and 80 percent of all family incomes; and high income is the top 20 percent of all family incomes. Data on family income are missing for 1974. Estimates beginning with 1987 reflect new editing procedures for cases with missing data on school enrollment items. Estimates beginning with 1992 reflect new wording of the educational attainment item. Estimates beginning with 1994 reflect changes due to newly instituted computer-assisted interviewing. SOURCE: Laird, J., Debell, M., Kienzi, G., & Chapman, C. (2007). *Dropout Rates in the United States: 2005* (NCES 2007-059). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

Overall status dropout rates of 16-24 year olds also experienced a downward trend between 1972 and 2005, decreasing from 14.6 percent to 9.4 percent (Figure 2.2). In 1972, the status dropout rate for Whites was 12.3 percent, followed by Blacks at 21.3 percent and Hispanics at 34.3 percent. A decrease in status dropout rates for each race/ethnic group was achieved over the last three decades. In 2005, the status dropout rate for Whites was 6 percent, followed by Blacks at 10.4 percent and Hispanics at 22.4 percent. While the difference of these rates narrowed between the White and Black populations, the Hispanic population consistently experienced a higher percentage of dropouts than the other groups over the 33 year period.

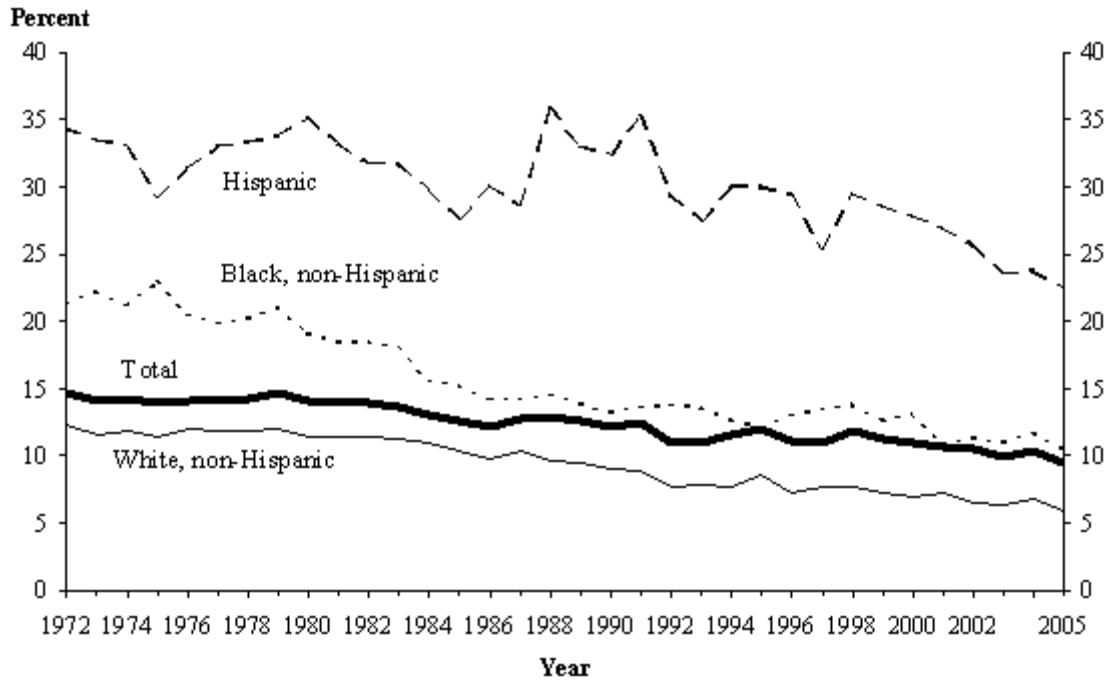


Figure 2.2 Status dropout rates of 16- through 24-year-olds, by race/ethnicity: October 1972 through October 2005

NOTE: The status dropout rate indicates the percentage of 16- through 24-year-olds who are not enrolled in high school and who lack a high school diploma or equivalent credential such as a General Educational Development (GED). Beginning in 2003, respondents were able to identify themselves as being more than one race. The 2003 through 2005 categories for White, non-Hispanic and Black, non-Hispanic contain only respondents who indicated just one race. The Hispanic category includes Hispanics of all races and racial combinations. Because of small sample size for some or all of the years shown in the figure, American Indians/Alaska Natives and Asian/Pacific Islanders are included in the totals but not shown separately. The “more than one race” category is also included in the total in 2003 and 2004 but not shown separately because of small sample size. The variable nature of the Hispanic status rates reflects, in part, the small sample size of Hispanics in the CPS. Estimates beginning with 1987 reflect new editing procedures for cases with missing data on school enrollment items. Estimates beginning with 1992 reflect new wording of the educational attainment item. Estimates beginning with 1994 reflect changes due to newly instituted computer-assisted interviewing. SOURCE: Laird, J., Debell, M., Kienzi, G., & Chapman, C. (2007). *Dropout Rates in the United States: 2005* (NCES 2007-059). U.S. Department of Education. Washington, DC: National Center for Education Statistics.



Figure 2.3 represents the status completion rates of 18 to 24 year olds from 1972 to 2005. This statistic is used to determine the number of individuals who have left school and hold a high school credential. This rate is not used to evaluate the educational system of the U.S. due to the fact individuals may complete their education outside the country. It does indicate, however, the number of individuals residing in this country that do not hold a high school diploma or General Education Diploma (GED).

As also evidenced in the previous two figures, Figure 2.4 indicates an overall increase in completion rates since 1972; however, differences of completion rates between populations still exist. For example, in 1972 the overall status completion rate was 82.8 percent and in 2005 it had increased to 87.6 percent. Nonetheless, the statistics from 2005 show that Asian/Pacific Islanders and Whites have a higher status completion rate (95.8 and 92.3 percent respectively) and are more likely to complete high school than individuals who identified themselves as Blacks (85.9 percent), Hispanics (70.2 percent) and more than one race (89.5 percent).

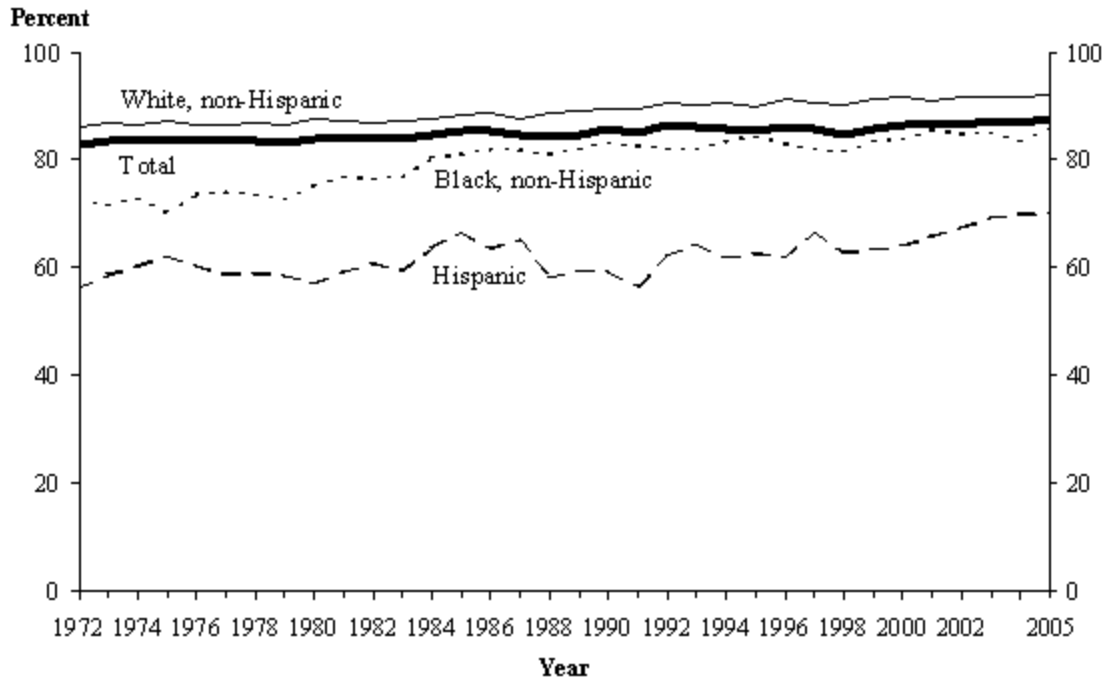


Figure 2.3 Status completion rates of 18- through 24-year-olds not currently enrolled in high school or below, by race/ethnicity: October 1972 through October 2005

NOTE: Status completion rates measure the percentage of 18- through 24-year-olds who have left high school and who also hold a high school credential. High school credentials include regular diplomas and alternative credentials such as GEDs. Beginning in 2003, respondents were able to identify themselves as being more than one race. The 2003 through 2005 categories for White, non-Hispanic and Black, non-Hispanic contain only respondents who indicated just one race. The Hispanic category includes Hispanics of all races and racial combinations. Because of small sample size for some or all of the years shown in the figure, American Indians/Alaska Natives and Asian/Pacific Islanders are included in the totals but not shown separately. The “more than one race” category is also included in the total in 2003 and 2004 but not shown separately because of small sample size. The variable nature of the Hispanic status rates reflects, in part, the small sample size of Hispanics in the CPS. Estimates beginning with 1987 reflect new editing procedures for cases with missing data on school enrollment items. Estimates beginning with 1992 reflect new wording of the educational attainment item. Estimates beginning with 1994 reflect changes due to newly instituted computer-assisted interviewing. SOURCE: Laird, J., Debell, M., Kienzi, G., & Chapman, C. (2007). *Dropout Rates in the United States: 2005* (NCES 2007-059). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

In their report *Dropout Rates in the United States: 2005*, NCES calculated the averaged freshman graduation rate (AFGR) for public school students in the United States graduating in 2003-04 to be 75 percent. The AFGR is used to determine how many high school students graduate on time (in four years) with a diploma. As represented in Figure 2.4, fifteen states experienced an AFGR of 80 percent or higher. While eleven states had rates of 70 percent or lower. Of these eleven states, seven are concentrated in the Southeastern region of the country (Louisiana, Mississippi, Alabama, Tennessee, Florida, Georgia, and South Carolina).

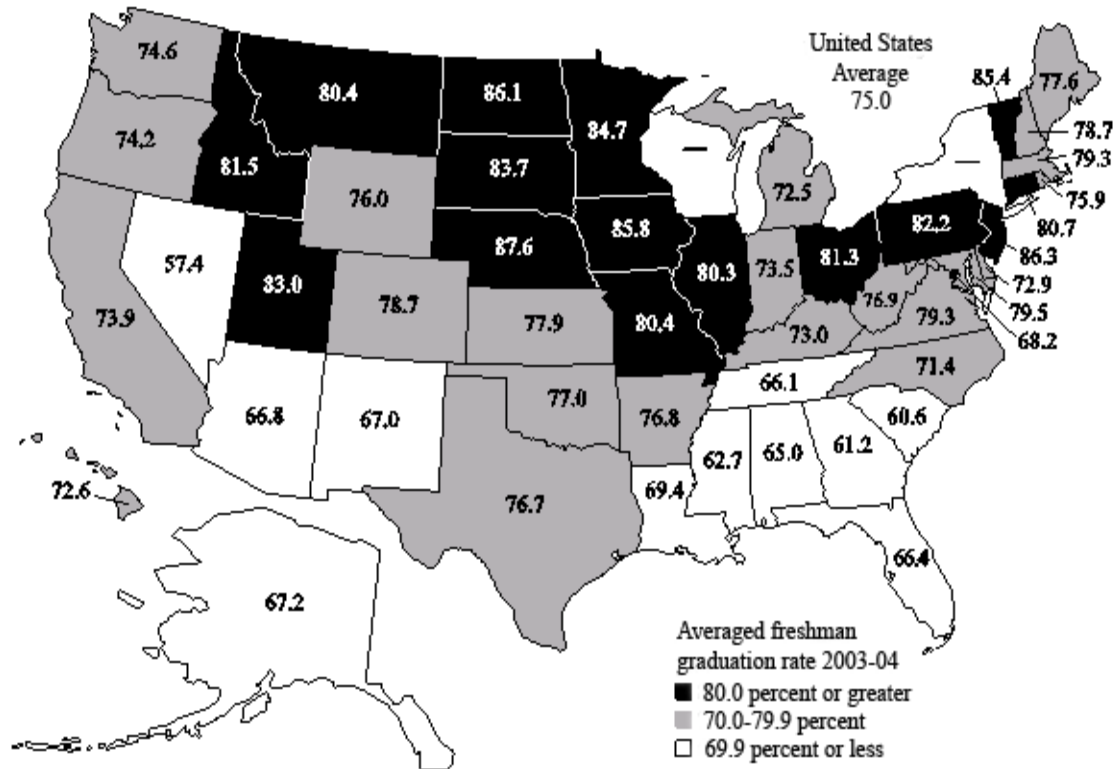


Figure 2.4 Averaged freshman graduation rates of public high school students, by state: School year 2003–04

Not available.<sup>1</sup> The national estimate does not include data from two states with missing diploma counts: New York and Wisconsin. When the national estimate is adjusted to account for missing information for these two states by using the 2002–03 rates for these states, the adjusted national rate is 74.3 percent.

NOTE: The averaged freshman graduation rate provides an estimate of the percentage of public high school students who graduate with a regular diploma 4 years after starting 9th grade. The rate uses aggregate student enrollment data to estimate the size of an incoming freshman class and aggregate counts of the number of diplomas awarded 4 years later. The incoming freshman class size is estimated by summing the enrollment in 8th grade for one year, 9th grade for the next year, and 10th grade for the year after and then dividing by 3. The number of diplomas is the count of all diplomas awarded 4 years after a 9th–grade class started 9th grade. Ungraded students were allocated to individual grades proportionally to the enrollments by grade. SOURCE: Laird, J., Debell, M., Kienzi, G., & Chapman, C. (2007).

*Dropout Rates in the United States: 2005* (NCES 2007-059). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

### *Mississippi High School Graduation and Dropout Rates*

Mississippi contains 152 public school districts within 82 counties. Before 2005, the Mississippi Department of Education's primary method of calculating high school graduation rates was through the traditional graduation rate calculation. This particular rate excludes special education students, students who are retained, and those that completed the GED. Table 2.2 indicates that the traditional graduation rate was 85.12% for the school year 2004-2005.

Beginning in the 2001-2002 school year, the Mississippi Student Information System (MSIS) was established to track individual students over a period of time to better calculate graduation and dropout rates. The graduating class of 2005 represented the first true cohort to be tracked with this program. The cohort rate calculation only includes students who receive a traditional diploma as graduates. Due to the fact that freshman in the first cohort could have been repeating freshmen and the lack of tracking of summer activity for 2002 and 2003, rates calculated for the cohort are usually referred to as estimates; however, the estimated graduation rate for the cohort beginning with students entering 9<sup>th</sup> grade in the 2001-2002 school year was 60.8% (table 2.2), according to statistics from MDE. This estimated cohort rate is considered close in accuracy when compared to independent graduation rate estimates for Mississippi, such as the Manhattan Institute estimate using the "green method" (60%) (Green & Winters, 2005) and the Urban Institute Projection using the Cumulative Promotion Index (58%) (Swanson, 2005).

Table 2.2

## Variation in Graduation Rates Yielded by Various Calculation Methods

Method of Graduation Rate Calculation	School Year	Mississippi Graduation Rate
Traditional	2004-2005	85.12% <sup>a</sup>
Longitudinal or Cohort	Cohort beginning with students entering the 9 <sup>th</sup> grade in the 2001-2002 school year	60.8% <sup>b</sup>
Averaged Freshman	2003-2004*	62.7% <sup>c</sup>

\*Averaged freshman graduation rate data for Mississippi is for the 2003-2004 school year because 2004-2005 school year data was not available for this method.

<sup>a</sup>2004-2005 Mississippi Report Card (Traditional Data).

<sup>b</sup>MDE's "Estimated Graduation, Completion and Dropout Counts and Rates Based on Approved Procedures for Tracking a Cohort of Students Over 4 Years" (Final Report).

<sup>c</sup>National Center for Education Statistics.

Source: PEER Report 508

The Mississippi public school 2001-2002 cohort (graduating class of 2005) contained 51,391 students (Table 2.3). The estimated number of dropouts for this cohort was 11,169 students, which is a rate of 26.6%. Of the 51,391 students, 27,589 were considered completers (67%) and 25,057 (60.8%) were graduates. As represented in the national data, Mississippi also has differences of graduation and dropout rates based on ethnicity/race. Asians had the lowest dropout rate (13.8%) and the highest completion and graduation rates (82.8% and 79.5%). Whites came in second with a 22.4% dropout rate, 73.9% completion rate, and 68.8% graduation rate. Blacks and Native Americans had dropout rates of 30.1% and 40% respectively. Graduation rates for these groups were 54.1% for Blacks and 46.9% for Native Americans. Hispanics came in slightly above the state-wide average with a dropout rate of 25.9%, completion rate of 69.2%, and graduation rate of 63.7%.

Table 2.3

## Disaggregated 4-Year Dropout, Completion, and Graduation Data for Class of 2005

Group	Total Cohort N-Count	Dropout Denominator (Transfers and Deaths <sup>1</sup> Subtracted)	Estimated Dropouts <sup>1</sup> And Estimated 4 Year Dropout Rate <sup>2</sup>	Completion/ Graduation Denominator (Transfers, Deaths <sup>1</sup> and Grade 58 Subtracted)	Completers and Estimated 4-Year Completion Rate	Graduates and Estimated 4-Year Graduation Rate <sup>3</sup>	Possible Future Completers <sup>4</sup>
<b>All Students</b>	51,391	42,024	11,169 26.6%	41,188	27,589 67.0%	25,057 60.8%	5.3%
<b>Female</b>	23,895	19,803	4,174 21.1%	19,524	14,427 73.9%	13,529 69.3	4.2%
<b>Male</b>	27,496	22,226	7,002 31.5%	21,669	13,162 60.7%	11,528 53.2%	6.1%
<b>Asian</b>	438	311	43 13.8%	308	255 82.8%	245 79.5%	3.1%
<b>Black</b>	26,094	22,437	6,748 30.1%	21,897	13,389 61.1%	11,839 54.1%	6.6%
<b>Hispanic</b>	508	286	74 25.9%	273	189 69.2%	174 63.7%	6.0%
<b>Native America</b>	107	65	26 40.0%	64	33 51.6%	30 46.9%	5.6%

Table 2.3 Continued

<b>White</b>	24,244	18,838	4,227 22.4%	18,559	13,723 73.9%	12,769 68.8%	3.6%
<b>Black Female</b>	11,971	10,514	2,484 23.6%	10,343	7,166 69.3%	6,640 64.2%	5.5%
<b>White Female</b>	11,398	8,929	1,619 18.1%	8,828	7,012 79.4%	6,651 75.3%	2.7%
<b>Black Male</b>	14,123	11,923	4,266 35.8%	11,554	6,223 53.9%	5,199 45.0%	7.3%
<b>White Male</b>	12,846	9,913	2,613 26.4%	9,735	6,711 68.9%	6,118 62.8%	4.4%

<sup>1</sup>Based on actual statewide 2004 and 2005 summer activity coding, 58.5% of unknown students were classified as dropouts and 35.0% were classified as transfers/deaths.

<sup>2</sup>Includes all coded school year and summer activity dropouts plus "lost" T1 and T2 transfers. This represents a 4-year "9-12" dropout rate. The customary "7-12" cohort dropout rate would be higher.

<sup>3</sup>Graduates include only traditional diploma recipients. Occupational diploma recipients, district GED recipients, special education certificate of attendance recipients, and students who completed all requirements except for a passing score on one or more tests required for graduation are completers, but not graduates.

<sup>4</sup>Possible future completion percentage was calculated by applying the estimated statewide dropout rate to students who were still enrolled at the end of 2004/2005. Add the percentage in this column to estimate the ultimate completion rate; the estimated ultimate graduation rate will be somewhat lower.

Source: Mississippi Department of Education. (2007a). *Estimated Graduation, Completion and Dropout Counts and Rates Based on Approved Procedures for Tracking a Cohort of Students Over 4 Years*.

Mississippi graduation, dropout and completion rates varied significantly by district (Appendix A). Enterprise School District represented the highest completion and graduation rates (96.2% and 92.5%) for the cohort class of 2005 and the lowest dropout rate of 3.6%. Canton School District represented the lowest rates for completers and graduates (29.1% and 27.3% respectively) and highest rate for dropouts (61.7%). Of the 152 public school districts in Mississippi, 70 had a graduation rate below 60%, while only 7 districts had graduation rates above 85% for the 2001-2002 cohort. Completion rates are much the same, with 38 districts below 60% and 7 above 85%. A large portion



of the districts (59) had dropout rates of 31% or more, with merely 7 districts having rates of 10% or less.

### *Effects of Dropouts*

The cost of high school dropouts in our nation is tremendous. The U.S Bureau of the Census (2005) statistics for 2004 show the average annual income for a high school dropout to be \$16,485, while a high school graduate averaged \$26,165. Income levels show an even larger gap when examining the average income of people who have obtained an Associate's degree (\$35,103) and a Bachelor's degree (\$49,656). In total, the Alliance for Excellent Education (2007b) estimates the lifetime loss of income from high school dropouts for the Class of 2006 to be over \$4 billion for Mississippi and \$309 billion nationally.

Even though these statistics are staggering, even more so is the accumulated wealth that is lost from high percentages of dropouts. Wealth may take the form of material possessions with monetary value (home and cars), investments in nontangible property (degrees), and cash investments (savings and individual retirement accounts). Research shows that households headed by a high school dropout accumulate 10 times less wealth than a household headed by a high school graduate. Gouskova and Stafford (2005) found that the average household wealth for a high school dropout to be \$500, while high school graduates and college graduates had \$5,000 and \$47,000 respectively. The Alliance for Excellent Education (2007a) estimates an increase of \$74 billion in wealth, if every head of household graduated high school. This increase in wealth would have many long term benefits. People with wealth are more likely to invest in higher

education (Doron & Fisher, 2002; Kochhar, 2004), support their children's education (Hertz, 2006; Orr, 2003; Sawhill, 2006), and improve the financial prospects for their immediate family.

Another major concern is the loss of local, state and national tax revenues. On average a high school dropout contributes approximately \$60,000 less in taxes over a lifetime (Rouse, 2005). Males between the ages of 25 and 34 years, who did not complete high school, create an estimated tax revenue loss of approximately \$944 billion (National Dropout Prevention Center/Network, n.d.). State and local economies also suffer due to the loss of new business, caused from a less educated populace. Between \$7.9 and \$10.8 billion could be saved annually by the United States by improved education of recipients of Temporary Assistance to Needy Families, food stamps, and housing assistance (Garfinkel, Kelly, & Waldfogel, 2005). Another \$17 billion could be saved in Medicaid and health care expenditures for the uninsured (Alliance for Excellent Education, 2006).

High school dropouts comprise 75% of America's state prison inmates and 59% of federal inmates (Harlow, 2003). In their lifetime, dropouts are 3.5 times more likely than graduates to be arrested. A minimal increase of 1% in high school graduation rates would save \$1.4 billion in incarceration costs (Alliance for Excellent Education, 2003). Increasing male graduation rates by only 5% would result in \$4.9 billion in crime-related costs (Alliance for Excellent Education, 2006).

Wealth perpetuates wealth (Sawhill, 2006). And high school graduates are more likely to have better-educated children. The totality of the situation is that high school graduates benefit the communities in which they live. They do so through a decrease in teen pregnancy (Haveman, Wolfe, & Wilson, 2001), crime rates (Raphael, 2004), and

reliance on government health care (Muenning, 2005) and public services (Garfinkel et al., 2005). And an increase is seen in home ownership, entrepreneurship, educational attainment, asset accumulation, civic engagement, voting, volunteerism, and neighborhood stability (Alliance for Excellent Education, 2006).

### *Risk Factors and Reasons for Dropping Out*

A report by Communities in Schools, in collaboration with the National Dropout Prevention Center, examined over 44 articles published between 1980 and 2005 pertaining to the risk factors or conditions that significantly increase the likelihood of students dropping out of school. The literature shared the following common threads (Hammond, Linton, Smink & Drew, 2007, p. 1):

- Dropping out of schools is related to a variety of factors that can be classified in four areas or domains: individual, family, school and community factors.
- There is no single risk factor that can be used to accurately predict who is at risk of dropping out.
- The accuracy of dropout prediction increases when combinations of multiple risk factors are considered.
- Dropouts are not a homogeneous group. Many subgroups of students can be identified based on when risk factors emerge, the combination of risk factors experienced, and how the factors influence them.
- Students who drop out often cite factors across multiple domains and there are complex interactions among risk factors.

- Dropping out of school is often the result of a long process of disengagement that may begin before a child enters school.
- Dropping out is often described as a process, not an event, with factors building and compounding over time.

Communities in Schools further examined these 44 studies to identify significant risk factors. Focus was placed on determining the significant risk factors of dropouts in the domains of individual and family factors. Eight factor categories and twenty-five significant risk factors that resulted are depicted in Table 2.4.

Table 2.4

Significant Risk Factors for School Dropout

<b>Risk Category and Risk Factor</b>
<b><u>Individual Domain</u></b>
<b>Individual Background Characteristics</b>
<ul style="list-style-type: none"> <li>• Has a learning disability or emotional disturbance</li> </ul>
<b>Early Adult Responsibilities</b>
<ul style="list-style-type: none"> <li>• High number of work hours</li> <li>• Parenthood</li> </ul>
<b>Social Attitudes, Values, &amp; Behavior</b>
<ul style="list-style-type: none"> <li>• High-risk peer group</li> <li>• High-risk social behavior</li> <li>• Highly socially active outside of school</li> </ul>
<b>School Performance</b>
<ul style="list-style-type: none"> <li>• Low achievement</li> <li>• Retention/over-age for grade</li> </ul>
<b>School Engagement</b>
<ul style="list-style-type: none"> <li>• Poor attendance</li> <li>• Low educational expectations</li> <li>• Lack of effort</li> <li>• Low commitment to school</li> <li>• No extracurricular participation</li> </ul>
<b>School Behavior</b>
<ul style="list-style-type: none"> <li>• Misbehavior</li> <li>• Early aggression</li> </ul>
<b><u>Family Domain</u></b>
<b>Family Background Characteristics</b>
<ul style="list-style-type: none"> <li>• Low socioeconomic status</li> <li>• High family mobility</li> <li>• Low education level of parents</li> <li>• Large number of siblings</li> <li>• Not living with both natural parents</li> <li>• Family disruption</li> </ul>
<b>Family Engagement/Commitment to Education</b>
<ul style="list-style-type: none"> <li>• Low educational expectations</li> <li>• Sibling has dropped out</li> <li>• Low contact with school</li> <li>• Lack of conversations about school</li> </ul>

In 2005, Peter Hart Research Associates conducted four focus groups of 16-24 year olds and 467 interviews of 16-25 year old high school dropouts to determine who is dropping out of high school and why. The focus groups were located in Philadelphia and Baltimore, while the interviews were conducted in 25 diverse locations across the nation, including Jackson, MS. The authors emphasize that all of their findings did not mirror national statistics and are not a nationally representative sample; however, a broad cross-section of the dropout population is represented.

Those surveyed painted a much different picture of the typical high school dropout that comes to mind (Bridgeland et al., 2006):

- 88% had passing grades, with 62% having C's and above;
- 58% dropped out with just two years or less to complete high school;
- 66% would have worked harder if expectations were higher;
- 70% were confident they could have graduated from high school;
- 81% recognized that graduating from high school was vital to their success;
- 74% would have stayed in school if they had to do it over again;
- 51% accepted personal responsibility for not graduating and an additional 26% shared the responsibility between themselves and their school, leaving very few who blamed the schools alone; and
- Nearly all of the students had thoughtful ideas about what their schools could have done to keep them from dropping out and would counsel students who are thinking about dropping out not to do so. (p. 3)

“There is no single reason why students drop out of high school. The decision to drop out is complex and relates to the individual student – and their family, school and community. The decision is personal, reflects their unique life circumstances, and is part of a slow process of disengagement from school” (Bridgeland et al., 2006, p. 4).

However, the following common responses were found: school is boring; uninspired teaching, unmotivated students – low expectations held by adults for the students contrast to the high expectations students have for themselves; real life events got in the way of school – 32% left to get a job, 26% became a parent, 22% had to help their family; struggling in school and needing more help; slow process of disengagement; too much freedom; and parent engaged too late. Figure 2.5 indicates the top five reasons for leaving school identified by Peter Hart Research Associates survey participants.

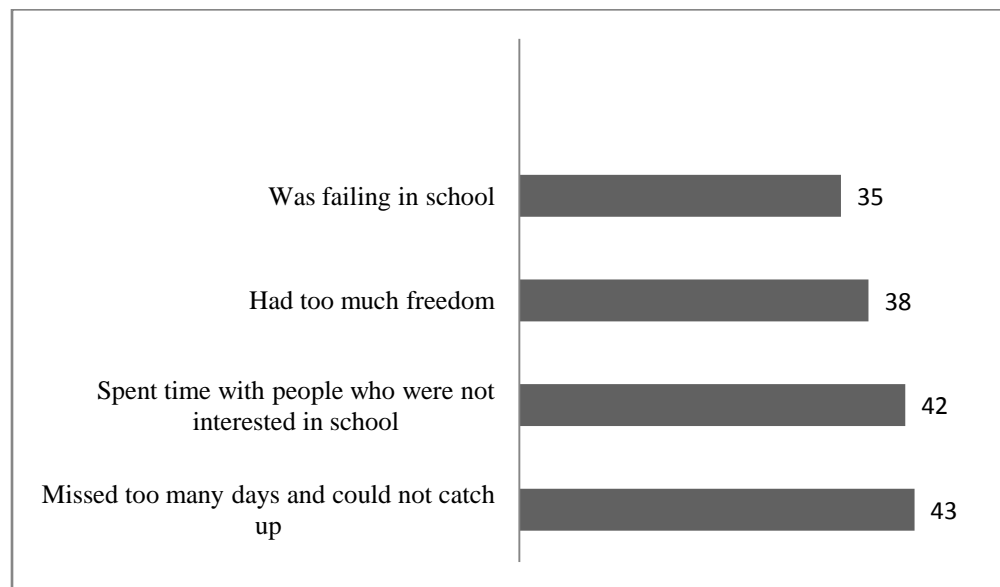


Figure 2.5 Top Five Reasons Dropouts Identify as Major Factors for Leaving School

### *Federal Dropout Prevention Programs*

Several programs pertaining to high school graduation, completion and dropping out are authorized by The Elementary and Secondary Education Act of 1965 (ESEA), as amended by the No Child Left Behind Act of 2001 (NCLBA). Additionally the Higher Education Act (HEA) and Workforce Investment Act (WIA) authorize programs pertaining to dropout prevention. These federal programs are generally categorized as follows (Kuenzi, 2007):

- programs with the primary purpose of preventing students from dropping out and/or helping dropouts re-enter and complete high school or an equivalency program,
- programs having multiples purposes, at least one of which is targeted to dropout recovery or dropout prevention, and
- programs with broad purposes not explicitly encompassing dropouts but whose funds may be used to help individuals complete high school. (p. 3)

Three programs are categorized as primary purpose. Two of which are the Dropout Prevention Program and the Neglected and Delinquent Program authorized in ESEA, Title I, Parts D and H, and have a primary purpose of preventing students from dropping out of high school. The Migrant High School Equivalency Program is the third primary purpose program and is authorized in HEA, Title IV, Part A. The federal government provides support for other programs that include dropout prevention as one of their purposes, even if it is not the primary. These include programs such as GEAR UP, as well as programs that are authorized in the WIA (i.e. Job Corps). Appendix B



specifies each of the federal programs provided, along with their categories and main function(s).

### *Mississippi Dropout Prevention Plan*

Mississippi Code: Title 37 Education § 37-13-80 established the Office of Dropout Prevention (ODP) within the Department of Education. The primary role of the ODP is the administration of Mississippi's statewide dropout prevention programs and any regulations or policies adopted by the State Board of Education pertaining to dropout prevention. This legislature also requires the graduation rate for cohort classes to increase to no less than eighty-five percent (85%) by the 2018-2019 school year. To aid in the accomplishment of the goals set forth, the Office of Compulsory School Attendance Enforcement, School Counseling, and Alternative Education were placed within the Dropout Prevention office.

The ODP established a Dropout Prevention Taskforce comprised of school, business and community leaders. The goal of the Taskforce was to construct a detailed Dropout Prevention Plan for the state. The resulting plan designated three overarching goals (MDE, 2007b):

#### Goal I:

To increase the graduation rate for 9-12 cohort classes on a systematic basis to 85% by the 2018-2019 school year as mandated by Mississippi Code §37-13-80. The Office of Dropout Prevention is also responsible for establishing graduation rate benchmarks for each two-year period from the 2008-2009 school

year through the 2018-2019 school year, to serve as guidelines for the graduation rate increase.

The 4-year cohort graduation rate for 2004-2005 is 60.8%. In order to attain the 85% goal by 2018-2019, the following two-year benchmarks are established:

- Benchmark 1 – 2008-2009 63%
- Benchmark 2 – 2010-2011 66%
- Benchmark 3 – 2012-2013 71%
- Benchmark 4 – 2014-2015 77%
- Benchmark 5 – 2016-2017 81%
- Benchmark 6 – 2018-2019 85%

Goal II:

By 2012-2013, initiatives instituted by the Office of Dropout Prevention will reduce the state dropout rate by 50%. With a current state 9-12 dropout rate of 26.6%, in order to reduce the dropout rate by 50% by 2012-2013, the following annual benchmarks are established:

- Benchmark 1 – 2008-2009 25%
- Benchmark 2 – 2009-2010 22%
- Benchmark 3 – 2010-2011 18%
- Benchmark 4 – 2011-2012 15%
- Benchmark 5 – 2012-2013 13%

Goal III:

By 2012-2013, initiatives instituted by the Office of Dropout Prevention will reduce the statewide truancy rate by 50%. With a current state truancy rate of 31.8%,

in order to reduce the truancy rate by 50% by 2012-2013, the following benchmarks are established:

- Benchmark 1 – 2008-2009 30%
- Benchmark 2 – 2009-2010 28%
- Benchmark 3 – 2020-2012 23%
- Benchmark 4 – 2012-2013 19%
- Benchmark 5 – 2013-2014 16% (p. 8)

The *Effective Strategies for Dropout Prevention* (Smink, n.d.) developed by the National Dropout Prevention Center/Network served as a framework for the State Plan. The strategies encompass four major areas: School and Community Perspective, Early Interventions, Basic Core Strategies, and Making the Most of Education. The fifteen specific strategies include:

1. Systemic Renewal
2. School-Community Collaboration
3. Safe Learning Environments
4. Family Engagement
5. Early Childhood Education
6. Early Literacy Development
7. Mentoring/Tutoring
8. Service Learning
9. Alternative Schooling
10. After School Opportunities
11. Professional Development

12. Active Learning
13. Educational Technology
14. Individualized Instruction
15. Career and Technical Education

Appendix C illustrates how current state and federal initiatives relate to these particular strategies.

Implementation goals were set forth to move towards Local Dropout Prevention Plans for each public school district. Once established, the ODP worked with local teams to achieve district level goals. Seven critical components were identified by the state that must be addressed by each local team. These components include (MDE, 2007b):

1. Public Relations Dropout Prevention Awareness Campaign
2. An Assessment of Current Initiatives
3. School Attendance Officer (SAO) Staff Refocusing Study
4. Dropout Recovery Program
5. Transition Plans for Dropout Prevention
6. Federal Program/Funding Opportunities
7. Research Partnerships

At the State Department of Education's 2007 annual conference, State Superintendent Hank Bounds acknowledged the academic crisis that the state is in. "If we are going to move Mississippi from the bottom, we're going to have to think differently and act with a sense of urgency" (National Association of State Boards of Education, 2007, p. 2). While Mississippi's Dropout Prevention Plan is credited as a step in the right direction due to the emphasis on local participation, an increased involvement of the

community college in improving high school graduation rates may prove to be an area overlooked (NASBE, 2007). The second portion of this literature review examines a possible role Mississippi Community Colleges can play that is not addressed in the State Dropout Prevention Plan.

## **Dual Enrollment**

### *The Link with Graduation Rates*

In November 2006 (Bottoms), the Southern Regional Education Board (SREB) published *10 Strategies for Improving High School Graduation Rates and Student Achievement*. One suggested strategy is to “create partnerships with employers, community and technical colleges and shared-time career/technical centers” (p. 11). Students may be more successful if high schools and colleges would work together and blur the distinction between the two education sectors (Venezia, Kirst, & Antonio, 2003). Dual enrollment is one type of program that does just that.

A study conducted by the Community College Research Center at Teachers College, Columbia University (Karp et al., 2007) used existing large-scale administrative datasets to examine the short and long-term effects of dual enrollment in the states of New York and Florida. While the main focus of the study concerned the relationship between dually enrolled students and postsecondary education, benefits were also linked to high school graduation. The New York sample size limited the findings for that state, however, in Florida results showed that there was a positive relationship between students that are dually enrolled and high school graduation. Results also indicate that

males and low-income students benefitted more in postsecondary education from dual enrollment participation than their peers.

### *Characteristics*

Dual enrollment programs allow high school students to take college-level courses while still attending high school (Andrews, 2004; Karp, et al., 2007; Kleiner & Lewis, 2005). In certain cases, college credit obtained through these courses also counts towards high school graduation requirements, an arrangement known as dual credit (Waits, Setzer, & Lewis, 2005). Whether the student is obtaining credit only through the college or both the college and high school, simultaneous enrollment is involved therefore the student is dually enrolled.

Dual Enrollment is similar to programs such as Advanced Placement and International Baccalaureate in that students have the opportunity to achieve college credit. But, dual enrollment students are measured by the final grade achieved in the course, rather than a score on an examination.

Dual Enrollment programs vary widely from state-to-state and even school-to-school within the state. Karp et al., (2004, p. 1) found “10 features along which dual enrollment programs can vary.” These program features/factors include target population, admission requirements, course content, course location, type of instructor, the method of earning college credit, program intensity, the characteristics of students, and funding and state mandates.

### *Benefits and Concerns*

The concept of dual enrollment has its proponents and adversaries. Those who support dual enrollment state the following benefits:

1. Prepares students for postsecondary education (American Association of State Colleges and Universities, 2002; Bailey & Karp, 2003; Clark, 2001; U.S. Department of Education, 2003b).
2. Allows students to complete a postsecondary degree in less time (AASCU, 2002; Hoffman, 2005).
3. Reduction in tuition costs, if assistance is provided for the program (Bailey & Karp, 2003; Boswell, 2001a; Hoffman, 2005; U.S. Department of Education, 2003b).
4. Provides greater academic challenges to students (Boswell, 2001a).
5. Allows students to take courses that would not normally be offered in high school (AASCU, 2002; Bailey & Karp, 2003; Clark, 2001; U.S. Department of Education, 2003b).
6. Promotes a relationship between colleges and high schools (Bailey & Karp, 2003; Boswell, 2001a; Clark, 2001).
7. Allows students that would not normally consider college to be exposed to the environment (Bailey & Karp, 2003; Boswell, 2001a).

Those who have opposition to dual enrollment programs do so on two fronts, cost and program quality. The funding source for a student to participate varies by state. Costs may be incurred by the parents/guardian, high school or through state/federal funds. If the tuition is paid by the student and/or parent/guardian, opportunities are limited to those

who can afford them. If funds are provided through a governmental agency, the criticism may be made that taxpayers are incurring twice the costs to educate the same student (AASCU, 2002). The second concern is of the quality of education that is provided through dual enrollment. Opponents to the program cite variations in program features (Karp et al., 2004), such as location, student mix, instructor and course content may lead to a degraded or “watered-down” course (AASCU, 2002).

### *Previous Research*

A review of the literature pertaining to dual enrollment reveals a concentration on dual enrollment as a means to establish a seamless transition to higher education (Bailey, Hughes, & Karp, 2002; Bailey & Karp, 2003; Jacobson, 2005; U.S. Department of Education, 2003a). This study seeks to examine the role of dual enrollment in increasing high school graduation rates and decreasing dropout rates by focusing on the recruitment of a wider range of students. The literature reviewed did not produce material that substantially focuses on dual enrollment strictly in this aspect. Preliminary research by Karp, et al. (2007) found a significant relationship between students who were dually enrolled and high school graduation. Factors that may affect the decision to participate in dual enrollment; such as motivation, career goals, and high school experiences were not taken into account. In addition, no data was analyzed to determine if dual enrollment had an effect on the high school graduation rates of various subgroups (based on ethnicity/race and socio-economic status).



*Mississippi Community College Dual Enrollment Policy and Programs*

Currently 15 community and junior colleges are operated in the state of Mississippi: East Central Community College, East Mississippi Community College, Hinds Community College, Holmes Community College, Itawamba Community College, Jones County Junior College, Mississippi Delta Community College, Northeast Community College, Northwest Community College, Pearl River Community College, Southwest Community College, Mississippi Gulf Coast Community College, Copiah-Lincoln Community College, Meridian Community College, and Coahoma Community College. Each community/junior college is created as a district, comprising of counties that serve as boundaries to designate separate entities. Appendix D contains Mississippi Codes §37-29-31, §37-29-401, §37-29-451, §37-29-501, §37-29-551 which allocate the counties in Mississippi to a community/junior college district.

Mississippi Code §37-29-1 authorizes the boards of trustees of community and junior colleges to establish a dual enrollment program within each district.

Recommendations for dual enrollment admission include:

1. Students must have completed a minimum of fourteen (14) core high school units;
2. Students must have a 3.0 grade point average on a 4.0 scale, or better, on all high school courses, as documented by an official high school transcript; a home-schooled student must submit a transcript prepared by a parent, guardian or custodian with a signed, sworn affidavit to meet the requirement of this paragraph; and
3. Students must have an unconditional written recommendation from their high school principal and/or guidance counselor. A home-schooled student must

submit a parent, legal guardian or custodian’s written recommendation to meet the requirement of this paragraph.

4. Students may be considered for the dual enrollment program who have not completed the minimum of fourteen (14) core high school units if they have a minimum ACT composite score of thirty (30) or the equivalent SAT score, and have the required grade point average and recommendation prescribed above. (¶ 2)

The establishment of dual enrollment programs is expanded upon by Mississippi Code §37-15-38, which addresses some of the program features, previously referenced (Karp et al., 2004), in which programs can vary. The following program features are addressed:

1. Student eligibility – A student must properly enroll in a dual enrollment program before credits earned from a postsecondary institution may be transferred to the student’s high school district.
2. Admission criteria – A student must meet the admission requirements for the individual institution.
3. Tuition and cost responsibility – Tuition and costs may be paid by the “postsecondary institution, the local school district, the parents or legal guardians of the student, or by grants, foundations or other private or public sources” (¶ 4).
4. Transportation responsibility – Transportation is the responsibility of the parent or legal guardian.
5. School district average daily attendance credit – A student will be counted in the “average daily attendance of the public school district in which the student attends high school” (¶ 6).

6. High school student transcript transfer requirements – Grades and college credits will be recorded on the college transcript where the student attends classes.
7. Determining factor of prerequisites for enrollment in dual credit courses – Determination of course prerequisites and the receiving of dual credit will be determined by the postsecondary institution.
8. Process for determining articulation of curriculum between high school, university and community and junior college courses – Postsecondary curricula must meet the competency requirements of courses listed in the Mississippi Curriculum Frameworks. Courses not listed in the frameworks must meet the standards of the postsecondary institution.
9. Ineligible courses for dual credit programs – Courses required for subject area testing are not eligible for dual credit.
10. Eligible courses for dual credit programs – “Courses eligible for dual credit include, but are not necessarily limited to, foreign languages, advanced math courses, advanced science courses, performing arts, advanced business and technology, and career and technical courses” (§ 11). All courses must receive approval from both the local school district superintendent and the chief academic officer of the postsecondary institution to be considered for dual credit.
11. High school Carnegie unit equivalency – “One (1) three-hour university or community or junior college course is equal to one-half (1/2) high school Carnegie unit” (§ 12). Full Carnegie units and partial credit agreements for postsecondary courses less than three (3) hours must be approved.

12. Course alignment – Postsecondary institutions will “assess the place of dual credit courses with the context of their traditional offerings” (§ 13).
13. Maximum dual credits allowed – A student is allowed to earn an unlimited number of postsecondary credits for dual credit “as long as a B average is earned on the first two (2) approved dual credit courses” (§ 14). Students that do not meet this requirement will not be allowed to continue in the dual credit program.
14. Dual program allowances – CLEP credit may be granted for courses delivered by examination preparation (i.e. Advanced Placement or International Baccalaureate). Courses taught at a high school by a qualified employee of the school district approved by the postsecondary institution are eligible for credit. Postsecondary courses taught at the postsecondary institution by an employee of the institution are eligible credits. Online courses are allowed by the Mississippi Virtual Public School or a postsecondary institution.
15. Qualifications of dual credit instructors – An academic instructor must have a master’s degree with at least eighteen (18) graduate hours in their field of expertise to deliver dual credit instruction. A career and technical education instructor must meet requirements designated by the State Board for Community and Junior Colleges.
16. Guidance on local agreements – “The Chief Academic Officer of the State Board of Trustees of State Institutions of Higher Learning and the Chief Academic Officer of the State Board for Community and Junior Colleges shall develop a template to ensure consistent implementation of the dual enrollment program” (§ 17).

While the Mississippi Code provides guidelines for the program features of dual enrollment, many are vague and leave the determination up to the individual institution. It should also be noted that the recommended admission requirements are different for community colleges and universities. The recommended grade point average for community college dual enrollment is 3.0 on a 4.0 scale (Mississippi Code §37-29-1), while the recommendation for universities is 2.5 on a 4.0 scale (Mississippi Code §37-15-37). The final section of this literature review focuses on the service of underserved students through dual enrollment and the benefits thereof.

### *Serving Underserved Students*

Due to their open-access mission (Vaughan, 2000) and similarities to the governing bodies of the K-12 schools, community colleges are well suited as facilitators to K-12 educational reform in their communities (Boswell, 2001b, Orr & Bragg, 2001). Part of that reform includes, the No Child Left Behind Act of 2001 which is based on setting high expectations and measurable goals; however, these raised expectations “require schools to teach all students to the same standards that in the past were reserved for only the best students” (Bottoms, 2003, p. 7).

Dual enrollment is often linked to the most gifted high school students (Karp, et al., 2004), with a small number of overall students participating. Part of the reason may be funding, but the method of recruitment may play a larger role. A study examining the characteristics of dual enrollment programs in Boston Public Schools found that “students with initiative and drive or with especially attentive guidance counselors and

teachers are those that find their way to dual enrollment programs” (Boston Higher Education Partnership, 2005, p. 5).

Research on dual enrollment program outcomes for underserved students is very slim, in part due to the exclusiveness of the selection process (Bailey et al., 2002). The small amount of research that is available is promising. Karp, Calcagno, Hughes, Jeong, & Bailey (2007) conclude in their study *The Postsecondary Achievement of Participants in Dual Enrollment: An Analysis of Student Outcomes in Two States* that dual enrollment can benefit a wide range of students and that outreach needs to expand to underserved populations. Students from various backgrounds “are showing that the academic challenge of college courses is an inspiration not a barrier” (Hoffman, 2003, p. 3). Having a plan for the future and taking steps toward that future gives students a drive to be in school and work harder (Bottoms, 2003).

With all the possibilities that dual enrollment may hold for underserved students, few are ever reached with the program. All fifty (50) states offer some type of dual enrollment program. Twenty-nine (29) states report that they make a special effort to reach underserved students, such as low income, ethnic minorities, and rural students; however, only sixteen (16) states (Arkansas, Colorado, Hawaii, Idaho, Kentucky, Montana, New Jersey, New Hampshire, North Carolina, Oregon, Pennsylvania, Texas, Utah, Virginia, West Virginia and Vermont) report placing a high priority on reaching underserved students (Bragg, Kim, & Barnett, 2006). These efforts primarily exist to encourage underserved students to continue their education to the postsecondary level, not as a method to encourage high school graduation. Nonetheless, of the sixteen (16)

states that report a high priority on dual enrollment for underserved students, only two (2) consistently had an average freshman graduation rate lower than the national average for the schools years 2001-02, 2002-03, and 2003-04 (Laird et al., 2007).

## CHAPTER III METHODOLOGY

The purpose of this study was to determine the proportion of students dually enrolled in Mississippi community college dual enrollment programs and the degree to which Mississippi Community College Dual Enrollment demographics and poverty levels of Mississippi high school students affect high school graduation rates of Mississippi's Community College Districts. The methods and procedures that were used in the study are discussed in the following sections of this chapter: population, demographic variables, data procedure, and data analysis.

### **Population**

The population (N=120) for this study was comprised of Mississippi's 15 Community College Districts.

- East Central Community College District
- East Mississippi Community College District
- Hinds Community College District
- Holmes Community College District



- Itawamba Community College District
- Jones Junior College District
- Mississippi Delta Community College District
- Northeast Community College District
- Northwest Community College District
- Pearl River Community College District
- Southwest Community College District
- Mississippi Gulf Coast Community College District
- Copiah-Lincoln Community College District
- Meridian Community College District
- Coahoma Community College District

The study used extracted data for the demographic variables from student dual enrollment during the fall 2003, spring 2004, fall 2004, spring 2005, fall 2005, spring 2006, fall 2006 and spring 2007 Mississippi community college semesters and also from Mississippi public school 11<sup>th</sup> and 12<sup>th</sup> grade enrollment during the 2003-04, 2004-05, 2005-06 and 2006-07 school years. Retrieved data for the eight semesters was used to establish the degree to which these demographic variables affect high school graduation rates in Mississippi. The demographical variables that were used in this study are high school student poverty level, overall student dual enrollment, male dual enrollment, female dual enrollment, Black dual enrollment, White dual enrollment, Native American dual enrollment, Asian dual enrollment, Hispanic dual enrollment, dual enrollment academic curriculum, and dual enrollment technical/vocational curriculum.

## **Demographic Variables**

Demographic variables for this study were chosen based on data availability and relevance to the study. The enrollment data pertaining to gender, ethnicity and curriculum allowed the researcher to examine the diversity of the students participating in dual enrollment and the possible effects of such diversity on graduation rates within the district. Additionally the researcher chose to examine the poverty level of public schools containing 11<sup>th</sup> and 12<sup>th</sup> grades within the community college district and their effect on graduation rates within the district. This allowed for a better understanding of the effects of poverty levels on graduation and the possible need for funding sources to allow students not financially able to take part in the dual enrollment program.

## **Data Procedure**

Two existing datasets were used by the researcher for this study. The researcher was provided dual enrollment data for the fall 2003, spring 2004, fall 2004, spring 2005, fall 2005, spring 2006, fall 2006 and spring 2007 semesters by personnel at the Mississippi State Board of Community and Junior Colleges (SBCJC). The second dataset was obtained through the Mississippi Assessment and Accountability Reporting System (MAARS), which is available on the Mississippi Department of Education's website ([www.mde.k12.ms.us](http://www.mde.k12.ms.us)). The following is an overview of the data contained within each source:

### **Dual Enrollment Data – SBCJC**

- Race by community college district (Black, American Indian, Asian, Hispanic, White, not reported)

- Gender by community college district (male, female, not reported)
- Curriculum by community college district (academic, vocational/technical)
- Residence by community college district (in-district, out-of-district, out-of-state)

#### Public School Data – MDE

- Race by grade (Black, Native American, Asian, Hispanic, White)
- Gender by grade (male, female)
- Poverty level by public school (number of students eligible for free lunch)
- Traditional graduation rate by public school district

Dual enrollment data obtained from SBCJC was grouped by community college districts and does not designate any individual, only the number of students represented by each group. Data from this source will not require any adaptations for this study.

Data collected from MDE’s MAARS system was grouped according to the school and/or school district. No individual students are identified, only the number or percentage of students for each group. For comparison purposes, data from each school and/or school district was grouped according to the community college district in which it is included. By grouping according to the community college district, the researcher was able to better establish the proportion of students from that district participating in dual enrollment and the poverty level of public school students in grades 11 and 12 within the district. These proportions were then analyzed to find correlation between demographics and graduation rates of the community college district.

## Data Analysis

The data were compiled and statistically analyzed using Microsoft's Excel and Statistical Package for the Social Sciences (SPSS). Data analysis included descriptive and correlated statistics. Each semester of dual enrollment data were examined separately to eliminate the duplication of students that may have participated in the program multiple semesters.

To examine Research Question 1, the researcher used descriptive statistics to determine the proportions of students that participate in Mississippi Community College Dual Enrollment Programs based on gender, ethnicity, curriculum and Mississippi 11<sup>th</sup> and 12<sup>th</sup> grade public school population. Research Question 2 was answered by calculating the overall high school graduation rate and poverty level for each Mississippi Community College District. Regression analysis addressed Research Questions 3 and 4 determining the degree to which the proportion of students in schools with grades 11 and 12 categorized as poverty level; and the gender, ethnicity, and curriculum of students participating in Mississippi Community College Dual Enrollment Programs affect the overall high school graduation rate for Mississippi Community College Districts.

## CHAPTER IV

### RESEARCH RESULTS AND FINDINGS

The purpose of this study was to determine the proportions of students participating in Mississippi Community College Dual Enrollment Programs based on various demographics. In addition, the degree to which Mississippi Community College Dual Enrollment demographics and poverty levels of Mississippi public schools containing 11<sup>th</sup> and 12<sup>th</sup> grade students affect high school graduation rates of Mississippi's Community College Districts was examined. The findings of this study may provide an impetus for Mississippi high schools and community colleges to establish specific target populations for dual enrollment programs in order to assist the State's initiative for increasing high school graduation rates.

This study focused on dual enrollment demographics of Mississippi's 15 Community Colleges and Mississippi high school graduation rates and demographics from fall 2003 through spring 2007. Data was analyzed by descriptive statistics and regression analysis using SPSS. The findings were used to answer the research questions posed and are presented in the remainder of this chapter.

## Research Questions

### *Research Question 1*

1. What proportions of students participate in Mississippi Community College Dual Enrollment Programs based on gender, ethnicity, curriculum and Mississippi 11<sup>th</sup> and 12<sup>th</sup> grade public school population?

The proportions of students participating in Mississippi Community College Dual Enrollment Programs are based upon the enrollment of 11<sup>th</sup> and 12<sup>th</sup> grade students within each Community College District. Public high school enrollments for months 1 and 5 of the school year were used for comparison to the community college fall and spring semesters, respectively.

To determine participation based on gender, the total number of male and female 11<sup>th</sup> and 12<sup>th</sup> grade students was calculated for each community college district semester based on data from months 1 and 5 of public school enrollment. Data from month 1 served as the total number of public school students eligible for participation in dual enrollment for the community college fall semester. Data from month 5 served as the total number of public school students available for participation in dual enrollment for the community college spring semester. Dividing the number of male students participating in dual enrollment courses by the number of male students available for participation in dual enrollment produces the total percentage of male public school students participating in Mississippi Community College Dual Enrollment programs (malepc). The same procedure for females produced a total percentage of female participation (femalepc).

The percentage of students participating based on ethnicity was calculated in the same manner as above, using public school data and dual enrollment data to determine a participation percentage for Asians (asianpc), Blacks (blackpc), Whites (whitepc), Hispanics (hisppc), and Native Americans (natampc).

To determine the participation based on curriculum, dual enrollment data was used to determine the percentage of dually enrolled students enrolled in academic or technical/vocational courses. Academicpc represents the percentage of dually enrolled students taking academic courses. Techpc represents the percentage of dually enrolled students taking technical/vocational courses.

Finally the total percentage of students participating in Mississippi Community College Dual Enrollment (totalpc) was calculated each semester by dividing the overall number of students participating in community college dual enrollment by the number of public school students available for participation in dual enrollment.

The results from the eight semesters examined (Table 4.1) indicate a total mean percentage of student participation for all Mississippi Community Colleges to be 2.68%. The mean percentage of male participation was 1.89%, while females participated at almost double the rate of males with a mean percentage of 3.35%. Asians and Whites had the highest participation rates (9.64% and 6.89% respectively); while Blacks had the lowest participation rate of .72%. Dual enrollment students enrolled in academic courses 89.83% of the time, versus a mean enrollment of 1.88% for technical/vocational courses. For complete descriptive statistics refer to Table 4.1.

Table 4.1

Descriptive Statistics for Mississippi Community College Dual Enrollment

	Minimum	Maximum	Mean	Std. Deviation
Asian Percentage	.00	100.00	9.64	22.14034
Black Percentage	.00	4.99	.72	.98439
White Percentage	.00	87.50	6.89	11.98741
Hispanic Percentage	.00	66.67	3.31	9.48294
Native American Percentage	.00	100.00	1.42	9.47618
Male Percentage	.00	12.59	1.89	2.22867
Female Percentage	.00	23.97	3.35	3.82469
Academic Percentage	.00	100.00	89.83	28.74266
Technical/Vocational Percentage	.00	100.00	1.88	9.31723
Total Percentage	.00	19.03	2.68	3.06900

Table 4.2 designates the rankings of Mississippi Community Colleges based on mean total percentage of student dual enrollment participation within each community college district. Meridian, Copiah-Lincoln and Southwest Community Colleges exceeded the participation levels of the remaining community colleges by at least double and in some cases the participation is tenfold with mean participation levels of 8.45%, 7.35%, and 6.62% respectively. One-third of the community colleges (East Central, Itawamba, Coahoma, Northwest and East Mississippi) failed to serve an average of at least 1% of the available public school populations.



Table 4.2

Ranking Based on Mean Total Percentage of 11<sup>th</sup> and 12<sup>th</sup> Grade Students Participating in Dual Enrollment Programs within Each Mississippi Community College District

Ranking	Community College	Mean Total Percentage
1	Meridian	8.45
2	Copiah-Lincoln	7.35
3	Southwest	6.62
4	Holmes	3.28
5	Mississippi Delta	2.25
6	Mississippi Gulf Coast	2.21
7	Jones	2.15
8	Northeast	1.71
9	Pearl River	1.68
10	Hinds	1.46
11	East Central	.98
12	Itawamba	.82
13	Coahoma	.60
14	Northwest	.44
15	East Mississippi	.12

The total mean percentage of students participating in dual enrollment at Coahoma Community College for semesters fall 2003 through spring 2007 was .60%. The overall male and female participation rate of public school students was an average of .32% and .85%, respectively. All students participating in dual enrollment at this college enrolled in academic courses. Only two ethnic groups were served through dual enrollment, Blacks and Whites. For the eight semesters examined, an average of .05% of the White population was served and an average of .66% of the Black population. For complete descriptive statistics refer to Table 4.3.

Table 4.3

## Descriptive Statistics for Coahoma Community College Dual Enrollment

	Minimum	Maximum	Mean	Std. Deviation
Asian Percentage	.00	.00	.0000	.00000
Black Percentage	.00	4.99	.66	1.75208
White Percentage	.00	.43	.056	.15305
Hispanic Percentage	.00	.00	.0000	.00000
Native American Percentage	.00	.00	.0000	.00000
Male Percentage	.00	2.54	.32	.89643
Female Percentage	.00	6.36	.85	2.22967
Academic Percentage	.00	100.00	50.0000	53.45225
Technical/Vocational Percentage	.00	.00	.0000	.00000
Total Percentage	.00	4.59	.60	1.61290

The total mean percentage of students participating in dual enrollment at Copiah-Lincoln Community College for semesters fall 2003 through spring 2007 was 7.35%. The overall male and female participation rate of public school students was an average of 5.76% and 8.77%, respectively. Students participating in dual enrollment at this college enrolled in academic courses an average of 97.90% of the time, while enrolling in technical/vocational courses 2.05% of the time. Asian and Hispanic ethnic groups had mean participation levels of 31.46% and 23.28%, respectively. For complete descriptive statistics refer to Table 4.4.

Table 4.4

## Descriptive Statistics for Copiah-Lincoln Community College Dual Enrollment

	Minimum	Maximum	Mean	Std. Deviation
Asian Percentage	.00	60.00	31.46	22.45697
Black Percentage	1.70	3.59	2.51	.62004
White Percentage	8.67	19.84	14.46	3.83742
Hispanic Percentage	12.50	50.00	23.28	12.64774
Native American Percentage	.00	.00	.0000	.00000
Male Percentage	2.60	8.25	5.76	1.88937
Female Percentage	6.59	12.00	8.77	1.78222
Academic Percentage	92.67	100.00	97.9	2.45482
Technical/Vocational Percentage	.00	7.33	2.05	2.45759
Total Percentage	4.69	10.16	7.35	1.77199

The total mean percentage of students participating in dual enrollment at East Central Community College for semesters fall 2003 through spring 2007 was .98%. The overall male and female participation rate of public school students was an average of .60% and 1.33%, respectively. Students participating in dual enrollment at this college enrolled in academic courses an average of 99.39% of the time, while enrolling in technical/vocational courses .61% of the time. All ethnic groups were represented in this dual enrollment program. Asians had the highest mean participation level of 3.071% and Blacks had the lowest with an average participation of .15%. For complete descriptive statistics refer to Table 4.5.

Table 4.5

Descriptive Statistics for East Central Community College Dual Enrollment

	Minimum	Maximum	Mean	Std. Deviation
Asian Percentage	.00	9.09	3.07	4.27061
Black Percentage	.00	.68	.15	.23868
White Percentage	.96	3.61	1.76	.80144
Hispanic Percentage	.00	5.88	2.11	2.52455
Native American Percentage	.00	3.23	.70	1.31721
Male Percentage	.29	1.13	.60	.26289
Female Percentage	.69	2.66	1.33	.66909
Academic Percentage	95.12	100.00	99.39	1.725
Technical/Vocational Percentage	.00	4.87	.61	1.722
Total Percentage	.50	1.92	.98	.44681

The total mean percentage of students participating in dual enrollment at East Mississippi Community College for semesters fall 2003 through spring 2007 was .12%. The overall male and female participation rate of public school students was an average of .08% and .15%, respectively. All students participating in dual enrollment at this college enrolled in academic courses. Hispanics and Native Americans were not represented in this program. For complete descriptive statistics refer to Table 4.6.

Table 4.6

## Descriptive Statistics for East Mississippi Community College Dual Enrollment

	Minimum	Maximum	Mean	Std. Deviation
Asian Percentage	.00	5.26	.66	1.86081
Black Percentage	.00	.15	.02	.05354
White Percentage	.00	1.34	.25	.50008
Hispanic Percentage	.00	.00	.0000	.00000
Native American Percentage	.00	.00	.0000	.00000
Male Percentage	.00	.64	.08	.22548
Female Percentage	.00	.61	.15	.27513
Academic Percentage	.00	100.00	25.0000	46.29100
Technical/Vocational Percentage	.00	.00	.0000	.00000
Total Percentage	.00	.62	.12	.23107

The total mean percentage of students participating in dual enrollment at Hinds Community College for semesters fall 2003 through spring 2007 was 1.46%. The overall male and female participation rate of public school students was an average of 1.02 % and 1.79%, respectively. Students participating in dual enrollment at this college enrolled in academic courses an average of 99.36% of the time, while enrolling in technical/vocational courses .64% of the time. Whites had the highest mean participation level of 3.43%. For complete descriptive statistics refer to Table 4.7.

Table 4.7

## Descriptive Statistics for Hinds Community College Dual Enrollment

	Minimum	Maximum	Mean	Std. Deviation
Asian Percentage	.00	1.92	.89	.95573
Black Percentage	.05	.34	.17	.08412
White Percentage	2.72	3.94	3.43	.36294
Hispanic Percentage	.00	8.70	2.61	3.66236
Native American Percentage	.00	.00	.0000	.00000
Male Percentage	.64	1.37	1.01	.23632
Female Percentage	1.57	2.02	1.79	.15214
Academic Percentage	96.94	100.00	99.36	1.08368
Technical/Vocational Percentage	.00	3.06	.64	1.08368
Total Percentage	1.18	1.73	1.46	.15487

The total mean percentage of students participating in dual enrollment at Holmes Community College for semesters fall 2003 through spring 2007 was 3.28%. The overall male and female participation rate of public school students was an average of 2.35 % and 4.08%, respectively. Students participating in dual enrollment at this college enrolled in academic courses an average of 99.61% of the time, while enrolling in technical/vocational courses .39% of the time. Whites had the highest mean participation level of 7.33%, while Blacks participated at a rate of .46%. For complete descriptive statistics refer to Table 4.8.

Table 4.8

Descriptive Statistics for Holmes Community College Dual Enrollment

	Minimum	Maximum	Mean	Std. Deviation
Asian Percentage	.00	6.45	1.89	2.77947
Black Percentage	.25	1.21	.46	.31490
White Percentage	4.98	9.28	7.33	1.40073
Hispanic Percentage	.00	18.75	3.73	7.20673
Native American Percentage	.00	.00	.0000	.00000
Male Percentage	1.65	3.03	2.35	.50862
Female Percentage	2.51	5.93	4.08	.98393
Academic Percentage	98.97	100.00	99.61	.42719
Technical/Vocational Percentage	.00	1.03	.39	.42719
Total Percentage	2.21	4.58	3.28	.71254

The total mean percentage of students participating in dual enrollment at Itawamba Community College for semesters fall 2003 through spring 2007 was .82%. The overall male and female participation rate of public school students was an average of .55 % and 1.07%, respectively. Students participating in dual enrollment at this college enrolled in academic courses an average of 92.59% of the time, while enrolling in technical/vocational courses 7.41% of the time. Blacks, Hispanics and Native Americans were not represented in this program. For complete descriptive statistics refer to Table 4.9.

Table 4.9

Descriptive Statistics for Itawamba Community College Dual Enrollment

	Minimum	Maximum	Mean	Std. Deviation
Asian Percentage	.00	6.25	1.39	2.25138
Black Percentage	.00	.00	.0000	.00000
White Percentage	.72	1.54	1.13	.30054
Hispanic Percentage	.00	.00	.0000	.00000
Native American Percentage	.00	.00	.0000	.00000
Male Percentage	.28	.77	.55	.19964
Female Percentage	.52	1.39	1.07	.31062
Academic Percentage	89.47	100.00	92.59	3.33065
Technical/Vocational Percentage	.00	10.53	7.41	3.33065
Total Percentage	.50	1.09	.82	.21023

The total mean percentage of students participating in dual enrollment at Jones County Junior College for semesters fall 2003 through spring 2007 was 2.15 %. The overall male and female participation rate of public school students was an average of 1.43 % and 2.79%, respectively. Students participating in dual enrollment at this college enrolled in academic courses an average of 98.99% of the time, while enrolling in technical/vocational courses 1.01% of the time. Whites and Asians had the highest level of participation with averages of 3.11% and 2.08% students enrolling. For complete descriptive statistics refer to Table 4.10.



Table 4.10

## Descriptive Statistics for Jones County Junior College Dual Enrollment

	Minimum	Maximum	Mean	Std. Deviation
Asian Percentage	.00	16.67	2.08	5.89256
Black Percentage	.21	2.15	.71	.60821
White Percentage	1.95	5.92	3.11	1.38593
Hispanic Percentage	.00	.00	.0000	.00000
Native American Percentage	.00	.00	.0000	.00000
Male Percentage	.91	2.03	1.43	.41922
Female Percentage	1.56	6.23	2.79	1.54641
Academic Percentage	96.08	100.00	98.99	1.50663
Technical/Vocational Percentage	.00	3.92	1.01	1.50663
Total Percentage	1.38	4.28	2.15	.99789

The total mean percentage of students participating in dual enrollment at Meridian Community College for semesters fall 2003 through spring 2007 was 8.45 %. The overall male and female participation rate of public school students was an average of 5.31 % and 10.97%, respectively. Students participating in dual enrollment at this college only enrolled in academic courses. Participation levels for Asians, Whites and Hispanics saw mean averages of 17.71%, 34.97% and 10.12%. These higher averages are in part due to larger than normal levels of participation for at least one semester. For example, for one semester Asians participated at a level of 75%, while Whites participated at a level of 87.5% and Hispanics 66.67%. For complete descriptive statistics refer to Table 4.11.

Table 4.11

## Descriptive Statistics for Meridian Community College Dual Enrollment

	Minimum	Maximum	Mean	Std. Deviation
Asian Percentage	.00	75.00	17.71	26.13970
Black Percentage	.35	2.56	1.42	.88855
White Percentage	5.44	87.50	34.97	28.86115
Hispanic Percentage	.00	66.67	10.12	23.38915
Native American Percentage	.00	.00	.0000	.00000
Male Percentage	1.54	12.59	5.31	3.60591
Female Percentage	3.60	23.97	10.97	7.42050
Academic Percentage	100.00	100.00	100.00	.00000
Technical/Vocational Percentage	.00	.00	.0000	.00000
Total Percentage	2.99	19.03	8.45	5.68950

The total mean percentage of students participating in dual enrollment Mississippi Delta Community College for semesters fall 2003 through spring 2007 was 2.25 %. The overall male and female participation rate of public school students was an average of 1.62 % and 2.80%, respectively. Students participating in dual enrollment at this college enrolled in academic courses an average of 87.5% of the time, while enrolling in technical/vocational courses 12.5% of the time. Whites and Asians had the highest level of participation with averages of 34.38% and 10.13% students enrolling. Blacks averaged 1.61% enrollment. For complete descriptive statistics refer to Table 4.12.

Table 4.12

## Descriptive Statistics for Mississippi Delta Community College Dual Enrollment

	Minimum	Maximum	Mean	Std. Deviation
Asian Percentage	.00	100.00	34.38	42.12545
Black Percentage	.16	3.58	1.61	1.32447
White Percentage	.40	25.00	10.13	9.23355
Hispanic Percentage	.00	.00	.0000	.00000
Native American Percentage	.00	.00	.0000	.00000
Male Percentage	.19	3.40	1.62	1.36868
Female Percentage	.21	5.53	2.80	2.23923
Academic Percentage	.00	100.00	87.50	35.35534
Technical/Vocational Percentage	.00	100.00	12.50	35.35534
Total Percentage	.20	4.43	2.25	1.80741

The total mean percentage of students participating in dual enrollment at Mississippi Gulf Coast Community College for semesters fall 2003 through spring 2007 was 2.21 %. The overall male and female participation rate of public school students was an average of 1.44 % and 2.91%, respectively. Students participating in dual enrollment at this college only enrolled in academic courses. Every ethnicity participated, ranging from Blacks at .94% to Native Americans at 5.53%. For complete descriptive statistics refer to Table 4.13.

Table 4.13

## Descriptive Statistics for Mississippi Gulf Coast Community College Dual Enrollment

	Minimum	Maximum	Mean	Std. Deviation
Asian Percentage	.90	2.68	1.7667	.68018
Black Percentage	.41	1.77	.9392	.45309
White Percentage	1.29	3.18	2.3860	.66284
Hispanic Percentage	.00	4.11	1.1843	1.44230
Native American Percentage	.00	14.29	5.5250	6.16394
Male Percentage	.77	2.00	1.4428	.35105
Female Percentage	1.77	3.64	2.9054	.69804
Academic Percentage	100.00	100.00	100.0000	.00000
Technical/Vocational Percentage	.00	.00	.0000	.00000
Total Percentage	1.30	2.84	2.2147	.51021

The total mean percentage of students participating in dual enrollment at Mississippi Delta Community College for semesters fall 2003 through spring 2007 was 1.71 %. The overall male and female participation rate of public school students was an average of 1.22 % and 2.18%, respectively. Students participating in dual enrollment at this college enrolled in academic courses an average of 98.75% of the time, while enrolling in technical/vocational courses 1.25% of the time. Native Americans had the highest level of participation with an average of 12.5% enrolling. Blacks averaged .26% enrollment, with the highest level for a semester at .54%. For complete descriptive statistics refer to Table 4.14.

Table 4.14

## Descriptive Statistics for Northeast Community College Dual Enrollment

	Minimum	Maximum	Mean	Std. Deviation
Asian Percentage	.00	.00	.0000	.00000
Black Percentage	.00	.54	.26	.19676
White Percentage	.87	3.17	1.95	.89849
Hispanic Percentage	.00	3.70	.46	1.30946
Native American Percentage	.00	100.00	12.50	35.35534
Male Percentage	.30	2.58	1.22	.81009
Female Percentage	1.35	3.51	2.18	.88497
Academic Percentage	95.65	100.00	98.75	1.92631
Technical/Vocational Percentage	.00	4.35	1.25	1.92631
Total Percentage	.86	2.71	1.71	.75295

The total mean percentage of students participating in dual enrollment at Northwest Community College for semesters fall 2003 through spring 2007 was .44%. The overall male and female participation rate of public school students was an average of .31% and .57%, respectively. Students participating in dual enrollment at this college enrolled in academic courses an average of 98.88% of the time, while enrolling in technical/vocational courses 1.12% of the time. Only two ethnic groups were served through dual enrollment, Blacks and Whites. For the eight semesters examined, an average of .82% of the White population was served and an average of .04% of the Black population. For complete descriptive statistics refer to Table 4.15.

Table 4.15

## Descriptive Statistics for Northwest Community College Dual Enrollment

	Minimum	Maximum	Mean	Std. Deviation
Asian Percentage	.00	.00	.0000	.00000
Black Percentage	.00	.14	.0426	.05405
White Percentage	.31	1.15	.8201	.26737
Hispanic Percentage	.00	.00	.0000	.00000
Native American Percentage	.00	.00	.0000	.00000
Male Percentage	.07	.52	.3065	.15906
Female Percentage	.25	.95	.5655	.20680
Academic Percentage	95.24	100.00	98.8839	2.07268
Technical/Vocational Percentage	.00	4.76	1.1161	2.07268
Total Percentage	.16	.67	.4443	.14635

The total mean percentage of students participating in dual enrollment at Pearl River Community College for semesters fall 2003 through spring 2007 was 1.68 %. The overall male and female participation rate of public school students was an average of 1.19 % and 2.12%, respectively. Students participating in dual enrollment at this college enrolled in academic courses an average of 99.07% of the time, while enrolling in technical/vocational courses .93% of the time. Every ethnicity participated, ranging from Blacks at .30% to Asians at 2.48%. For complete descriptive statistics refer to Table 4.16.

Table 4.16

## Descriptive Statistics for Pearl River Community College Dual Enrollment

	Minimum	Maximum	Mean	Std. Deviation
Asian Percentage	.00	3.85	2.48	1.57801
Black Percentage	.07	.69	.30	.22342
White Percentage	.65	3.91	2.32	.89554
Hispanic Percentage	.00	5.56	2.04	2.02761
Native American Percentage	.00	20.00	2.50	7.07107
Male Percentage	.35	1.93	1.19	.43083
Female Percentage	.60	3.76	2.12	.87905
Academic Percentage	97.53	100.00	99.07	1.05272
Technical/Vocational Percentage	.00	2.47	.93	1.05272
Total Percentage	.48	2.91	1.68	.66846

The total mean percentage of students participating in dual enrollment at Southwest Community College for semesters fall 2003 through spring 2007 was 6.62%. The overall male and female participation rate of public school students was an average of 5.20 % and 7.88%, respectively. Students participating in dual enrollment at this college enrolled in academic courses an average of 99.75% of the time, while enrolling in technical/vocational courses .25% of the time. Asian and White ethnic groups had the highest mean participation levels, 46.88% and 19.20%, respectively. The lowest participation level for Whites for any given semester was 7.29%. Blacks only participated at a rate of 1.61%. For complete descriptive statistics refer to Table 4.17.

Table 4.17

Descriptive Statistics for Southwest Community College Dual Enrollment

	Minimum	Maximum	Mean	Std. Deviation
Asian Percentage	.00	100.00	46.88	38.81619
Black Percentage	.51	2.80	1.61	.80795
White Percentage	7.29	24.46	19.20	5.66307
Hispanic Percentage	.00	33.33	4.17	11.78511
Native American Percentage	.00	.00	.0000	.00000
Male Percentage	1.19	7.77	5.209	2.09731
Female Percentage	3.54	10.23	7.88	2.22793
Academic Percentage	97.98	100.00	99.75	.71425
Technical/Vocational Percentage	.00	2.02	.25	.71425
Total Percentage	2.39	8.92	6.62	2.08825

*Research Question 2*

2. What is the cumulative high school graduation rate and poverty level for schools contained within each Mississippi Community College District?

Traditional graduation rates were ascertained from the Mississippi Assessment and Accountability Reporting System (MAARS). By determining the public schools contained within each community college district, an overall traditional graduation rate was calculated per community college district.

Poverty levels were also established through MAARS. Poverty levels are based upon the percentage of students eligible for free lunches under the National School Lunch Act. Only the poverty levels of schools containing 11<sup>th</sup> and 12<sup>th</sup> grades were included in the calculations. An overall poverty level was calculated for each community college district.



The mean traditional high school graduation rate for all public high schools from school year 2003-04 through 2006-07 was 85.53%. The lowest graduation rate represented was 79.03% and the highest 92.95%. The mean poverty level for public high schools from school year 2003-04 through 2006-07 was 58.21%. The lowest poverty level represented was 31.66% and the highest 89.81%. For complete descriptive statistics refer to Table 4.18.

Table 4.18

Descriptive Statistics for Mississippi Community College Districts by High School Graduation Rate and Student Poverty Level

	Minimum	Maximum	Mean	Std. Deviation
Graduation Rate	79.03	92.95	85.53	2.73652
Poverty Level	31.66	89.81	58.21	14.70

Table 4.19 designates the rankings of Mississippi Community Colleges based on mean total percentage of public high school graduation rates within each community college district. Northeast, Jones County, Copiah-Lincoln, Northwest, and Itawamba Community Colleges exceeded the mean graduation level of all public high schools within the state with mean rates of 91.23%, 87.52%, 87.50%, 86.6570 and 86.10% respectively. The remaining community college district public high school graduation rates ranged from 85.50% to 81.36%. For complete descriptive statistics refer to Table 4.19.

Table 4.19

Ranking Based on Mean Total Percentage of Public High School Graduation Rates within Each Mississippi Community College District

Ranking	Community College	Mean Total Percentage
1	Northeast	91.23
2	Jones County	87.52
3	Copiah-Lincoln	87.50
4	Northwest	86.66
5	Itawamba	86.10
6	Meridian	85.50
7	Holmes	85.35
8	Hinds	85.27
9	Mississippi Gulf Coast	85.14
10	Coahoma	84.92
11	East Mississippi	84.79
12	Pearl River	84.20
13	Mississippi Delta	83.95
14	Southwest	83.46
15	East Central	81.36

Table 4.20 designates the rankings of Mississippi Community Colleges based on mean total percentage of public high school poverty levels within each community college district. Five districts have poverty levels above the average for public high schools within Mississippi. They are as follows: Northwest at 59.99%, Holmes at 63.44%, Southwest at 71.41%, and Coahoma at 86.64% and Mississippi Delta at 88.72% poverty level. For complete descriptive statistics refer to Table 4.20.

Table 4.20

Ranking Based on Mean Total Percentage of Public High School Poverty Levels within Each Mississippi Community College District

Ranking	Community College	Mean Total Percentage
1	Mississippi Gulf Coast	39.43
2	Northeast	40.81
3	Itawamba	42.09
4	Hinds	46.33
5	Pearl River	54.73
6	Jones County	55.44
7	East Central	55.66
8	East Mississippi	55.91
9	Copiah-Lincoln	56.15
10	Meridian	56.42
11	Northwest	59.99
12	Holmes	63.44
13	Southwest	71.41
14	Coahoma	86.64
15	Mississippi Delta	88.72

The mean high school graduation rate for public high schools within the Coahoma Community College District from school year 2003-04 through 2006-07 was 84.92%. The lowest graduation rate represented was 81.06% and the highest 87.52%. The mean poverty level for public high schools within the Coahoma Community College District from school year 2003-04 through 2006-07 was 86.64%. The lowest poverty level represented was 85% and the highest 87.36%. For complete descriptive statistics refer to Table 4.21.

Table 4.21

Descriptive Statistics for Coahoma Community College District by High School Graduation Rate and Student Poverty Level

	Minimum	Maximum	Mean	Std. Deviation
Graduation Rate	81.06	87.52	84.92	2.64021
Poverty Level	85.00	87.36	86.64	1.02525

The mean high school graduation rate for public high schools within the Copiah-Lincoln Community College District from school year 2003-04 through 2006-07 was 87.50%. The lowest graduation rate represented was 86.24% and the highest 88.62%. The mean poverty level for public high schools within the Copiah-Lincoln Community College District from school year 2003-04 through 2006-07 was 56.15%. The lowest poverty level represented was 53.93% and the highest 57.43%. For complete descriptive statistics refer to Table 4.22.

Table 4.22

Descriptive Statistics for Copiah-Lincoln Community College District by High School Graduation Rate and Student Poverty Level

	Minimum	Maximum	Mean	Std. Deviation
Graduation Rate	86.24	88.62	87.50	.95003
Poverty Level	53.93	57.43	56.15	1.43131

The mean high school graduation rate for public high schools within the East Central Community College District from school year 2003-04 through 2006-07 was 81.36%. The lowest graduation rate represented was 79.03% and the highest 83.10%. The mean poverty level for public high schools within the East Central Community College

District from school year 2003-04 through 2006-07 was 55.66%. The lowest poverty level represented was 55.10% and the highest 55.97%. For complete descriptive statistics refer to Table 4.23.

Table 4.23

Descriptive Statistics for East Central Community College District by High School Graduation Rate and Student Poverty Level

	Minimum	Maximum	Mean	Std. Deviation
Graduation Rate	79.03	83.10	81.36	1.62088
Poverty Level	55.10	55.97	55.66	.36605

The mean high school graduation rate for public high schools within the East Mississippi Community College District from school year 2003-04 through 2006-07 was 84.79%. The lowest graduation rate represented was 81.61% and the highest 87.72%. The mean poverty level for public high schools within the East Mississippi Community College District from school year 2003-04 through 2006-07 was 55.91%. The lowest poverty level represented was 51.96% and the highest 58.86%. For complete descriptive statistics refer to Table 4.24.

Table 4.24

Descriptive Statistics for East Mississippi Community College District by High School Graduation Rate and Student Poverty Level

	Minimum	Maximum	Mean	Std. Deviation
Graduation Rate	81.61	87.72	84.79	2.56289
Poverty Level	51.96	58.86	55.91	2.84145

The mean high school graduation rate for public high schools within the Hinds Community College District from school year 2003-04 through 2006-07 was 85.27%. The lowest graduation rate represented was 82.19% and the highest 87.68%. The mean poverty level for public high schools within the Hinds Community College District from school year 2003-04 through 2006-07 was 46.33%. The lowest poverty level represented was 41.8% and the highest 50.35%. For complete descriptive statistics refer to Table 4.25.

Table 4.25

Descriptive Statistics for Hinds Community College District by High School Graduation Rate and Student Poverty Level

	Minimum	Maximum	Mean	Std. Deviation
Graduation Rate	82.19	87.68	85.27	2.11054
Poverty Level	41.80	50.35	46.33	3.76400

The mean high school graduation rate for public high schools within the Holmes Community College District from school year 2003-04 through 2006-07 was 85.35%. The lowest graduation rate represented was 84.24% and the highest 86.39%. The mean poverty level for public high schools within the Holmes Community College District

from school year 2003-04 through 2006-07 was 63.44%. The lowest poverty level represented was 62.65% and the highest 65.2%. For complete descriptive statistics refer to Table 4.26.

Table 4.26

Descriptive Statistics for Holmes Community College District by High School Graduation Rate and Student Poverty Level

	Minimum	Maximum	Mean	Std. Deviation
Graduation Rate	84.24	86.39	85.35	.79381
Poverty Level	62.65	65.20	63.44	1.10547

The mean high school graduation rate for public high schools within the Itawamba Community College District from school year 2003-04 through 2006-07 was 86.10%. The lowest graduation rate represented was 84.18% and the highest 87.77%. The mean poverty level for public high schools within the Itawamba Community College District from school year 2003-04 through 2006-07 was 42.0858%. The lowest poverty level represented was 40.86% and the highest 43.58%. For complete descriptive statistics refer to Table 4.27.

Table 4.27

Descriptive Statistics for Itawamba Community College District by High School Graduation Rate and Student Poverty Level

	Minimum	Maximum	Mean	Std. Deviation
Graduation Rate	84.18	87.77	86.10	1.59599
Poverty Level	40.86	43.58	42.09	1.10094

The mean high school graduation rate for public high schools within the Jones County Junior College District from school year 2003-04 through 2006-07 was 87.52%. The lowest graduation rate represented was 85.27% and the highest 88.87%. The mean poverty level for public high schools within the Jones County Junior College District from school year 2003-04 through 2006-07 was 55.44%. The lowest poverty level represented was 52.95% and the highest 58.22%. For complete descriptive statistics refer to Table 4.28.

Table 4.28

Descriptive Statistics for Jones County Junior College District by High School Graduation Rate and Student Poverty Level

	Minimum	Maximum	Mean	Std. Deviation
Graduation Rate	85.27	88.87	87.52	1.48573
Poverty Level	52.95	58.22	55.44	2.06603

The mean high school graduation rate for public high schools within the Meridian Community College District from school year 2003-04 through 2006-07 was 85.50%. The lowest graduation rate represented was 81.65% and the highest 89.79%. The mean poverty level for public high schools within the Meridian Community College District



from school year 2003-04 through 2006-07 was 56.42%. The lowest poverty level represented was 51.29% and the highest 61.45%. For complete descriptive statistics refer to Table 4.29.

Table 4.29

Descriptive Statistics for Meridian Community College District by High School Graduation Rate and Student Poverty Level

	Minimum	Maximum	Mean	Std. Deviation
Graduation Rate	81.65	89.79	85.50	3.30212
Poverty Level	51.29	61.45	56.42	4.05220

The mean high school graduation rate for public high schools within the Mississippi Delta Community College District from school year 2003-04 through 2006-07 was 83.95%. The lowest graduation rate represented was 82.42% and the highest 84.94%. The mean poverty level for public high schools within the Mississippi Delta Community College District from school year 2003-04 through 2006-07 was 88.72%. The lowest poverty level represented was 87.79% and the highest 89.81%. For complete descriptive statistics refer to Table 4.30.

Table 4.30

Descriptive Statistics for Mississippi Delta Community College District by High School Graduation Rate and Student Poverty Level

	Minimum	Maximum	Mean	Std. Deviation
Graduation Rate	82.42	84.94	83.95	1.12526
Poverty Level	87.79	89.81	88.72	.85177

The mean high school graduation rate for public high schools within the Mississippi Gulf Coast Community College District from school year 2003-04 through 2006-07 was 85.14%. The lowest graduation rate represented was 84.08% and the highest 85.56%. The mean poverty level for public high schools within the Mississippi Gulf Coast Community College District from school year 2003-04 through 2006-07 was 39.43%. The lowest poverty level represented was 31.66% and the highest 53.44%. For complete descriptive statistics refer to Table 4.31.

Table 4.31

Descriptive Statistics for Mississippi Gulf Coast Community College District by High School Graduation Rate and Student Poverty Level

	Minimum	Maximum	Mean	Std. Deviation
Graduation Rate	84.08	85.56	85.14	.65808
Poverty Level	31.66	53.44	39.43	9.01551

The mean high school graduation rate for public high schools within the Northeast Community College District from school year 2003-04 through 2006-07 was 91.23%. The lowest graduation rate represented was 90.02% and the highest 92.95%. The mean poverty level for public high schools within the Northeast Community College District from school year 2003-04 through 2006-07 was 40.81%. The lowest poverty level represented was 38.22% and the highest 43.10%. For complete descriptive statistics refer to Table 4.32.

Table 4.32

Descriptive Statistics for Northeast Community College District by High School Graduation Rate and Student Poverty Level

	Minimum	Maximum	Mean	Std. Deviation
Graduation Rate	90.02	92.95	91.23	1.27045
Poverty Level	38.22	43.10	40.81	1.89427

The mean high school graduation rate for public high schools within the Northwest Community College District from school year 2003-04 through 2006-07 was 86.66%. The lowest graduation rate represented was 83.92% and the highest 88.41%. The mean poverty level for public high schools within the Northwest Community College District from school year 2003-04 through 2006-07 was 59.99%. The lowest poverty level represented was 55.67% and the highest 67.09%. For complete descriptive statistics refer to Table 4.33.

Table 4.33

Descriptive Statistics for Northwest Community College District by High School Graduation Rate and Student Poverty Level

	Minimum	Maximum	Mean	Std. Deviation
Graduation Rate	83.92	88.41	86.66	1.85450
Poverty Level	55.67	67.09	59.99	4.57545

The mean high school graduation rate for public high schools within the Pearl River Community College District from school year 2003-04 through 2006-07 was 84.20%. The lowest graduation rate represented was 82.29% and the highest 86.64%. The mean poverty level for public high schools within the Pearl River Community College

District from school year 2003-04 through 2006-07 was 54.73%. The lowest poverty level represented was 49.14% and the highest 63.20%. For complete descriptive statistics refer to Table 4.34.

Table 4.34

Descriptive Statistics for Pearl River Community College District by High School Graduation Rate and Student Poverty Level

	Minimum	Maximum	Mean	Std. Deviation
Graduation Rate	82.29	86.64	84.20	1.71415
Poverty Level	49.14	63.20	54.73	5.83675

The mean high school graduation rate for public high schools within the Southwest Community College District from school year 2003-04 through 2006-07 was 83.46%. The lowest graduation rate represented was 82.33% and the highest 84.80%. The mean poverty level for public high schools within the Southwest Community College District from school year 2003-04 through 2006-07 was 71.41%. The lowest poverty level represented was 65.92% and the highest 74.04%. For complete descriptive statistics refer to Table 4.35.

Table 4.35

Descriptive Statistics for Southwest Community College District by High School Graduation Rate and Student Poverty Level

	Minimum	Maximum	Mean	Std. Deviation
Graduation Rate	82.33	84.80	83.46	.94179
Poverty Level	65.92	74.04	71.41	3.43273

### *Research Question 3*

3. To what degree do gender, ethnicity, and curriculum of students participating in Mississippi Community College Dual Enrollment Programs affect the overall high school graduation rate for Mississippi Community College Districts?

Regression analysis, shown in Table 4.36, was performed to determine if the Mississippi Community College dual enrollment variables of gender (male, female), ethnicity (Asian, Black, White, Hispanic, Native American), and curriculum (academic, technical) impact the traditional graduation rate of Mississippi public high schools. The overall relationship between the nine predictors and graduation rates is reported as 32.4% ( $R=.324$ ). When this multiple correlation ( $R$ ) is squared, we find that 10.5% of the variance in graduation rate can be explained using these predictors. The results of the F-test reveal a statistically non-significant value F value ( $F(9,110)=1.435, p=.182$ ). Based on the results of the regression, the variables female percentage, Native American percentage, technical/vocational percentage, academic percentage, Hispanic percentage, Asian percentage, Black percentage, male percentage, and White percentage do not contribute significantly to the prediction of graduation rate.

Table 4.36

Regression Output for the Graduation Rate Based on Gender, Ethnicity, and Curriculum of Dual Enrollment Students

**Model Summary**

		R	R Square	Adjusted R Square	Std. Error of the Estimate
Model	1	.324(1)	.105	.032	2.69262

**ANOVA(2)**

			Sum of Squares	df	Mean Square	F	Sig.
Model	1	Regression	93.615	9	10.402	1.435	.182(1)
		Residual	797.522	110	7.250		
		Total	891.136	119			

**Coefficients(1)**

			Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta	B	Std. Error
Model	1	(Constant)	85.556	.851		100.479	.000
		techpc	.003	.029	.009	.095	.924
		whitepc	-.036	.072	-.158	-.500	.618
		natampc	.050	.027	.173	1.877	.063
		academicpc	-.007	.009	-.075	-.759	.450
		hisppc	.033	.032	.113	1.006	.317
		blackpc	-.118	.480	-.042	-.245	.807
		asianpc	-.024	.017	-.198	-1.473	.143
		malepc	.124	.380	.101	.326	.745
		femalepc	.230	.336	.321	.684	.495

*Note:*

MODEL SUMMARY:1.00 Predictors: (Constant), femalepc, natampc, techpc, academicpc, hisppc, asianpc, blackpc, malepc, whitepc

ANOVA (2): 1.00 Predictors: (Constant), femalepc, natampc, techpc, academicpc, hisppc, asianpc, blackpc, malepc, whitepc

2.00 Dependent Variable: graduationrate

#### *Research Question 4*

4. To what extent does the proportion of 11<sup>th</sup> and 12<sup>th</sup> grade public school students categorized as poverty level affect the overall high school graduation rate for Mississippi Community College Districts?

Regression analysis, shown in Table 4.37, was performed to determine if the poverty levels of Mississippi 11<sup>th</sup> and 12<sup>th</sup> grade students impact the high school graduation rate of Mississippi Community College Districts. The overall relationship between the predictor and graduation rates is reported as 22.9% ( $R=.229$ ). When this multiple correlation ( $R$ ) is squared, we find that 5.3% of the variance in graduation rate can be explained using this predictor. The results of the F-test reveal a statistically significant value ( $F(1,118)=6.542, p=.012$ ). Based on the results of the regression, the variable poverty level is contributing significantly ( $p < .05$ ) to the prediction of graduation rate.

Table 4.37

Regression Output for the Graduation Rate Based on Poverty Level

**Model Summary**

		R	R Square	Adjusted R Square	Std. Error of the Estimate
Model	1	.229(1)	.053	.044	2.67495

**ANOVA(2)**

			Sum of Squares	df	Mean Square	F	Sig.
Model	1	Regression	46.807	1	46.807	6.542	.012(1)
		Residual	844.330	118	7.155		
		Total	891.136	119			

**Coefficients(1)**

			Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta	B	Std. Error
Model	1	(Constant)	88.012	1.001		87.912	.000
		povertylevel	-.043	.017	-.229	-2.558	.012

*Note:*

MODEL SUMMARY: 1.00 Predictors: (Constant), povertylevel

COEFFICIENTS (1): 1.00 Predictors: (Constant), povertylevel

2.00 Dependent Variable: graduationrate



CHAPTER V  
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

**Summary**

In the economic downturn America and the World are currently facing, it is more important than ever for young people to graduate with a high school diploma to help insure a better life for themselves and their families. However, the reality of the situation is that 1 of every 4 students will not receive a high school diploma, and closer to one of every 2 Blacks, Hispanics and Native Americans.

While educational reform was initiated more than 25 years ago by Ronald Reagan's National Commission on Excellence in Education's report titled *A Nation at Risk: The Imperative for Education Reform*, Mississippi is still addressing some of the same issues in the Mississippi Department of Education's 2007 *Mississippi Dropout Prevention Plan*. The moral of the story is the traditional methods of reform, such as rigorous testing, have not been the "fix-all" solution.

The Southern Regional Education Board encourages the creation of partnerships between public school districts and community and technical colleges to help improve high school graduation rates and student achievement. Due to their open-access mission (Vaughan, 2000) and similarities to the governing bodies of the K-12 schools,

community colleges are well suited as facilitators to K-12 educational reform in their communities (Boswell, 2001b, Orr & Bragg, 2001).

Mississippi Community Colleges enter this role as facilitators with already existing programs connecting the two sectors, such as dual enrollment. Preliminary research indicates a positive relationship between dually enrolled students and high school graduation, which serves as a good starting point. Additional data is needed on student demographics and achievement to supplement the tentative positive outcomes already reported (Hoffman, 2003). This leads to the purpose of this study, to determine the proportions of students participating in Mississippi Community College Dual Enrollment Programs based on various demographics. Additionally, the degree to which Mississippi Community College Dual Enrollment demographics and poverty levels of Mississippi public schools containing 11<sup>th</sup> and 12<sup>th</sup> grade students affect high school graduation rates of Mississippi's Community College Districts was concluded.

The demographic variables selected for the study included high school student poverty level, overall student dual enrollment, male dual enrollment, female dual enrollment, Black dual enrollment, White dual enrollment, Native American dual enrollment, Asian dual enrollment, Hispanic dual enrollment, dual enrollment academic curriculum, and dual enrollment technical/vocational curriculum. These variables were chosen based on data availability and relevance to the study. The enrollment data pertaining to gender, ethnicity and curriculum allowed the researcher to examine the diversity of the students participating in dual enrollment and the possible effects of such diversity on graduation rates within the district. Furthermore the researcher chose to examine the poverty level of public schools containing 11<sup>th</sup> and 12<sup>th</sup> grades within the

community college district and their effect on graduation rates within the district. This allowed for a better understanding of the effects of poverty levels on graduation and the possible need for funding sources to allow students not financially able to take part in the dual enrollment program.

Descriptive statistics in chapter four indicate a low overall percentage of students participating in dual enrollment and the participation percentages are disproportioned between community college districts. It was also established through regression analysis that the variables female percentage, Native American percentage, technical/vocational percentage, academic percentage, Hispanic percentage, Asian percentage, Black percentage, male percentage, and White percentage do not contribute significantly to the prediction of graduation rate. However, poverty levels did show a significant relationship to graduation rates.

### **Conclusions**

1. This study found that 12 (80%) of Mississippi's community college districts serviced below 3.5% of the available public school population through dual enrollment. Of this 80%, 33.3% or 5 college districts had participation levels below 1%.
2. Females participated in dual enrollment at higher levels than males in every Mississippi Community College District.
3. Asians and Whites had the highest dual enrollment participation levels of all the ethnic groups. Of Mississippi's fifteen community colleges, six demonstrate Asians participating at a higher mean than the other ethnicities. Five community

colleges had the highest participation from Whites, while three indicated Native Americans as the highest and one indicated Blacks. Hispanics did not represent the highest level of participation in any district.

4. Whites were served by dual enrollment from all of Mississippi's community college districts. Seven of the community college districts failed to serve their Hispanic population through dual enrollment and another seven did not serve the Native American population. Despite the fact Asians had the highest participation level; three college districts did not provide service to this group. Lastly, one community college district did not have any participation from its Black population.
5. This study found that students that participated in dual enrollment enrolled in academic courses at a higher rate than technical/vocational courses in every Mississippi Community College District.
6. Public high school graduation rates for Mississippi Community College Districts ranged from 79.03% to 92.95% with a mean of 85.53%. Only five community college districts had mean graduation rates above the overall mean for the State.
7. Poverty levels of schools within Mississippi Community College Districts ranged from 31.66% to 89.81% with a mean of 58.21%. Five community college districts had poverty levels above the state mean and two had levels above 80%.
8. Dual enrollment participation levels of males, females, Asians, Blacks, Whites, Hispanics, and Native Americans did not significantly contribute to the prediction of high school graduation rates. It was also determined that the curriculum of

dually enrolled students (i.e. academic, technical/vocational) did not contribute to the prediction of graduation rate.

9. The poverty level of public schools was a significant indicator of high school graduation rate. Higher poverty levels is a significant predictor of lower high school graduation rates.

### **Recommendations**

1. While this study encompassed the entire population of dual enrollment programs in Mississippi Community Colleges more data needs to be collected. The researcher recommends the collection of longitudinal data on individual dual enrollment students. This would enable future research to explore effects of an individual's motivation levels, high school GPA, socio-economic status, etc. on his or her achievement in high school, dual enrollment courses, and college.
2. This study did not take into account any of the program factors that can vary within each community college. The researcher recommends further research to examine the factors that may inhibit or promote levels of dual enrollment participation within each community college district.
3. The researcher recommends program goals and a target population to be developed at the statewide level for Mississippi Community College Dual Enrollment Programs. The establishment of goals and a target population will reduce the risk of unintended consequences and reduce the criticisms of such programs. The creation of these allow for a more focused effort at student recruitment.

4. This study found higher levels of dual enrollment participation concentrated in only a few public schools and community college districts. The researcher recommends an increased level of awareness of such programs to be made to all public school administrators and students.
5. The literature review revealed that Mississippi Community Colleges require a higher GPA for admittance into a dual enrollment program than Mississippi universities. The researcher recommends less stringent admission requirements to incorporate students who may have an inadequate high school GPA, but would thrive in a college environment due to academic challenge, family obligations, work schedule, etc.
6. This study found that higher poverty levels are significantly related to lower high school graduation. The researcher recommends that resources be provided to allow students financially disadvantaged to participate in dual enrollment.
7. Results of the study indicate a disproportioned number of students participating in academic dual enrollment courses. The researcher recommends college administrators to examine the need of offering more technical/vocational courses based on the intended outcomes of the program.

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APPENDIX A  
MISSISSIPPI COHORT DROPOUT, COMPLETION AND GRADUATION RATES  
BY PUBLIC SCHOOL DISTRICT

Appendix A.1: Estimates of Mississippi Public School Four Year Dropout, Completion and Graduation Rates by School District, for the Full Cohort of Students Who Began

Ninth Grade During the 2001-02 School Year\*

CODE	DISTRICT NAME	TOTAL COHORT N-COUNT	4-YEAR DROPOUT RATE ESTIMATE	4-YEAR COMPLETION RATE ESTIMATE	4-YEAR GRADUATION RATE ESTIMATE
0	Mississippi	51391	26.6	67	60.8
4820	Aberdeen	215	32.5	59.6	51.6
200	Alcorn	357	18.6	79.4	69.7
300	Amite County	188	43	46.4	43
4821	Amory	195	28.4	67.5	60.8
400	Attala County	109	17	78.2	77
5920	Baldwyn	112	25.6	72.8	60.5
2320	Bay St. Louis	292	24.3	67.1	62.6
612	Benoit	25	17.4	55	50
500	Benton County	131	22.2	72.8	69.3
2420	Biloxi	671	17.8	77.5	66.4
5921	Booneville	104	6.5	92.3	92.3
4320	Brookhaven	338	16.6	75.5	70.5
700	Calhoun County	263	17.8	76.5	68.1
4520	Canton	497	61.7	29.1	27.3
800	Carroll County	140	31.1	65.8	59.8
900	Chickasaw County	53	11.1	79.1	62.8
1000	Choctaw County	159	31.4	66.9	64.7
1100	Claiborne County	190	8	88.2	85.3
1420	Clarksdale	267	20.1	75	68
614	Cleveland	376	24.3	69.1	67
2521	Clinton	451	23.9	74.2	73.2
1402	Coahoma AHS	144	45.6	44.9	39
1400	Coahoma County	142	37.1	52.5	51.5
8111	Coffeeville	94	31.3	62.7	45.8
4820	Columbia	208	4.3	91.4	82.8
4420	Columbus	524	26.3	66.2	63.6
1500	Copiah County	349	28.8	67.3	59.9
220	Corinth	179	23.5	76.5	67.8
1600	Covington County	375	12.8	81.4	66.8
1700	DeSoto County	2550	12.5	82.5	78.9
6720	Drew	88	24.7	68.9	64.9
2620	Durant	75	18.8	68.8	62.5
3111	East Jasper	94	4.5	87.5	78.4
6811	East Tallahatch	149	31.7	65.6	60
1211	Enterprise	77	3.6	96.2	92.5
6220	Forest City	132	40.5	56.5	45.2
1802	Forrest AHS	245	30.3	58	53.1
1800	Forrest County	79	27.7	70.8	64.6
1900	Franklin County	170	12.1	84.2	61.2
2000	George County	398	32.1	62.4	56.9
2100	Greene County	194	26.3	73.1	64.9
7620	Greenville	709	25.2	65	58.5
4220	Greenwood	306	35.2	55.6	54.5
2220	Grenada	440	35.7	55.8	47.5
2421	Gulfport	703	22.2	71.2	63.2
2300	Hancock County	466	24.9	66.2	57.6
2400	Harrison County	1441	28.4	63.9	54.5
1820	Hattiesburg	481	30	59.1	53.8
1520	Hazlehurst City	144	34.1	58.2	53.7
2502	Hinds AHS	166	43.9	48	45.9
2500	Hinds County	582	20.5	74.6	68.8
7611	Hollandale	87	41.9	56.8	54.1
4720	Holly Springs	203	29.9	54.9	52.2

\*The Clay County School District enrolls only K-6 students.



CODE	DISTRICT NAME	TOTAL COHORT N-COUNT	4-YEAR DROPOUT RATE ESTIMATE	4-YEAR COMPLETION RATE ESTIMATE	4-YEAR GRADUATION RATE ESTIMATE
2600	Holmes County	368	22	55.8	48.8
920	Houston Separate	212	40.6	56.6	48.6
2700	Humphreys County	200	27	65.3	58.4
6721	Indianola	367	33.3	56.2	49.2
2900	Itawamba County	338	34.8	60.7	58.4
3000	Jackson County	972	32	62.2	59.2
2520	Jackson Public	3487	32.4	55.6	50.5
3300	Jeff. Davis County	246	29	65.7	61.1
3200	Jefferson County	132	18.5	73.4	69.4
3400	Jones County	770	25.1	71.5	69.1
3500	Kemper County	93	26.4	58.9	54.4
420	Kosciusko	210	8.1	87.8	73
3600	Lafayette County	244	16	78.7	62.8
3700	Lamar County	737	19.4	77.3	75.5
3800	Lauderdale County	759	26.1	68.5	61.6
3420	Laurel	323	25.6	70.2	52.2
3900	Lawrence County	192	21.2	73.6	71.2
4000	Leake County	309	34.3	58.2	56
4100	Lee County	650	26.5	66.4	57
4200	Leflore County	323	36.6	55.4	47
7612	Leland	130	22.5	72.7	67
4300	Lincoln County	249	23.6	74	72.6
2422	Long Beach	417	23.2	70.8	66.5
8020	Louisville	336	44.9	47.3	44.3
4400	Lowndes County	595	24	71.7	65.1
3711	Lumberton	100	28.2	67.6	62
4500	Madison	934	15	82.5	78.7
4600	Marion County	294	19	67.8	61.7
4700	Marshall County	393	34.2	57.3	53.6
5720	McComb	326	30.3	65.8	58.1
3820	Meridian	702	36.4	54.3	48.9
4800	Monroe County	247	21.9	76.1	68.5
4900	Montgomery County	55	48	44.4	37.8
3020	Moss Point	442	38	52.5	47
616	Mound Bayou	87	21.7	73.9	66.7
130	Natchez-Adams	576	32.4	59.6	54.9
5000	Neshoba County	264	29.4	65.1	58.3
4111	Nettleton	120	20.6	76.6	57.9
7320	New Albany	174	15.9	80.9	73.3
5130	Newton City	98	39.8	50	47.6
5100	Newton County	178	23.4	73	67.4
613	North Bolivar	112	33	62.2	42.9
5411	North Panola	199	38.8	55.4	49.5
5711	North Pike	178	29.7	67.7	64.6
7011	North Tippah	128	14.6	82.4	73.5
5200	Noxubee County	239	34.4	60.8	55.5
3021	Ocean Springs	595	13.3	81.5	79.3
921	Okolona Separate	98	45.1	47.8	45.6
5300	Oktibbeha County	120	32.7	57.7	43.3
3620	Oxford	293	18.8	78.6	76.2
3022	Pascagoula	785	29.6	65.1	58.4
2423	Pass Christian	226	5.7	79.3	69.3
6120	Pearl	357	30.6	66.6	62.1
5500	Pearl River	298	26.9	70.5	51

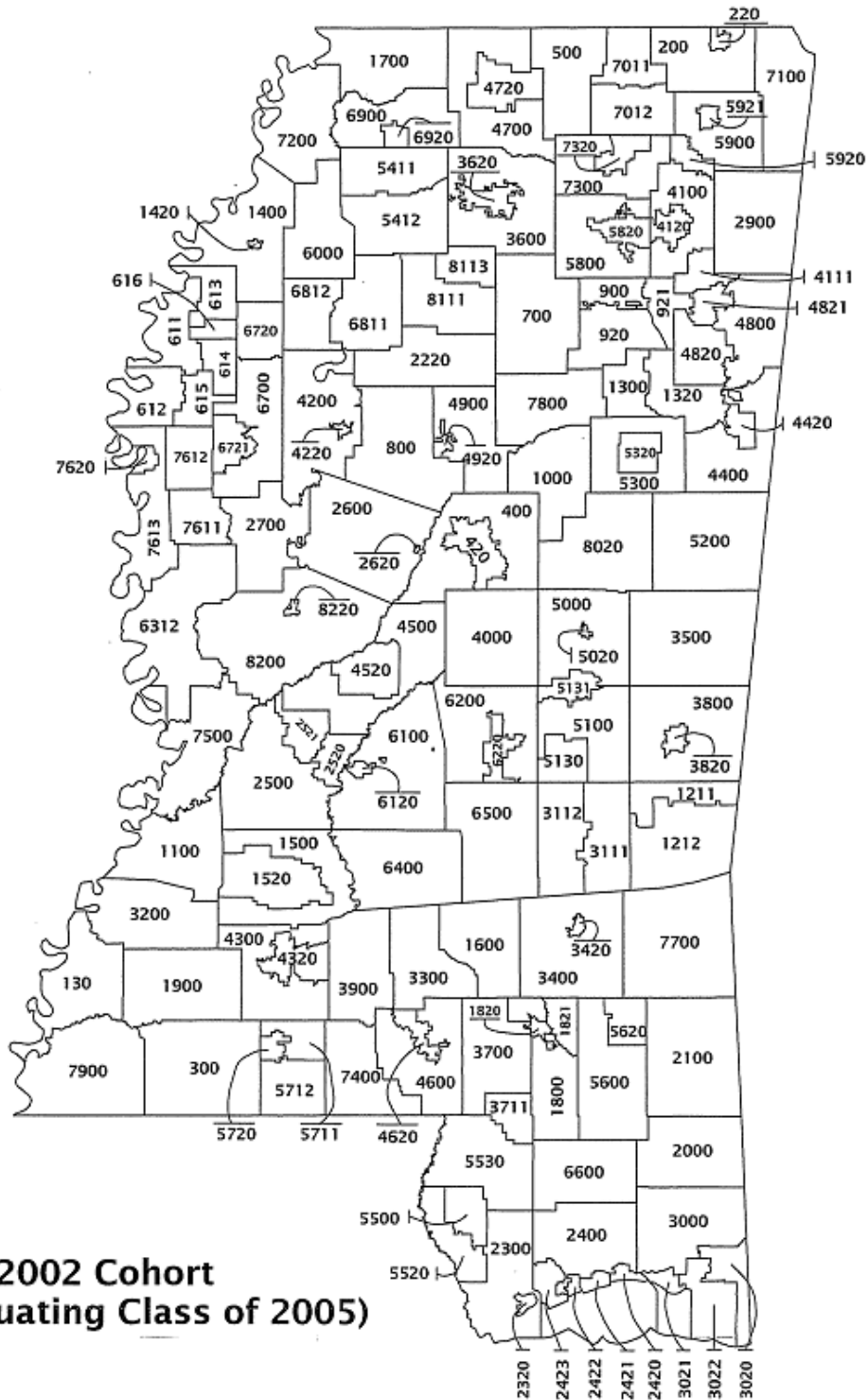


<u>CODE</u>	<u>DISTRICT NAME</u>	<u>TOTAL COHORT N-COUNT</u>	<u>4-YEAR DROPOUT RATE ESTIMATE</u>	<u>4-YEAR COMPLETION RATE ESTIMATE</u>	<u>4-YEAR GRADUATION RATE ESTIMATE</u>
5600	Perry County	125	7.6	89	76.9
1821	Petal	327	26.5	69.2	67.3
5020	Philadelphia	95	25.6	74.1	69.4
5520	Picayune	447	30.6	64.7	53.6
5820	Pontotoc City	179	15.1	82.1	69.5
5800	Pontotoc County	322	5.9	92.3	75.2
5530	Poplarville	192	20.5	74.8	66.9
5900	Prentiss County	227	11.4	87.2	86.6
1212	Quitman	264	25.7	67.4	60.1
6000	Quitman County	128	26.1	67.8	51.3
6100	Rankin County	1586	17.3	79.7	78.3
5620	Richton	97	32.9	62.2	59.8
6200	Scott County	387	29.7	67.1	59.2
6920	Senatobia	190	12.7	84.5	81.7
615	Shaw	76	16.2	79.4	67.6
6400	Simpson County	361	21.9	72.7	66
6500	Smith County	340	22.5	72.3	63.3
6312	South Delta	130	39.8	48	44.7
5412	South Panola	442	18.8	76.1	66.2
5712	South Pike	225	39.1	53.5	49
7012	South Tippah	258	21.6	76.4	72.6
5320	Starkville	450	36.1	59.4	58.2
6600	Stone County	293	14.8	82.1	77.7
6700	Sunflower County	104	34.5	61.9	52.4
6900	Tate County	332	26.6	64.5	56.2
7100	Tishomingo County	312	13.8	86.1	73
7200	Tunica County	201	31.7	60.6	56.7
4120	Tupelo	697	27.9	67	56.7
5131	Union City	77	23.4	71.9	64.1
7300	Union County	227	8.7	91.3	80.2
7500	Vicksburg-Warre	920	37.9	52.7	49.5
7400	Walthall County	275	15.3	75.8	67.7
8113	Water Valley	139	32	62.8	47.9
7700	Wayne County	489	29.9	64.4	54.1
7800	Webster County	191	20.5	78.3	66.3
611	West Bolivar	130	30.8	60.2	55.8
3112	West Jasper	159	31	64.1	50.7
1320	West Point	428	41.8	50.7	47.2
6812	West Tallahatch	122	22.3	66	60.2
7613	Western Line	271	32.1	60.4	58.9
7900	Wilkinson County	169	31.4	56.7	48.4
4920	Winona	154	19.3	71.3	71.3
8220	Yazoo City	242	38.2	55.6	50.7
8200	Yazoo County	205	29.3	66.3	61.5

Source: Mississippi Department of Education, Estimates of 4-Year Dropout, Completion, and Graduation Rates for the Full Cohort of Students Beginning with Ninth Graders in 2001/2002

Appendix A.2 : Maps Showing Mississippi Public School District Dropout Completion, and Graduation Rates for the Full Cohort of Students Who Began the Ninth Grade During the 2001-2002 Year, by Rate Categories

## Mississippi Public School Districts with Identification Number



**2001-2002 Cohort  
(Graduating Class of 2005)**

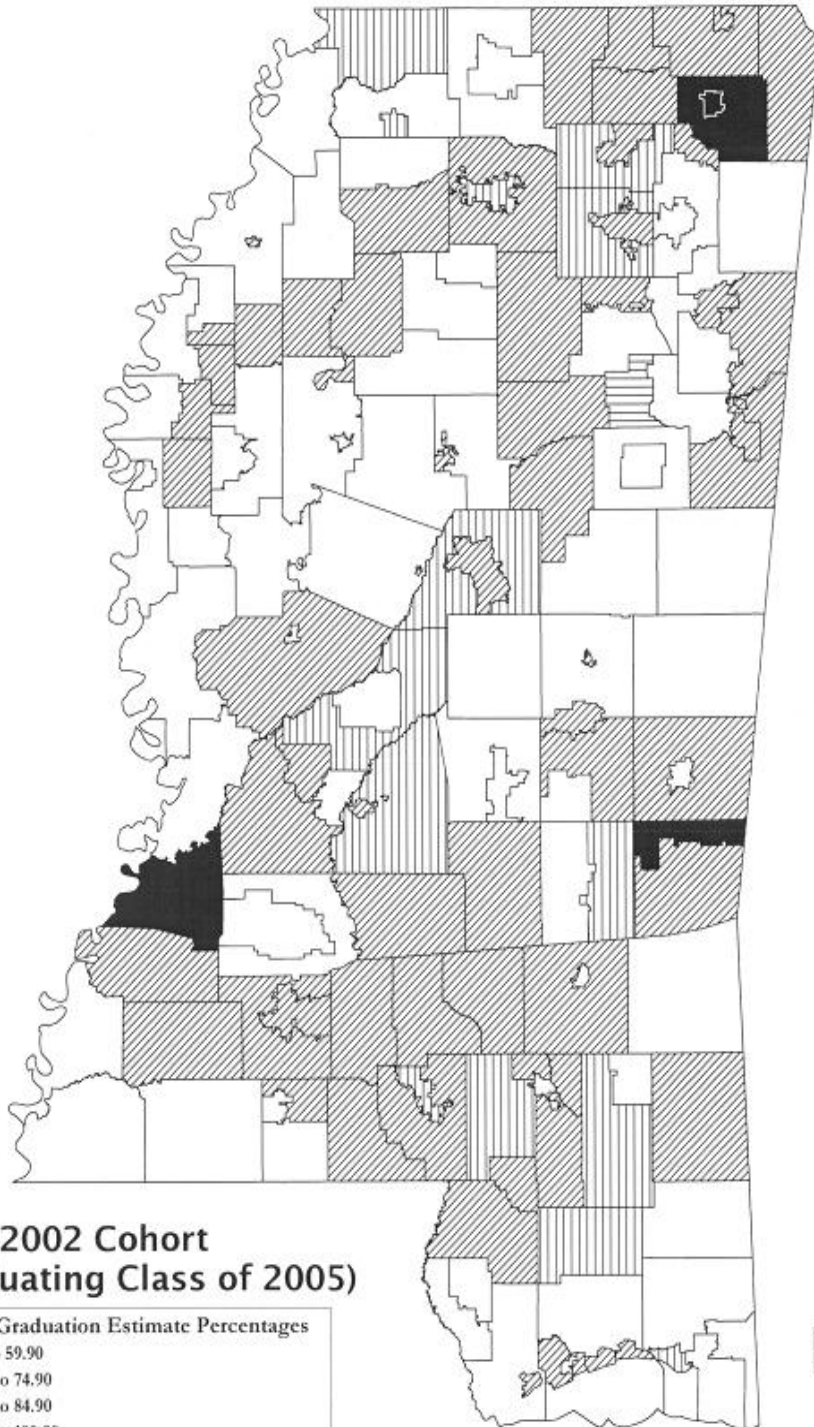
<b>DISTRICT ID CODE</b>	<b>DISTRICT NAME</b>
4820	Aberdeen
200	Alcorn
300	Amite County
4821	Amory
400	Attala County
5920	Baldwyn
2320	Bay St. Louis
612	Benoit
500	Benton County
2420	Biloxi
5921	Booneville
4320	Brookhaven
700	Calhoun County
4520	Canton
800	Carroll County
900	Chickasaw County
1000	Choctaw County
1100	Claiborne County
1420	Clarksdale
1300	Clay
614	Cleveland
2521	Clinton
1402	Coahoma AHS
1400	Coahoma County
8111	Coffeeville
4620	Columbia
4420	Columbus
1500	Copiah County
220	Corinth
1600	Covington County
1700	DeSoto County
6720	Drew
2620	Durant
3111	East Jasper
6811	East Tallahatch
1211	Enterprise
6220	Forest City
1802	Forrest AHS
1800	Forrest County
1900	Franklin County
2000	George County
2100	Greene County
7620	Greenville
4220	Greenwood
2220	Grenada
2421	Gulfport
2300	Hancock County
2400	Harrison County
1820	Hattiesburg
1520	Hazlehurst City
2502	Hinds AHS

<b>DISTRICT ID CODE</b>	<b>DISTRICT NAME</b>
2500	Hinds County
7611	Hollandale
4720	Holly Springs
2600	Holmes County
920	Houston Separate
2700	Humphreys County
6721	Indianola
2900	Itawamba County
3000	Jackson County
2520	Jackson Public
3300	Jeff.Davis County
3200	Jefferson County
3400	Jones County
3500	Kemper County
420	Kosciusko
3600	Lafayette County
3700	Lamar County
3800	Lauderdale County
3420	Laurel
3900	Lawrence County
4000	Leake County
4100	Lee County
4200	Leflore County
7612	Leland
4300	Lincoln County
2422	Long Beach
8020	Louisville
4400	Lowndes County
3711	Lumberton
4500	Madison
4600	Marion County
4700	Marshall County
5720	McComb
3820	Meridian
4800	Monroe County
4900	Montgomery County
3020	Moss Point
616	Mound Bayou
130	Natchez-Adams
5000	Neshoba County
4111	Nettleton
7320	New Albany
5130	Newton City
5100	Newton County
613	North Bolivar
5411	North Panola
5711	North Pike
7011	North Tippah
5200	Noxubee County
3021	Ocean Springs
921	Okolona Separate

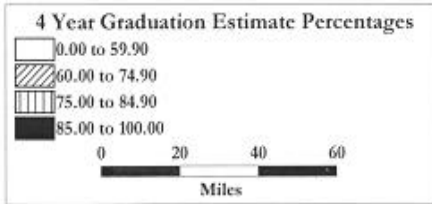
<b>DISTRICT ID CODE</b>	<b>DISTRICT NAME</b>
5300	Oktibbeha County
3620	Oxford
3022	Pascagoula
2423	Pass Christian
6120	Pearl
5500	Pearl River
5600	Perry County
1821	Petal
5020	Philadelphia
5520	Picayune
5820	Pontotoc City
5800	Pontotoc County
5530	Poplarville
5900	Prentiss County
1212	Quitman
6000	Quitman County
6100	Rankin County
5620	Richton
6200	Scott County
6920	Senatobia
615	Shaw
6400	Simpson County
6500	Smith County
6312	South Delta
5412	South Panola
5712	South Pike
7012	South Tippah
5320	Starkville
6600	Stone County
6700	Sunflower County
6900	Tate County
7100	Tishomingo County
7200	Tunica County
4120	Tupelo
5131	Union City
7300	Union County
7500	Vicksburg-Warre
7400	Walthall County
8113	Water Valley
7700	Wayne County
7800	Webster County
611	West Bolivar
3112	West Jasper
1320	West Point
6812	West Tallahatch
7613	Western Line
7900	Wilkinson County
4920	Winona
8220	Yazoo City
8200	Yazoo County



# Mississippi Public School Districts - Graduation Rate

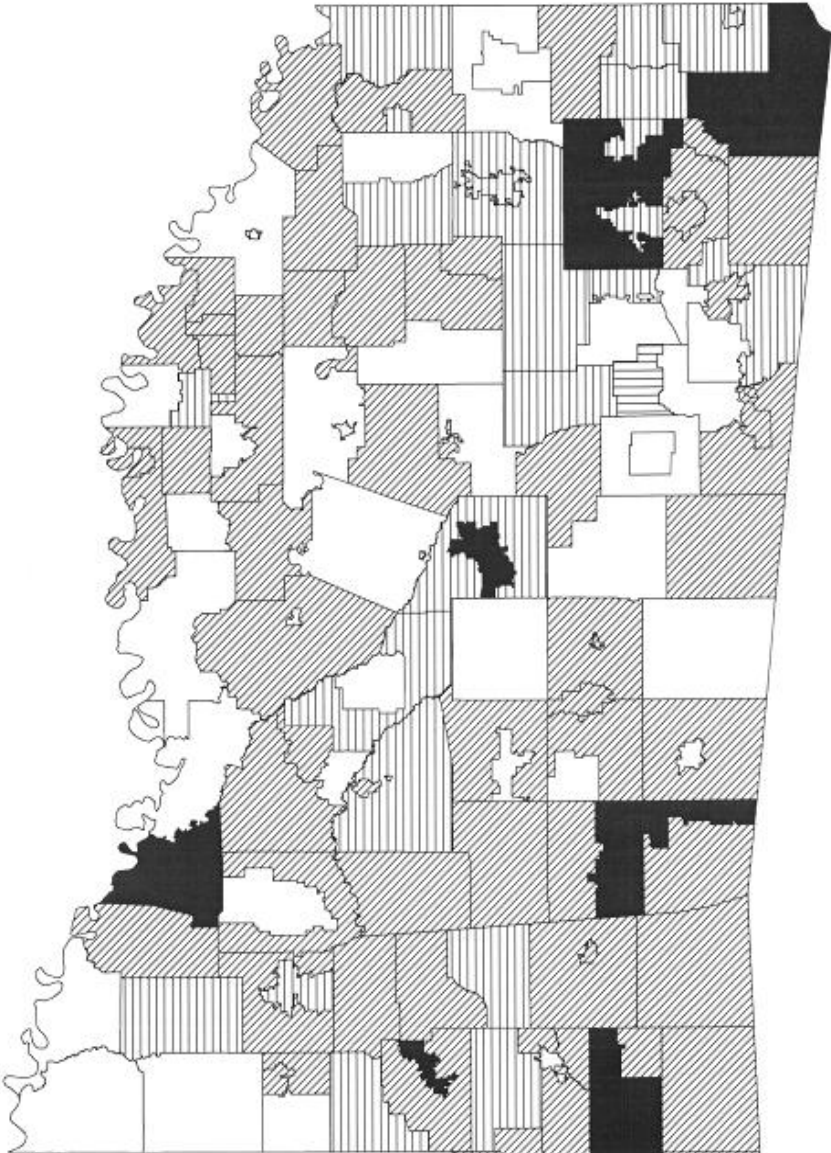


**2001-2002 Cohort  
(Graduating Class of 2005)**

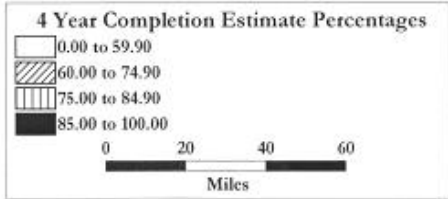


Clay County Public School District (ID: 1300) only enrolls K-6. No data available for higher grade performance.

# Mississippi Public School Districts - Completion Rate



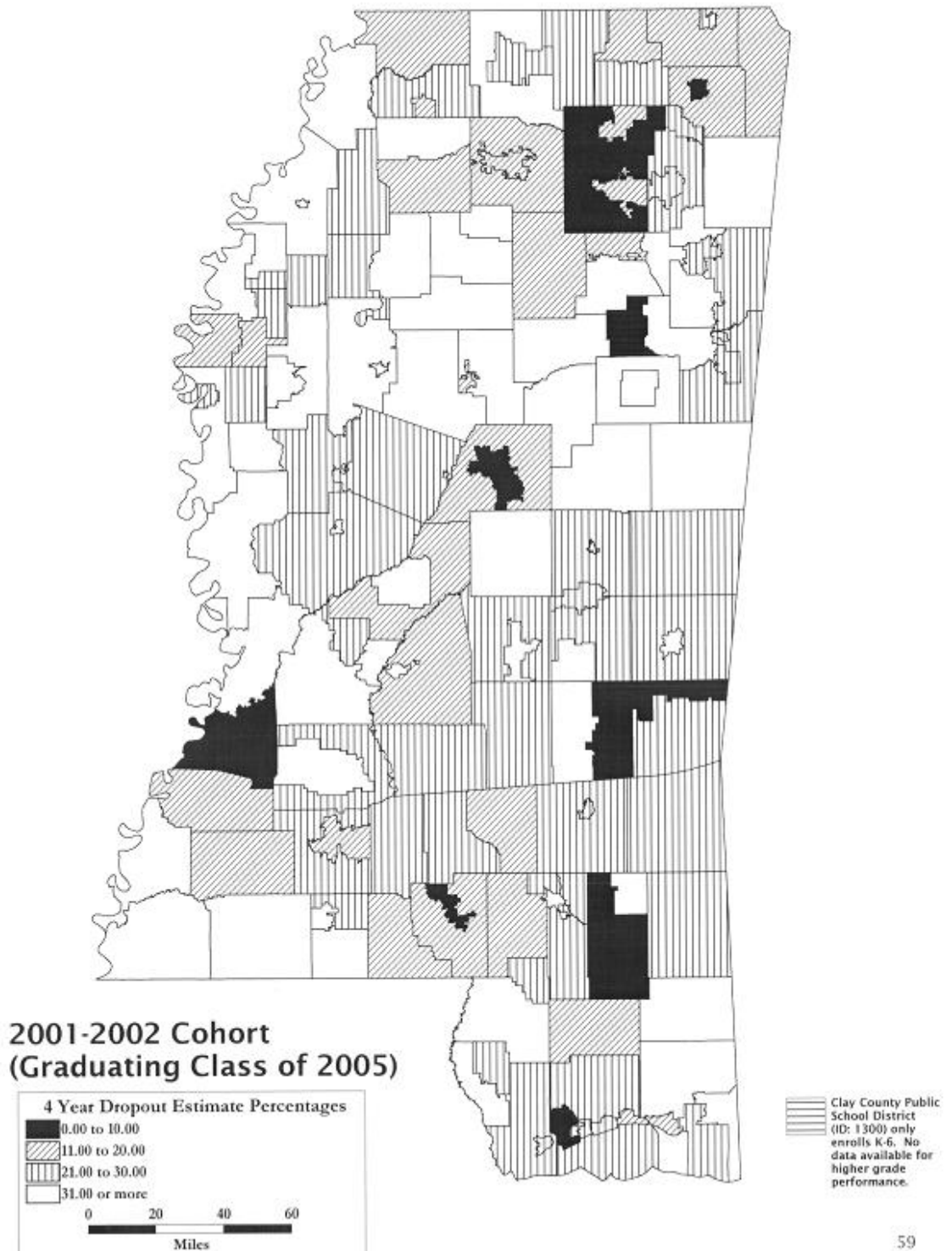
**2001-2002 Cohort  
(Graduating Class of 2005)**



Clay County Public School District (ID: 1300) only enrolls K-6. No data available for higher grade performance.



## Mississippi Public School Districts - Dropout Rate



Source: PEER Report 508

APPENDIX B

FEDERAL DROPOUT PREVENTION PROGRAMS

<b>Primary Purpose Programs</b>	
Dropout Prevention Program	<p>The DPP, ESEA Title I, Part H, provides support for ED to coordinate a national strategy for reducing dropout rates.</p> <p>The DPP also authorizes grants to state educational agencies (SEAs) and local educational agencies (LEAs) to establish programs for early prevention, to identify and prevent potential dropouts from leaving school, and to encourage dropouts to reenter and complete school. Authorized activities include professional development, reduction in pupil-teacher ratios, counseling and mentoring for students at risk of dropping out, and implementing comprehensive school reform. At appropriation levels of \$75 million or less, the Secretary makes competitive awards to SEAs and LEAs that serve students in grades 6 through 12 and have annual dropout rates above the state average.</p>
Neglected and Delinquent Program	<p>The N&amp;D, ESEA Title I, Part D, provides grants to SEAs and LEAs for instructional services for youth in delinquent, community day, or correctional institutions as well as youth at risk of dropping out of school.</p>
Migrant High School Equivalency Program	<p>The migrant High School Equivalency Program, HEA Title IV, Part A, Subpart 5, provides five-year competitively awarded grants to institutions of higher education and other public and private nonprofit organizations to support educational programs designed for migrant students ages 16 and up.</p> <p>Grantees operate residential and commuter projects that provide academic and support services to help migrant students obtain their high school equivalency certificate and move on to employment or enrollment in higher education institutions.</p>

<b>Multiple Purpose Programs</b>	
Talent Search	Talent Search, HEA Title IV, Part A, Subpart 2, Chapter 1, is one of several federal Trio programs that provides grants to programs sponsored by institutions of higher education, public or private agencies or organizations, and in some cases, high schools. Talent Search programs provide services to disadvantaged youth such as academic, personal, and career counseling with the goal of increasing the number of youth who complete high school and enroll in postsecondary education. Talent Search also serves high school dropouts by encouraging them to reenter the educational system and complete their education. Participants must be between the ages of 11 and 27 and have completed the fifth grade.
Upward Bound	Upward Bound, HEA Title IV, Part A, Subpart 2, Chapter 1, is one of the federal Trio programs that provides grants to programs operated by institutions of higher education, public and nonprofit agencies, and occasionally some high schools. Upward Bound projects provide residential programs for disadvantaged students between the ages of 13 and 19 to improve their academic skills and motivation to complete high school and enroll in postsecondary education.
GEAR UP	Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP), HEA Title IV, Part A, Subpart 2, Chapter 2, awards grants on a competitive basis to states and eligible partnerships to increase high school completion and postsecondary enrollment. Grantees provide continuous mentoring, counseling, outreach, and support services to cohorts of disadvantaged students beginning in 7 <sup>th</sup> grade, through high school completion, and into postsecondary enrollment.

<p>Adult Education and Literacy State Grants</p>	<p>The Workforce Investment Act of 1998 (WIA), Title II, Subpart A, Chapter 2, authorizes grants to states for increasing adult literacy, obtaining employment skills, helping adult parents to become active participants in their children's education, and helping adults complete their secondary education. Eligible participants are between the ages of 16 and 61, beyond the compulsory school attendance age under state law, have not obtained a secondary education degree or equivalent, and are not enrolled in a secondary completion program.</p>
<p>Youth Activities</p>	<p>The Youth Activities program (WIA Title I, Subtitle B, Chapter 4) awards formula grants to states that provide eligible youth assistance in achieving academic and employment success, effective and comprehensive activities which include a variety of options for improving educational and skill competencies and provide connections to employers. At least 30% of the funds currently allocated to local areas have to be spent on activities for out-of-school youth. An eligible youth is defined as a low-income individual between the ages of 14 and 21 and who is one or more of the following: deficient in basic literacy skills; a school dropout; homeless, a runaway or a foster child; pregnant or a parent; an offender; or, requires additional assistance to complete an educational program or secure and maintain employment. A three-part formula is used to make allocations to states based on the number of disadvantaged youth and unemployed persons. Dropout prevention and secondary educational completion programs are included in the list of allowable activities.</p>

<p>Job Corps</p>	<p>Job Corps (WIA, Title I, Subtitle C) provides residential education and training programs for disadvantaged individuals between the ages of 16 and 24, meeting at least one of the following criteria: basic skills deficient; high school dropout; homeless, a runaway, or foster child; a parent; or an individual who requires additional education, vocational training, or intensive counseling and related assistance, in order to participate successfully in regular schoolwork or to secure and hold employment. Among other things, Job Corps centers — located in all 50 states — are to provide opportunities for participants to receive high school equivalency certificates.</p>
<p>Migrant Seasonal Farmworker Program</p>	<p>This program (WIA, Title I, Subtitle D) awards competitive grants to entities having a significant understanding of the problems faced by migrant and seasonal farmworker families, familiarity with the service area, and capability to provide workforce development and other related services to migrant families. Funded projects carry out workforce investment activities and other related assistance which may include dropout prevention activities, English literacy, and education assistance, among others, for economically disadvantaged migrant farmworkers and their dependents.</p>
<p>Youthbuild</p>	<p>YouthBuild was originally authorized under the Housing and Community Development Act of 1992 (P.L. 102-550), which added YouthBuild as a subtitle in the Cranston-Gonzalez National Affordable Housing Act of 1990 (P.L. 101-625). By FY2008, the Department of Labor (DOL) will have assumed full administrative responsibility for this program from the Department of Housing and Urban Development (HUD).  YouthBuild awards competitive grants to public and</p>

	private non-profit organizations to assist disadvantaged young adults with education and employment skills. In these programs, low-income young people ages 16-24 work toward their GED or high school diploma while learning job skills by building affordable housing for homeless and low-income people.
<b>Broad Purpose Programs</b>	
Title I-A LEA Grants	The ESEA Title I-A LEA grant program provides assistance to state and local educational agencies for the education of disadvantaged children. Grants are used to provide supplementary educational and related services to low-achieving children attending schools with high concentrations of children from low-income families.
Migrant Education Program	The Migrant Education Program (MEP), ESEA Title I, Part C, provides grants to SEAs to assist in the education of migratory children between the ages of 3 and 21.
21 <sup>st</sup> Century Community Learning Centers	The 21 <sup>st</sup> Century Community Learning Center program, ESEA Title IV, Part B, supports the establishment of centers in inner-city and rural public school buildings to provide educational, recreational, cultural, health and social services to persons of all ages in the surrounding community. Program funds are targeted to communities with low achieving students and high rates of juvenile crime, school violence, and student drug abuse that need resources to establish an after-school center.

<p>Safe and Drug-Free Schools and Communities</p>	<p>The Safe and Drug-Free Schools and Communities state grants program, ESEA Title IV, Subpart 1, provides support for comprehensive, integrated approaches to drug and violence prevention. States award sub-grants to parent and community groups and other organizations for local drug and violence prevention activities. Priority for funding goes to programs and activities serving: 1) children and youth not normally served by state or local educational agencies, or 2) populations needing special services, including school dropouts.</p>
<p>Developing Hispanic-Serving Institutions</p>	<p>HEA Title V, Part A awards five-year competitive grants to Hispanic-serving institutions (HSIs) to assist them in planning, developing, undertaking and carrying out programs to improve and expand the institutions' capacity to serve Hispanic and other low-income students. Among the authorized activities is establishing community outreach programs to encourage elementary and secondary school students to develop the academic skills and the interest to pursue higher education. Priority for assistance goes to HSIs that enter into collaborative agreements with at least one LEA or community-based organization to provide them assistance in reducing dropout rates of Hispanic students, improving rates of academic achievement among Hispanics, and increasing the Hispanic enrollment rate into institutions of higher education.</p>



<p>Temporary Assistance for Needy Families</p>	<p>The Personal Responsibility and Work Opportunity Reconciliation Act of 1996, as amended by the Deficit Reduction Act of 2005, authorizes Temporary Assistance for Needy Families (TANF). TANF provides cash assistance to low-income families with children and requires that recipients work within 24 months of first receiving assistance. Recipients who lack a high school diploma may engage in two educational activities to meet the work participation requirement — education directly related to employment and attendance at a qualified secondary school — either of which should lead to a high school diploma or its equivalent.</p>
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Source: Kuenzi, J. (2007). *High School Graduation, Completion, and Dropouts: Federal Policy, Programs and Issues*. Congressional Research Service.

APPENDIX C  
DROPOUT PREVENTION STRATEGIES AND CURRENT STATEWIDE  
AND FEDERAL INITIATIVES

**Current Statewide/Federal Initiatives:**

The table below displays how current initiatives in the state related to dropout prevention fit within various school levels, the fifteen dropout prevention strategies, and the Department’s five strategies. Each of these initiatives assists the state with meeting its overarching goals.

15 Dropout Prevention Strategies	School / Grade Level				
	District-wide	Pre-Kindergarten	Elementary School	Middle School	High School
<b>Systemic Renewal</b>	<ul style="list-style-type: none"> <li>Dyslexia Program</li> <li>Data Improvement Project (MSDIP)</li> <li>Youth Risk Behavior Survey (YRBS)</li> <li>Title VI.B.2 Rural and Low-Income Schools</li> <li>Title I, Part F Comprehensive School Reform</li> <li>Title I, Part C, Migrant Education Programs</li> <li>Student Progress Monitoring System (SPMS) tracking tool</li> <li>Teacher preparation programs at public &amp; private institutions</li> <li>Mississippi School Administrator Sabbatical Program</li> </ul>	<ul style="list-style-type: none"> <li>Early Prevention, Screening, Diagnosis, and Treatment Program (EPSDT)</li> <li>Title III English Language Learners</li> <li>Title I, Part C, Migrant Education Programs</li> </ul>	<ul style="list-style-type: none"> <li>Early Prevention, Screening, Diagnosis, and Treatment Program (EPSDT)</li> <li>Title III English Language Learners</li> <li>Title I, Part C, Migrant Education Programs</li> <li>Mississippi Curriculum Test (MCT2)</li> </ul>	<ul style="list-style-type: none"> <li>Early Prevention, Screening, Diagnosis, and Treatment Program (EPSDT)</li> <li>Title III English Language Learners</li> <li>Title I, Part C, Migrant Education Programs</li> <li>Mississippi Curriculum Test (MCT2)</li> </ul>	<ul style="list-style-type: none"> <li>Early Prevention, Screening, Diagnosis, and Treatment Program (EPSDT)</li> <li>Title III English Language Learners</li> <li>Title I, Part C, Migrant Education Programs</li> <li>High School Redesign</li> </ul>
<b>School-Community Collaboration</b>	<ul style="list-style-type: none"> <li>School-Community Involvement Evaluation Instrument</li> <li>Title IV-B 21<sup>st</sup> Century Community Learning</li> </ul>	<ul style="list-style-type: none"> <li>Support Our Students</li> <li>Title X, Part C, Homeless Children and Youth Act</li> </ul>	<ul style="list-style-type: none"> <li>Even Start Family Literacy Program</li> <li>Support Our Students</li> <li>Title X, Part C, Homeless Children and Youth Act</li> </ul>	<ul style="list-style-type: none"> <li>Support Our Students</li> <li>Title X, Part C, Homeless Children and Youth Act</li> </ul>	<ul style="list-style-type: none"> <li>Support Our Students</li> <li>Title X, Part C, Homeless Children and Youth Act</li> </ul>

15 Dropout Prevention Strategies	School / Grade Level				
	District-wide	Pre-Kindergarten	Elementary School	Middle School	High School
	Centers				
<b>Safe Learning Environments</b>	<ul style="list-style-type: none"> <li>Effective School &amp; Classroom Management</li> <li>School Safety Environment Assessment Tool</li> <li>Safe and Orderly School Climate Evaluation Instrument</li> </ul>				
<b>Family Engagement</b>	<ul style="list-style-type: none"> <li>School-Community Involvement Evaluation Instrument</li> <li>Public Relations Evaluation Instrument</li> </ul>	<ul style="list-style-type: none"> <li>Temporary Assistance for Needy Families (TANF)</li> </ul>	<ul style="list-style-type: none"> <li>Even Start Family Literacy Program</li> <li>Title III English Language Learners</li> <li>Temporary Assistance for Needy Families (TANF)</li> </ul>	<ul style="list-style-type: none"> <li>Title III English Language Learners</li> <li>Temporary Assistance for Needy Families (TANF)</li> </ul>	<ul style="list-style-type: none"> <li>Title III English Language Learners</li> <li>Temporary Assistance for Needy Families (TANF)</li> </ul>
<b>Early Childhood Education</b>			<ul style="list-style-type: none"> <li>Even Start Family Literacy Program</li> </ul>		
<b>Early Literacy Development</b>	<ul style="list-style-type: none"> <li>Three Tier Policy</li> </ul>		<ul style="list-style-type: none"> <li>Reading First Grants</li> <li>Even Start Family Literacy Program</li> </ul>		
<b>Mentoring /Tutoring</b>		<ul style="list-style-type: none"> <li>Support Our Students</li> <li>Title X, Part C, Homeless Children and Youth Act</li> </ul>	<ul style="list-style-type: none"> <li>Support Our Students</li> <li>Title X, Part C, Homeless Children and Youth Act</li> </ul>	<ul style="list-style-type: none"> <li>Support Our Students</li> <li>Title X, Part C, Homeless Children and Youth Act</li> </ul>	<ul style="list-style-type: none"> <li>Support Our Students</li> <li>Title X, Part C, Homeless Children and Youth Act</li> </ul>
<b>Service-Learning</b>					<ul style="list-style-type: none"> <li>High School Redesign</li> </ul>
<b>Alternative Schooling</b>			<ul style="list-style-type: none"> <li>Alternative Education</li> <li>Title I, Part D Subpart 1 Neglected and Delinquent</li> </ul>	<ul style="list-style-type: none"> <li>Alternative Education</li> <li>General Educational Development Option (GED) Program</li> </ul>	<ul style="list-style-type: none"> <li>Alternative Education</li> <li>General Educational Development Option (GED) Program</li> </ul>

15 Dropout Prevention Strategies	School / Grade Level				
	District-wide	Pre-Kindergarten	Elementary School	Middle School	High School
				<ul style="list-style-type: none"> <li>Title I, Part D, Subpart 1 Neglected and Delinquent</li> </ul>	<ul style="list-style-type: none"> <li>Title I, Part D, Subpart 1 Neglected and Delinquent</li> </ul>
After-School Opportunities		<ul style="list-style-type: none"> <li>Support Our Students</li> <li>Title X, Part C, Homeless Children and Youth Act</li> </ul>	<ul style="list-style-type: none"> <li>Support Our Students</li> <li>Title X, Part C, Homeless Children and Youth Act</li> </ul>	<ul style="list-style-type: none"> <li>Support Our Students</li> <li>Title X, Part C, Homeless Children and Youth Act</li> </ul>	<ul style="list-style-type: none"> <li>Support Our Students</li> <li>Title X, Part C, Homeless Children and Youth Act</li> </ul>
Professional Development	<ul style="list-style-type: none"> <li>Effective School &amp; Classroom</li> <li>MS-E Learning for Educators</li> <li>MS Online</li> <li>The Institute for Effective Instructional Leadership- Administrator Training</li> <li>Technology Evaluation</li> <li>Mathematics and Science Partnership Grants</li> <li>Mathematics Framework Training</li> <li>Three Tier Policy</li> <li>Integrating Curriculum, Assessment, and Instruction Training</li> <li>Title IV Program</li> <li>Comprehensive Health Education Framework Training</li> <li>Personnel Appraisals of school staff</li> <li>Instructional Process/ Curriculum Delivery</li> <li>Title I, Part C Migrant</li> </ul>		<ul style="list-style-type: none"> <li>Intel Teach to the Future</li> <li>Project Stream</li> </ul>	<ul style="list-style-type: none"> <li>Intel Teach to the Future</li> <li>Project Stream</li> <li>Mathematics Academies</li> </ul>	<ul style="list-style-type: none"> <li>Intel Teach to the Future</li> <li>Project Stream</li> <li>Mathematics Academies</li> </ul>

15 Dropout Prevention Strategies	School / Grade Level				
	District-wide	Pre-Kindergarten	Elementary School	Middle School	High School
	<ul style="list-style-type: none"> <li>Education Programs</li> <li>Teacher preparation programs at public &amp; private institutions</li> <li>Blue Ribbon Commission to examine teacher education programs</li> <li>Mississippi Sabbatical Program for administrators</li> </ul>				
Active Learning	<ul style="list-style-type: none"> <li>Three Tier Policy</li> <li>Integrating Curriculum Assessment, and Instruction Training</li> <li>Physical Education Framework Training</li> </ul>		<ul style="list-style-type: none"> <li>Reading Sufficiency Grants</li> </ul>	<ul style="list-style-type: none"> <li>HIV/ AIDS Prevention</li> </ul>	<ul style="list-style-type: none"> <li>Talent Search Grant</li> <li>Redesigning Education for the 21<sup>st</sup> Century Workforce (Plan)</li> <li>HIV/ AIDS Prevention</li> <li>High School Redesign</li> </ul>
Educational Technology			<ul style="list-style-type: none"> <li>Intel Teach to the Future</li> <li>Enhancing Education Through Technology</li> </ul>	<ul style="list-style-type: none"> <li>Intel Teach to the Future</li> <li>Enhancing Education Through Technology</li> </ul>	<ul style="list-style-type: none"> <li>Intel Teach to the Future</li> <li>Enhancing Education Through Technology</li> <li>Mississippi Virtual Public School (MVPS)</li> </ul>
Individualized Instruction	<ul style="list-style-type: none"> <li>Three Tier Policy</li> <li>Personnel Appraisals of school staff</li> <li>Instructional Process/ Curriculum Delivery</li> </ul>			<ul style="list-style-type: none"> <li>Foreign Language Grant</li> </ul>	<ul style="list-style-type: none"> <li>Foreign Language Grant</li> </ul>

15 Dropout Prevention Strategies	School / Grade Level				
	District-wide	Pre-Kindergarten	Elementary School	Middle School	High School
Career and Technical Education (CTE)					<ul style="list-style-type: none"> <li>Jobs for MS Graduates Grant</li> <li>Redesigning Education for the 21<sup>st</sup> Century Workforce (Plan)</li> </ul>

Source: Mississippi Department of Education. (2007b). *Mississippi Department of Education State Dropout Prevention Plan 2007-2019*.

APPENDIX D

MISSISSIPPI COMMUNITY AND JUNIOR COLLEGE DISTRICTS

**§ 37-29-31. Junior college districts created.**

There are hereby created the following junior college districts comprising the entire counties therein named and having boundaries coinciding with the external boundaries thereof, each of which shall be separate juristic entities and bodies politic and corporate:

- (a) East Central Junior College District shall be comprised of the counties of Leake, Neshoba, Newton, Scott and Winston.
- (b) East Mississippi Junior College District shall be comprised of the counties of Clay, Kemper, Lauderdale, Lowndes, Noxubee and Oktibbeha.
- (c) Hinds Junior College District shall be comprised of the counties of Hinds, Rankin, Warren and Claiborne.
- (d) Holmes Junior College District shall be comprised of the counties of Attala, Carroll, Choctaw, Grenada, Holmes, Madison, Montgomery, Webster and Yazoo.
- (e) Itawamba Junior College District shall be comprised of the counties of Chickasaw, Itawamba, Lee, Monroe and Pontotoc.
- (f) Jones County Junior College District shall be comprised of the counties of Clarke, Covington, Greene, Jasper, Jones, Perry, Smith and Wayne.
- (g) Mississippi Delta Junior College District shall be comprised of the counties of Bolivar, Humphreys, Issaquena, Leflore, Sharkey, Sunflower and Washington.
- (h) Northeast Junior College District shall be comprised of the counties of Alcorn, Prentiss, Tippah, Tishomingo and Union.
- (i) Northwest Junior College District shall be comprised of the counties of Benton, Calhoun, DeSoto, Lafayette, Marshall, Panola, Quitman, Tallahatchie, Tate, Tunica and Yalobusha.
- (j) Pearl River Junior College District shall be comprised of the counties of Forrest, Hancock, Jefferson Davis, Lamar, Marion and Pearl River.
- (k) Southwest Junior College District shall be comprised of the counties of Amite, Pike, Walthall and Wilkinson.

Sources: Codes, 1942, § 6475-51; Laws, 1964, ch. 398, § 1; Laws, 1975, ch. 301, § 12; Laws, 1995, ch. 605, § 12, eff from and after July 1, 1995.

**§ 37-29-401. Mississippi Gulf Coast Junior College District created.**

There is hereby created a junior college district comprised of the territory lying within Harrison, Stone, George and Jackson Counties and having boundaries coinciding with the external boundaries thereof.

The name of the said junior college district shall be the Mississippi Gulf Coast Junior College

District of Mississippi and the said district shall be and the same is hereby constituted a legal political governmental subdivision and a body corporate.

Sources: Laws, 1962, ch. 381, §§ 1, 2.

**§ 37-29-451. Copiah-Lincoln Junior College District created.**

There is hereby created the Copiah-Lincoln Junior College District comprised of the territory lying within Adams, Copiah, Franklin, Jefferson, Lawrence, Lincoln and Simpson Counties and having boundaries coinciding with the external boundaries thereof. The said district shall be and is hereby constituted a legal political governmental subdivision and a body corporate. The board of trustees of said district, with the consent of the Junior College Commission, is hereby empowered to change the name of the district.

Sources: Laws, 1975, ch. 301, § 1, eff from and after passage (approved February 4, 1975).

**§ 37-29-501. Meridian Junior College District created.**

There is hereby created a junior college district comprised of the territory lying within the Meridian Municipal Separate School District and having boundaries coinciding with the external boundaries thereof. The name of the said junior college district shall be the Meridian Junior College District and the said district shall be and the same is hereby constituted a legal political governmental subdivision and a body corporate.

Sources: Laws, 1980, ch. 428, § 1, eff from and after passage (approved April 30, 1980).

**§ 37-29-551. Coahoma Community College District; creation; boundaries.**

There is hereby created the Coahoma Community College District comprised of the territory lying within Coahoma County, Tunica County, Quitman County, Bolivar County and Tallahatchie County, and having boundaries coinciding with the external boundaries thereof. The district shall be, and is hereby constituted, a legal political governmental subdivision and a body corporate.

Sources: Laws, 1995, ch. 605, § 1, eff from and after July 1, 1995.



APPENDIX E  
PERMISSION LETTER FROM THE MISSISSIPPI STATE UNIVERSITY  
INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION  
OF HUMAN SUBJECTS IN RESEARCH



October 2, 2008

Amanda Powell  
37 Lynwood Dr.  
Puyvis, MS 39475

RE: IRB Study #08-035: Poverty Levels and Dual Enrollment Demographics and Their Effect on Mississippi High School Graduation Rates

Dear Ms. Powell:

The above referenced project was reviewed and approved via administrative review on 2/7/2008 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>.**

Please refer to your IRB number (#08-035) 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 me at [cwilliams@research.msstate.edu](mailto:cwilliams@research.msstate.edu) or call 662-325-5220.

Sincerely,

A handwritten signature in blue ink that reads "Christine Williams".

Christine Williams  
IRB Compliance Administrator

cc: Dr. James Davis

**Office for Regulatory Compliance**

P. O. Box 6223 • 8A Morgan Street • Mailstop 9563 • Mississippi State, MS 39762 • (662) 325-3294 • FAX (662) 325-8776