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Higher education desegregation: an analysis of state efforts in systems formerly operating segregated systems of higher education

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HIGHER EDUCATION DESEGREGATION: AN ANALYSIS OF STATE
EFFORTS IN SYSTEMS FORMERLY OPERATING SEGREGATED
SYSTEMS OF HIGHER EDUCATION

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
In partial fulfillment of the
Requirements for the degree of
Doctor of Philosophy

In

The Department of Educational Theory, Policy, and Practice

by

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Abstract

The landmark Supreme Court Decision of *Brown v. the Board of Education* in 1954 struck down the policy of separate but equal and set a legal precedent that racial discrimination in public education violates the United States constitution. Later the 1964 Civil Rights Act prohibited colleges and universities from discriminating based upon age, sex, race, or religion. The Civil Rights Act strengthened the enforcement capabilities of the Office of Civil Rights in ensuring desegregation. These legislative and judicial efforts have engaged higher education and state officials in often-controversial attempts to desegregate systems and institutions of higher education. Because colleges and universities predominately failed to comply with court decisions and judicial outcomes, in 1971 the NAACP Legal Defense Fund filed suit against the Office of Civil Rights for failing to enforce Title VI of the Civil Rights Act of 1964 (*Adams v. Richardson*, 1973). Since 1971, 19 states have been struggling to comply with legislative and judicial requirements to desegregate.

The purpose of this study was to longitudinally analyze the results of desegregation efforts at public colleges and universities in states that formerly operated dual systems of higher education. The progress, rate of change, and pattern of desegregation were quantifiably measured using a segregation index and analyzed using a repeated measure analysis of variance, pooled cross-sectional time-series model, and Split-Plot Analysis of Variance.

The results of the study indicate that Adams states made initial progress in desegregating between 1980 and 1990, but over the last 10 to 15 years, the Adams states have, overall, begun to re-segregate. The results of this study

have implications for policy makers in setting state and institutional policies and allocating resources. The data provides policymakers the ability to benchmark and understand the historical implications of policies implemented during the early desegregation efforts. Policy makers, to include legislators, state executives, institutional administrators, and governing boards have the ability to influence the direction and priorities of desegregating higher education.

Chapter 1 Introduction

The purpose of this study is to longitudinally analyze the results of desegregation efforts at public colleges and universities in states that formerly operated dual systems of higher education. This chapter provides an overview of the historical events along with significant legislation and court cases that led to the enforcement of desegregation. These critical events include *Plessy v. Ferguson* (1896), *Brown v. Board of Education* (1954), The Civil Rights Act, and *Adams v. Richardson* (1973). The framework of segregation was established with *Plessy v. Ferguson* (1896), which provided the “the constitutional, as well as legal, bedrock for the entire system of racial segregation in the South” (Samuels, 2004, p. 3) and set the precedent of “separate but equal”. The landmark Supreme Court decision of *Brown v. Board of Education* (1954) struck down the precedent of *Plessy v. Ferguson* (1896) and the passage of the Civil Rights Act of 1964 prohibited discrimination and resulted in the request from the Department of Health, Education, and Welfare for states to desegregate. The *Adams v. Richardson* (1973) court case resulted from the Department of Health, Education, and Welfare’s request for desegregation plans which marked the beginning of over 35 years of desegregation implementation and monitoring.

These events significantly changed higher education. Many states transformed from legally segregated de jure systems of higher education to systems with mandated integration. Although the *Brown* (1954) decision laid the groundwork for such change, the speed and effectiveness of desegregation efforts have widely varied by institution and by state. The “racial crisis” in higher education continues to manifest itself in many ways, from incidents of prejudice

on campus to policy decisions concerning affirmative action to debates on the introduction of multicultural elements in the curriculum (Altbach, 1991). Higher education desegregation in America has been one of the most volatile, divisive, and controversial issues facing public institutions, higher education management boards, and state policy makers (Altbach, 1991). Race has been and continues to be a central issue in higher education.

Higher Education Desegregation

Higher education, until after the Civil War, was virtually unavailable to African American students. De jure racial segregation was established by law and prevented races from daily interaction in eating in restaurants, using public restrooms, and attending school together. Particularly in the South, states legally mandated segregation and sought to exclude African American students from enrolling in higher education (Anderson, 2002). As states ended de jure segregation as a result of legal court challenges, policies and practices were implemented that led to de facto segregation. Although illegal, many states had de facto segregation that eventually led 19 states to be involved in the Adams v. Richardson litigation that attempted to desegregate higher education (Anderson, 2002)..

The door to higher education was initially opened immediately after the Civil War, but the first Morrill Land Grant Act began the process to create widespread access. The Morrill Land Grant Act enacted by congress and signed by Lincoln in 1862 provided a basis for the development and creation of higher education institutions. This Act was designed to democratize higher education by providing increasing access to higher education along with providing a stable

funding source for institutions. In this way it represented the political, social, economic, and educational ideals at the time (Williams, 1997). The Morrill Act provided support in every state for the development of at least one agricultural and mechanical college. Each state received 30,000 acres for each senator and representative for the establishment of land grant colleges. The money from the sale of the land was set up in an endowment with the proceeds generated from the interest going to the growth and operations of the land grant colleges. If not used, the funds would be returned to the federal government (Westmeyer, 1985).

Another significant piece of legislation, the 14th Amendment of the United States Constitution was approved in 1868. The 14th Amendment provides that:

All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws (United States Constitution. Article XIV).

This amendment was signed into law and provided the foundation for litigation that would continue through the 21st century based upon the “equal protection” clause.

Later, in 1890, the second Morrill Act established funding for "separate, but equal" institutions for African Americans. The 1890 Morrill Act prevented institutions from receiving federal funding if they excluded admission to students based upon race, unless there was an institution for African Americans that met compliance with the requirement for nondistinction (Westmeyer, 1985). This act laid the foundation for historically black land grant institutions. The practice of establishing “separate but equal” institutions in each state began. The following

historically black land grant institutions were created: Alabama A & M, Normal, University of Arkansas, Pine Bluff, Florida A & M University, Fort Valley State University, Kentucky State University, Southern University A & M College, University of Maryland East Shore, Alcorn State University, Lincoln University, Langston University, South Carolina State University, North Carolina A & T State University, Tennessee State University, Prairie View A & M University, and Virginia State University (Goodchild & Wechsler, 1997).

From 1890 until 1899, at least one black institution was established every year in the 19 states operating dual systems of higher education (Brown, 2001). By 1953, over 75,000 students were enrolled in public and private black colleges (Office of Civil Rights, 1991). Today, there are approximately 105 historically black institutions in the United States with an enrollment in excess of 300,000 students (National Center for Education Statistics, 2003). These historically black institutions later became a pivotal focal point for states complying with mandated desegregation efforts in the 1970s and 1980s.

Legislative and judicial actions following the Civil War set the stage for the battle over desegregation that would continue for over 100 years. These early historical legislative and legal challenges provide the framework to begin analyzing the current status of desegregation. The bedrock case that affirmed de jure segregation and set a precedent for over 50 years upholding racial segregation was *Plessy v. Ferguson* (1896).

Plessy v. Ferguson

Plessy v. Ferguson (1896) is one of the first Supreme Court cases affirming segregation and providing a legal basis for separate but equal. The case challenged a Louisiana law establishing legal segregation.

The State of Louisiana has a long history of legislative and legal battles relating to segregation. In 1890 the Louisiana Legislature passed Act 111 that required railroads to have separate rail cars for African Americans and Caucasians. In 1896, Homer Adolph Plessy, was arrested for sitting in the whites only rail car. The case was sent to the United States Supreme Court, and the Louisiana Law was upheld on the basis of “separate but equal” (Mitchell & Salsbury 2000). Justice John Harlan was the only dissenting justice. He stated:

Our Constitution is color-blind, and neither knows nor tolerates classes among citizens... In my opinion, the judgment this day rendered will, in time, prove to be quite as pernicious as the decision made by this tribunal in the Dred Scott case... The present decision, it may well be apprehended, will not only stimulate aggressions, more or less brutal and irritating, upon the admitted rights of colored citizens, but will encourage the belief that it is possible, by means of state enactments, to defeat the beneficent purposes by which the people of the United States had in view when they adopted the recent amendments of the Constitution (as cited in Mikula, 1999, p. 512.)

Plessy v. Ferguson (1896) became the foundation for segregation and went virtually unchallenged for 37 years (Teddle & Freeman, 2002). The precedent of *Plessy v. Ferguson* slowly began to be challenged and over time weaknesses in the defense of the separate but equal doctrine began to emerge. An early case, *Gon Lum v. Rice* (1927) in Mississippi, affirmed the Supreme Court's decision in *Plessy v. Ferguson*. Gon Lum was a Chinese girl whose father attempted to enroll her in an all white school. The Court upheld Mississippi's right to classify her as a non-white student citing *Plessy v. Ferguson*

(Whitman, 1993). *Gon Lum v. Rice* is an example of an early case that failed to adequately persuade the courts.

Later in 1933, the NAACP represented Hocutt in North Carolina and filed suit for denying him admission based upon race. The case was dismissed by the Superior Court in North Carolina. This case was the beginning of the challenge to *Plessy v. Ferguson* (1896) (Teddlie & Freeman 2002).

One of the first cases to successfully challenge the separate but equal doctrine of *Plessy v. Ferguson* (1896) was *Gaines v. Missouri* (1938). In 1921, Missouri granted out of state tuition for African Americans to attend graduate school to prevent integration since historically black colleges did not yet offer graduate education (Southern Education Foundation, 1974). In 1938, Lloyd Gaines filed suit against Missouri for denying him admission to the University of Missouri Law School. The Court found that separate facilities did not exist, and he could not be denied admission based upon race. The Court ordered that Gaines be admitted to the University of Missouri Law School in a 6 to 2 decision (Trent, 1991).

The Supreme Court decision in *Sweatt v. Painter* (1950) provides evidence of the extent to which states went to deny admission to students based on race. The NAACP Legal Defense began a strategy of attacking graduate and professional schools where separate programs for blacks and whites did not exist. Sweatt applied to the University of Texas Law School for the start of the February, 1946 semester. He was denied admission based solely on his race. State law in Texas restricted the university to white students only. Thurgood Marshall and W. J. Durham represented Sweatt and filed a lawsuit against the

law school for violating the equal protection clause of the 14th Amendment. The Court delayed the case for six months and then denied Sweatt admission. The lower Court's decision to deny admission was based upon the creation of a law school for African Americans, which was scheduled to open in February 1947. The decision was appealed and went to the Supreme Court.

The Supreme Court reversed the lower Court's decision and ordered the University of Texas Law School to admit Sweatt. The decision clearly reviewed the separate but equal doctrine established in *Plessy v. Ferguson* (1896). Justice Vinson delivered the opinion of the Court and stated that the new institution for African Americans could not possibly provide the same educational opportunities. The new law school lacked the distinguished faculty, law review, alumni, and facilities that make for a great law school. Additionally, Sweatt would have been educated in an isolated environment that would exclude him from a large percent of the population he would serve, including lawyers, judges, witnesses, and others. At the time the Supreme Court heard the case, only one alumnus from the African American law school had been admitted to the Texas Bar (*Sweatt v. Painter*, 1950). The Court concluded with the following statement:

petitioner may claim his full constitutional right: legal education equivalent to that offered by the State to students of other races. Such education is not available to him in a separate law school as offered by the State. We cannot, therefore, agree with respondents that the doctrine of *Plessy v. Ferguson* (1896), requires affirmance of the judgment below (*Sweatt v. Painter*, 1950).

The Supreme Court's decision in *Sweatt v. Painter* (1950) was a key victory for the NAACP Legal Defense. The strategy to target graduate school admission was proving to be successful and provided a precedent for continued legal challenges.

Brown v. Board of Education and Other Desegregation Cases 1954

In December of 1952, an appeal of a lower court case, in *Brown v. the Board of Education of Topeka, Kansas* (1954) and four other cases were presented to the United States Supreme Court. The Supreme Court ruling in May, 1954 was a coordinated effort to bring five cases before the United States Supreme Court dealing with segregation in elementary schools. In May, 1954, the United States Supreme Court unanimously (9 for and 0 dissenting) jolted America with its ruling that school segregation violated the 14th Amendment (Tachach, 1998).

The first case, *Brown vs. the Board of Education of Topeka, Kansas* (1954), was presented by Robert Carter who argued to the Court that the case was not about the precedent set by *Plessy v. Ferguson* (1896). The schools for blacks and whites had equivalent facilities, curricula, and teachers; additionally, minority students had transportation. While the prior Supreme Court rulings were based merely upon the equality of facilities, Carter argued that the Board of Education, in segregating schools solely on race, violated the equal protection clause of the 14th Amendment. Carter frequently cited the ruling in *Sweatt v. Painter* (1950) and also provided evidence that the educational opportunities were inferior to those in whites-only schools. In Carter's testimony, he quoted the lower court's finding stating that:

Segregation of white and colored children in public schools has a detrimental effect upon the colored children. The impact is greater when it has the sanction of the law; for the policy of separating the races is usually interpreted as denoting the inferiority of the Negro group. A sense of inferiority affects the motivation of a child to learn. Segregation with the sanction of law, therefore, has a tendency to [restrain] the educational and mental development of Negro children and to deprive them of some of the

benefits they would receive in a racially integrated school system (Friedman, 2004, p. 15).

The State of Kansas reluctantly argued for the decision because the Board of Education of Topeka decided not to resist the appeal. The State's argument was based solely on the fact that the State's Constitution failed to violate the 14th Amendment (Friedman, 2004).

Thurgood Marshall argued the second case in *Briggs v. Elliott* (1952). Marshall was a lead attorney for the NAACP Legal Defense Fund and later served as a United States Supreme Court Justice from 1967 to 1991 (Tachach, 1998). The case from Clarendon County, South Carolina focused on equality in the school system. The lower courts found that Clarendon County failed to provide equal educational facilities, equipment, curricula, and opportunities for all students. Marshall cited the Morgan case which was one of the first contradictions to *Plessy v. Ferguson* (1896) in which the Supreme Court ruled that segregation in interstate commerce was unconstitutional. Additionally, Marshall referenced the decision in *Sweatt v. Painter* (1950) where the Supreme Court determined that in graduate education equality went beyond just physical facilities (Friedman, 2004).

John Davis presented arguments for the State of South Carolina. Mr. Davis provided testimony that the State had begun a building campaign to provide equal facilities to all students in South Carolina. The District built a new high school and appropriated \$21,000 for additional equipment in order to be in compliance with the lower court's ruling on equality in education. Davis further argued that South Carolina's law requiring segregation in public education was

constitutional and failed to violate the 14th Amendment (*Brown v. Board of Education*, 1954).

The last three cases, *Davis v. County School Board of Prince Edward County, Virginia*, *Bolling v. Sharpe* (District of Columbia), and *Gebhart v. Belton* (State of Delaware) continued to provide additional testimony supporting the end to segregation in education. The primary points continually presented were the inequalities in education, the violation of the 14th Amendment and the violation of due process. The arguments to maintain segregation were based upon the State's constitutionality of statutes that were lawful and failed to violate the 14th Amendment.

The plaintiffs were successful in collectively arguing that the education received at black segregated schools was inferior to white only schools and violated the 14th Amendment. Chief Justice Warren addressed the nation with the Court's decision:

We conclude that in the field of public education the doctrine of "separate but equal" has no place. Separate educational facilities are inherently unequal. Therefore, we hold that the plaintiffs and others similarly situated are... deprived of the equal protection of the laws guaranteed by the Fourteenth Amendment (*Brown v. Board of Education*, 1954).

The decision of *Brown v. the Board of Education* (1954) was not initially thought to impact higher education since the case was based on segregation in elementary and secondary schools. Therefore, higher education was much slower in implementing the Supreme Court's decision, and in many states the Supreme Court decision was ignored.

The Supreme Court, through *Brown v. the Board of Education* (1954) created the opportunity for citizens to challenge higher education desegregation.

Leading the way to integration in the south, James Meredith in early 1961 applied to the University of Mississippi (Ole Miss) and became the first African American to attend an all white college in Mississippi. The integration of Meredith was not without tremendous upheaval, unrest, and riots at the University of Mississippi in Oxford (Cohodas, 1997). Governor Ross Barnett defiantly opposed the integration of Ole Miss and exhausted every legal, judicial, legislative, and political avenue to prevent Meredith's admission to no avail (Cohodas, 1997). President Kennedy ordered over 12,000 army troops to maintain order and provide for Meredith's safety. Meredith graduated in 1963 thereby breaking the racial barrier in Mississippi (Adams, 1993).

In Alabama in 1963, Governor George Wallace stood at the entrance to a building on the University of Alabama campus to personally prevent the integration of the university. President John F. Kennedy then ordered the Alabama National Guard to the University. The National Guard maintained order and provided protection to the African American students while registering and attending classes. In 1965, Vivian Malone Jones became the first African American to graduate from the University of Alabama (Hebel, 2004).

There was massive resistance to desegregation throughout the south following the decision in *Brown v. the Board of Education* (1954). Yet, the momentum was shifting in higher education away from segregation.

Civil Rights Act

The enactment of the Civil Rights Act created a legal statute to ensure desegregation. The Civil Rights Act was designed to eliminate discrimination and sought to produce action that had not previously taken place in higher

education after the *Brown v Board of Education* (1954) Supreme Court decision (Brown, 2001).

In 1946, President Truman created the Committee on Civil Rights. He further ordered an end to racial discrimination in the armed forces in 1948 (Higham, 1997). This marked the beginning of presidential policy to improve the racial inequalities of America by focusing on civil rights. On July 2, 1964, President Johnson signed the Civil Rights Act of 1964. Title VI, Nondiscrimination in Federally Assisted Programs, of the Civil Rights Act states that “no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance” (Southern Education Foundation, 1974, p. 23). The passage of the Civil Rights Act is a critical historical moment in higher education desegregation, although it did not immediately make an impact. The Act also stated that institutions violating the 1964 Civil Rights Act would jeopardize their federal funding. The Civil Rights Act enabled the Department of Health, Education, and Welfare and the Department of Justice to enforce Title VI and, for the first time, provided a legal basis upon which to pursue enforcement. Prior to the Civil Rights Act, enforcement was based upon court precedent and there was little if any penalty for failing to comply with desegregation. The Civil Rights Act created a legal basis for ending discrimination and provided the avenue to enforce and sanction higher education institutions for non-compliance. The Office of Civil Rights, under the Department of Health Education and Welfare, was the department responsible for enforcing the Civil Rights Act. The

Department of Health Education and Welfare would become involved in very contentious and extensive effort of desegregation.

By the end of the 1960s, 19 states operated dual systems of higher education: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, and West Virginia. These 19 states offered separate but equal systems of higher education and would later become the focus of compliance with the Civil Rights Act (Southern Education Foundation, 1974). The beginning of the legal challenge to these separate systems of higher education was challenged in *Adams v. Richardson* (1973).

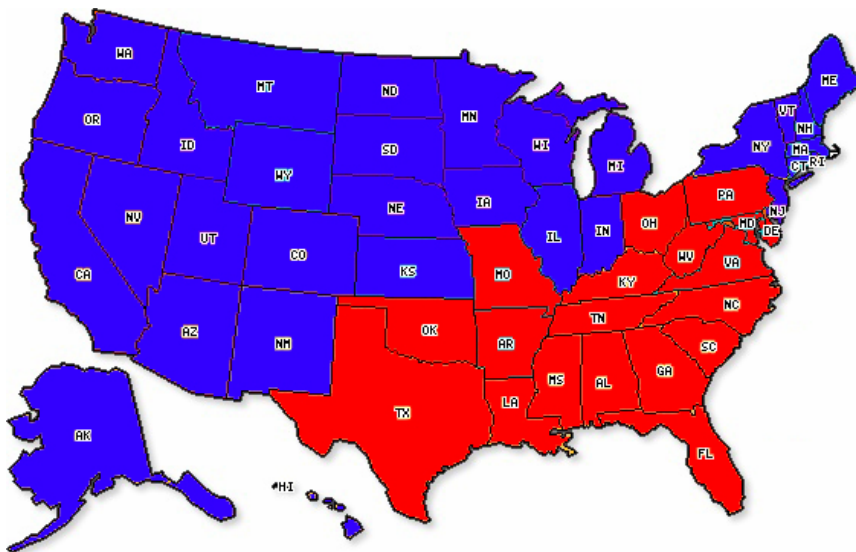


Figure 1.1 Adams States

Adams v. Richardson

Adams v. Richardson (1973) was the outcome to one of the first federal initiatives to ensure compliance with The Civil Rights Act. In 1969, the United States Department of Health, Education, and Welfare under Title VI of the Civil

Rights Act directed 19 states to develop a plan to end segregation in higher education. The Director of the Office of Civil Rights, Leon Panetta, wrote letters in 1969 and 1970 to 10 southern states (Louisiana, Mississippi, Oklahoma, North Carolina, Florida, Arkansas, Pennsylvania, Georgia, Maryland, and Virginia) informing them they were in violation of Title VI of the Civil Rights Act and in jeopardy of losing federal funding. The letter requested a desegregation plan. Mississippi and Louisiana refused to submit plans. President Nixon then fired Leon Panetta as the Director of Civil Rights for attempting to enforce desegregation (Olivas, 1989; Williams, 1997).

President Nixon directly impacted desegregation efforts. H.R. Halderman, Nixon's Chief of Staff recorded the following notes of Nixon: "He plans to take on the integration problem directly. Is really concerned about situation in southern schools and feels we have to take some leadership to try to reverse Court decisions that have forced integration too far, too fast. (Nixon) has told Mitchell [Attorney General] to file another case, and keep filing until we get a reversal" (as cited in Eaton & Orfield, 1996, p. 9).

President Nixon appointed William Rehnquist to the Supreme Court. Rehnquist became an adamant opponent to integration. Rehnquist wrote the following about *Brown v. Board of Education* (1954) Supreme Court Decision: "I realize that it is an unpopular and unhumanitarian position, for which I have been excoriated by 'liberal' colleagues, but I think *Plessy v. Ferguson* (1896) was right and should be reaffirmed" (Eaton & Orfield, 1996, p. 10). President Nixon appointed four Supreme Court justices, which would have a tremendous

influence on future Supreme Court cases. Ronald Reagan later appointed Rehnquist as Chief Justice (Orfield & Eaton, 1996).

In 1970, the NAACP Legal Defense Fund filed suit against the United States Department of Health, Education, and Welfare for failing to enforce the 1964 Civil Rights Act (Adams v. Richardson, 1973). The suit was filed because the Office of Civil Rights had not followed through on the ten letters to the states asking for desegregation plans within 120 days (Southern Education Foundation, 1974). The Department of Health, Education, and Welfare asked for a summary judgment to dismiss the case. Judge John H. Pratt in Washington, D.C. declined the motion and the case proceeded. The outcome of the *Adams v. Richardson* case forced the Department of Health, Education, and Welfare to reinstate the request for desegregation plans from states and shifted the focus from institutional policies to state systems (Southern Education Foundation, 1974). Ending legal segregation was not in itself enough to show that states had complied with the Civil Rights Act. Further efforts needed to be established to end the previous dual systems of higher education.

Louisiana and Mississippi each chose a unique strategy and responded differently than other states. While most states developed desegregation plans that were submitted to the Office of Civil Rights, Louisiana and Mississippi failed to adequately submit plans and as a result, both were involved in lengthy court proceedings. The Department of Health, Education, and Welfare, in 1973, twice notified Louisiana that they were violating the Civil Rights Act. Under the administration of Governor Edwin Edwards, Louisiana failed to respond. The Department turned the case over to the United States Department of Justice. On

March 14, 1974, the United States Department of Justice filed a suit in U.S. District Court against the Louisiana State Board of Education, the Coordinating Council of Higher Education, the Louisiana State University Board of Supervisors, the Louisiana Board of Regents and board members. The Attorney General of the United States, Douglas Gonzales, signed the suit (Adams, 1974).

Mississippi argued that their system of higher education was no longer legally segregated and their creation of a community college structure was outside the realm of the Office of Civil Right's scope. A lawsuit was filed in 1975 and would later reach the Supreme Court in 1992 under *United States v. Fordice* (1992).

States began developing desegregation plans with little help, insight, or input from the Office of Civil Rights. The vague lack of direction provoked confusion and unrest. In 1977, the Office of Civil Rights, in response to federal courts, specified criteria and provided guidance for state desegregation plans (Office of Civil Rights, 1991). The criteria for desegregation required each institution to re-define its mission and establish numeric goals for desegregating students, faculty, and management boards (Southern Education Foundation, 1980). The following statement is taken from the federal guidelines:

An acceptable plan shall commit the state to the goal of organizing and operating the system and institutions of higher education in a manner that promises realistically to overcome the effects of past discrimination and to disestablish the dual system and which assures that students will be attracted to each institution on the basis of educational programs and opportunities uninhibited by past practices of segregation. The state plan must 1) define the mission of each institution within the system on a basis other than race; 2) specify steps to be taken to strengthen the role of traditionally black public institutions in the state; and 3) commit the state to take specific steps to eliminate educationally unnecessary program duplication among traditionally black and white

institutions in the same service area (Southern Education Foundation, 1980, p. 7).

The desegregation plans and other state efforts began initiating the development of programs providing access to higher education for students previously denied admissions to institutions. These programs would come under scrutiny and later be heard by the Supreme Court.

California v. Bakke

California v. Bakke (1978) was a major court decision that had widespread and immediate implications on higher education desegregation efforts. In 1973 and again in 1974, Allen Bakke, a white student, was denied admission into the University of California at Davis. He sued the University of California for discrimination since the University's admission policy created admission slots for minority students (Olivas, 1997). The suit claimed that he was discriminated against based upon race and his denial violated the 1964 Civil Rights Act, California Constitution, and the Equal Protection Clause of the 14th Amendment. The Supreme Court upheld the California Court's decision in favor of Bakke and ordered him to be admitted in a 5 to 4 decision. The Court ruled that

1. in the absence of a finding of specific discrimination traceable to a particular institution, race could not be used as a criterion for remedial benefits, 2. a person's race or ethnic background could not be used as a sole criterion for admissions decisions, and 3. race or national origin, along with other criteria, could be a factor in admissions where those criteria are intended to meet certain institutional needs or priorities (Trent, 1991, p. 126).

The special admission criteria providing admission slots for minority students violated the 1964 Civil Rights Act. The decision of the courts struck down quotas and special admissions programs based upon race.

The Bakke (1978) decision changed the landscape and momentum of desegregation in higher education. The policies and practices of institutions attempting to desegregate had to be revised to comply with the Supreme Court Decision. The late 1970s and 1980s marked a time of required submission of desegregation plans for numerous states. In addition, monitoring and complying with desegregation efforts outlined in the 1977 criteria were needed for an acceptable desegregation plan. Under President Reagan, desegregation efforts were minimized based upon the administration's non-enforcement practices (Trent, 1991). Although Reagan's practice was non-enforcement, he made a commitment to officials of black colleges and universities. He stated the following to a group of black college and university presidents, "Today, I want to reaffirm this administration's continued commitment – not only so that your institutions will survive but so that they will flourish" (Reagan, 1982, p. 1194). This commitment came at a time when the administration directed federal funds to improve the infrastructure of black colleges and universities. These efforts of the Reagan administration shifted the focus from student desegregation to funding and support for black college and universities. In conjunction with the Reagan administration's efforts, the legal efforts of desegregation were dealt a major blow when Judge Pratt, in 1987, dismissed the Adams case stating that the original plaintiffs lacked standing (Trent, 1991). Judge Pratt, who had previously provided favorable outcomes for desegregation efforts, surprised desegregation plaintiffs with his ruling and seriously hindered the legal basis for future litigation.

United States v. Fordice

In 1975, Mississippi citizens filed suit against Mississippi for operating a dual system of higher education. The case went to trial in 1987 (Southern Education Foundation, 1995). On June 26, 1992, the United States Supreme Court reversed the Fifth Circuit Court in *United States v. Fordice* (1992) and held Mississippi liable for operating a dual, segregated system of higher education. *United States v. Fordice* provided several key resolutions to desegregation remediation (Southern Education Foundation, 1995).

Mississippi has eight four-year institutions, five predominately white and three predominately black. The five comprehensive institutions consist of three predominately white institutions with higher admission standards and higher funding (*United States v. Fordice, 1992*).

The Federal District Court based its decision on admission requirements, institutional classification, mission assignments, duplication of programs, and funding. The Court used the interpretation of *Bazemore v. Friday* (1986) in that the State does not need to restrict student choice or provide a degree of racial balance in order to meet desegregation requirements. The Court viewed the State as providing racially neutral admission criteria and ruled that the State demonstrated that it had fulfilled its affirmative duty to desegregate higher education (*United States v. Fordice, 1992*). The Supreme Court responded to the District Court and the Fifth Circuit Court of Appeals by stating:

There are several surviving aspects of Mississippi's prior dual system which are constitutionally suspect; for even though such policies may be race neutral on their face, they substantially restrict a person's choice of which institution to enter and they contribute to the racial identifiability of the eight public universities (*United States v. Fordice, 1992, p. 718*).

Kujovich (1996) commented on the *Fordice* decision in the following way: “The compromise struck by the Court, however, produced a constitutional remedy that may fall far short of what is necessary to eliminate the effects of past discrimination and ensure equality of higher educational opportunity” (p. 10). The Supreme Court ruled that Mississippi did not meet its obligations to desegregate by removing the racial decision in admissions, further, the policies on admissions standards, duplicate programs, institutional missions, and number of institutions contributed to the past de jure segregation (Kujovich, 1996).

The *Fordice* ruling created a new set of guidelines and principles for looking at desegregation. The guidelines of the Court looked at four areas: 1. admission standards, 2. program duplication, 3. institutional missions, and 4. continued operation of eight institutions (Wilson, 1994). These precedent setting guidelines from the Supreme Court provided guidance for state desegregation remedies after 1992. Still, the questions, concerns, and implications of the case did not solve the desegregation problem. Justice Scalia wrote that the *Fordice* standard is ill equipped to solve higher education desegregation (Wilson, 1994).

Hopwood v. State of Texas

In 1992, four students filed suit against the State of Texas for racially discriminating against them in the admission process at the University of Texas School of Law. The plaintiffs claimed that their 14th Amendment rights of Equal Protection were violated (*Hopwood v. Texas*, 1996).

The Law School had developed a separate screening system for African American and Mexican American students. The screening process rated students on the “Texas Index” and grouped them into three categories to be

considered for admissions. The plaintiffs argued that they were not granted the same admission process and were therefore discriminated against in their admission decision due to lower standards and preferential treatment given to African American and Mexican American students (*Hopwood v. Texas*, 1996).

In 1996, the 5th Circuit Appeals Court reversed the decision upholding the law school's admission process by the District Court. The Appeals Court ruled that the separate admissions process based solely on race failed to uphold the Supreme Court's *Bakke* precedence of strict scrutiny. Thus, the Court looked at the two-pronged approach previously set by the judicial system in that it, 1.) served a compelling interest, and 2.) was narrowly tailored to the achievement of that goal (Olivas, 1997). The Appeals Court agreed with the plaintiffs that diversity did not serve as a compelling interest under the 14th Amendment. The Court stated the following, "Within the general principles of the Fourteenth Amendment, the use of race in admissions for diversity in higher education contradicts, rather than minimizes, the use of race" (Olivas, 1997, p. 739).

The Supreme Court denied any consideration of hearing the *Hopwood* (1996) case since the Law School was not appealing the use of the admission process. The law school had previously changed the admission process and was appealing the rationale of the 5th Circuit Appeals Court (Olivas, 1997).

Higher education in the United States was then split between the court decisions in *Bakke* (1978) and *Hopwood* (1996). Many believed that the decision in *Hopwood* was only applicable to states within the 5th Circuit Appeals Court jurisdiction. Although it took some time, this would later change in the

United States Supreme Court's ruling on two cases involving the University of Michigan in 2003.

Gratz v. Bollinger

The University of Michigan Cases, *Gratz v. Bollinger* (2003) along with *Grutter v. Bollinger* (2003), are Supreme Court cases that provide further direction and legal boundaries for using race as one of the criteria in admission decisions. In 1995, Jennifer Gratz applied for admission to the University of Michigan. The University developed an admissions system that placed students into categories: admit, admit or postpone, postpone or admit, delay or postpone, and delay or reject. The placement into categories was based upon a 150-point system of which 100 guaranteed admission. The process looked at the quality of the applicants' high school, high school GPA, high school curriculum, geographical residence, alumni relationships, ACT/SAT scores, and race. Based upon Ms. Gratz's calculated score, she was entered into the postpone category. In the calculation process, The University of Michigan gave 20 points for students based upon their ethnicity in underrepresented minority groups (*Gratz v. Bollinger*, 2003).

Ms. Gratz and Patrick Hamacher filed a class action lawsuit in 1997 that alleged the university violated their 14th Amendment Rights and Violated Title IV of the Civil Rights Act by using race/ethnicity as a criteria in making admission decisions. Gratz and Hamacher's suit was based upon the Supreme Court's decision in *Bakke*. The University of Michigan did not have a compelling government interest and the use of race in the decision process was not narrowly tailored. The University of Michigan's defense was that the admissions process

contributed to a diverse student body and that the educational benefits of a diverse student body are a compelling state interest (*Gratz v. Bollinger*, 2003).

In April of 2003, the Supreme Court heard the *Gratz v. Bollinger* (2003) case and in June 2003, the Supreme Court ruled against the University of Michigan. The Court decided that the university did not use race in a narrowly tailored fashion. In the *Bakke* (1978) decision, Justice Powell lamented the decision to use race as a criteria and focused on the individual's background and experiences in contributing to the educational benefits of the institution. The use of race to solely provide one-fifth of the points necessary for a student to gain admission to the University of Michigan failed to look at the individual contributions of the applicant and was in contradiction to the *Bakke* opinion (*Gratz v. Bollinger*, 2003).

Grutter v. Bollinger

In *Grutter v. Bollinger* (2003), the Supreme Court heard the case of the University of Michigan Law School Admissions Program. The Law School, in 1992, developed an admissions policy that complied with Justice Powell's opinion in the Supreme Court case *University of California v. Bakke* (1978). Further, the policy was modeled after the Harvard Plan, which had been cited as an acceptable plan in the *Bakke* case. The new admissions policy required that the law school admissions office evaluate each applicant based upon his/her undergraduate GPA, LSAT scores, letters of recommendations, personal statement, and an essay (*Grutter v. Bollinger*, 2003). The University of Michigan's Law School policy was developed to achieve a diverse student body. The policy was designed to look at many aspects of diversity, although an

emphasis was placed on obtaining a critical mass of ethnic diversity, particularly African Americans, Hispanics, and Native Americans.

In 1996, Barbara Grutter applied to the law school with a 3.8 undergraduate GPA and a 161 on the LSAT. She was denied admissions and filed a suit against the University of Michigan Law School claiming she was discriminated against in violation of her 14th Amendment rights and Title VI of the Civil Rights Act (*Grutter v. Bollinger*, 2003). The case went to court, was appealed, and ended up on the Supreme Court Docket.

Justice Powell's opinion in the 1978 Bakke case was the foundation upon which the Supreme Court analyzed the Grutter case. The Supreme Court upheld the Law School's argument that they had a compelling state interest, which was justified by the educational benefits from a diverse student body. Research by Bowen and Bok, Orfield and Kurlaender, and Chang, Witt, Jones, Hurtado, Milem, Gurin, and Hakuta, supported the Law School's position and positively influenced the outcome of the case.

Once the Court satisfied the compelling state interest test, the justices then analyzed the strict scrutiny requirement. As opinioned in Bakke (1978), a narrowly tailored program does not use quotas, but may use race as a plus in the admissions process. The individualized nature of the Law School's process does not solely take into account race, but looks at various factors of a diverse student that would provide educational benefits to the student body. Individual consideration was given to each applicant and a variety of diverse factors affected their admission status (*Grutter v Bollinger*, 2003).

The Court acknowledged the compelling government interest and the strict scrutiny of the narrowly tailored plan, and confirmed that the admission policy did adhere to Justice Powell's opinion in the 1978 Bakke Case. The Supreme Court's decision upheld the appeals court judgment that the University of Michigan's admission process did not violate the equal protection clause of the 14th Amendment or Title VI of the Civil Rights Act (*Grutter v Bollinger*, 2003).

Although the Supreme Court ruling in *Gratz* and *Grutter* provided higher education judicial guidance in developing affirmative action plans, it did not end the debate. The Court's ruling stimulated new efforts, with broad public support, to ban affirmative action.

Beyond Gratz and Grutter

After the Supreme Court ruled on the *Gratz* (2003) and *Grutter* (2003) cases, the State of Michigan, in 2006, approved (with a 58 percent majority) Proposal 2, a statewide proposal called the Michigan Civil Rights Initiative. Proposal 2 prohibits state agencies and institutions from operating affirmative action programs that grant preferences based on race, color, ethnicity, national origin, or gender (Schmidt, 2006). This is the third state after California in 1996 and Washington in 1998 to approve similar statewide initiatives. The passage of Michigan's Proposal 2 has other states and institutions concerned about their affirmative action policies and the potential of statewide ballot initiatives.

In 2008, the American Civil Rights Institute, which played an integral role in California, Washington, and Michigan, has targeted Arizona, Colorado, Missouri, and Oklahoma for statewide referendums banning affirmative action (Schmidt, 2007). A number of organizations are forming to oppose the ballot initiatives

each state. The American Civil Rights Institute plans to ride the momentum gained in Michigan and continue beyond the 4 states in 2009 (Schmidt, 2007). Retired Supreme Court Justice, Sandra Day O'Connor, expressed her concern that the Court's opinion in *Grutter v. Bollinger* (2003) may be short lived in light of the recent statewide initiatives banning affirmative action and stressed the need for improving elementary and secondary education (Schmidt, 2007).

There are a number of pending cases that could have an impact on state desegregation efforts. In 2006, the alumni from Grambling State University filed a lawsuit against the State of Louisiana for mis-treatment and ending Louisiana's desegregation agreement too soon (Blum, 2006). Grambling is moving to selective admissions in 2010 as part of Louisiana's higher education master plan. The alumni claim that Grambling is being punished now that Louisiana's consent decree settlement has expired. The suit lists over 40 allegations of legal and civil rights violations (Blum, 2006).

In Maryland, Morgan State University is struggling to uphold Maryland's desegregation agreement that forbids predominately white institutions from offering new programs that are offered at nearby Historically Black Colleges and Universities (HBCUs). Morgan State University recently filed a lawsuit against the Maryland Higher Education Board for approving Towson State University's request for an MBA program. The approval of the MBA program violates the desegregation agreement of like degree programs at proximate institutions. The lawsuit is attempting to preserve the MBA enrollment at Morgan State University (Monastersky, 2006).

Prairie View A&M is trying to prevent the University of Houston from offering a satellite site in the suburbs of Houston (Schmidt, 2007). The Texas Higher Education Coordinating Board approved the plan, but placed restrictions on the plan, including the input from Prairie View A&M on the programs offered. Based upon the restrictions, the University of Houston withdrew the proposal (Schmidt, 2007).

The Texas legislature recently passed legislation to modify the states admission program that allows the top 10 percent of each high school class to gain admission to any public university in Texas. The modification now allows institutions to limit the top 10 percent of the class to 60 percent, therefore freeing up additional student slots for the university to have greater flexibility in shaping the entering class (Fischer, 2007).

Although the landscape of higher education today has changed dramatically over the past 100 years, higher education desegregation continues to be contentious based upon the equity and equality of access, programs, and funding. The federal government, states, and institutions have debated and implemented practices and policies that have attempted to remedy past inequities.

This study focuses on higher education desegregation, particularly in the states that operated dual systems of higher education. The following problem statement guides the research questions in this study.

Statement of the Problem

Segregation has had a powerful impact on the people of the United States. The transition to desegregated institutions has been time-consuming and

distressing, with a lasting impact on higher education. Nineteen states, Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, and West Virginia, were involved in the Adams litigation in the 1970s and previously operated legally separated, dual systems of higher education for blacks and whites. These state systems were found to be unconstitutional in the 1975 *Adams v. Richardson* (1973) court decision. In response to litigation and legislation, states have been involved in remedying desegregation in higher education for over 50 years.

Research Questions

The following research questions are addressed in this study:

1. To what extent have the states that previously operated dual systems of higher education and were involved in the *Adams v. Richardson* (1973) litigation desegregated?
2. To what degree and at what rate has desegregation taken place in the states that previously operated dual systems of higher education and were involved in the *Adams v. Richardson* (1973) litigation?
3. Is there a difference in desegregation results between two-year and four-year institutions in states that previously operated dual systems of higher education and were involved in the *Adams v. Richardson* (1973) litigation?

Chapter Summary

Nineteen states previously operated dual systems of higher education. Through legislation and litigation, these states have had to desegregate higher education. Some states have been able to demonstrate desegregation

compliance over the past twenty years and are no longer monitored by the Office of Civil Rights. A number of states have recently ended their desegregation cases and the remaining states are nearing completion of their desegregation monitoring and are expecting approval from the courts and the Office of Civil Rights to end their scrutiny from desegregation monitoring. This chapter provides the historical framework for analyzing the desegregation efforts of institutions and states as federal desegregation oversight diminishes.

Chapter 2 Review of Related Literature and Research

In order to provide a context for this study, this chapter consists of a review of literature and research on higher education desegregation. It discusses desegregation, the rationale for desegregation, strategies used to desegregate higher education institutions, and the current status of state desegregation efforts.

Desegregation

Recently, Bennett (1998) highlighted the problems and issues related to diversity and desegregation by asking the following questions: “Have PWIs (Predominately White Institutions) desegregated? What is integration? Has full integration occurred? If not, how can practitioners promote positive interracial interaction on campus? College and universities have superficially and cosmetically desegregated, but not ideologically” (p. 123). This lack of understanding that Bennett articulates establishes the need for educational research on desegregation.

Desegregation mandates of policy changes and implementation have been met with varied approaches and results among states. States initially removed the legal barriers to desegregate, but the de facto segregation still existed.

Segregation

According to Benenson (2002), social science research looks at segregation as a means to measure the population for groups and/or a group’s exposure to other groups. Segregation can be analyzed looking at different concepts of individual segregation and/or group segregation (Benenson & Omar,

2002). The tendency of an individual or group to segregate is influenced by their social relationships and the frequency of the spatial relationships of the group and/or other groups (Schnell & Ostendorf, 2002). Segregation is not only related to residential segregation, but to every day life experiences. Individuals can belong to and exist into several spatial environments simultaneously.

Segregation has been referenced as “ours” against “theirs” (Schnell, 2002).

Segregation is influenced by practice and policy as well as routine daily life experiences, exposure, and influence from homogeneous and heterogeneous groups.

Schnell (2002) defines segregation as strategies directed to distance social groups. This is evidenced by the decisions in *Plessy v. Ferguson* (1896) and the historical concept of “separate but equal.” Schnell (2002) developed a conceptual framework of socio spatial segregation.

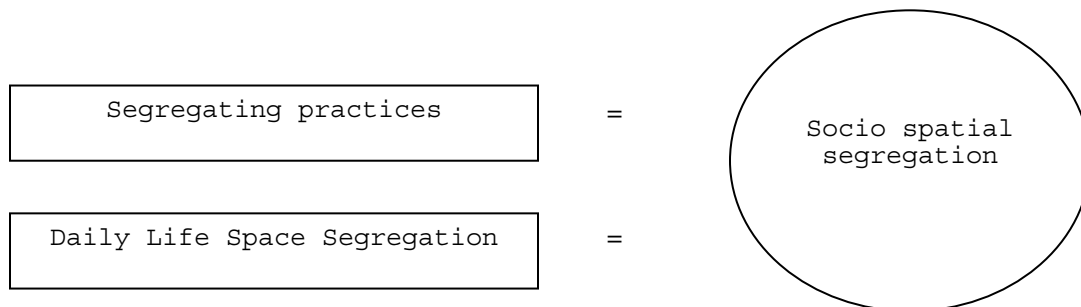


Figure 2.1 Socio Spatial Segregation

Desegregation and segregation occur in an individual’s physical and social environment in which they live and work. When segregation becomes a means to distance social groups at the expense of one group to the benefit of the other, as Schnell (2002) has noted, segregation then becomes negative and the “ours” against “theirs” feelings are heightened. This is the case in higher education;

until the 1960s many states legally mandated separate education for different races.

As legal, political, and judicial pressures forced states to desegregate, the physical and social spatial environment in higher education began to change. This change associated with impact of desegregation has not necessarily had a positive effect on overall equality and justice (Benenson, 2002).

Implications of Desegregation

Jacob (2002) emphasizes the importance of opportunities for racial and ethnic minorities and discusses the 1999 American Educational Research Association (AERA) report titled "*Compelling Interest Examining the Evidence on Racial Dynamics in Higher Education,*" which concluded that

- (1) There is clear evidence of continuing inequities in educational opportunity along racial categories;
- (2) Test-based definitions of merit are incomplete;
- (3) Race is a major social psychological factor in the American consciousness and behaviors; and
- (4) Racially diversified environments, when properly utilized, lead to improvements in educational outcomes for all parties (Jacobs, 2002, p. 3).

The report further suggests developing interventions that specifically address past and current effects of racial discrimination to achieve equality of opportunity for all. Admissions policies need to operate under an inclusive definition of merit that take into account the relative, intellectual, and civic contributions an applicant will make to the university and the broader community. Institutions need to accurately address the detrimental effects of social and

environmental factors on the test performance of racial and ethnic groups who continue to be targets of discrimination. Admissions and campus diversity policies need not only consider the individual, but also reflect the consequences of race in society. Colleges and universities need to realize the benefits of diversity for all members of the university community and of the broader society and must maximize and integrate diversity, including the composition of students, faculty, and administration. A more inclusive curriculum needs to be structured along with continued dialogue across racial and ethnic lines (Chang, 1999).

The implication of desegregation on higher education provides a challenge to states to develop equitable policies and procedures that comply with state and federal guidelines. These policies must comply with judicial and legal mandates while producing quantifiable progress to desegregate institutions without negatively impacting historically black colleges and universities.

Desegregation in Higher Education

The path to desegregation in higher education has been a long, controversial, and slow process. Hurtado (2002) states, "Many institutions have made substantial progress since the 1960s, old images die slowly – all the more slowly if students of color are few" (p. 128). The major influences on higher education desegregation have been the *Brown v. Board of Education* (1954), Civil Rights Act of 1964, *Adams v. Richardson* (1973), *University Regents of California v. Bakke* (1978), and *United States v. Fordice* (1992). The legal and judicial impact of these events shaped the parameters and guidelines of state desegregation efforts.

One of the many challenges to desegregating higher education has been to appropriately and realistically quantify, measure, and set goals for desegregation. In analyzing desegregation, a variety of desegregation/segregation measures have been developed to measure the degree of difference among groups in spatial relations, as well as the distribution of social groups. Indices of segregation usually measure dissimilarity, exposure, clustering, and/or compactedness (Benenson, 2002).

Trent (1991) looked at the differences in the segregation index (dissimilarity) among regions between 1976 and 1984. He identified schools in the north, midwest, south, and west and looked at differences between private/public and two-year/four-year institutions. He noted that in the south the greatest gain between the two time periods in desegregation occurred at the public four-year institutions with a segregation index (range 0 = low segregation to 100 = high segregation) changing from 53.6 to 43.2. The segregation index in 1984 shows differences in the regions for full time undergraduate students: north, 21.4; midwest, 23.0; south, 42.5; and west, 21.5. Comparatively, the south had almost doubled the level of segregation compared to the other three regions. The south region includes seventeen of the 19 states analyzed in this study.

Rationale for Desegregation

The initial challenge to legal segregation in higher education was motivated by a desire of African Americans to gain access to undergraduate and graduate programs. The Supreme Court cases, *Gaines v. Missouri* (1938) and *Sweatt v. Painter* (1950), provided the initial foundation to challenge the constitutionality of legally segregated higher education. Additionally, the

challenge was also to remedy the inadequate and less than equitable distribution of financial and physical resources to HBCU's institutions. Educational and social science research began to influence the policies of institutions and states by providing empirical evidence relating to higher education access, the educational benefits of desegregation, and the social justice and equity in higher education.

Access

Access to higher education was limited based upon legal exclusions by states creating separate institutions for African Americans. Prior to the 1960s, enrollment for African Americans was almost exclusively limited to the Historically Black Colleges and Universities. Only a few African Americans attended predominately white institutions in the north prior to the civil war. *Plessy vs. Ferguson* (1896) solidified the policy of separate by equal and was upheld until the 1954 *Brown v. Board of Education* (1954) decision. After World War II, the GI Bill increased enrollment in higher education and particularly increased the number of African Americans who predominately attended HBCUs (Wilson, 1998). Legal challenges between the 1930s and 1960s began to open up opportunities for African Americans to attend graduate schools at predominantly white institutions.

With the passage of the Civil Rights Act in 1964, legal discrimination was eliminated and African American enrollment at predominately white institutions increased. African American Enrollment increased in the 1970s, but began to decrease in the 1980s (Deskins, 1991).

Table 2.1 African American College Enrollment and Enrollment Rates of Recent High School Completers (Numbers in thousands)

<i>Year</i>	<i>Number of high school completers</i>	<i>Enrolled in college</i>
1972	316	141
1973	324	105
1974	325	154
1975	302	126
1976	290	129
1977	325	161
1978	345	160
1979	319	149
1980	350	149
1981	349	149
1982	382	137
1983	390	149
1984	433	172
1985	332	140
1986	378	140
1987	333	174
1988	378	168
1989	332	177
1990	331	155
1991	310	144
1992	354	171
1993	304	169
1994	316	161
1995	349	179
1996	406	227
1997	384	225
1998	386	239
1999	436	257
2000	393	216
2001	381	210
2002	382	227
2003	327	188
2004	398	249

Source: Digest of Education Statistics Tables and Figures 2005

With the elimination of legal segregation, institutions began to implement policies that continued to limit African American enrollment. Baker (2001) provides an in depth analysis of the negative impact of admission policies implemented as a result of legal challenges. Many southern states implemented admission requirements of SAT and ACT test scores which negatively impacted minority students. The policies provided opportunities for advantaged African Americans, but created a greater class difference overall and provided little access overall for African Americans (Baker, 2001). Additionally, many states implemented tests for admission prior to entering the state bar, which previously only required graduation from law school. States began wide-spread implementation of the Educational Testing Services National Teachers Examination (NTE). The NTE effectively removed many minority teachers and, when used for salary compensation, provided greater disparity between teachers. Baker (2001) asserts and provides evidence that these policies were designed and implemented to continue the segregated educational systems by providing a legally defensible basis to separate the races.

The President of the University of California System, Richard Atkinson (2003), believes that the higher education system has failed to provide access to higher education for African American and Latino students since the *California v. Bakke* (1978) Supreme Court Decision. Atkinson's statements provide further evidence that desegregation efforts are limited and/or have failed to provide significant results (Atkinson, 2003). As Wilson (1998) states, "African American enrollment is not what it should be, particularly given the increased need for higher skill levels in the twenty-first century" (p. 11).

Access to higher education has increased for minority students, particularly since the late 1960s and early 1970s. There still is a sense that despite gains, the proportion of African American enrollment to Caucasian enrollment still lags. A gap is still evident in undergraduate enrollment, graduate enrollment, degrees awarded, and minority employment (Wilson, 1998).

Educational Benefits of Diversity

More than 50 years since the *Brown v. Board of Education* (1954) decision, the debate over diversity is still prevalent and often intense in higher education. A lack of consensus on the policies, solutions, and extent of educational benefit that diversity creates has not been conclusive, as evidenced by ongoing legal challenges.

The American Council on Education (ACE) developed a set of principle statements supporting diversity in higher education. ACE states that diversity (a) enriches the educational experience; (b) promotes personal growth and a healthy society; (c) strengthens communities and the workplace; and (d) enhances American's economic competitiveness (Lindsey & Justiz, 2001, p. 8).

Milem (2003) describes the individual benefits, institutional benefits, economic/private sector benefits, and societal benefits of diversity in higher education. Individual benefits include enhancing critical and complex thinking ability, enhancing the ability to understand diverse perspectives, improving openness to diversity, enhancing classroom discussions, providing greater satisfaction with the college experience, increasing student persistence, improving the racial and cultural awareness of students, increasing a commitment to racial understanding, providing a more supportive campus racial

climate, and increasing wages for graduates. The institutional benefits include a more student-centered approach to teaching and learning, greater diversity in curricular offerings, more research focused on issues of race/ethnicity and gender, and more women and faculty of color involved in community and volunteer service. The economic/private sector benefits include the cultivation of a workforce with greater levels of cross-cultural competence, a greater available talent pool, enhanced marketing efforts, higher levels of creativity and innovation, better problem-solving abilities, and greater organizational flexibility. Affirmative action in employment leads to decreased job discrimination, decreased wage disparities, decreased occupational segregation, increased occupational aspirations for women and people of color, and greater organizational productivity. Societal benefits include decreased occupational and residential segregation, greater engagement socially and politically, decreased stereotyping, higher levels of community service civic responsibility, increased equity in society, and a more educated citizenry. In sum, Millem's work demonstrates and supports the need for greater diversity based upon the benefits to individuals, institutions, and society.

As part of the foundation that the University of Michigan used for the decision to include race in the admission process, which was later challenged in *Gratz v. Bollinger* (2003), Gurin (2004) conducted a longitudinal survey of students at the University of Michigan that empirically identified and supported the educational benefits of diversity. The basis of the study was that "students who interact with diverse students in classrooms and in the broad campus environment will be more motivated and better able to participate in a

heterogeneous and complex society” (Gurin, 2004, p. 19). In her study, the impact of diversity on a student’s educational experiences was compared between two groups of students, a control group and quasi-experimental group.

Eighty-seven students were selected to participate in a curricular diversity program that would expose them to a wide and prolonged variety of diversity topics and activities. The students entered the diversity program upon entering the university. The students were given a survey prior to entering the program, after completing the semester and then four years later. The survey results of the students in the diversity program were then compared to a matched group of students, the control group, with similar characteristics who enter the university at the same time, but did not participate in the diversity program.

The two groups were compared using nine different factors: perspective taking, non-divisiveness of difference, perception of commonalities in values across groups, mutuality in learning about own and other groups, acceptance of conflict as a normal part of social life, interest in politics, participation in campus politics, participation on community service, and commitment to post-college civic participation. After the fourth year, the survey results were analyzed for the two groups. Significant differences were found on the democratic sentiments and civic activities factors (Gurin, 2004). Students who enrolled in the diversity program showed a greater self-awareness about ethnic groups, had a greater appreciation for democracy, showed a greater understanding for others’ perspectives, and had greater involvement in other group memberships. The students in the diversity program also demonstrated a greater commitment to helping their community and promoting a greater understanding of racial/ethnic

groups. The students in the diversity program also reported significant individual gains from the pre-test survey, the end-of-term survey, and the four-year survey.

The Gurin (2004) study concludes that student diversity has the potential to provide a positive educational experience for students when provided in an appropriate environment. Gurin states:

Racial and ethnic diversity on college campuses offers students for personal development and preparation for citizenship in an increasingly multicultural society depends on actual experience that students have with diverse peers. Just as positive educational benefits of racial and ethnic desegregation depended on real integration of children from different backgrounds, higher education institutions have to make use of racial/ethnic diversity by creating educational programs that bring diverse students together in meaningful, civil discourse to learn from each other (p. 32).

One of the more recent and controversial challenges to the benefits of diversity on education came in 2003 by Rothman, Lipset, and Nevitte. Their study indirectly analyzed the argument that increasing racial diversity enriches the educational experience. The study analyzed student, faculty, and administrator responses about their perceptions and experiences on campus. The responses of faculty and staff were then correlated to the respective racial demographics of their college based upon a national data set. The study looked particularly at the relationship and percentage of Caucasian and African American students on the campus. The results of the Rothman et al. study were contrary to overwhelming support in higher education that diversity enhances the educational experience. The findings of the study concluded that diversity increased perceptions of personal discrimination among students. Faculty, however, viewed diversity as improving race relations on campus. Overall, the study challenged the methodology generally used to analyze diversity and

educational benefits and concluded that “the findings failed to support the argument that enrollment diversity improves the education and racial milieu at American colleges and universities” (Rothman, Lipset, & Nevitte, 2003. p 24.).

The response to the Rothman (2003) study has generated a fierce debate on the results. The methodology has been questioned, particularly the indirect method of measurement (Burns, 2003). Burns counters the Rothman study and states that “the research on diversity is far more convincing... racial diversity is a fact of life. Our universities must be proactive about increasing diversity. Why? Because to do so is to create an enriching educational experience that prepares students for a complex and diverse world” (p. 52A).

Social Justice

Social justice refers to the concept that benefits or advantages are available to all in society equally (Minogue, 1998). One aspect of social justice theory is that the government redistributes the wealth, which results in eliminating poverty and provides for basic/minimum equality (Minogue, 1998). In a socially just society, each person is treated equally, has fair and equal access, and has privilege to society’s means including education and employment (Koggel, 1998). People with similar talents and abilities should not have a disadvantage based upon their race, gender, disability, class, location, or wealth (Koggel, 1998). Class and social status should not advance one segment of society over the other. Social justice becomes the means to distribute wealth and improve the quality of life of society.

Desegregation efforts have broken down many of the barriers that previously stood in the way, at least in principle, of a socially just society in

America. Class and social status currently have an impact on the ability to accumulate wealth and power, but in education the legal barriers have been removed. The fundamental question has now become the elimination of the educational achievement gap and ensuring that every student obtains a quality education regardless of ethnicity and social class (Hebel, 2004).

Equity

One of the key points influencing the Supreme Court's decision in the Brown (1954) case was the fact that discrimination is demoralizing, depersonalizing, and has the potential to create an inferiority complex upon those being discriminated against. The research conducted by Kenneth and Mamie Clark looked at the psychological impact of desegregation (Howard, 1997). Their research demonstrated the inferiority complex that young children had about their own race. The research conducted by the Clarks demonstrated that equality in education for different racial groups was inherently unequal. This inequality has been used throughout the debate and litigation of higher education desegregation.

A focal point in the *United States v. Fordice* (1992) decision was the noticeable disparity between three of the traditionally white institutions: Mississippi State, the University of Mississippi, and the University of Southern Mississippi and the three traditional black institutions: Alcorn State University, Mississippi Valley, and Jackson State in Mississippi. The three white institutions were thought of as flagship institutions with higher admission standards and greater state funding, while the three HBCU institutions were generally recognized as regional institutions with lower admission standards and

inadequate state funding. Although *Brown vs. The Board of Education* (1954) struck down separate but equal, disparity continues to exist between institutions in higher education. One of the key components of the Mississippi settlement agreement is the increased long-term financial support the state has offered to the three HBCU institutions (*United States v. Fordice* 1992).

Not only has there been financial disparity in funding and resources at HBCUs, but also disparity in student preparation, retention, and degree attainment. Trent (1997) looked at the disparity between African American degree attainment and Caucasian degree attainment between 1975 and 1981. The study showed a difference between the available pool of college students and the number of degrees awarded. The African American available pool in 1972 was 10.9 percent of the college population while the available white pool was 88.1 percent. The available pool for African Americans increased to 11 percent in 1977 and the white available pool decreased to 87.3 percent. The number of bachelor degrees awarded in 1975-76 year for African Americans was only 6.3 percent, while the numbers of Caucasian degrees awarded were 87 percent. In the 1980-1981 academic year, the number of bachelor degrees awarded to African Americans increased from 6.3 percent to 6.5 percent while the number of degrees awarded to Caucasians decreased from 87 percent to 85 percent (Trent, 1997). Based upon Trent's research, there is a disproportionate number of degrees awarded to white students based upon the population of students potentially eligible to receive degrees.

There has also been a debate on the role of the open admissions community college in providing access and equality with their large enrollment of

under represented minorities. African American enrollment is higher in community colleges than four-year institutions (U. S. Department of Education, 2001). One of the original goals of the community college was to provide the curriculum and courses for students to transfer to four-year institutions (Brint & Karabel, 1989).

Much of the debate is on whether community colleges do actually assist or hinder students in obtaining their goal of achieving a bachelor's degree.

Community colleges have been accused of diverting students away from four-year universities with a smaller number of students actually transferring from community colleges to four-year universities compared to the number of students having the initial goal of transferring (Brint & Karabel, 1989). In a recent study by the U. S. Department of Education (2001) 71 percent of beginning community college students surveyed anticipated earning a bachelor's degree or higher. Only 11 percent of the students were continuously enrolled in an academic major, full-time, and taking courses towards a bachelor's degree. The estimated number of students transferring to a four-year institution was approximately 20 to 25 percent across various studies (U. S. Department of Education, 2001).

Students who initially enroll in community colleges are more likely to drop out than students who initially enroll in four-year institutions due to low academic preparation and financial constraints (Admon, 2006). Students were also more likely to enroll in vocational programs. Admon's critical statement about the role of open admissions community colleges demonstrates a disparaging view, "It looks like the major beneficiaries of the new policy were White students, while

many minorities found themselves locked at the dead-end programs of the community college” (Admon, 2006).

Community colleges do benefit students who are unable to meet the more stringent admissions requirements at four-year institutions. Many researchers argue that community colleges improve levels of educational attainment by providing pathways for students to transfer and matriculate to four-year institutions (U. S. Department of Education, 2001).

Desegregation was designed to provide equality in higher education. The lengthy process to desegregate higher education has increased funding for historically black colleges and universities, increased African American enrollment in higher education, and removed the legal barriers to institutions previously exclusively for whites.

Strategies to Achieve Desegregation

This section discusses the role of historically black colleges and universities, affirmative action, and percentage plans in relation to their impacts on higher education desegregation. State boards of higher education, state legislatures, and colleges and universities began to develop strategies to provide access to higher education and develop strategies to comply with the Civil Rights Act and court decisions. Initially, access to higher education was established through HBCUs.

As the movement to desegregate began to take place, affirmative action programs were implemented to increase the opportunity for underrepresented minorities to attend colleges and universities that previously excluded them. Affirmative action programs began to be challenged in court on the same basis of

segregation. Alternative methods to affirmative action are being developed with the latest trend focusing on percentage plans.

Historically Black Colleges and Universities

The mission of HBCUs has been to develop the educational and social functions of students by providing access to higher education in a rich and positive environment of black history and tradition (Sims, 1994). The educational attainments of African Americans have been significantly achieved through HBCU institutions. HBCUs have provided remedial education, an environment of support, and a cultural environment creating an identity and necessity in higher education (Brown & Davis, 2001).

Many of the land grant HBCUs received their foundation from the second Morrill Land Grant Act of 1890 (Neyland, 1990). The 1890 Morrill Act provided that land grant funds be equitably divided in states where separate institutions for races had been established. This led to the establishment or creation of land grant HBCUs.

In 1890, less than half of the southern African American population 10 years of age or older could read or write. The HBCU institutions initially did not have the high school enrollment to feed into their colleges. At the time, there were only 65 high schools in the south designated for African Americans. The focus of the HBCU was primarily on the elementary and secondary education levels in order to prepare students for collegiate work (Neyland, 1990).

Many of the HBCU institutions were initially developed to provide a liberal arts education or a normal education that focused on training teachers. The focus of the land grant institutions changed with the 1890 Morrill Act and the

focus shifted to agricultural, mechanical, and home economics training. The 1890 Morrill Act was beneficial as it provided stable funding for HBCUs to build campuses and increase enrollment.

It was not until the 1920s and 1930s that HBCUs began a standard four-year college curriculum. Graduate programs were later initiated for most HBCUs in the 1930s, 1940s, and 1950s. Graduate programs began to be developed as an outcome of the 1938 U.S. Supreme Court decision in *Lloyd Gaines v. University of Missouri* (1938). The Supreme Court ruled that Missouri's practice of providing aid to African American students to attend out-of-state graduate school programs violated the equal protection clause of the Fourteenth Amendment. The Court said:

Here the petitioner's right is a personal one. It was as an individual that he was entitled to the equal protection of the laws, and the state was bound to furnish him within its borders facilities for legal education substantially equal to those which the State there afforded to persons of the white race, whether or not other Negroes sought the same privileges (Neyland, 1990 p. 103).

Many states began to offer graduate programs at HBCU institutions following the Supreme Court decision as opposed to desegregating predominantly white graduate programs.

As desegregation efforts became more prevalent after the *Brown v. Board of Education* (1954) decision, predominately white institutions began increasing the number of African American students admitted. As a result of the political and legal implications of desegregation, HBCU institutions began to be challenged for their continued existence. Samuels (2004), supports the role of HBCUs and advocates that HBCUs should be maintained, strengthened, and enhanced in order to maximize the educational opportunities for African

Americans. He also points out that the *Brown* (1954) decision “remains a highly contested political icon that means radically different things to different people (Samuels, 2004, p. 149).”

Felton Clark, President of Southern University, expressed his concerns about the future mission of land grant HBCUs:

The Negro Land-Grant Colleges have held open the door, leading to college training of countless Negroes who otherwise could never have embraced it. Literally, they have been instruments for the democratization of higher education. It is highly important to realize that Negro Land-Grant Colleges came into existence for just one reason – segregation. When the elimination of segregation from the South’s Land-Grant Colleges and Universities has become an accomplished fact, the question is certain to be raised as to the justification of a land-grant college for Negroes (Neyland, 1990. p. 89).

President Clark’s comments in 1952 foreshadowed the debate that would ensue as Southern states began to desegregate. As states began to implement desegregation strategies, HBCU institutions began to be scrutinized over their duplication of efforts. The land grant components of many HBCU institutions were transferred to predominately white institutions.

Kentucky State University (KSU), faced with a trend of decreasing enrollment to 700 students in 1961, encountered political pressure from the state legislature to relegate KSU to a junior college or eliminate the institution altogether (Neyland, 1990). Likewise, the University of Maryland Eastern Shores also had a decrease in enrollment and discussions centered around closing the institution or merging the institution with a predominately white institution.

Chancellor William Hytche of the University of Maryland Eastern Shores responded to those efforts:

They’ve talked about making this place a chicken farm and they’ve talked about making it a prison farm. They’ve talked about making it a junior

college and they've talked about merging it with some other school. Now a legislative analyst says it should be shut down (Neyland, 1990, p. 256).

The frustration of HBCU institutions increased with continued decreasing enrollment, lack of support, and lack of funding. HBCU institutions were

Being punished for inadequate development when the state, through its policies of segregation, isolation, inadequate support, and curtailed course offerings, had failed to encourage or even permit growth at the institution (Neyland, 1990, p. 256).

Both Kentucky State University and the University of Maryland Eastern Shores were spared serious transformation, merger, or closure. The role of the HBCU was upheld primarily based upon the agreement in the *Adams v. Richardson* (1973) litigation that emphasized enhancing HBCU institutions rather than diminishing them. Based upon the Adams agreement, many HBCUs were elevated to university status emphasizing their continued and important role in higher education (Neyland, 1990).

HBCUs have historically enrolled a disproportionate number of African American students. Prior to 1954, over 90 percent of African American students, approximately one hundred thousand in 1954, were educated in HBCUs (Roebuck, 1993).

Affirmative Action

In the 1960s, affirmative action began with an emphasis on administrative preferences. Equity and fairness were the basis and intent of affirmative action programs in the early 1960s. President John F. Kennedy signed Executive Order 10952 creating the Equal Employment Opportunity Commission (Lindsey & Justiz, 2001). President Kennedy also pushed for desegregation in federally financed public housing (Fuchs, 1997). President Johnson continued Kennedy's

push for civil rights. Johnson supported and spoke favorably for affirmative action, he said, "Yes, it is a good idea, but don't call it compensatory. Call it 'affirmative action.' It's moving the nation forward! It's going out of our way to bring minorities in that have been excluded! That is positive affirmative action" (Fuchs, 1997, p. 65).

Affirmative action was designed to compensate for past discrimination, correct current inequalities, and create diversity in educational environments (Rothman, 2002, p. 11). Most race-based affirmative action programs target the low socioeconomic status of individuals and groups (Leman, 1997).

Chemerinsky (1997) outlines the goals, techniques, and needs of affirmative action. The goals for affirmative action were to: 1. remedy past discrimination, 2. enhance diversity, 3. increase the political power of minorities, 4. provide role models, and 5. enhance the wealth and services provided to the minority community.

Affirmative action was designed to remedy past discrimination by providing a means to erase the past effects for victims or classes of victims of prior discrimination (Chemerinsky, 1997). Affirmative action supporters seek to go beyond just ending legal discrimination, but also support providing an opportunity to establish an environment that would place the minority community at the appropriate level provided that prior discrimination did not exist.

The techniques of affirmative action varied based upon the actions desired in education, employment, promotion, contracting, and political representation. Affirmative action was implemented voluntarily and by court order. In implementing plans, organizations/institutions could recruit minorities, set goals

and timetables, create set-asides, establish quotas, and implement race-norming programs (Chemerinsky, 1997).

In 1969, under President Nixon, the Philadelphia Plan was implemented, which provided that companies doing business with the federal government were required to provide numerical goals and timetables for hiring and promoting African Americans (Fuchs, 1997).

The needs for affirmation action varied from creating equality and equity, remedying past discrimination, and enhancing the educational process by providing a diverse learning environment (Chemerinsky, 1997). Different techniques are implemented based upon the varying needs of affirmative action employment, politics, and education. In Bowen and Bok's (1998) study, academically selective institutions had a commitment to enrolling a diverse student body and paid attention to race in the admissions process. They also pointed out that overall, there are a relatively small number of institutions that reject applicants based upon a limited number of first-time freshmen.

With the passage of the Civil Rights Act in 1964, political and economic parity became the focus. The Civil Rights Act created a legal opportunity to enforce non-discrimination and added to the importance of affirmative action. Affirmative action contributed to significant advances in racial equality in the 1960s and 1970s (Higham, 1997). In the 1980s and 1990s affirmative action has been in a mode of retrenchment (Ethridge, 1997).

Affirmative action programs have come under significant scrutiny. Public policy on affirmative action has waned. Legal court actions in *Bakke*, *Hopwood*, *Gratz*, and *Grutter* have challenged and changed the landscape of higher

education. California, Texas, and Florida have changed their admissions programs away from quotas, set asides, and race based admission programs to percentage plans (U.S. Commission on Civil Rights, 2000)

Higher education has been challenged to effectively, politically, and legally provide equal opportunity to individuals that in the past it has excluded.

Affirmative action programs in admissions at the undergraduate and graduate level have provided colleges and universities a means to enhance diversity.

Percentage Plans

In response to the increased scrutiny and legal challenges in using race-based admission decisions, California, Florida, and Texas have developed alternative admission requirements using percentage plans (U.S. Commission on Civil Rights, 2000). These percentage plans replaced affirmative action plans, which have been continually challenged in court.

In California, the state has had a long standing policy of admitting the top 12.5% of high school graduates statewide. This was in place during and prior to affirmative action initiatives. Affirmative action was dissolved in California. The California plan was later changed to ensure admission of the top 4% of graduates in each high school. California's change expanded the potential pool of applicants and increased the opportunity of obtaining diversity based upon the diversity of California's high schools (U.S. Commission on Civil Rights, 2000).

In 1998, Texas, in response to the *Hopwood* (1996) case, implemented a percentage plan, eliminating policies that were based upon affirmative action. The Texas Plan allows students in the top 10% of their high school graduating class the ability to choose the state college or university of their choice. The plan

also provides guidelines for students not in the top 10% of their graduating class and looks at 17 factors including social economic status and standardized test scores (U.S. Commission on Civil Rights, 2000).

In 1999, Florida banned the use of race in admission decisions. The state implemented the Talented Twenty Program. The Talented Twenty Program allows students in the top 20% of their high school class who have taken a 19 unit core college curriculum to enroll in one of Florida's 11 public institutions. Students also have the ability to gain admission based upon standardized test scores, grade point average and a profile assessment (U.S. Commission on Civil Rights, 2000).

The U.S. Commission on Civil Rights (2000) concluded that in all three states, percentage plans reduced the number of minority students enrolled at the top tier public institutions. In California, both undergraduate and professional programs have seen a decrease in minority applications. In Texas, the percentage plans have seen a decrease in minority students at the University of Texas-Austin. Prior to the percentage plan, African American enrollment at the University of Texas – Austin was five percent. After the implementation of the percentage plan, it has dropped to three percent. Hispanic enrollment decreased from 15 percent to 13 percent (U.S. Commission on Civil Rights, 2000). In Florida, the Commission (2000) found that the percentage plans hindered African American participation in higher education. African American students are represented proportionately lower than Caucasians and other ethnic minorities in first time college enrollment.

The Commission concluded that percentage plans would not achieve the goal of equal educational opportunity for all students. Unlike past affirmative action programs that increased minority participation in higher education, percentage plans alone have not increased minority participation in higher education. The Commission believes that further efforts to increase educational opportunities must go beyond the percentage plans by offering multiple paths and multiple incentives.

The debate over percentage plans continues. In Texas, the legislature is debating modifying the ten percent plan or halting the plan all together (Kofler, 2004). Proponents argue that the plan provides flexibility. In 2003, the University of Texas admitted over seventy-percent of incoming freshmen under the ten percent plan. Many legislators believe the plan has improved diversity and the plan only needs to be modified (Kofler, 2004).

Current Status of Desegregation Efforts

The extent of desegregation efforts are being questioned as states are finalizing and settling their cases. Hebel (2002) asserts that “some believe that states have wasted opportunities to use desegregation plans to significantly improve college opportunities for minority students. And they fear that efforts to diversity campuses and broaden access will lessen as pressure is taken off these states” (p. A28). In 1988 and 1989, the Office of Civil Rights declared that Arkansas, Georgia, Missouri, North Carolina, Oklahoma, South Carolina, and West Virginia no longer operated a segregated system of higher education and ended monitoring these states (Roebuck, 1993).

The following states are set to finalization their desegregation plans:
Kentucky, Florida, Virginia, Pennsylvania, Maryland, Texas, and Ohio.

The following states are attempting to resolve lawsuits:

Louisiana	10 year settlement plan approved November 1994
Tennessee	5 year settlement plan approved January 2001
Mississippi	17 year settlement plan approved February 2002.
Alabama	Monitoring a 1995 court order (Hebel, 2002).

State Desegregation Status

The following examples provide a summary of desegregation efforts of a few states.

Louisiana

In September 1992, the United States Department of Justice asked that the Louisiana case to be remanded to the District Court based on the Supreme Court's ruling in *United States v. Fordice* (1992) (Dyer, 1992). On December 23, 1992, Judge Charles Schwartz ordered the implementation of the earlier District Court's ruling creating a single higher education board, but left out the merger of the Louisiana State University and the Southern University Law Schools (Redman and Shuler, 1992). In December, 1993, a federal appeals court threw out Judge Schwartz's order for sweeping changes and a trial was set for the United States Department of Justice to prove Louisiana was in violation of the Civil Rights Act of 1964 (Redman, 1993).

In 1994, a federal judge approved a 10 year plan to increase integration in Louisiana Colleges. The plan added academic programs to historically black colleges and provided funding to improve facilities (Hebel, 2004). The settlement agreement ended in 2006.

Mississippi

In April 2001, an agreement between the United States Justice Department and Mississippi Citizens was filed in court after being initially filed in 1975. The terms of the agreement included \$500 million dollars over 17 years. Attorney General John Ashcroft spoke after the agreement was reached, “The important agreement that we have reached with the state of Mississippi will increase access to quality educational opportunities and benefit all of Mississippi’s students and citizens” (U.S. Department of Justice, 2001).

Alvin Chambliss, the plaintiff’s attorney, challenged the agreement and appealed the court decision. The appeal claimed that the settlement, although beneficial for historically black colleges, was inadequate and failed to provide equality in educational opportunities for black and white students (Hebel, 2004).

Tennessee

In 1968, Rita Sanders Geier filed suit against Tennessee for approving a branch campus that would create a situation whereby a predominantly black and predominantly white institution would exist in close proximity. The *Geier v. Sundquist* settlement, 2001, abolishes enrollment goals and ends affirmative action in hiring. The centerpiece of the plan is to help Tennessee State University, a predominantly black institution, attract white students (Yates, 2001).

South Carolina

Despite being declared in compliance with the Office of Civil Rights in the 1980s, a recent report in 2002 expressed concern about the state's current desegregation status. The Southern Education Foundation published Miles to Go: South Carolina, which discussed their concern that only 8.6% of South Carolina's faculty in public higher education institutions were African American (The Southern Education Foundation, 2002). African American enrollment in South Carolina has increased twenty-percent (20%) in the last eight years, but the graduation and retention rates are lower than Caucasian students (The Southern Education Foundation, 2002).

In the 1998, report the Southern Education Foundation documents the current status of desegregation:

Race remains a powerful and persistent barrier to the full and equal participation of blacks in higher education in the 19 states that previously operated segregated colleges and universities. Despite some promising initiatives in these states, remnants of the past continue to restrict opportunity for black students, limiting their aspirations and threatening a region's hopes for a brighter future (Southern Education Foundation, 1998, p. 16).

Kentucky

Kentucky is currently in the middle of their third desegregation plan since 1982. The Kentucky Plan for Equal Opportunity in Higher Education 1997-2002 identifies successes and problems since 1982. The current plan focuses the emphasis on retention and graduation of African American students and also places an emphasis on its historically black institution, Kentucky State University (KSU). The state received tremendous scrutiny for its proposed plan to eliminate KSU or merge them with another college. The elimination or merger of KSU

would dispel the claim that Kentucky operated a dual system of higher education. The current plan focuses on increased funding, proper facilities, and programs of Kentucky State University.

Chapter Summary

As the nineteen states end or near the end of their desegregation initiatives, the overriding question continues to be whether these efforts have produced substantial progress. Ebarb (1995) conducted a study of political leaders in a southern state and concluded that the argument of desegregation favors the separate but equal doctrine that was the basis for numerous court decisions and even for the passage of the Civil Rights Act of 1964. He believes that as long as racially identifiable boards and institutions exist, de jure segregation will exist, and will provide the basis for further litigation (Ebarb, 1995).

Quantifiable results are needed to assess the status of higher education desegregation in these 19 states. The implications for the states and institutions based upon the research results will provide a solid foundation from which the direction of public, legislative, and judicial policies and decisions can be made.

The next chapter describes the longitudinal data collection and data analysis. Desegregation will be measured and analyzed in the 19 states that operated dual systems of higher education with comparative analysis for non-Adams states.

Chapter 3 Methodology and Procedures

The study provides an analysis of over 30 years of historical patterns of higher education desegregation in states that previously operated dual educational systems based on race. As noted in Chapter 1, the study addresses the following questions:

1. To what extent have the states that previously operated dual systems of higher education and were involved in the *Adams v. Richardson* (1973) litigation desegregated?
2. To what degree and at what rate has desegregation taken place in the states that previously operated dual systems of higher education and were involved in the *Adams v. Richardson* (1973) litigation?
3. Is there a difference in desegregation results between two-year and four-year institutions in states that previously operated dual systems of higher education and were involved in the *Adams v. Richardson* (1973) litigation?

The longitudinal data on the progress, rate of change, and pattern of desegregation quantifiably measures and provides the ability to compare desegregation in states mandated to comply with federal statutes and legal mandates. In this chapter the methods used to collect and procedures which were used to analyze data in this study are identified and explained.

Research Design

The descriptive research technique of panel design was used to measure the changes in desegregation over time in higher education. In a panel design,

the researcher collects the same data on the same subjects over at least two separate points in time (Hagenaars, 1990). In the current study, the panel study design provided the ability to collect enrollment data for each institution and each state at the initial data collection point of 1980 and subsequently through 2000. The panel research design method allows for repeated surveying and looks at responses over time. Further, the design establishes how the responses have changed and individuals and/or groups can be identified and further analyzed looking at differences in individuals and subgroups (Hagenaars, 1990). Panel design detects individual change along with aggregate change and provides better statistical analysis than trend and cohort analysis based upon the sensitivity to smaller changes over time and the ability to track the events and characteristics that contribute to the change (Gall, 1996). The panel analysis technique normally is associated with problems in measurement error and mortality (Hagenaars, 1990), but this research design eliminates the problem of mortality based upon longevity of institutions and measurement error is minimized based upon federal reporting requirements in higher education.

Data Collection

The sample includes all public two-year and four-year institutions in the 19 states involved in the *Adams v. Richardson* (1973) litigation. In the fall of 2000, over 700 public institutions operated in the 19 states. Four separate data sources provided the data for analysis.

The first source of institutional data collected was based upon the institutions' participation in the Higher Education General Information Survey (HEGIS) from 1977 until 1983. HEGIS is a comprehensive national system of

collecting basic higher education data. The Fall Enrollment Survey initially administered by HEGIS and later by the Integrated Postsecondary Education Data System (IPEDS), includes data on full-time, part-time, and full-time equivalent enrollment by sex and by race for undergraduate and graduate students by field of study is used to analyze desegregation. In 1977, the Fall Enrollment Survey expanded and began collecting student enrollment data based on race/ethnic categories.

The second source of data is for two-year and four-year public institutions based upon their participation in The Integrated Postsecondary Education Data System (IPEDS) Fall Enrollment Survey between 1984 and 1988 found at the International Archive of Education Data supported by the National Center for Education Statistics. IPEDS is a national data set consisting of institution-level data that can be used to describe trends in postsecondary education at the institution, state and/or national levels. IPEDS continued the HEGIS data collection survey, but now provides greater in-depth analysis of higher education through multiple extensive national surveys including the Fall Enrollment Survey, Completions, Graduation Rate Survey, Salaries, Tenure, and Fringe Benefits of Full-Time Instructional Faculty, Financial Statistics, Student Financial Aid, and Fall Staff surveys.

From 1989 until 2004, the third source of data is for two-year and four-year institutions based upon participation in The Integrated Postsecondary Education Data System (IPEDS) Fall Enrollment Survey from the National Center for Education Statistics.

Each Fall Enrollment Survey from 1980 until 2004 was downloaded individually and imported into a single database with the following fields:

UNITID – Unique identifier for each reporting unit

YEAR - IPEDS Data Year

INSTNM – Institution (Entity) Name

STABBR – Post Office Code State abbreviations

FICE – Identifies schools accredited at the college level by an agency recognized by the Secretary of Education

LEVEL – Level of Institution (Administrative unit, 4 or more years, at least 2 but less than 4 years, and less than 2 years)

HLOFFER – Highest level of offering (Associate, Bachelor, Master, Doctor, Other)

CONTROL – Public, Private nonprofit, Private for-profit

ACCRD2 – Regional Accrediting Agency

SECTOR – Sector of institution (Public two-year, Public four-year or above)

ENROLL – Enrollment for Non-resident alien, Black, non-Hispanic, American Indian/Alaskan Native, Asian or Pacific Islander, Hispanic, White non-Hispanic, and race/ethnicity unknown.

The various data sources were merged to provide a common data table with the ability to analyze institutional and state data for all periods.

Data Analysis

The data was processed and analyzed using SPSS Version 11. Specific statistical analysis was used to analyze each research question using repeated

measure analysis of variance, cross-sectional analysis, log linear trend analysis, Split-Plot Analysis of Variance, and graphical trends.

A segregation index was calculated for each institution, institution type (two-year, four-year), state, and a composite index and average index for states from 1980 until 2002. The data collected was analyzed using an index of segregation defined as:

$$D = 1/2 \sum \left| \frac{n_1}{N} - \frac{w_1}{W} \right|$$

Figure 3.1 Segregation Index

(where n_1 = the African American enrollment at the institution; N = the total African American enrollment in the state; w_1 = the Caucasian enrollment at the institution; W = the total Caucasian enrollment in the state).

The Segregation Index is used to measure the extent of school desegregation. The Index analyzes the racial composition of students attending public higher education proportionally in the state compared to the racial composition of students proportionally at each individual college or university in the state. The Segregation Index (index of dissimilarity) was used by Hanley (1983) to analyze elementary and secondary racial composition at the school district level. Trent (1991) used the segregation index (Coleman segregation index) to analyze higher education by region (north, midwest, south, and west), by control (public or private), and by level (two-year or four-year). Trent (1991)

compared regions using 1976 and 1984 data with an index of 38.4 in 1976 and 34.0 in 1984 for all institutions nationally. In both studies, the index did not provide the extent of longitudinal periods, and likewise did not provide data on all states previously operating dual systems of higher education. The studies also did not analyze the individual institutional level data.

A segregation index for each institution was calculated based upon the ratio of students at the institution to the racial make-up of the state. The absolute value of each institution score in a state is summed and then halved to compute the state segregation index. Each state index was computed for each year data was collected between 1980 and 2004. The scale computed for the segregation index ranges between 0 and 100. Zero equates to a completely integrated institution or state and 100 equates to a completely segregated institution or state. The composite segregation indexes for each institution, state, type of institution, and composite score for each year was imported into SPSS for statistical analysis.

In order to look at the segregation index by state over time between Adams states and non-Adams states, further analysis was conducted using a pooled cross-sectional time-series model. The model expands previous analysis beyond just the segregation index by state and year to also include socio-economic, demographic, and political variables by state and year and their overall impact on desegregation. The pooled cross sectional model estimation is prone to violations of ordinary least squares (OLS) assumptions of homoskedasticity and uncorrelated error terms (Gujarati, 1995; Kmenta, 1986; Greene, 1993). OLS estimates are unbiased in the presence of autocorrelation,

these estimates are not efficient, and the variability of OLS coefficients obscures the tests of statistical significance. To correct the model for violations of homoskedasticity, the pooled cross-sectional time-series model uses feasible generalized least squares (FGLS). The model assumes a heteroskedastic error structure across panels with no cross-sectional correlation and is estimated using panel-specific estimates of first-order autocorrelation.

The segregation index was analyzed in STATA using the FGLS statistical model with data collected on each state from the Statistical Abstract of United States for each year from 1980 to 2004. The variables used to analyze the effect on the desegregation were the percent of the population that was black, the percent of the population living in urban areas, per capita income, density of the population, state aid as a percent of total expenditures, the party control of various elected officials, the state unemployment rate, total state expenditures, total government employees, and whether or not the state was an Adams states.

Demographic Variables. The first demographic variable in the study is the percent of the population that is African American. The variable allows us to measure the impact of the population that is African American and its relationship on the segregation index. The direction and magnitude of the relationship between the African American population and the states' segregation index over time was analyzed.

The second demographic variable is the population density. The population density variable measures the concentration of the population and is calculated as the population, in thousands, divided by the state square miles in thousands.

The third demographic variable is the percent of the population that is urban. The urban population is classified as all territory, population, and housing units located within urbanized areas and urban clusters. An urbanized area consists of densely settled territories that contain 50,000 or more people, while an urban cluster consists of densely settled territories with at least 2,500 people but fewer than 50,000 people.

Socio/Economic Variables. The first socio/economic variable in the study is the states per capita income. Per capita income is the mean income computed for every man, woman, and child in the state. It is derived by dividing the aggregate income of the total population in the group. Per capita income is rounded to the nearest whole dollar.

The second socio/economic variable in the study is the state unemployment rate. The unemployment rate represents the number unemployed individuals as a percent of the labor force.

The third socio/economic variable in the study is the states per capita expenditures. Per capita state expenditures are the total local and state expenditures divided by the total state population.

The fourth socio/economic variable in the study is intergovernmental aid as a percentage of total state expenditures. The variable is calculated based upon the total amount of federal aid as a percentage of total state expenditures.

The fifth socio/economic variable in the study is the number of total government employees. The number of total government employees is the number of local, state, and federal government employees in the state.

Political Variables. The first political variable is the party control of the state senate, state house, and governor. The party control variable is the sum of the number of democratic state senators, democratic state representatives, and democratic governor.

Other Variables. The segregation Index is used to measure the extent of state desegregation in higher education. The Index analyzes the racial composition of students attending public higher education proportionally in the state compared to the racial composition of students proportionally at each individual college or university in the state.

The last variable analyzed in the study identifies whether the state was involved in the *Adams v. Richardson* (19973) litigation. The 19 Adams states were coded using 1 and the non Adams states were coded using 0.

Research Question 1

To what extent have the states that previously operated dual systems of higher education and were involved in the *Adams v. Richardson* (1973) litigation desegregated? A repeated measures analysis of variance was conducted to analyze the segregation index within each state and between states examining and evaluating differences in desegregation longitudinally over time. The repeated measures analysis of variance also provides an analysis of individual institution desegregation in each state looking at differences within each institution and between each institution each year and longitudinally since 1980.

The assumptions for Repeated-Measures Analysis of Variance were tested, 1. a randomly selected sample, 2. normal distribution, 3. population variances for the test occasions are equal (homogeneity of variance), and 4.

population correlation coefficients between pairs of test occasion scores are equal (Hinkle, 1998). The repeated-measures ANOVA reduces the residual when testing different occasions. The variation of the segregation index was analyzed for differences among institutions and between states longitudinally from 1980 until 2004.

Research Question 2

To what degree and at what rate has desegregation taken place in the states that previously operated dual systems of higher education and were involved in the *Adams v. Richardson* (1973) litigation?

A linear trend analysis was used to look at the averages of the segregation index from 1980 to 2004 for states, institutions, and two-year and four-year institutions. The linear trend across time was analyzed exploring the rate of change over time or slope. The quadratic trend or curvature across time analyzed the rate at which the slope changes and the cubic trend analyzes the rate of change of the quadratic (curvature) trend over time (Hand & Taylor, 1987). A t-test was conducted to compare differences in slopes between Adams and non-Adams states overall between 1980 and 2004 and again between 1995 and 2004.

Research Question 3

Is there a difference in desegregation results between two-year and four-year institutions in states that previously operated dual systems of higher education and were involved in the *Adams v. Richardson* (1973) litigation? A Split-Plot Analysis of Variance provided further analysis of the segregation index differences between two-year and four-year institutions within each state and

between each state. The two-factors analyzed in the split plot analysis are institution type (two-year/four-year) and desegregation. The Split-Plot Analysis of Variance allows for between-group comparisons between two-year and four-year institutions, and within-subject comparisons within states (Gardner, 2001).

The observed values provide an opportunity to look at the patterns of change over time and rate of desegregation over time. The results extracted are useful in providing an opportunity to quantify desegregation efforts, track the desegregation phenomena, and provide benchmarks among states and institutions to identify successful desegregation efforts that have yielded successful results. The results have a potentially powerful result in quantifying and analyzing desegregation as states review, and finalize their desegregation efforts.

Sample Segregation Index

A sample Segregation index was computed for the 19 states based upon fall 1980 enrollment data collected from IPEDS. 705 public institutions in the 19 states were analyzed. The following student segregation indexes were computed for explanatory discussion (presented descending in rank order):

The mean segregation index for the 19 states is 38.42. The analysis is particularly interesting when looking at Mississippi, which has a Segregation index of 52.84 and is slightly below half way between complete segregation and complete integration. In 2002, Mississippi negotiated a 17-year settlement agreement with a segregation index of 40.35. In contrast to Mississippi, Kentucky with a 24.19 Segregation index was to conclude its desegregation compliance in December 2002 and has yet to settle. The differences are telling.

When looking at the histories and efforts over the past 30 years, Kentucky has greater diversity at its institutions of higher education than in Mississippi.

Table 3.1 Sample Segregation index

Segregation index Scores 1980

State	Index
DE	56.48
MO	53.39
MS	52.84
LA	52.33
PA	51.22
MD	50.80
VA	46.85
NC	45.62
TX	43.58
TN	43.02
SC	41.00
AR	38.57
AL	35.89
GA	34.55
OH	34.39
WV	33.56
FL	32.21
KY	30.26
OK	28.19

The quantifiable analysis provides the ability and opportunity to explore further individual differences in state approaches and actions resulting in significant gains in desegregation. The information will provide sound, justifiable basis on benchmark practices leading to greater desegregation in higher education. Additionally it provides that ability for trend analysis looking at current trends of re-segregation.

Limitations

The Segregation index provides the ability to track desegregation over time, but lacks the ability to identify what has impacted the change. The social, political, and economic influences on desegregation are not captured or identified. Major influences such as court, governing, legislative, and economic decisions can be analyzed, but the degree to which the change in desegregation can be attributable to the event is limited.

The data collected is self-reported by institutions and in certain years HEGIS did not collect institutional level data on ethnicity until 1977. Additionally changes in institutions, new institutions, closed and merged institutions will be problematic.

Chapter Summary

The methodology outlined provides a unique opportunity to quantify and analyze the status of desegregation for over 30 years in the 19 states previously operating dual systems of higher education. The resulting data collection and analysis provides the ability to compare the level and progress of desegregation over time looking at institution changes, state changes, and allowing comparison of institutional characteristics such as two-year and four-year institutions.

Chapter 4 Results

This chapter provides the results to the research questions that guided this study. Again, this study was conducted as a descriptive panel study that analyzed the results of desegregation efforts in states that operated dual systems of higher education. The segregation index was analyzed from 1980 to 2004. The following paragraphs will show the results of research questions.

Research Question 1

1. To what extent have the states that previously operated dual systems of higher education and were involved in the *Adams v. Richardson* (1973) litigation desegregated?

A repeated measures analysis of variance was conducted to investigate the difference between the segregation index of states that were involved in the *Adams v. Richardson* Litigation (1973) and non-Adams states between 1980 and 2004.

Descriptive Statistics

Descriptive statistics are provided for selected years including 1980, 1990, 2000, and 2004 in order to provide a summary of the data for measures of central tendency and variability. The descriptive statistics provide a base analysis and understanding of the data for later analysis using a repeated measures analysis of variance.

The mean segregation index for all fifty states in 1980 was 36.40. The mean segregation index in 1980 for Adams states was 42.36 and the mean for non-Adams states was 32.76. The index for all states in 1980 ranged from a minimum of 14.69 in Vermont to a maximum of 56.48 in Delaware.

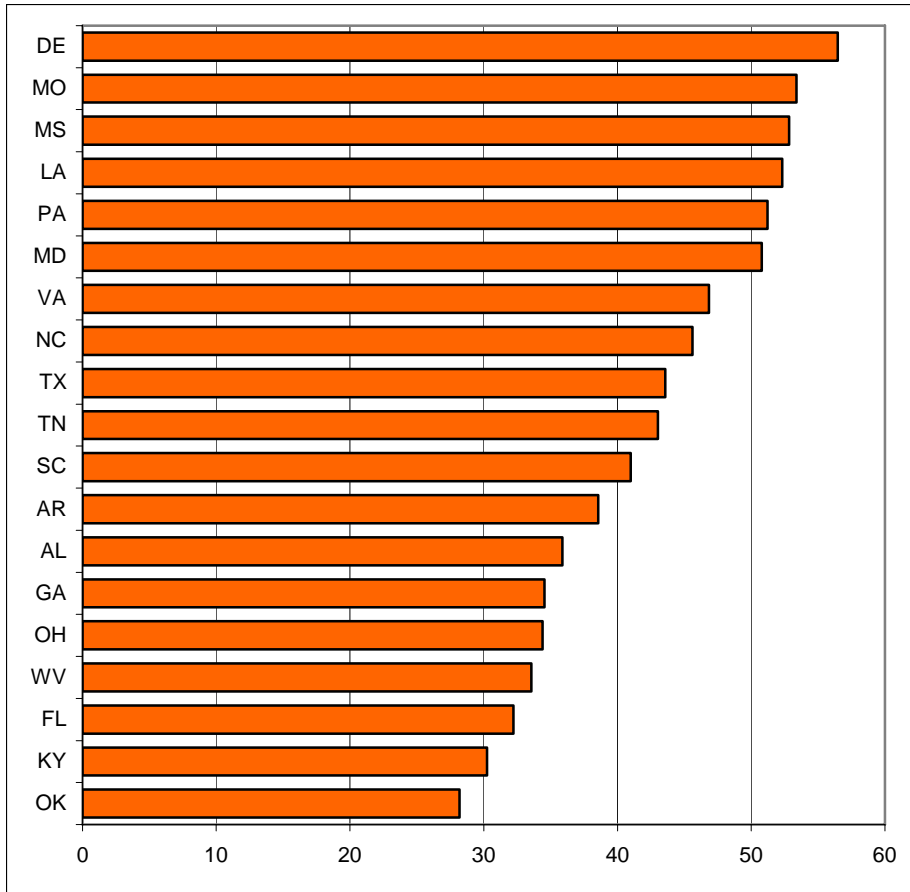


Figure 4.1 Segregation Index 1980

The Adams states index ranged from a minimum of 28.19 in Oklahoma to a maximum of 56.48 in Delaware and the non-Adams states ranged from 14.69 to a maximum of 54.91 in Illinois. The standard deviation of the segregation index for all states in 1980 was 11.85, the Adams states standard deviation was 8.89 and the non-Adams states at 12.09. The variance of the segregation index for all states in 1980 was 140.63 with the Adams states at 79.05 and the non-Adams states at 146.07.

The mean segregation index for all 50 states in 1990 decreased to 33.56. The mean segregation index for Adams states and non-Adams states decreased to 38.49 and 30.53 respectively. The segregation index for all states in 1990

ranged from a minimum of 8.72 in Idaho to a maximum of 54.53 in Illinois. Adams states index ranged from a minimum of 24.20 in West Virginia to a maximum of 51.57 in Louisiana and the non-Adams states ranged from 8.72 in Idaho to a maximum of 54.53 in Illinois.

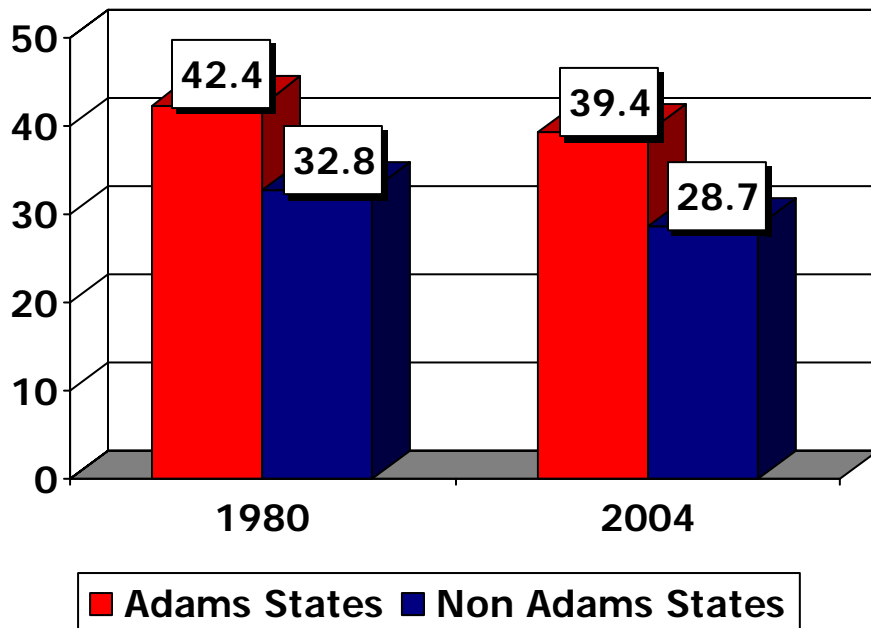


Figure 4.2 Segregation Index 1980 and 2004

The standard deviation of the segregation index for all states in 1990 was 10.78 with the Adams states standard deviation at 6.83 and the non-Adams states at 11.71. The variance of the segregation index for all states in 1990 was 116.27 with the Adams states variance at 46.66 and the non-Adams states variance at 137.06. The mean segregation index for all fifty states in 2000 decreased slightly to 32.78 with the Adams states mean index increasing to 39.08 and the non-Adams states decreasing to 28.92. The index for all states in 2000 ranged from a minimum of 11.04 in Montana to a maximum of 52.25 in New

York. The Adams states index ranged from a minimum of 22.80 in West Virginia to a maximum of 48.71 in Virginia and the non-Adams states ranged from 11.04 in Montana to a maximum of 52.25 in New York.

Table 4.1 Descriptive Statistics All States

<i>Year</i>	<i>Range</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Error</i>	<i>Std. Deviation</i>
1980	41.79	14.69	56.48	36.40	1.68	11.86
1984	46.36	8.51	54.87	35.54	1.58	11.20
1986	49.48	8.71	58.19	35.62	1.59	11.24
1988	48.51	7.23	55.74	34.39	1.54	10.91
1990	45.81	8.72	54.53	33.56	1.52	10.78
1992	47.24	7.22	54.46	34.24	1.60	11.28
1993	44.33	9.89	54.22	32.89	1.68	11.85
1994	41.99	12.33	54.32	32.81	1.69	11.93
1995	43.50	11.16	54.66	32.77	1.69	11.95
1996	42.21	12.37	54.58	32.39	1.71	12.06
1997	41.61	11.79	53.40	32.82	1.64	11.62
1998	43.26	9.73	52.99	32.53	1.73	12.24
1999	41.29	10.63	51.92	32.20	1.73	12.23
2000	41.21	11.04	52.25	32.78	1.60	11.29
2001	40.77	10.23	51.00	32.99	1.59	11.22
2002	39.74	11.27	51.01	32.65	1.62	11.49
2003	39.46	9.88	49.34	32.93	1.52	10.77
2004	42.45	6.85	49.30	32.79	1.54	10.91

N=50

The standard deviation of the segregation index for all states in 2000 was 11.29 with the Adams states standard deviation at 7.40 and the non-Adams states at 11.61. The variance of the segregation index for all states in 2000 was 127.49 with the Adams states variance at 54.81 and the non-Adams states variance at 134.83.

The mean segregation index for all 50 states in 2004 increased to 32.79 with the Adams states mean index increasing to 39.42 and the non-Adams states decreasing to 28.72. The index for all states in 2004 ranged from a minimum of 6.85 in Vermont to a maximum of 49.30 in New York.

Table 4.2 Descriptive Statistics Adams States

<i>Year</i>	<i>Range</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Error</i>	<i>Std. Deviation</i>
1980	28.29	28.19	56.48	42.36	2.04	8.89
1984	28.86	22.46	51.32	39.95	2.01	8.78
1986	27.70	23.64	51.34	39.36	1.88	8.18
1988	25.37	26.75	52.12	38.62	1.68	7.32
1990	27.37	24.20	51.57	38.49	1.57	6.83
1992	30.36	21.97	52.33	39.19	1.68	7.32
1993	29.01	21.67	50.68	39.43	1.78	7.75
1994	28.82	22.35	51.17	39.33	1.76	7.68
1995	31.17	19.96	51.13	39.10	1.84	8.02
1996	31.75	19.97	51.72	39.20	1.84	8.00
1997	30.79	21.49	52.28	39.25	1.79	7.78
1998	31.98	21.01	52.99	39.70	1.82	7.93
1999	30.83	21.09	51.92	39.06	1.80	7.83
2000	25.91	22.80	48.71	39.08	1.70	7.40
2001	29.08	21.92	51.00	39.44	1.75	7.63
2002	28.16	22.10	50.26	39.31	1.72	7.52
2003	26.55	22.53	49.08	39.34	1.71	7.46
2004	24.08	24.62	48.70	39.42	1.65	7.21

N=19

The Adams states index ranged from a minimum of 24.62 in West Virginia to a maximum of 48.70 in Missouri and the non-Adams states ranged from 6.85 in Vermont to a maximum of 49.30 in New York. The standard deviation of the segregation index for all states in 2004 was 10.91 with the Adams states standard deviation at 7.21 and the non-Adams states at 10.88. The variance of the segregation index for all states in 2004 was 119.05 with the Adams states variance at 52.04 and the non-Adams states variance at 118.30.

Assumptions of Repeated Measures Analysis of Variance

The assumptions of repeated measures analysis of variance were analyzed.

1. Normality - The assumption for the multivariate approach is that the vectors of the dependent variables follow a multivariate normal distribution, and the variance-covariance matrices are equal across the cells formed by the between-

subjects effects. Box's M statistic tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

Table 4.3 Descriptive Statistics Non-Adams States

<i>Year</i>	<i>Range</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Error</i>	<i>Std. Deviation</i>
1980	40.22	14.69	54.91	32.76	2.17	12.09
1984	46.36	8.51	54.87	32.84	2.12	11.78
1986	49.48	8.71	58.19	33.33	2.21	12.33
1988	48.51	7.23	55.74	31.79	2.16	12.00
1990	45.81	8.72	54.53	30.53	2.10	11.71
1992	47.24	7.22	54.46	31.20	2.21	12.28
1993	44.33	9.89	54.22	28.88	2.20	12.24
1994	41.99	12.33	54.32	28.82	2.23	12.40
1995	43.50	11.16	54.66	28.90	2.23	12.40
1996	42.21	12.37	54.58	28.21	2.21	12.32
1997	41.61	11.79	53.40	28.87	2.14	11.91
1998	43.06	9.73	52.79	28.14	2.23	12.42
1999	41.25	10.63	51.88	27.99	2.27	12.62
2000	41.21	11.04	52.25	28.92	2.09	11.61
2001	40.68	10.23	50.91	29.04	2.03	11.32
2002	39.74	11.27	51.01	28.57	2.10	11.68
2003	39.46	9.88	49.34	29.00	1.92	10.67
2004	42.45	6.85	49.30	28.72	1.95	10.88

N = 31

2. Sphericity - Mauchly's Test of Sphericity was used to analyze the assumption on sphericity. The within subjects effect of Mauchly's test of sphericity was significant, therefore rejecting the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variable is proportional to the identity matrix. Based upon the significant test of sphericity, further analysis uses the repeated measures analysis of variance Greenhouse-Geisser test, a more conservative statistical approach. The Greenhouse-Geisser test of sphericity was not significant with a .224 statistic.

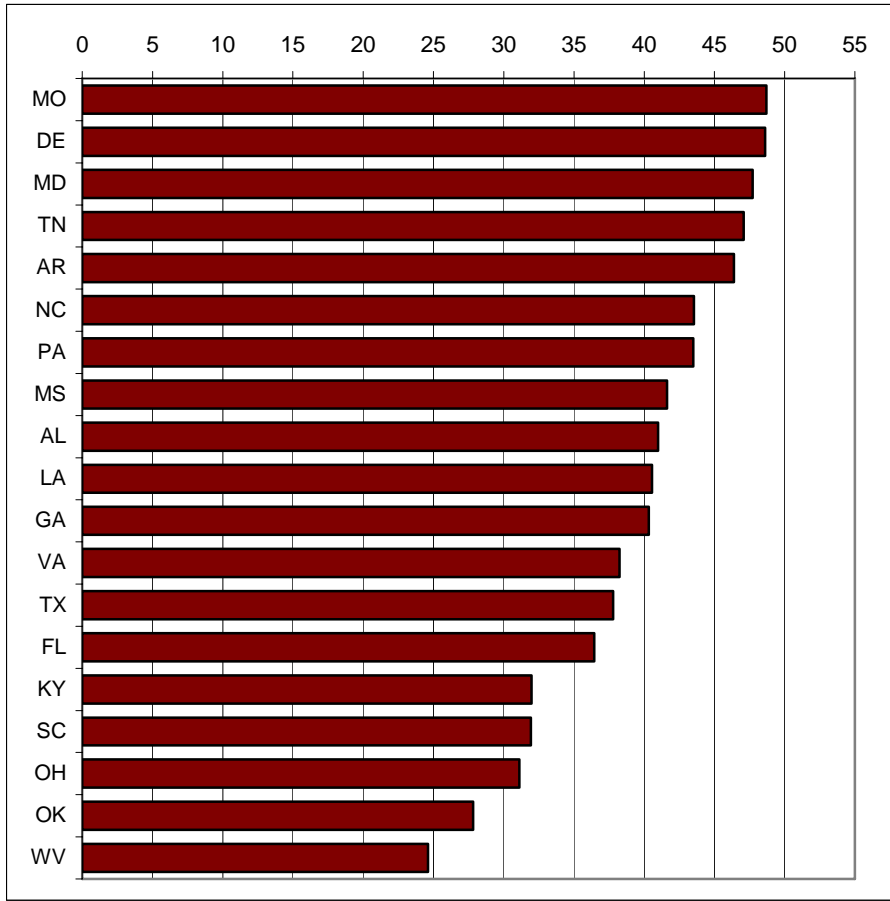


Figure 4.3 Segregation Index 2004

Repeated Measures Analysis of Variance

The between group variability using the Greenhouse-Geisser correction for sphericity was significant with an F statistic of 470.158. The mean square is 1007652.59 with 1 degree of freedom. Therefore the null hypothesis was rejected since there is a significant difference in the segregation index scores from 1980 to 2004 with a .000 significance level. Based upon the statistical results, there are significant differences between states in the segregation index.

The within group variability using the Greenhouse-Geisser correction of sphericity was significant with an F statistic of 5.571. The mean square is 348.99 with 3.8 degrees of freedom. Therefore the null hypothesis is rejected, since

there is a significant difference over time in the segregation index from 1980 to 2004 with a .000 significance level. Based upon the statistical results, there are significant differences over time in the segregation index.

Table 4.4 Repeated Measures Analyze of Variance Between Subjects Results

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power(a)
Intercept	1,007,653	1	1,007,653	470.16	0.00	470.16	1
Error	105,018	49	2,143.22				
a Computed using alpha = .05							

Table 4.5 Repeated Measures Analyze of Variance Within Subjects Results

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power(a)	
year	Sphericity Assumed	1,323.00	17	77.82	5.57	0.00	94.71	1.00
	Greenhouse-Geisser	1,323.00	4	346.99	5.57	0.00	21.24	0.97
	Huynh-Feldt	1,323.00	4	316.91	5.57	0.00	23.26	0.98
	Lower-bound	1,323.00	1	1,323.00	5.57	0.02	5.57	0.64
Error(year)	Sphericity Assumed	11,635.56	833	13.97				
	Greenhouse-Geisser	11,635.56	187	62.28				
	Huynh-Feldt	11,635.56	205	56.88				
	Lower-bound	11,635.56	49	237.46				
a Computed using alpha = .05								

Based upon the repeated measures analysis of variance, there are statistically significant differences in the segregation index between states from 1980 to 2004. There is also a statistically significant difference within each state in the segregation index between 1980 and 2004. Adams states on average decreased desegregation 2.94 points declining from 42.36 to 39.42 while non-Adams states had a greater decrease of 4.04 points.

Pooled Cross Sectional Time Series Analysis

In order to look at the segregation index by state over time between Adams states and non-Adams states, further analysis was conducted using a pooled cross-sectional time-series model. The model expands previous analysis

Table 4.6 State Segregation index 1980 to 2004

State	1980	1984	1986	1988	1990	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
AK	22.04	27.39	28.91	21.62	16.88	17.45	17.84	16.32	16.54	16.90	15.30	13.71	10.63	11.87	10.23	11.86	11.63	14.09
AL	35.89	36.36	37.49	37.48	38.10	40.79	40.72	39.12	34.12	34.14	33.81	39.85	39.59	38.40	39.42	40.37	41.41	40.98
AR	38.57	36.98	41.24	40.99	38.33	37.78	39.78	41.14	42.15	44.03	44.78	46.72	45.01	43.96	45.87	46.75	46.47	46.38
AZ	29.47	28.65	26.24	24.68	23.50	25.54	24.69	24.56	23.54	23.57	23.11	22.48	23.61	24.86	24.32	25.22	23.73	23.76
CA	47.15	43.97	44.76	42.70	41.38	41.18	42.20	42.61	41.46	42.19	42.22	41.54	42.63	41.99	41.93	41.75	41.77	42.06
CO	38.72	39.84	43.47	44.08	38.72	43.66	41.20	41.80	43.05	41.73	39.81	41.16	41.21	41.54	42.14	43.38	41.53	38.90
CT	37.57	37.18	35.74	33.87	32.07	33.44	31.95	32.50	30.43	30.34	31.50	29.47	29.03	30.80	33.20	33.49	33.70	33.78
DE	56.48	49.19	45.18	43.92	42.03	43.57	45.52	45.58	44.37	45.71	45.23	45.34	44.80	46.81	47.55	47.83	47.21	48.60
FL	32.21	33.34	36.81	34.87	38.05	38.78	36.59	36.12	37.14	36.66	37.56	37.92	36.88	36.14	36.90	36.13	36.67	36.44
GA	34.55	33.48	36.75	34.74	34.47	36.05	35.70	35.58	35.94	36.27	37.20	36.89	36.98	37.53	38.85	39.77	40.63	40.34
HI	42.38	27.36	33.21	26.49	26.31	27.83	26.60	24.29	28.93	27.12	28.76	30.47	37.10	33.36	33.15	29.54	26.64	23.19
IA	15.48	14.65	15.18	14.05	11.32	14.53	15.04	15.15	15.16	16.32	16.11	13.83	13.70	12.54	15.29	15.47	16.19	14.95
ID	17.07	8.51	8.71	7.23	8.72	7.22	9.89	12.33	12.88	12.85	16.87	17.78	17.82	16.65	13.80	15.36	16.58	15.66
IL	54.91	54.87	58.19	55.74	54.53	52.21	51.93	50.71	50.12	49.61	50.42	49.65	47.88	45.74	45.42	46.21	45.83	45.82
IN	30.97	30.28	31.33	29.09	27.65	26.39	24.81	26.86	26.95	27.94	28.24	29.32	29.94	31.18	30.91	30.75	31.16	31.62
KS	25.58	27.92	34.15	31.34	31.67	32.98	33.49	35.25	34.05	28.99	30.90	30.41	31.18	31.70	29.99	30.92	28.71	29.06
KY	30.26	22.46	23.64	28.04	29.89	32.89	32.95	32.82	33.31	33.08	31.99	31.91	31.48	32.61	32.76	32.59	32.83	31.99
LA	52.33	49.82	51.07	52.12	51.57	52.33	50.68	49.48	48.66	48.25	45.84	45.56	42.87	43.24	42.18	40.51	41.12	40.56
MA	43.33	42.26	45.41	41.39	40.31	37.99	39.07	39.04	39.15	37.71	38.60	39.02	38.19	38.84	40.08	39.28	38.01	38.15
MD	50.80	48.77	45.08	46.64	47.69	50.64	50.65	51.17	51.13	51.72	52.28	52.99	51.92	48.71	48.52	48.86	48.45	47.73
ME	36.78	42.05	44.42	47.64	30.65	38.82	22.91	14.63	28.88	16.88	19.51	15.12	12.42	13.70	13.72	11.27	19.78	23.01
MI	44.17	40.09	37.30	39.57	38.12	34.23	33.37	33.44	32.62	32.46	32.31	33.53	32.64	32.87	33.31	34.49	35.40	35.74
MN	31.15	37.50	37.51	33.57	37.02	42.51	44.39	43.05	42.14	39.21	41.31	39.58	38.95	40.05	40.63	40.62	41.11	42.16
MO	53.39	51.32	50.36	41.42	41.49	43.91	49.29	48.78	48.02	47.92	48.10	48.47	48.30	48.60	51.00	50.26	49.08	48.70
MS	52.84	50.14	51.34	49.45	46.00	44.50	44.44	43.50	46.31	41.69	40.17	40.84	41.17	39.37	41.04	40.73	41.36	41.62
MT	32.50	18.54	18.40	21.14	23.44	18.03	19.30	15.18	11.16	13.46	14.12	19.84	13.56	11.04	16.90	13.77	16.29	13.06
NC	45.62	41.56	41.59	41.61	40.54	40.58	41.86	42.52	41.97	42.77	42.86	44.18	42.14	41.61	41.69	42.26	42.63	43.53
ND	20.91	44.31	40.09	37.59	38.24	32.23	23.59	29.96	25.99	24.07	23.46	25.07	21.94	22.26	24.48	21.22	22.33	20.91
NE	47.21	44.77	46.18	44.87	41.04	44.14	41.66	41.25	41.06	43.51	42.45	43.71	43.06	43.49	41.90	41.06	40.05	38.91
NH	19.44	18.43	25.11	18.63	21.90	39.62	14.24	16.22	12.80	14.36	31.36	12.13	14.42	20.78	18.06	21.37	24.64	21.38
NJ	34.11	31.36	31.10	28.72	29.05	30.71	30.48	31.40	31.82	32.57	31.33	32.48	32.44	31.95	32.91	31.82	32.52	34.26
NM	20.40	24.01	28.99	28.44	31.15	30.54	22.51	20.12	20.92	17.65	17.52	16.18	13.46	26.79	23.98	25.07	21.75	19.04
NV	53.34	36.85	33.26	30.76	28.06	29.80	31.57	32.43	32.48	33.48	32.76	31.71	32.25	31.35	31.36	31.32	31.19	31.94
NY	51.81	53.10	54.62	52.01	54.36	54.46	54.22	54.32	54.66	54.58	53.40	52.79	51.88	52.25	50.31	50.14	49.34	49.30
OH	34.39	33.19	29.62	27.77	33.09	30.97	31.86	31.81	31.78	32.48	32.05	32.26	30.68	31.58	31.37	31.56	31.21	31.11
OK	28.19	27.35	27.81	28.56	28.63	31.33	30.08	30.18	29.71	30.70	30.91	29.74	27.72	27.17	27.81	27.25	26.70	27.81
OR	22.48	30.18	26.26	23.61	27.66	29.48	27.37	29.03	30.55	27.18	27.34	29.77	29.84	29.81	27.55	29.16	28.10	26.88
PA	51.22	50.37	44.25	43.41	45.23	46.74	47.08	47.00	47.74	48.73	48.65	47.69	47.65	45.87	46.67	45.15	44.28	43.50
RI	19.71	16.59	16.85	19.49	17.08	18.01	13.27	14.40	12.81	12.37	11.79	9.73	11.36	12.57	17.54	17.51	17.52	19.83
SC	41.00	36.95	36.19	35.58	34.69	33.19	31.80	30.59	31.55	31.29	31.76	31.82	31.77	32.57	32.69	32.98	31.97	31.94
SD	32.06	34.92	35.62	36.65	27.99	25.31	23.98	23.00	16.89	15.43	16.81	18.75	21.01	22.56	26.67	18.04	24.97	30.87
TN	43.02	45.34	44.35	42.50	42.72	42.74	42.89	43.77	44.14	44.52	45.73	45.43	45.36	48.57	46.46	44.94	46.18	47.09
TX	43.58	40.61	38.59	38.63	36.87	38.68	39.27	38.48	37.98	38.34	37.95	38.31	38.37	38.63	38.43	37.61	37.79	
UT	23.79	24.13	24.35	16.55	13.30	10.60	12.54	14.56	16.99	19.68	17.67	19.79	24.15	21.56	23.11	17.59	20.58	23.09
VA	46.85	42.67	40.30	39.36	37.70	37.12	36.72	36.45	36.34	36.93	36.92	37.69	38.46	38.56	38.06	38.41	39.18	38.23
VT	14.69	16.11	12.00	23.18	26.18	28.75	20.75	19.52	19.70	15.15	13.63	10.78	11.73	21.32	16.63	13.38	9.88	6.85
WA	37.56	36.20	34.80	35.29	35.74	35.46	34.02	33.22	33.16	33.05	32.73	30.79	31.00	31.57	32.03	31.82	32.91	31.11
WI	47.89	52.03	55.48	52.01	53.13	52.74	50.98	51.79	52.61	52.49	52.39	51.94	51.67	50.54	50.91	51.01	47.58	46.53
WV	33.56	29.07	26.15	26.75	24.20	21.97	21.67	22.35	19.96	19.97	21.49	21.01	21.09	22.80	21.92	22.10	22.53	24.62
WY	20.75	34.03	25.69	23.52	19.36	11.49	15.37	14.45	16.27	21.79	21.39	19.72	16.92	18.98	17.76	21.86	27.43	24.50

beyond just the segregation index by state and year to also include socio-economic, demographic and political variables by state and year and their overall impact on desegregation. The pooled cross sectional model estimation is prone to violations of ordinary least squares (OLS) assumptions of homoskedasticity and uncorrelated error terms (Gujarati, 1995; Kmenta, 1986; Greene, 1993). OLS estimates are unbiased in the presence of autocorrelation, these estimates are not efficient, and the variability of OLS coefficients obscures the tests of statistical significance. To correct the model for violations of homoskedasticity,

the pooled cross-sectional time-series model uses feasible generalized least squares (FGLS). The model assumes a heteroskedastic error structure across panels with no cross-sectional correlation and is estimated using panel-specific estimates of first-order autocorrelation.

The FGLS reports estimates for our model of desegregation in Adams and non-Adams states from 1980 to 2000. The model fits the data ($R^2 = .4014$., Wald $\chi^2 = 1045.41$, probability < 0.000), with approximately 40% of the variance in desegregation explained by the variables in the model. The independent variables with significant results were Adams states, percent black, percent urban, unemployment, state expenditures, and government employment.

Table 4.7 Variable Descriptive Statistics

<i>Variable</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Minimum</i>	<i>Maximum</i>
Segregation Index	33.84	11.33	7.22	58.19
Per Capita Income	24,280.16	4,797.01	12,965.39	41,924.24
Government Employment	6.49	0.79	4.82	10.11
Density - Population/Square Mile	176.24	239.44	4.68	1,156.94
Per Capita Expenditures	3,032.54	1,159.99	750.70	6,629.64
Percent of Intergovernmental Aid	0.25	0.05	0.02	0.55
State Unemployment Rate	5.47	1.73	2.20	17.10
Party Control of House, Senate, and Governor	0.55	0.33	-	1.00
Percentage Urban Population	69.85	15.02	30.48	99.16
Percentage Black Population	9.94	9.39	0.20	36.93
Adams State	0.39	0.49	-	1.00

N=833

Non significant variables were per capita income, density of the population, state aid as a percent of total expenditures, and the party control of various elected officials.

The significant variables found in the results were the percent of the population that was black, the percent of the population living in urban areas, the state unemployment rate, total state expenditures, total government employees,

and whether or not the state was an Adams states. The significant variables that had a negative impact on the segregation index were total government employees, and total state expenditures. Non significant variables were per capita income, density of the population, state aid as a percent of total expenditures, and the party control of various elected officials.

Table 4.8 FGLS Regression Results

<i>Variable</i>	<i>b</i>	<i>z</i>	<i>Sig</i>
Per Capita Income	0.00006	0.72	
Government Employment	-0.63703	-2.78 ***	
Density - Population/Square Mile	0.00196	0.98	
Per Capita Expenditures	-0.00178	-6.86 ***	
Percent of Intergovernmental Aid	3.06275	1.10	
State Unemployment Rate	0.06419	2.03 **	
Party Control of House, Senate, and Governor	0.28691	-1.02	
Percentage Urban Population	0.02370	9.95 ***	
Percentage Black Population	0.03159	19.04 ***	
Adams State	0.83764	2.85 ***	
Intercept	2.56443	6.55 ***	

N	833
Pseudo-R ²	0.4014
Wald χ^2	1045.4100
Prob (Wald χ^2)	0.0000
Log likelihood	-1881.9930

*** prob < 0.01

** prob < 0.05

* prob < 0.10

Note: This model is estimated using feasible generalized least squares. The model assumes a heteroskedastic error structure across panels with no cross-sectional correlation and is estimated using panel specific estimates of the first-order autoregressive process.

The findings provide evidence that desegregation results can be explained in part by variation in the demographic, socio-economic, and political contexts.

Summary

Overall, statistically significant results in desegregation occurred between 1980 and 2004 within and between states. The results varied between Adams

and non-Adams states with the Adams states desegregating on average more than non-Adams states. Although in the past five years, the Adams states have started a trend of becoming more segregated, the 2004 desegregation average regressed back to the level of the early 1990s. In the Adams states, there have been significant results in desegregation some states, but not an overall consistency. There have also been some Adams states that have reversed the anticipated trend towards desegregation and have actually become more segregated regardless of their desegregation plans and involvement in legal and judicial reforms.

The findings from the FGLS model provide evidence that desegregation is explained in part by the variation of in the political, socio-economic, and demographic data of each state in influencing desegregation efforts.

Research Question 2

2. To what degree and at what rate has desegregation taken place in the states that previously operated dual systems of higher education and were involved in the *Adams v. Richardson* (1973) litigation?

The degree and rate of change of desegregation efforts in states involved in *Adams v. Richardson* (1973) were compared looking at the slope of the regression line of the states segregation index between 1980 and 2004. The regression line is the rate of change over time with a higher slope value indicating a steeper incline or a steeper decline with negative values. A horizontal line or a slope value of 0 indicates no change over time.

Descriptive Statistics

The average slope or rate of change between 1980 and 2004 in the segregation index for all states was $-.159$. The average Adams states slope was $-.053$ with a declining segregation index rate slower than non-Adams states with a slope of $-.223$.

The slope for the segregation index for all states ranged from a minimum of -1.42 to a maximum of $.42$. The Adams states slope ranged from a minimum of $-.57$ to a maximum of $.42$ and the non-Adams states ranged from a minimum of -1.42 to a maximum of $.32$. The standard deviation of the slope for the segregation index for all states was $.32$ with the Adams states standard deviation at $.27$ and the non-Adams states at $.34$.

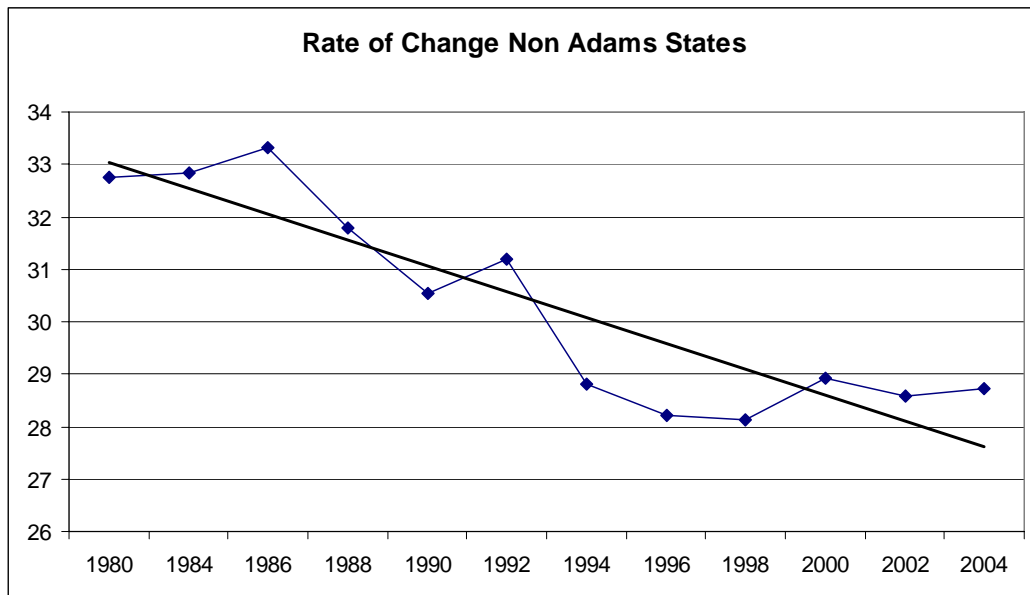


Figure 4.4 Non-Adams States Rate of Change

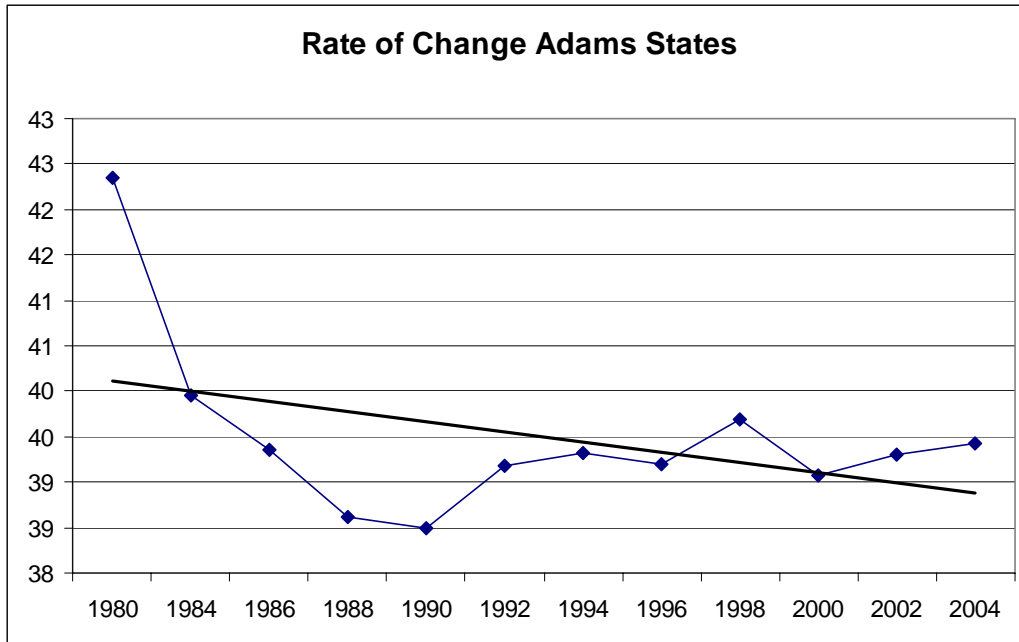


Figure 4.5 Non-Adams States Rate of Change

Significance Test

A t-test was conducted to determine if there was a statistically significant difference between the slope of Adams states and non-Adams states. Equal variances were assumed based upon the high significance level in Levene’s Test for Equality of Variance test. Based upon the equality of variance, the significance level of the t-test was .071, therefore accepting the null hypothesis that there is no statistically significant difference between the slope and rate of change in the segregation index between 1980 and 2004 between Adams states and non-Adams states.

Table 4.9 Slope Descriptive Statistics

	<i>Adams</i>	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Std. Error Mean</i>
slope	0	31	-0.2234	0.3404	0.06
	1	19	-0.0532	0.2728	0.06

Table 4.10 Slope T-Test

	Levene's Test for Equality of Variances		t-test for Equality of Means			Mean Difference		95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	0.18	0.67	(1.84)	48.00	0.07	(0.17)	0.09	(0.36)	0.02
Equal variances not assumed			(1.94)	44.45	0.06	(0.17)	0.09	(0.35)	0.01

Table 4.11 Slope of States between 1980 and 2004

State	Adams	Slope	State	Adams	Slope
AK	0	-0.6825	MT	0	-0.5476
AL	1	0.1572	NC	1	-0.0036
AR	1	0.4231	ND	0	-0.7043
AZ	0	-0.1934	NE	0	-0.2405
CA	0	-0.1527	NH	0	-0.0491
CO	0	0.0253	NJ	0	0.0720
CT	0	-0.2097	NM	0	-0.2603
DE	1	-0.1106	NV	0	-0.4473
FL	1	0.1248	NY	0	-0.1430
GA	1	0.2545	OH	1	-0.0379
HI	0	-0.1984	OK	1	-0.0268
IA	0	0.0196	OR	0	0.1477
ID	0	0.3104	PA	1	-0.1347
IL	0	-0.5349	RI	0	-0.1293
IN	0	0.0490	SC	1	-0.3091
KS	0	0.0300	SD	0	-0.5804
KY	1	0.3113	TN	1	0.1622
LA	1	-0.5665	TX	1	-0.1386
MA	0	-0.2335	UT	0	0.0135
MD	1	0.0509	VA	1	-0.2330
ME	0	-1.4197	VT	0	-0.3141
MI	0	-0.3622	WA	0	-0.2630
MN	0	0.3176	WI	0	-0.1089
MO	1	0.0067	WV	1	-0.3740
MS	1	-0.5667	WY	0	-0.1344

The degree and rate of change of desegregation efforts in states involved in Adams v. Richardson (1973) were then analyzed for differences in the slope of the regression line of the states segregation index for the last 10 years between 1995 and 2004. The 10-year comparison looks at desegregation efforts following

the Fordice (1992) decision and provides an analysis of the most recent desegregation efforts of states.

Descriptive Statistics

The average slope or rate of change between 1995 and 2004 in the segregation index for all states was 0.031. The average Adams state slope was 0.021 with an inclining desegregation rate and the non-Adams states also had an increase in the desegregation rate with a slope of 0.037.

Table 4.12 Descriptive Statistics Between 1995 and 2004

	<i>Adams</i>	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Std. Error Mean</i>
slope	0	31	-0.2117	0.5489	0.10
	1	19	0.0208	0.3296	0.08

The slope for the segregation index for all states ranged from a minimum of -1.74 to a maximum of .91. The Adams states slope ranged from a minimum of -.67 to a maximum of .76 and the non-Adams states ranged from a minimum of -1.74 to a maximum of .91. The standard deviation of the slope for the segregation index for all states was .49 with the Adams states standard deviation at .33 and the non-Adams states at .55.

Significance Test

A t-test was conducted to determine if there was a statistically significant difference between the slope of Adams states and non-Adams states between 1995 and 2004. Equal variances were assumed based upon the high significance level in Levene’s Test for Equality of Variance test. Based upon the equality of variance, the significance level of the t-test was .067, therefore accepting the null hypothesis that there is no statistically significant difference

between the slope or rate of change in the segregation index between 1995 and 2004 between Adams states and non-Adams states.

Table 4.13 Slope T-Test

	Levene's Test for Equality of Variances		t-test for Equality of Means			95% Confidence Interval of the Difference			
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
slope	2.77	0.10	(1.67)	48.00	0.1020	(0.23)	0.14	(0.51)	0.05
Equal variances assumed									
Equal variances not assumed			(1.87)	48.00	0.0675	(0.23)	0.12	(0.48)	0.02

In addition to statistically analyzing the rate of change over time, state enrollment patterns were analyzed in approximately five year increments for periods 1980-1986, 1986-1990, 1990-1995, 1995-2000, 2000-and 2004. The expanded increment in time allows for analysis in expanded time periods.

Changes in enrollment became evident between 1980 and 1986. Total enrollment in all states grew 6.4% between 1980 and 1986 to 10 million students. Enrollment in Adams states grew 11.4% while non-Adams states grew 3.2%. African American enrollment in both Adams and non-Adams states grew by only 2.3% between 1980 and 1986 to 883,000 students. When comparing Adams states to non-Adams states, total enrollment grew 11.4% and 3.2% respectively while African American enrollment grew 5.4% in Adams states and declined by 1.5% in non-Adams states.

The Adams states with the largest increase in African American enrollment between 1980 and 1986 were Georgia, Florida, and Louisiana with 53.2%, 31.6%, and 27.3% respectively. The non-Adams states with the largest increase in African American enrollment for the same time period were New

Hampshire, Alaska, and New Mexico with 87.7%, 68.7%, and 64.9% respectively. The Adams states with the largest decreases in African American enrollment were Ohio, Missouri, and Pennsylvania with -19.8%, -11.5%, and -11.3% respectively. The non-Adams states with the largest decreases in African American enrollment were Nevada, California, and New Jersey with -32.8%, -17.6%, and -17.6% respectively.

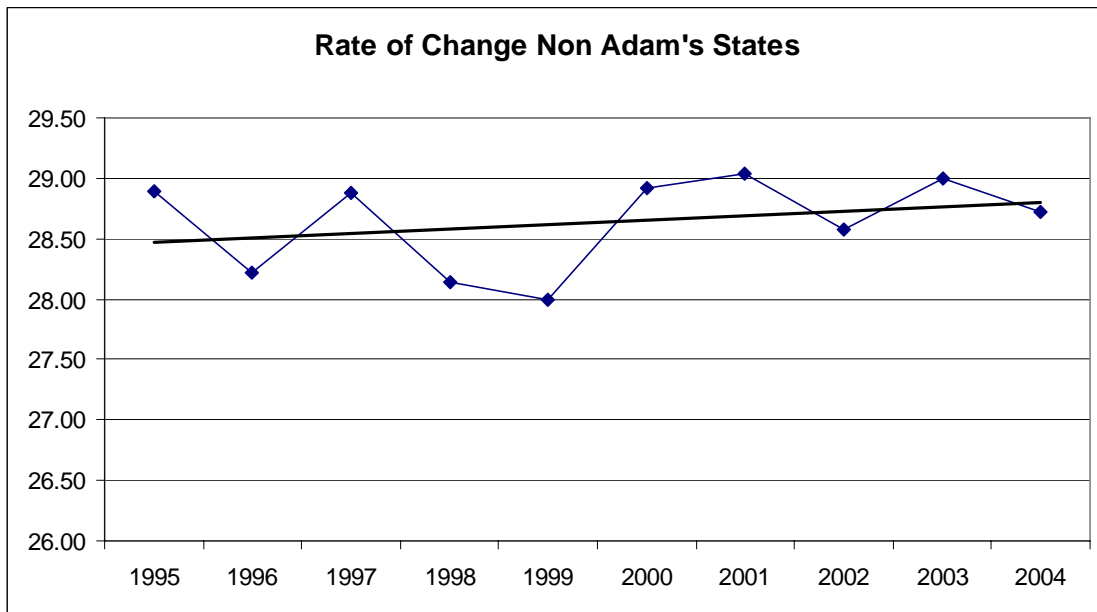


Figure 4.6 Non-Adams States Rate of Change

States continued to increase enrollment between 1986 and 1990 with increased total state enrollment by 11% to 11.1 million students. African American enrollment surpassed the overall enrollment percent, increasing by 14.3% to 1 million students. With the increase in African American enrollment between 1986 and 1990, African American enrollment still only consisted of 9% of all students.

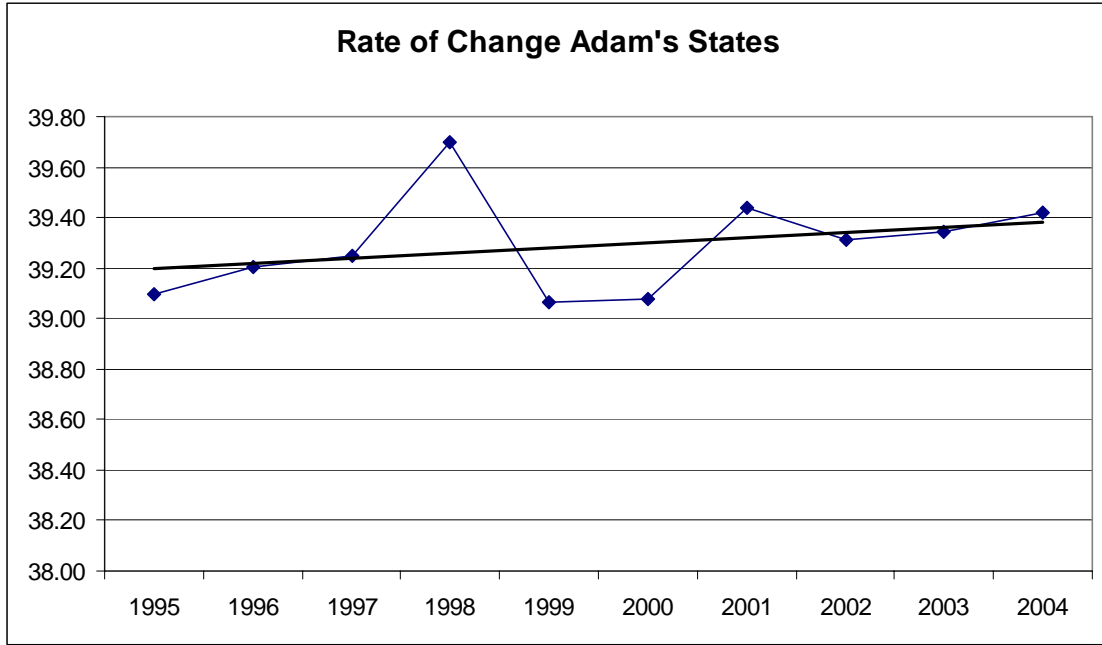


Figure 4.7 Non-Adams States Rate of Change

Again, during this period, Adams states increased total enrollment and African American enrollment at a greater rate than non-Adams states. Adams states increased enrollment by 15% to 4.7 million students and increased African American enrollment by 17.2% to 578,000 students. Non-Adams states increased enrollment by 8.2% to 6.4 million students and reversed the declining African American enrollment trend by increasing 10.6% to 431,000 students.

The Adams states with the largest increase in African American enrollment between 1986 and 1990 were Florida, Delaware, and Ohio with 43.6%, 36.3%, and 26.2% respectively. The non-Adams states with the largest increase in African American enrollment for the same time period were South Dakota, Maine, and Nevada with 83.8%, 65.8%, and 57.4% respectively. The Adams states with the smallest increases in African American enrollment were Louisiana, North Carolina, and Pennsylvania with 4.9%, 5.7%, and 6.0% respectively. The non-Adams states with the largest decreases in African

American enrollment were Montana, Illinois, and Nebraska with -12.5%, -4.3%, and -0.7% respectively.

Enrollment continued to increase slightly between 1990 and 1995. In all states, enrollment increased 1.9% to 11.4 million students. African American enrollment again out paced total enrollment gains by increasing 15.3% to 1.2 million students. Adams states enrollment continued the trend of increasing enrollment at a higher rate than non-Adams states between 1990 and 1995 by 4.6% and -.2% respectively with total student enrollment at 4.9 and 6.4 million students. African American enrollment in Adams states increased 22.4% to 707,000 students. African American enrollment in non-Adams states increased 5.8% to 457,000 students.

The Adams states with the largest increase in African American enrollment between 1990 and 1995 were Georgia, Alabama, and South Carolina with 56.0%, 34.2%, and 30.4% respectively. The non-Adams states with the largest increases in African American enrollment for the same time period were Minnesota, Maine, and North Dakota with 67.0%, 43.0%, and 41.7% respectively. The Adams states with the smallest increases in African American enrollment were West Virginia, Missouri, and Mississippi with 1.1%, 1.4%, and 10.1% respectively. The non-Adams states with the largest decreases in African American enrollment were Alaska, Wyoming, and Hawaii with -11.4%, -11.3%, and -7.7% respectively.

Enrollment between 1995 and 2000 grew 4.8% to 13.1 million students in all 50 states studied. African American enrollment grew at the largest percent increase between this period, 18.4% to 1.5 million students. Adams states grew

at the slowest rate during this period, 2.1% to 5.1 million students. African American enrollment continued to see larger enrollment increases to 808,000 students, an increase of 14.2%. Non-Adams states saw a reversing trend from their declining enrollment in the previous period to increase 7% to 6.9 million students. Again, African American enrollment continued to increase at 5.6% to 544,000 students.

The Adams states with the largest increase in African American enrollment between 1995 and 2000 were Mississippi, Tennessee, and Virginia with 34.2%, 33.7%, and 23.2% respectively. The non-Adams states with the largest increase in African American enrollment for the same time period were New Jersey, New Hampshire, and Maine with 43.3%, 25.1%, and 24.9% respectively. The Adams states with the largest decreases in African American enrollment were Alabama and Oklahoma, with -9.4%, and -1.4% respectively, followed by an increase in Pennsylvania with 2.5%. The non-Adams states with the largest decreases in African American enrollment were South Dakota, Alaska, and Kansas with -27.5%, -7.3%, and -6.7% respectively.

Total state enrollment grew between 2000 and 2004 by 10% to 13.1 million students. African American enrollment again out paced the total growth percent, growing at 18.4% to 1.5 million students. African American enrollment has grown to comprise 11.7% of total enrollment. Adams states enrollment grew by 13.8% to 5.7 million students with African American enrollment growing by 21.7% to 983,000 students. African American enrollment has grown to comprise 17% of total enrollment in Adams states. Non-Adams states continued to grow at

7.1% to 7.4 million students. African American enrollment grew 12.8% to 544,000 students and comprised 7.4% of the non-Adams states total enrollment.

The Adams states with the largest increase in African American enrollment between 2000 and 2004 were Arkansas, Georgia, and Texas with 39.3%, 35.1%, and 30.0% respectively. The non-Adams states with the largest increase in African American enrollment for the same time period were South Dakota, Maine, and Vermont with 143.9%, 113.0%, and 108.8% respectively. The Adams states with the smallest increases in African American enrollment were Tennessee, Virginia, and Missouri with -1.7%, 9.0%, and 9.2% respectively. The non-Adams states with the smallest increases in African American enrollment were California, Hawaii, and Alaska with 3.6%, 6.9%, and 7.3% respectively.

Additionally, the Adams states that have had the largest increase in African American enrollment between 1980 and 2004 were Georgia, Florida, and Arkansas with 345.3%, 236.5%, and 127.5% respectively. The non-Adams states with the largest increase in African American enrollment were Minnesota, New Hampshire, and Maine with 538.1%, 529.2%, and 447.6% respectively. The states with the lowest percent increase in African American enrollment in Adams states were Missouri, Ohio, and Pennsylvania and non-Adams states were California, Michigan, and New York.

Using the statistically significant results obtained from the repeated measures analysis of variance, the state segregation index scores allow us to measure change in desegregation based upon the racial make up of higher education enrollment at public institutions.

In 1980, Delaware, Missouri, Mississippi, and Louisiana were the most segregated states involved in the Adams case. In 1980, Oklahoma, Kentucky, West Virginia, and Florida were the least segregated states from the Adams states. By 2004, Delaware and Missouri were still the most segregated states followed by Maryland, Tennessee, and Arkansas. Louisiana and Mississippi went from two of the most segregated states to ranking near the 50th percentile. The least segregated states in 2004 were West Virginia, Oklahoma, Ohio, South Carolina, Kentucky, and Florida respectively. South Carolina moved from the middle of the states in 1980 to ranking toward the top in 2004.

The Adams states with the greatest change in desegregation between 1980 and 2004 are Louisiana, Mississippi, West Virginia, and South Carolina. Louisiana had the largest point difference in the segregation index going from 52.33 in 1980 to 40.56 in 2004 for a 22% decrease in their segregation index. Mississippi's segregation index decreased from 52.84 to 41.62 between 1980 and 2004 a difference of 11.22 points for a 21% decrease. West Virginia had the largest percent difference in segregation index change between 1980 and 2004 with a 27% decrease from 33.56 to 24.62. South Carolina had a 21% decrease in their segregation index going from 41 to 31.94.

The Adams states with the smallest change in desegregation between 1980 and 2004 are Arkansas, Georgia, Alabama, Florida, Tennessee, and Kentucky. All six states have a higher segregation index in 2004 than in 1980.

Although African American enrollment increased in the Adams states between 1980 and 2004 at a much higher rate than the non-Adams states, the Adams states institutions are not as diverse as the non-Adams state institutions

based upon their overall segregation index and change in segregation index between 1980 and 2004. The non-Adams states average segregation index in 1980 was 32.76 and in 2004 it was 28.72. The Adams states average segregation index in 1980 was 42.36 and in 2004 it was 39.42.

Table 4.14 Segregation Index Greater in 2004 than 1980

<i>State</i>	<i>Seg. 1980</i>	<i>Seg. 2004</i>	<i>% Change</i>	<i>Actual Change</i>
Kentucky	30.26	31.99	0.06	-1.73
Tennessee	43.02	47.09	0.09	-4.07
Florida	32.21	36.44	0.13	-4.23
Alabama	35.89	40.98	0.14	-5.09
Georgia	34.55	40.34	0.17	-5.79
Arkansas	38.57	46.38	0.20	-7.81

Adams states made greater improvement in desegregation in the 1980s. Since the 1990s, Adams states overall have increased segregation, particularly after the US vs. Fordice (year) Supreme Court Decision.

Research Question 3

3. Is there a difference in desegregation results between two-year and four-year institutions in states that previously operated dual systems of higher education and were involved in the *Adams v. Richardson* (1973) litigation?

The split plot analysis of variance was conducted to investigate the difference in the segregation index score between public two-year and public four-year colleges and universities that were involved in the Adams v. Richardson Litigation (1973) and non-Adams states between 1980 and 2004.

Descriptive Statistics

Descriptive statistics are provided for six selected periods including 1980, 1986, 1990, 1995, 2000, and 2004 in order to provide a summarization of the data for measures of central tendency and variability. The descriptive statistics provide a base analysis and understanding of the data for later analysis using a split plot analysis of variance.

The mean institutional segregation index component for all states was 1.137. The mean institutional segregation index component in 1980 for all states was 1.24. The mean institutional index for the Adams state was 1.18 and the mean for non-Adams states was 1.29. In comparison, the Adams state's four-year institutional mean was 1.85 and the non-Adams mean was 1.74. The Adams states two-year institutions mean was .58 and the non-Adams was .98. The mean institutional segregation index component for the Adams states index ranged from a minimum of 0.0 to a maximum of 27.06 and the non-Adams states ranged from 0.0 to a maximum of 26.67. The standard deviation of the mean segregation index component for all states in 1980 was 2.23 with the Adams states standard deviation at 2.29 and the non-Adams states at 2.19. The standard deviation of the mean segregation index component for four-year institutions in Adams states was 2.91 and 1.25 for two-year institutions. The standard deviation for four-year institutions in non-Adams states was 2.63 and 1.78 for two-year institutions.

The mean institutional segregation index component in 1986 for all states was 1.13. The mean institutional index for the Adams state was 1.04 and the mean for non-Adams states was 1.21. In comparison, the Adams states four-

year institutions mean was 1.59 and the non-Adams mean was 1.55. The Adams states two-year institutions mean was .54 and the non-Adams was .99. The mean institutional segregation index component for the Adams states index ranged from a minimum of 0.0 to a maximum of 22.59 and the non-Adams states ranged from 0.0 to a maximum of 20.23. The standard deviation of the mean segregation index component for all states in 1986 was 1.98 with the Adams states standard deviation at 1.96 and the non-Adams states at 1.99. The standard deviation of the mean segregation index component for four-year institutions in Adams states was 2.50 and 1.07 for two-year institutions. The standard deviation for four-year institutions in non-Adams states was 2.03 and 1.94 for two-year institutions.

The mean institutional segregation index component in 1990 for all states was 1.08. The mean institutional index for the Adams state was 1.03 and the mean for non-Adams states was 1.13. In comparison, the Adams states four-year institutions mean was 1.56 and the non-Adams mean was 1.41. The Adams states two-year institutions mean was .56 and the non-Adams was .95. The mean institutional segregation index component for the Adams states index ranged from a minimum of 0.0 to a maximum of 20.99 and the non-Adams states ranged from 0.0 to a maximum of 17.78. The standard deviation of the mean segregation index component for all states in 1990 was 1.84 with the Adams states standard deviation at 1.89 and the non-Adams states at 1.79. The standard deviation of the mean segregation index component for four-year institutions in Adams states was 2.41 and 1.04 for two-year institutions. The

standard deviation for four-year institutions in non-Adams states was 1.78 and 1.78 for two-year institutions.

The mean institutional segregation index component in 1995 for all states was 1.05. The mean institutional index for the Adams state was 1.01 and the mean for non-Adams states was 1.08. In comparison, the Adams states four-year institutions mean was 1.51 and the non-Adams mean was 1.31. The Adams states two-year institutions mean was .56 and the non-Adams was .93. The mean institutional segregation index component for the Adams states index ranged from a minimum of 0.0 to a maximum of 21.89 and the non-Adams states ranged from 0.0 to a maximum of 17.96. The standard deviation of the mean segregation index component for all states in 1995 was 1.78 with the Adams states standard deviation at 1.86 and the non-Adams states at 1.71. The standard deviation of the mean segregation index component for four-year institutions in Adams states was 2.37 and 1.03 for two-year institutions. The standard deviation for four-year institutions in non-Adams states was 1.79 and 1.64 for two-year institutions.

The mean institutional segregation index component in 2000 for all states was 1.06. The mean institutional index for the Adams states was 1.02 and the mean for non-Adams states was 1.10. In comparison, the Adams states four-year institutions mean was 1.50 and the non-Adams mean was 1.32. The Adams states two-year institutions mean was .59 and the non-Adams was .96. The mean institutional segregation index component for the Adams states index ranged from a minimum of 0.0 to a maximum of 22.43 and the non-Adams states ranged from 0.0 to a maximum of 16.76. The standard deviation of the mean

segregation index component for all states in 2000 was 1.77 with the Adams states standard deviation at 1.80 and the non-Adams states at 1.74. The standard deviation of the mean segregation index component for four-year institutions in Adams states was 2.28 and 1.03 for two-year institutions. The standard deviation for four-year institutions in non-Adams states was 1.65 and 1.78 for two-year institutions.

The mean institutional segregation index component in 2004 for all states was 1.05. The mean institutional index for the Adams state was 1.02 and the mean for non-Adams states was 1.08. In comparison, the Adams states four-year institutions mean was 1.46 and the non-Adams mean was 1.24. The Adams states two-year institutions mean was .62 and the non-Adams was .97. The mean institutional segregation index component for the Adams states index ranged from a minimum of 0.0 to a maximum of 22.86 and the non-Adams states ranged from 0.0 to a maximum of 16.28. The standard deviation of the mean segregation index component for all states in 2004 was 1.72 with the Adams states standard deviation at 1.78 and the non-Adams states at 1.66. The standard deviation of the mean segregation index component for four-year institutions in Adams states was 2.24 and 1.08 for two-year institutions. The standard deviation for four-year institutions in non-Adams states was 1.48 and 1.75 for two-year institutions.

Assumptions of Split Plot Analysis of Variance

The assumptions of repeated measures analysis of variance were analyzed.

1. Normality - The assumption for the multivariate approach is that the vectors of the dependent variables follow a multivariate normal distribution, and the variance-covariance matrices are equal across the cells formed by the between-subjects effects. Box's M statistic tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups and was significant at the .000 level. The assumption of normality was violated since the institutional scores contributing to the segregation index was calculated using the absolute value. The large n value exceeded 1,300 cases/institutions and compensated for the violation of normality.

2. Sphericity - Mauchly's Test of Sphericity was used to analyze the assumption on sphericity. The within subjects effect of Mauchly's test of sphericity was significant; therefore rejecting the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variable is proportional to the identity matrix. Based upon the significant test of sphericity, further analysis used the Greenhouse-Geisser test, a more conservative statistical approach. The Greenhouse-Geisser test of sphericity was not significant with a .662 statistic.

Split Plot Analysis of Variance

The between group variability between four-year and two-year and Adams and non-Adams institutions using the Greenhouse-Geisser correction of sphericity was significant with an F statistic of 7.82. The mean square is 144.31 with 1 degree of freedom. Therefore, the null hypothesis is rejected with a .001 significance level that there is no significant difference in the institutional mean

segregation index institutional component from 1980, 1986, 1990, 1995, 2000, and 2004 between institutional level and Adams states. Based upon the statistical results, there are significant differences in the institutional component of the segregation index.

Table 4.15 Split-Plot Analysis of Variance Between Two-Year and Four-Year

<i>Source</i>	<i>Type III Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>	<i>Partial Eta Squared</i>
Intercept	10,349.27	1	10,349.27	560.71	0.00	0.29
adams	28.64	1	28.64	1.55	0.21	0.00
iclevel	1,077.85	1	1,077.85	58.40	0.00	0.04
adams * iclevel	144.31	1	144.31	7.82	0.01	0.01
Error	25,231.34	1,367	18.46			

The within group variability using the Greenhouse-Geisser correction of sphericity was significant with an F statistic of 20.74. The mean square was 13.76 with 3.3 degrees of freedom. Therefore, the null hypothesis is rejected with a .000 significance level that there is no significant difference over time in the segregation index from 1980, 1986, 1990, 1995, 2000, and 2004. Based upon the statistical results, there are significant differences between states in the institutional component of the segregation index.

Based upon the results, there are significant differences between desegregation at four-year and two-year institutions. There are also noticeable differences between Adams and non-Adams states. The Adams states two-year institutions are more desegregated than non-Adams states. On the other hand, four-year institutions in Adams states are more segregated than non-Adams states.

Some of the differences between two-year and four-year institutions can be explained by the open admissions nature of two-year institutions, more under-prepared students enter higher education at this level. Research has shown that

students entering two-year institutions are less likely to complete a bachelor's degree.

Chapter 5 Discussion

This chapter discusses and further analyzes the findings of the study. The purpose of this dissertation was to study desegregation in the states that previously operated dual systems of higher education. Higher education segregation is a part of a much bigger social problem that has been a major part of the United States' struggle to ensure equality of its citizens. The movement to desegregate higher education did not happen in isolation. Rather, it was part of America's movement and realization of liberty and equality to maximize the freedom of all citizens, regardless of skin color (Samuels, 2004). Segregation in restaurants, public restrooms, and in elementary and secondary schools are examples of the prevalence and entrenchment of segregation in America. In all of these cases, dismantling previously accepted segregated social institutions or practices was contentious. And, as in the case of higher education, problems and solutions associated with segregation are connected to larger social norms and values.

Desegregation was upheld based upon the 1896 Supreme Court decision, *Plessy v. Ferguson* (1896), which established the precedent of separate but equal. The separate but equal doctrine was upheld for over 50 years, but began to come under scrutiny in the mid-1900s. In 1954, the landmark Supreme Court decision of *Brown v. Board of Education* (1954) struck down the precedent of *Plessy v. Ferguson* (1896) and educational systems began the long and complex process of desegregation. Later, the passage of the Civil Rights Act of 1964, which prohibited discrimination, provided further incentive and enforcement of desegregation efforts and resulted in the request from the Department of Health,

Education, and Welfare for states to submit plans to desegregate higher education. The *Adams v. Richardson* (1973) court case resulted from the Department of Health, Education, and Welfare's request for desegregation plans which marked the beginning of over 35 years of desegregation implementation and monitoring.

These events significantly changed higher education. Many states transformed from legally segregated systems of higher education to systems with mandated integration. Higher education desegregation in America has been a controversial and contested issue facing public institutions. This study analyzed the results of desegregation efforts between 1980 and 2004 in the 19 states which previously operated dual systems of higher education and compared the results to states not involved in the Adams case.

The study is based upon a state segregation index which examines the racial composition of each institution based upon the racial composition of the state higher education enrollment. The segregation index ranges between 0 and 100 with 100 representing total segregation and 0 representing total desegregation. The key significant findings, potential explanations, implications for policy, and implications for future research are examined.

Research Question 1

1. To what extent have the states that previously operated dual systems of higher education and were involved in the *Adams v. Richardson* (1973) litigation desegregated?

Adams states decreased their average state segregation index score by 6.9% between 1980 and 2004. The average state segregation index in 1980 was

42.36 and in 2004 it was 39.42. In 1980, there was a 22.7% difference between Adams and non-Adams state in the segregation index score. The non-Adams states segregation index score was 32.76 compared to the 42.36 score for Adams states.

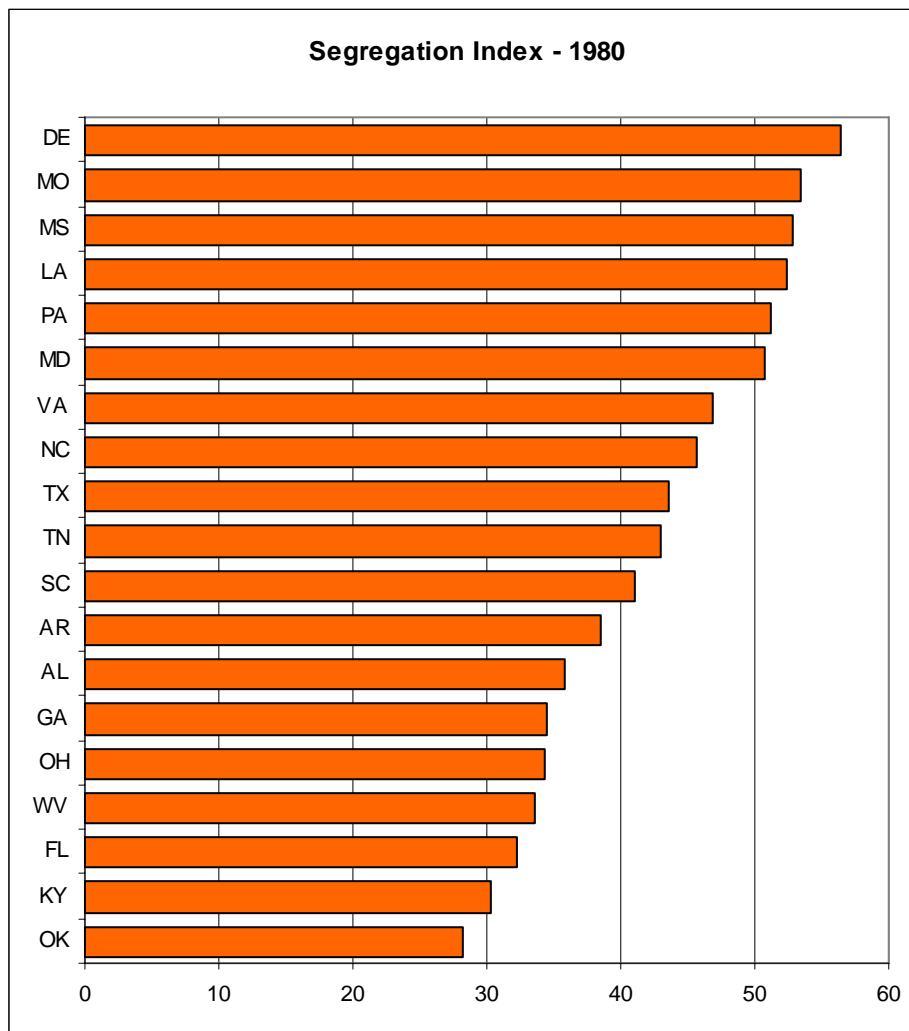


Figure 5.1 Segregation Index Scores for Adams States - 1980

Ten years later, in 1990, the Adams states had closed the segregation index gap to 20.7%. By 2000, the Adams states began an increasing trend of re-segregation while non-Adams state continued improvements in desegregation. The gap between Adams and non-Adams states grew to 26%. By the last year

of the study, in 2004, the gap continued to increase with Adams states segregation index score was 39.42 and non-Adams states score was 28.72, a gap of 27.1%.

The results of the repeated measures analysis of variance resulted in significant differences in the segregation index scores between 1980 and 2004 between Adams and non-Adams states. There has been a significant difference in desegregation between the Adams and non-Adams states. Additionally, there has also been a significant difference in the segregation index over time in the individual states.

Further analysis of the segregation index using a pooled cross sectional time series analysis revealed that certain demographic, political, and social factors provided significant evidence in explaining the variation in the state segregation index score. The significant variables analyzed in this study were the percent of the population that was African American, the size of government employment, the percent of the population that was urban, the state unemployment rate, and the political party control of state government.

The significant variables found in the results were the percent of the population that was black, the percent of the population living in urban areas, the state unemployment rate, total state expenditures, total government employees, and whether or not the state was an Adams states. The significant variables that had a negative impact on the segregation index were total government employees, and total state expenditures. Non significant variables were per capita income, density of the population, state aid as a percent of total expenditures, and the party control of various elected officials. Although not

significant, the impact of party control of various elected officials had a negative impact on the segregation index.

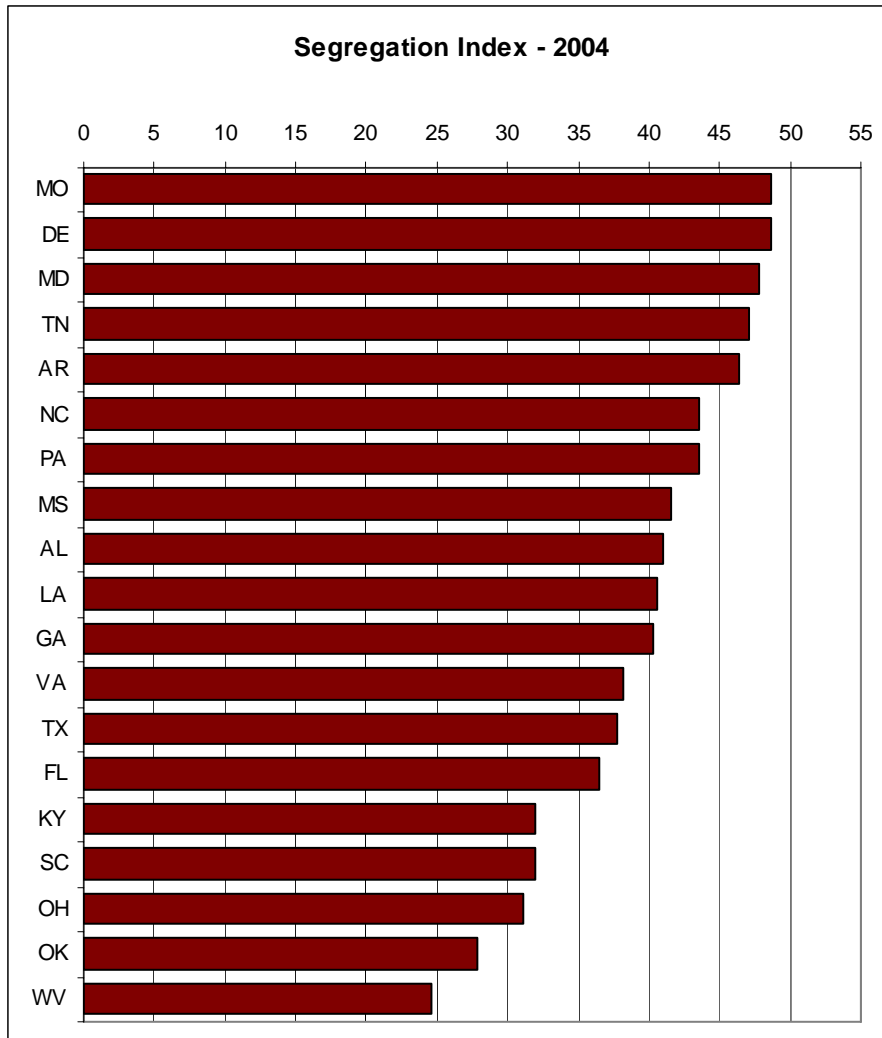


Figure 5.2 Segregation Index Scores for Adams States - 2004

The nineteen states involved in the *Adams v. Richardson* (1973) litigation have made significant improvements overall in their segregation index score between 1980 and 2004. However, over the past 15 years, the improvements in their segregation index scores have been minimal and in recent years, the scores have been reversing. Based upon the results in this study, these states have been re-segregating.

Research Question 2

2. To what degree and at what rate has desegregation taken place in the states that previously operated dual systems of higher education and were involved in the *Adams v. Richardson* (1973) litigation?

The slope of the regression line was analyzed using a t-test to determine the difference in the rate of change between Adams and non-Adams states and statistical tests showed no significant difference between the two groups of states overall between 1980 and 2004. The slope of the regression line was then analyzed over the past ten years between 1995 and 2004. Again, there was no significant difference between the rate of change in desegregation results between the Adams and non-Adams states. The average non-Adams state slope declined by 14% and the average Adams state declined by 7.5% between 1980 and 2004. Between 1995 and 2004, the average Adams state slope increased by less than 1% while the non-Adams state slope decreased by less than 1%. Adams states made greater changes in desegregation in the 1980s than non-Adams states. Since the 1990s, the rate of change for Adams states has actually increased.

Research Question 3

3. Is there a difference in desegregation results between two-year and four-year institutions in states that previously operated dual systems of higher education and were involved in the *Adams v. Richardson* (1973) litigation?

A split plot analysis of variance was conducted to analyze the difference in the segregation index score between two-year and four-year colleges and universities. The statistical analysis results showed a significant difference in desegregation between the institutional level, two-year and four-year institutions and Adams and non-Adams states. There was also a significant difference in the results of the component segregation index over time.

There are also noticeable differences between Adams and non-Adams states. Adams states two year institutions are more desegregated than non-Adams states. Additionally, four-year institutions in Adams states are more segregated than non-Adams states.

Implications for Policy

Since the Brown v. Board of Education (1954) Supreme Court decision struck down legal segregation, states have adopted many different stances in terms of desegregating their institutions of higher education. The results of this study highlight state results in increasing access to higher education. In 1980, there were 9.4 million students were enrolled in the public higher education institutions that were examined in this study. There were 864,000 African American students enrolled in all states representing only 9% of all students enrolled in higher education. In the nineteen Adams states, 4.6 million students were enrolled with African American students consisting of 13% of all students, compared to the non-Adams states enrollment of 5.8 million students and with African Americans consisting of 7% all students.

After the Office of Civil Rights developed criteria for desegregation plans in 1977 including defining institutional missions, strengthening the role of HBCUs,

and eliminating unnecessary duplicate programs, Adams states began submitting and implementing their plans (Southern Education Foundation, 1980).

The results of this study have implications for policy makers in setting state and institutional policies and allocating resources. The data provide policymakers the ability to benchmark and understand the historical implications of policies implemented during the early desegregation efforts.

Another way to look at the differential in desegregation scores is to rank order states based upon their segregation index, and then determine results for the distribution. For this study, in 2004 Adams states ranked above the 75th percentiles of the distributions are considered to have relatively high segregation, while Adams states ranked at or below the 25th percentiles are considered to have relatively low segregation rates. Among all states included in the study, low desegregation scores are below 32, high desegregation scores (i.e., those at or above the 75th percentile) are 46 or higher.

Policy makers, to include legislators, state executives, institutional administrators, and governing boards have the ability to influence the direction and importance of desegregation and diversity in higher education.

Desegregation continues to be an issue throughout many of the Adams states. For example, recently the Grambling State University Alumni filed a lawsuit against the State of Louisiana for mis-treatment and ending the desegregation agreement too soon (Shreveport Times, 2006). In Maryland and Texas, HBCUs are struggling to uphold desegregation agreements that forbid predominately white institutions from offering new programs that are offered at nearby HBCUs. Morgan State University in Maryland recently filed a lawsuit

against the Maryland Higher Education Board for approving Towson State University's request for an MBA program. The approval of the MBA program violates the desegregation agreement of like degree programs at proximate institutions. The lawsuit is attempting to preserve the MBA enrollment at Morgan State University (Monastersky, 2006). Prairie View A&M is trying to prevent the University of Houston from offering a satellite site in the suburbs of Houston (Schmidt, 2007).

Table 5.1 Segregation Status

<i>State</i>	<i>2004</i>	<i>Percent</i>	<i>Status</i>
MO	48.7	100%	High Segregation
DE	48.6	94%	High Segregation
MD	47.73	89%	High Segregation
TN	47.09	83%	High Segregation
AR	46.38	78%	High Segregation
NC	43.53	72%	Medium Segregation
PA	43.5	67%	Medium Segregation
MS	41.62	61%	Medium Segregation
AL	40.98	56%	Medium Segregation
LA	40.56	50%	Medium Segregation
GA	40.34	44%	Medium Segregation
VA	38.23	39%	Medium Segregation
TX	37.79	33%	Medium Segregation
FL	36.44	28%	Medium Segregation
KY	31.99	22%	Low Segregation
SC	31.94	17%	Low Segregation
OH	31.11	11%	Low Segregation
OK	27.81	6%	Low Segregation
WV	24.62	0%	Low Segregation

Along with these institution based problems, the president of the National Association for Equal Opportunity in Higher Education (NAFEO), Lezli Baskerville is attempting to meet with Congress on the inaction of the Office of Civil Rights. Baskerville made the following statement regarding state desegregation results;

“There has been serious slippage in some states, and in other states there has never been real compliance with the letter or spirit of the agreements.” The NAFFEO organization has been developing a legal approach to force the United States Department of Education to enforce the desegregation agreements (Inside Higher Ed, 2006). Although many states have legally ended their desegregation agreements, based upon recent litigation, the desegregation issues are not over.

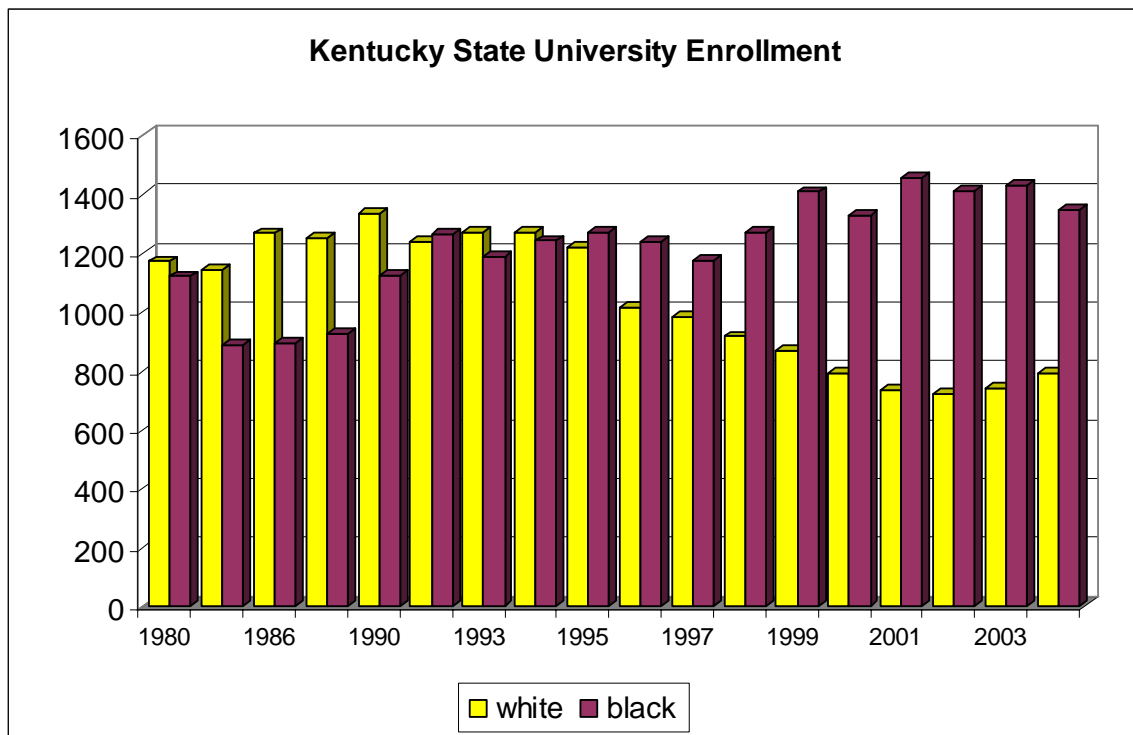


Figure 5.3 Kentucky State University Student Enrollment 1980 to 2004

Implications for Historically Black Colleges and Universities

One of the greatest tensions in desegregating states is the role of HBCUs. HBCUs have a unique mission serving students that traditionally have not had the option of attending any college of their choice. As legal and policy barriers

for African American students were removed, the potential impact was that enrollment patterns would possibly shift to predominately white institutions.

When comparing growth in total enrollment and African American enrollment, it is important to analyze the population growth and demographic characteristics of higher education enrollment in each state along with the state population and demographics.

In all of the Adams states, the population increased between 1980 and 2004, while the African American population changes varied by state. In all but four states, HBCU enrollment has increased since 1980.

Table 5.2 State Population (in thousands)

<i>State</i>	<i>Population</i>		<i>Percent Black</i>	
	<i>1980</i>	<i>2004</i>	<i>1980</i>	<i>2004</i>
Alabama	3,900.37	4,525	25.57	26.36
Arkansas	2,288.74	2,750	16.27	15.76
Delaware	594.92	830	16.11	20.36
Florida	9,839.84	17,385	13.60	15.67
Georgia	5,486.17	8,918	26.69	29.60
Kentucky	3,664.22	4,142	7.07	7.50
Louisiana	4,223.10	4,507	29.32	33.04
Maryland	4,227.64	5,561	22.67	29.06
Mississippi	2,525.34	2,901	35.16	36.82
Missouri	4,921.97	5,760	11.66	11.49
North Carolina	5,898.98	8,540	22.40	21.79
Ohio	10,800.65	11,450	9.97	11.89
Oklahoma	3,040.76	3,524	6.75	7.72
Pennsylvania	11,868.30	12,394	8.81	10.51
South Carolina	3,134.50	4,198	30.35	29.37
Tennessee	4,600.25	5,893	15.80	16.79
Texas	14,338.21	22,472	11.94	11.71
Virginia	5,368.33	7,481	18.82	19.88
West Virginia	1,951.35	1,813	3.33	3.20

In states with decreases in HBCU enrollment between 1980 and 2004, particularly in Ohio and West Virginia, the state segregation index is among the lowest of the 19 Adams states. Ohio and West Virginia are two of the three lowest of the 19 states with a 31.11 and 24.62 segregation index in 2004.

West Virginia's two HBCUs Bluefield State College and West Virginia State University have an African American enrollment of 10% and 15% respectively in 2004. The diversification of their HBCUs resulted in the state segregation index declining from 33.56 in 1980 to 24.62 in 2004. This is a stark contrast to the results in Kentucky and Florida which both have only one public HBCU. Kentucky State University in 1980 was 48% African American and by 2004 their African American enrollment increased to 58%. Kentucky's

Table 5.3 HBCU Enrollment

<i>State</i>	<i>1980</i>	<i>2004</i>	<i>% Increase</i>
AL	14,368	27,121	89%
AR	3,064	3,303	8%
DE	2,084	3,270	57%
FL	5,371	13,067	143%
GA	5,479	9,026	65%
KY	2,336	2,335	0%
LA	15,218	20,455	34%
MD	11,421	19,956	75%
MO	3,826	4,880	28%
MS	13,398	17,376	30%
NC	16,593	30,826	86%
OH	3,031	1,820	-40%
OK	1,179	3,049	159%
PA	3,720	3,557	-4%
SC	4,598	5,717	24%
TN	8,318	9,100	9%
TX	21,552	30,149	40%
VA	11,954	11,024	-8%
WV	7,095	6,850	-3%

segregation index reflected the change in enrollment at Kentucky State University and the segregation index increased from 30.26 in 1980 to 31.99 in 2004. Kentucky State University's African American enrollment fluctuated between 1980 and 2004 with a low of 41% and a high of 63%. Also, Florida A&M University went from 88% in 1980 to 91% in 2004. The state segregation

index for Florida went from 32.21 in 1980 to 36.44 in 2004. The role of HBCUs has a significant impact on the states desegregation results.

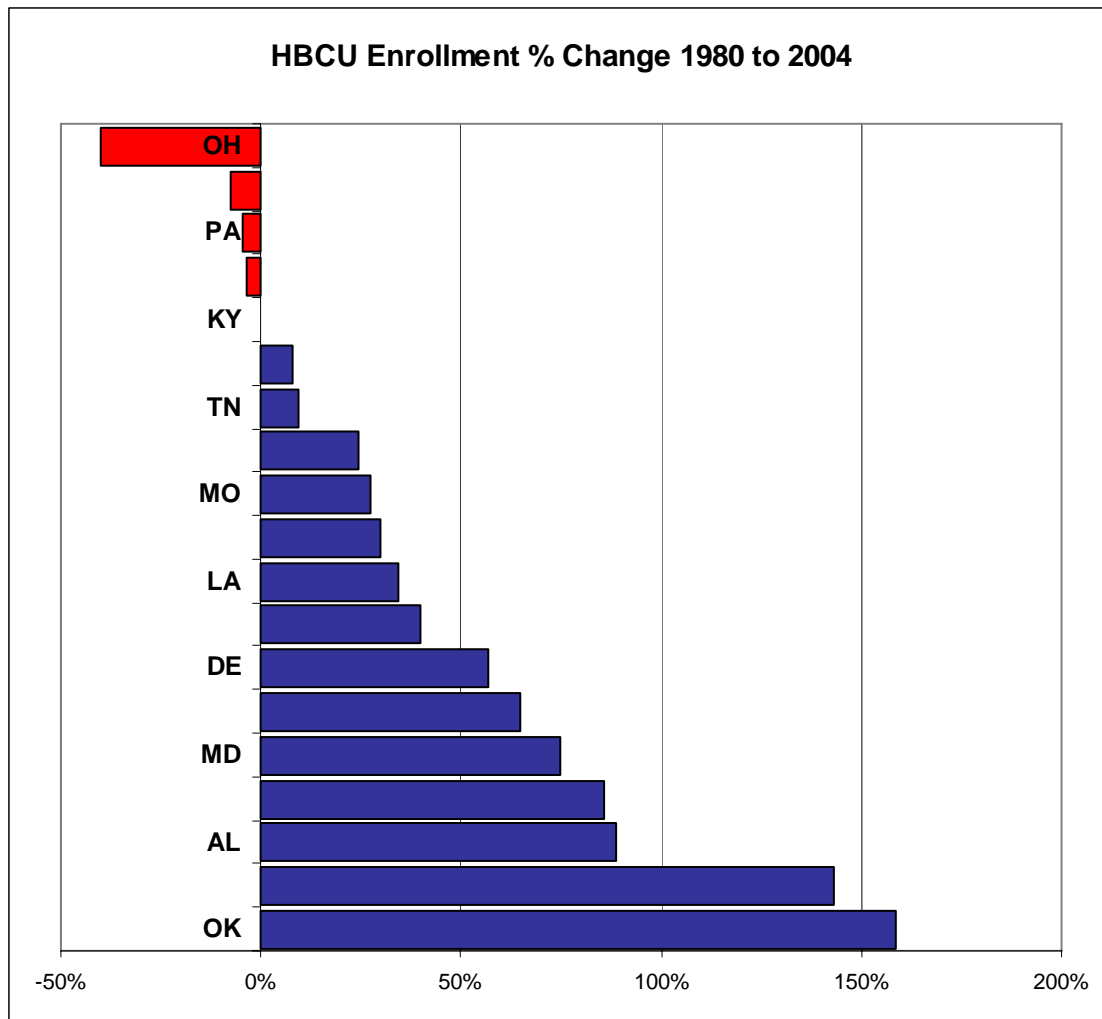


Figure 5.4 Percent Change in HBCU Enrollment Between 1980 and 2004

HBCU enrollment has followed the pattern similar to the pattern of state desegregation. As states initially focused on desegregation efforts in the early 1980s after the Office of Civil Rights developed the ingredients for desegregation, the percent of HBCU enrollment that was African American declined as well as the state segregation index. After the *United States v. Fordice* (1992) Supreme Court ruling changed the focus away from specific

enrollment goals and directed the attention back to equity, state segregation index scores began to rise and overall the percent of African Americans enrolled at HBCUs began to increase.

Federal Versus State Policy

The results of this study demonstrate that when there was greater focus from the Office of Civil Rights, particularly in the late 1970s and early 1980s, there was more change in the state segregation index. As the federal philosophy shifted during the Reagan administration, the focus of the administration was on enhancing HBCUs and less on desegregation. It is interesting to note that Louisiana and Mississippi, two states with the greatest segregation in 1980, have been involved in federal court cases. Both states were monitored by the federal court and Mississippi's eventually led to the Supreme Court decision in *U.S. v. Fordice* (1992) which then led to the 1994 Louisiana Desegregation Settlement Agreement. Both states made the greatest point change in their state segregation index from 1980 to 2004.

Once the Supreme Court ruled in the *Fordice* case, it changed the scope and role of the federal government. As states focused on equity, desegregation monitoring had begun to conclude. Important to note is Mississippi's state segregation index has increased as the Office of Civil Rights and the judicial system have ended desegregation cases and state monitoring. Tennessee, Alabama, Louisiana, and Mississippi have recently ended their desegregation agreements. In most cases, the financial impact on HBCUs has been significant. It remains to be seen what these settlements will foster in terms of desegregation in these states.

Change at State Level or Institution Level

Based upon results in Louisiana and Mississippi, where federal court orders forced the states under close scrutiny to implement desegregation plans, the implication is that greater change can be made at the state level. The state has the ability to distribute funding, review duplication of programs, adjust, change, or revise missions, coordinate admission standards, and provide overall management of higher education. Future research could distinguish the level of impact on desegregation comparing state efforts to systems and institutions.

Percentage Plans

One method which California, Florida, and Texas have used to bypass the scrutiny of affirmative action has been to implement percentage plans. Based upon these percentage plans, each state has a policy that allows admission into four-year institutions based upon a student's percentile rank in their high school graduating class. Each state has a different set of criteria; California accepts the top four percent, Texas accepts the top ten percent, and Florida accepts the top twenty percent.

Based upon the results from this study, African American enrollment decreased at four-year institutions in California and Texas, while two-year enrollment increased between 1990 and 2004.

Florida has had different results from California and Texas. Florida has seen an increase in the percentage of African American enrollment at four-year institutions and a decrease in the percentage at two-year institutions since the implementation of their percentage plans. With an increase of almost 28,000 African American students enrolled in four-year institutions and over 22,000

African American students enrolled in two-year institutions, Florida has seen a significant increase in enrollment over the past 14 years.

Table 5.4 Comparison of 4-Year and 2-Year Enrollment

<i>State</i>	<i>Level</i>	<i>year</i>	<i>Black Enrollment</i>
CA	4 Year	1990	27%
CA	4 Year	2004	21%
CA	2 Year	1990	73%
CA	2 Year	2004	79%
FL	4 Year	1990	46%
FL	4 Year	2004	51%
FL	2 Year	1990	54%
FL	2 Year	2004	49%
TX	4 Year	1990	48%
TX	4 Year	2004	44%
TX	2 Year	1990	52%
TX	2 Year	2004	56%

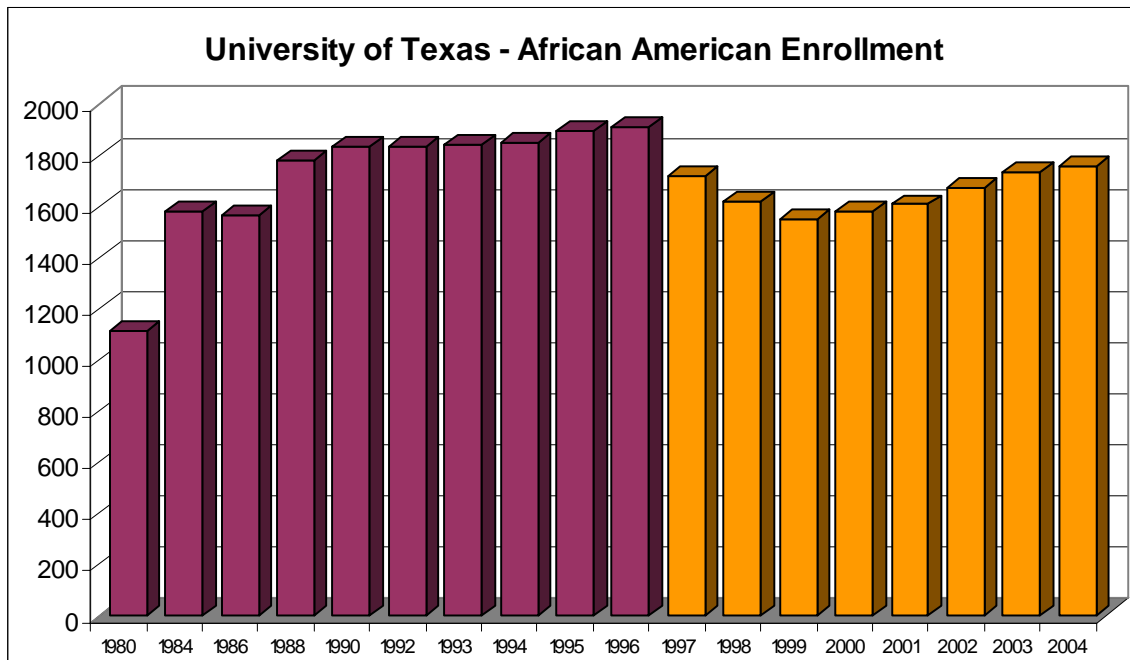


Figure 5.5 University of Texas at Austin African American Enrollment

As percentage plans come under particular scrutiny in Texas, Florida appears to have identified a model that has shown positive results in increasing

access to higher education, but this increase has not coincided with a decrease in the segregation index. Florida's HBCU enrollment increased 143% during the timeframe of this study.

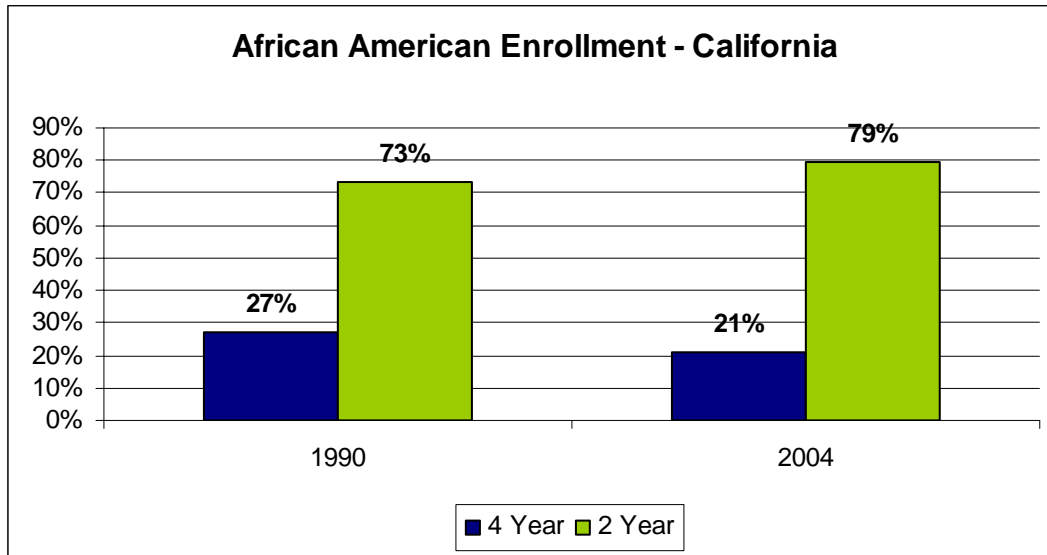


Figure 5.6 African American Enrollment by Institutional Level – California

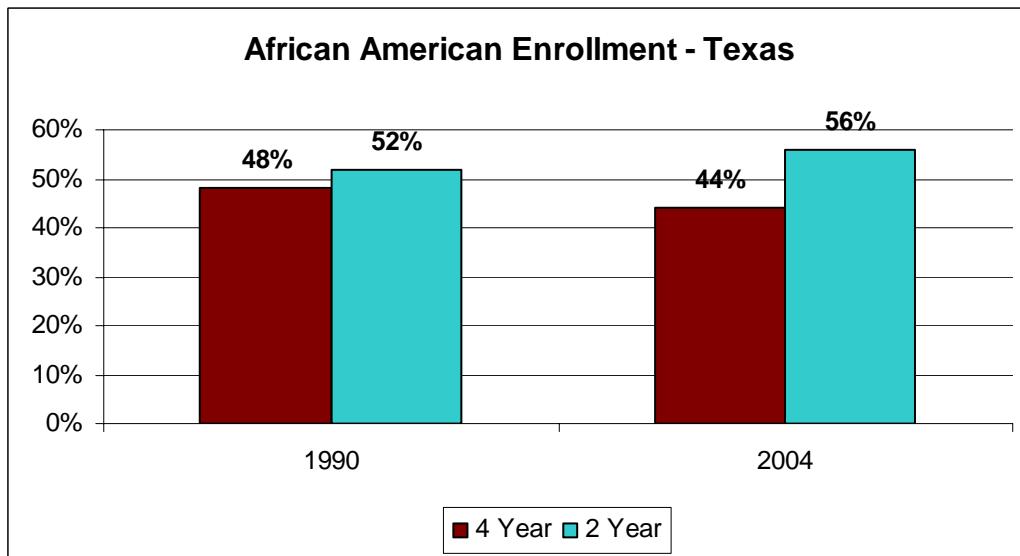


Figure 5.7 African American Enrollment by Institutional Level – Texas

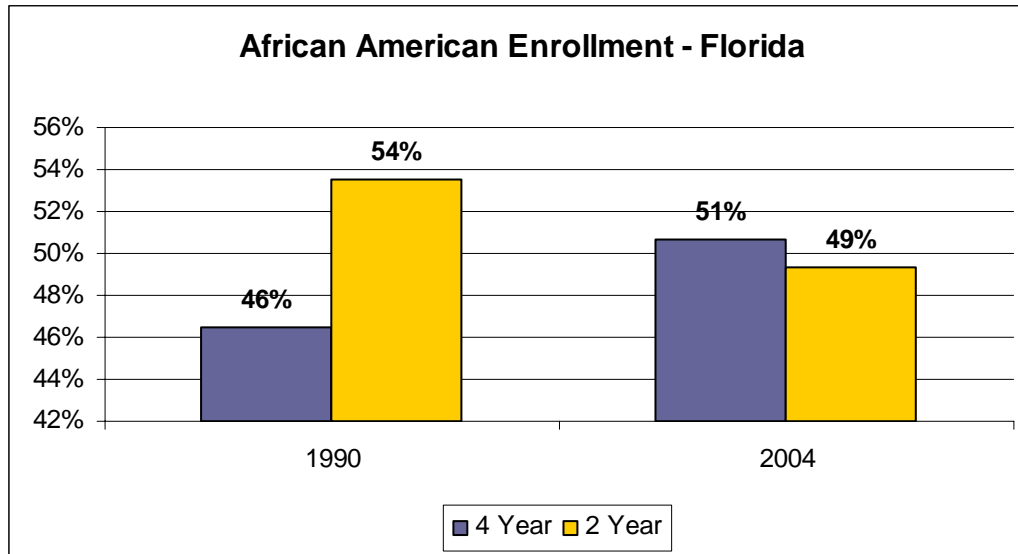


Figure 5.8 African American Enrollment by Institutional Level - Florida

The results of the study indicate that there are differences in desegregation over time between two-year and four-year institutions. The “cooling out” or hindrance of students, particularly African Americans, transitioning from two-year institutions to four-year institutions is consistent with the U.S. Department of Education’s study that estimated number of students transferring to a four-year institution was approximately 20 to 25 percent across various studies (U. S. Department of Education, 2001). The disproportionate number of African American students enrolled in community colleges has increased from 39% in 1980 to 49% in 2004. Based upon the disproportionate number of African American students enrolled in community colleges, it is possible that the community college system plays a role in the continued segregation of four-year institutions

Implications for Future Research

Based upon the extent of data generated from this study, the opportunities for future research are abundant. Two immediate research opportunities are

presented here. These include, first, an analysis of further factors of desegregation in order to incorporate them with the results from this study on student desegregation and, second, a consideration of the historical and current social, political, and economic characteristics of each state involved in the Adams case.

In providing further research in analyzing desegregation, one could incorporate a quantitative statistical analysis using a structural equation model. The factors incorporated in the model would include three factors, the student segregation index analyzed in this study from 1980 to 2004 which be expanded to included 2005. Additionally, a new factor on faculty and staff would be added. The faculty and staff factor would incorporate IPEDS Human Resource data collected annually since 1993. The faculty and staff segregation index would be computed based upon the same equation for student desegregation in this study. Another new factor added would be a student degree program completion segregation index which would analyze a segregation index for graduates. The degree completion index would be analyzed using IPEDS graduation data submitted annually by institutions. The three factor structural equation model would then statistically analyze the cause and effect of students, faculty, and degree completers on desegregation. Correlation statistics would analyze the impact of desegregated faculty and staff on student desegregation and degree completers.

The second research study would use a mixed methods research case study approach that would study and analyze each state's current and historical social, political, economic, and higher education environment. The initial results

of this study would identify states that made the greatest progress and states that made the least progress in order to begin the case study.

The social characteristics analyzed would include but not be limited to population degree attainment; school enrollments and graduates including early childhood, elementary, and secondary education; incarceration; population changes and projections; age distributions; and race and ethnic distributions. The political characteristics would analyze the states environment related to political representation, policy, state revenue and expenditures, state funding of k-12 and higher education, and state higher education legislation and influence.

The economic characteristics would analyze the states poverty level, employment and unemployment; employment and unemployment by industry; welfare, wealth, per capita income, and other appropriate variables.

The higher education environment would be analyzed by makeup of technical colleges, community colleges, and four-year colleges and universities; degrees earned by field of study, graduation rates, proximate HBCUs and predominantly white institutions, student tuition, financial aid, college budgets, revenues, and expenditures; institutional missions, degree programs, recruiting, and scholarships. Also, a major focus of the study would center on individual choice and determination and selection of attending college of high school students.

In addition, each state will be analyzed based upon their strategies to desegregate and those strategy outcomes. Best practices and models for state and institutional desegregation are anticipated outcomes.

Conclusion

One of the many challenges to desegregating higher education has been to appropriately and realistically quantify, measure, and set goals to desegregation. In analyzing desegregation, a variety of desegregation/segregation measures have been developed to measure the degree of difference among groups in spatial relations, the distribution of social groups. Indices of segregation usually measure dissimilarity, exposure, clustering, and/or compactedness (Benenson, 2002). This study provides broad generalizations as well as detail level data that provides insight into the longitudinal implications and results of state desegregation.

As states wind down desegregation lawsuits and court monitoring, it is incumbent upon higher education administrators, state officials, federal officials, legislators and judicial officials to reflect on the past twenty five years and analyze the efforts and results that led to changes in desegregation. Did the *Adams v. Richardson* (1973) litigation make a difference? Based upon the results of this study, the Adams litigation made a difference early on. Adams states clearly were moving toward desegregation in the 1980s, but progress was slow or non-existent in the 90s and 00s. The average segregation index score for all Adams states in 1980 was 42.36 and had declined by 10% to 38.49 by 1990. Between 1990 and 2004, the progress in state desegregation has tapered off and in some cases reversed. The average segregation index score has remained fairly stable between 1990 and 2004, increasing by 2.4% to 39.42.

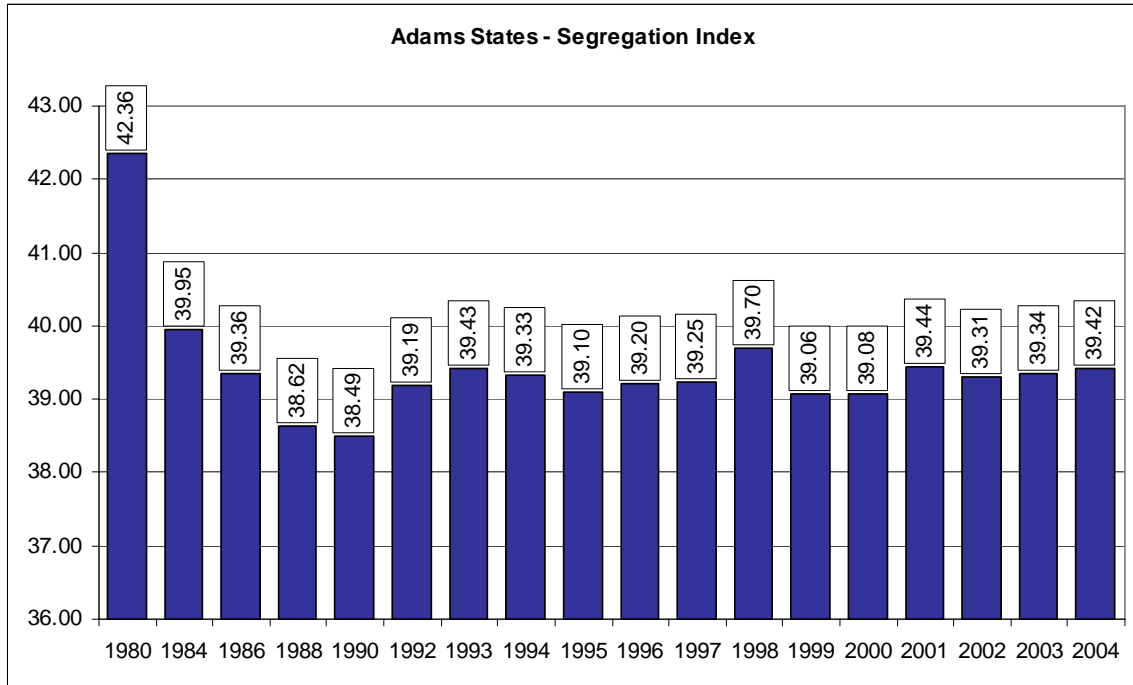


Figure 5.9 Adams State Segregation Index 1980 to 2004

As the courts and Office of Civil Rights are ending monitoring of the remaining states, the movement away from quantitative results is evident. Although the direction from the Office of Civil Rights in the late 1970s specifically focused on the number of students, faculty, and staff, the trend has been to focus on the US vs. Fordice (1992) decision that excluded quantifiable targets and numbers for desegregation and focused on missions, duplication of programs, and funding HBCUs.

Desegregation is a very complex issue with many varying and sometimes dichotomous views. To understanding the viewpoints and positions of all parties involved is tantamount with the high stakes gained or lost. In many cases, as with many HBCUs, survival has become the focus.

Today, the Adams states are more segregated than 10 to 15 years ago. The data from this study identifies a continuing trend toward greater segregation.

The solution for many states has been to invest large sums of money in higher education for desegregation. This funding strategy has satisfied the various stakeholders monitoring state desegregation. The findings of this study suggest that as desegregation oversight is winding down, so is the progress that states have made. It is ironic that today, “separate but equal” has been the compromise.

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Vita

Edwin H. Litolff, III was born in Slidell, Louisiana on May 24, 1968. He attended Pearl River High School where he was very involved in extra curricular activities including a variety of sports. He attended Southeastern Louisiana University in Hammond, Louisiana, and obtained a bachelor's degree in 1991 and a master's degree in 1992. He went to work at Southeastern Louisiana University in student affairs immediately after completing his master's degree. He was very involved while at Southeastern Louisiana University on the campus and in the community.

In 1997 he began working in the Office Enrollment Services for the fledgling community college in Baton Rouge, Louisiana. Baton Rouge Community College opened in 1998 and exceeded all enrollment expectations. He later worked in the Office of Institutional Research during Baton Rouge Community College's accreditation review. In 2005, he became the Associate Vice President for Institutional Research and Enrollment Management at the University of Louisiana System Office.