

NO CHILD LEFT BEHIND?: THE RELATIONSHIP BETWEEN EDUCATION POLICY
AND STUDENT SUCCESS

by

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ABSTRACT

This study investigated how education policy influences student success, and if there are linkages between K-12 education policy and higher education. Historically, education has primarily been a function of state and local governments. The role of the federal government drastically changed with the passage of the No Child Left Behind Act in 2001. This thesis focused on the influence of No Child Behind on several indicators of student success in K-12 and postsecondary education. All fifty states were examined in this study. This approach is rather unusual since it is typical to focus on one state or a small group of states. In addition to the state level analyses, macro analyses were also conducted to generate sounder policy prescriptions. This study tested three primary research questions. (1) The first research question tested possible changes in several measures of student success since the implementation of No Child Left Behind. (2) The second research question analyzed the relationship between K-12 education policy and higher education. (3) The third research question addressed the possibility that state education reforms have had an impact on test scores, graduation rates, and college enrollment. After testing the three research questions the following results were found. (1) Findings showed that K-12 test scores have improved on the national level since the implementation of No Child Left Behind, but there are several states that have witnessed a decline in test scores since legislation was enacted. (2) No Child Left Behind has had an impact on higher education. Test scores have a relationship with college retention and college enrollment. (3) There was no relationship between the state reforms and the variables that measured student success. Based on the findings, policy prescriptions were generated for both leaders within education and policymakers.

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CHAPTER ONE: INTRODUCTION

Aristotle stressed in the importance of education in this famous quote, “All who have meditated on the art of governing mankind have been convinced that the fate of empires depends on the education of youth.” This quote from the ancient world describes the importance of education in the development of a prominent nation-state in the modern world. After the end of the Cold War the United States of America emerged as the world’s last remaining super power. It can be argued that this status was achieved through American innovation that is a direct result of education. The United States is home to the world’s greatest universities, and educated citizens are important in retaining our place within the international community. This quote speaks to the motivation behind this research. Federal policy makers have developed education reforms aimed at improving student learning outcomes. These policymakers, like Aristotle, understand how important education is to an individual country. Do these policies really make a difference? Are policymakers protecting our ‘empire’ with these reforms?

Education is an important component of democracy. Cultural norms are transmitted to children through education. These norms include how to become a good citizen. The 1958 National Defense Education Act was the federal government’s first attempt at using K-12 education to protect position of the United States within the international community (Spring 2004). This theme continued into the passage of the 1965 Elementary and Secondary Education Act (ESEA), *A Nation at Risk*, the 1994 reauthorization of the ESEA, and the 2001 reauthorization of the ESEA-the No Child

Left Behind Act. Politicians believed that federal legislation would ensure that American children do not fall behind children in other countries.

Politicians have often focused on K-12 education. The federal government has historically played a very limited role in higher education. Unlike K-12 education, the federal government does not place mandates on funding for higher education (Heller 2001). The role of the federal government has primarily been limited to federal financial aid, and this limited role is unique in the developed world (Burke 2005; Trow 1996).

The limited federal role in higher education is interesting because higher education plays an integral role in American society. Higher education provides citizens with an opportunity to achieve social mobility (Spellings Commission, Page 7). According to the United States Census Bureau, college graduates with a Bachelor's degree earn over one third more in their lifetime than individuals with a high school diploma. This disparity in lifetime earnings becomes greater with the attainment of advanced degrees. Although higher education provides citizens with an opportunity to achieve the American dream, there are segments of the population that are grossly underrepresented in higher education (Spellings Commission, Page 8). To compound this issue, the economy in the United States has drastically changed over the past fifty years. Manufacturing and other labor-intensive careers have been replaced with knowledge-based fields. This evolution has made postsecondary education even more important in achieving economic success.

Significance of Study

The purpose of this research is to examine how education policy influences student success, and if there are linkages between K-12 education and higher education. The federal government and individual states have often addressed the two sectors of education separately. Despite the separate treatment, there are linkages between K-12 education and higher education. Students who graduate high school enter postsecondary institutions with a certain level of preparation. The K-12 experience will also determine what students will enroll in a postsecondary institution. How does education policy influence the level of preparation students receive in K-12 schools? Has education policy influenced college enrollment and retention rates? These are the questions that will be addressed in this study. This research is important because education is a fundamental component for future economic success in this country. Additionally, federal and state governments invest a significant amount of money into education. It is important to understand the influence education policy has on student success.

Education Policies

K-12 Education

The No Child Left Behind Act was a reauthorization of the 1965 Elementary and Secondary Education Act. The ESEA was a component of the Great Society under President Johnson. President Clinton also reauthorized the bill in 1994, and the reauthorization expired in 2000. The most important component of the ESEA is Title I that provides funding for disadvantaged students in public schools. Before the passage of NCLB, Title I funds were provided based on the number of disadvantaged students in each school. Schools could use the funds to help impoverished schools obtain resources

that would be not available without the additional funding (Loveless 2006). Politicians began to have a problem with this method because the results of Title I funding were not quantifiable. The funds were not making a difference in the disparity between wealthy schools and poor schools. No Child Left Behind changed Title I by making funding an incentive of narrowing the achievement gap.

In addition to the changes to Title I, this legislation drastically changed the role of the federal government in education. Prior to No Child Left Behind, education was primarily a function of state and local governments. State and local governments had the power to create their own standards and to determine the material that is important to the students in their specific districts. No Child Left Behind required states to hold schools accountable by requiring all students to perform at a satisfactory level on standardized tests in reading, math, and science. States cannot receive federal funding without compliance with the mandates of this legislation.

The legislation itself is over six hundred pages long with ten titles. No Child Left Behind is a sweeping and complex piece of federal education. No Child Left Behind is composed of a 'tripod' of reforms that includes testing, standards, and penalties (McCluskey 2007; Peterson and West 2004). The purpose of the legislation is to, "close the achievement gap with accountability, flexibility, and choices, so that no child is left behind (Public Law 107-110.)" The federal government requires schools to be accountable for all students, and this accountability has a direct influence on federal funding. Schools and school districts are required to provide report cards to the federal government and the general public.

Schools must achieve adequate yearly progress (AYP) each year. If schools do not achieve AYP the school is labeled as in need of improvement. When schools are in need of improvement parents have an opportunity to transfer their child to another public school (<http://www.ed.gov/nclb/landing.jhtml>). Districts are required to break assessment results down by subgroups within the school. Students are broken into groups by ethnicity, race, and family income (Apple 2006). When one subgroup fails to meet AYP the entire schools is labeled as in need of improvement. It is important to note the special interests that are supported through the legislation. No Child Left Behind requires schools to provide student information to the military for recruiting purposes, protects prayer in after school activities, and testing companies have made a significant profit through increased testing (Hayes 2006).

Higher Education

President Lyndon B. Johnson signed the Higher Education Opportunity Act of 1965 as a component of his Great Society program. The legislation was reauthorized in 1968, 1972, 1976, 1980, 1986, 1992, 1998, and 2008. This piece of legislation provides funding for federal Pell Grants, the federal work study program, provides funding opportunities through federal loan programs, and funding for federal TRIO programs and GEAR UP. The Higher Education Opportunity Act expands the opportunities for students to attend college through these early outreach programs and funding opportunities. In contrast to the Elementary and Secondary Education Act, the Higher Education Opportunity Act has not been drastically altered during reauthorization.

The Spellings Commission: Big Changes for Higher Education?

In September 2005, Secretary of Education Margaret Spellings announced the creation of a commission to examine the future of higher education in the United States of America. The commission was charged with the task of creating recommendations for a national strategy for higher education. The commission and the task were unique since the federal government has historically played a limited role in higher education (Burke 2005). The findings and recommendations of the committee were presented in September 2006.

The Spellings Commission issued a warning to the American public about the future of higher education. “We remained so far ahead of our competitors for so long, however, that we began to take our postsecondary superiority for granted. The results of this inattention, though little known to many of our fellow citizens, are sobering...But a lot of other countries have followed our lead, and they are now educating more of their citizens to more advanced levels than we are. Worse, they are passing us by at a time when education is more important to our collective prosperity than ever (Spellings Commission 2006).” The report linked reform in higher education to American prominence in the world. The commission focused on four areas within higher education that they felt was in need of reform: access, affordability, quality, and accountability (Spellings Commission 2006).

The commission made several findings in their yearlong analysis of American higher education. There are several themes evident in these findings including: accountability, transparency, financial aid, and the alignment between K-12 education

and higher education. Increased accountability is at the foundation of the commission's recommendations. The issue is that institutions are currently judged on their reputations or on high school admissions standards rather than true learning outcomes (Spellings Commission 2006). "Despite increased attention to student learning results by college and universities and accreditation agencies, parents and students have no solid evidence, comparable across institutions, of how much students learn in colleges or whether they learn more at once college than another. Similarly, policymakers need more comprehensive data to help them decide whether the national investment in higher education is paying off and how taxpayer dollars could be used more effectively (Spellings Commission 2006)." The commission also stresses the need to create better alignment between K-12 and undergraduate education and a streamlined financial aid process.

The Spellings Commission report concludes with six recommendations to regain the American prominence in higher education: 1) decrease the barriers for low income students and minorities to increase access, 2) a complete restructuring of the federal financial aid system, 3) the creation of accountability measures that focus on student learning outcomes, 4) have institutions adapt their programs to fit the changing needs of the economy, 5) create a national strategy for lifelong learning, and 6) increase the federal investment in strategic academic programs (math and science). The findings and recommendations of the Spellings Commission were very controversial in the higher education community. The Spellings Commission framed higher education in economic terms. It was argue that the market would demand quality control in higher education

(Spellings Commission 2006, Paris 2007, Dwyer 2006). The timing of the Spellings Commission also created controversy. No Child Left Behind drastically changed K-12 education policy, and a similar theme of accountability was found in this report. It was clear that many policymakers believed that performance measurements, similar to ones implemented in K-12 education, would be useful in higher education (Altbach 1999, Burke 2005, and Hersh 2008).

Research Questions

The following research questions will be addressed in this study:

1. Have scores on national assessments changed since the implementation of No Child Left Behind?

High stakes testing was one of the results of the legislation. No Child Left Behind required states to hold schools accountable by requiring all students to perform at a satisfactory level on standardized tests in reading, math, and science. A majority of states have also developed standardized tests to measure writing skills. The purpose of the legislation is to, “close the achievement gap with accountability, flexibility, and choices, so that no child is left behind (Public Law 107-110.)” No Child Left Behind was signed into law in 2002, but a large majority of states already had national assessments in place to measure student achievement. Did No Child Left Behind improve standardized test scores? What are the results of this legislation? In addition to state assessments, this research question will also address SAT and ACT scores. Are students better prepared for these standardized tests? It is important to understand what is going on in K-12 before we

can understand how these policies influence higher education. In theory, if the aims of No Child Left Behind were being met students will be better prepared for college.

2. Is No Child Left Behind having an impact on higher education?

No Child Left Behind was one of the most significant pieces of education legislation in our countries history. This legislation drastically changed the role of the federal government in education and changed the classroom experience for all students. It would be impossible for higher education to be completely insulated from such an influential piece of legislation. Have college retention rates changed since 2002? Is there a relationship between test scores in K-12 and retention rates? Is there a relationship between test scores and college enrollment? The purpose of the No Child Left Behind is to provide all students an opportunity to succeed, and higher education is an important component of long- term success in this country. Or could rising costs be hindering students from enrolling or staying in college?

3. Are state education policies influencing test scores, graduation rates, and college enrollment?

Prior to No Child Left Behind, education was primarily a function of state and local governments. The federal government provided state and local governments with funding and recommendations for improving schools. State and local governments had the power to create their own standards and to determine the material that is important to the students in their specific districts. States have also developed policies that create linkages between K-12 education and higher education. These policies included

accelerated learning options- dual enrollment, AP/IB courses, and early college, K-12 and postsecondary curriculum alignment, and early outreach programs- including test preparation, dropout prevention programs, transition programs, and early college counseling. Are the linkages between K-12 and higher education a direct result of these policies? Do these policies make a difference?

This thesis is organized in the following manner. Chapter One introduced the topic and the problem being examined, outlined the research questions, and discussed the significance of this study. Chapter Two provides a review of the existing literature on K-12 education policy, higher education policy, and the literature that discusses collaborations between K-12 and higher education. Chapter Three outlines the findings and results of the data analysis. This chapter also outlines the methodology used in this study and discusses the data used in the analyses. Chapter Four discusses the conclusions of this study, revisits the research question, makes suggestions for future research, and provides policy prescriptions.

CHAPTER TWO: LITERATURE REVIEW

K-12 education and higher education are structured in a way that makes them distinct from one another (Venezia 2005). These distinctions have led to the establishment of different public policies for each sector of education. Although K-12 and higher education have been separated in the minds of policymakers and education leaders, there are linkages between the two sectors of education. For example, K-12 policies have a direct impact on higher education. Inadequate preparation for college in K-12 schools has a direct impact on college retention and graduation rates (Venezia 2005). The linkages between K-12 and higher education are prevalent throughout the literature. The literature is organized in the following manner: K-12 education policy, higher education policy, and policies that support collaborations between K-12 and higher education. Each section outlines the major themes in the literature.

K-12 Education

No Child Left Behind has been the foundation of K-12 education policy since 2001. In a relatively short period of time, this legislation has drastically changed the way that schools operate in the United States. During this time there has been a significant amount of literature that discusses the impact public policies have on student success. There are several themes that are prevalent throughout the literature. These themes include: the economy, diversity, and the changing role of states in education policy. It is important to understand the prevalent research in K-12 policy to understand the linkages between K-12 and higher education policy.

The Global Economy

A Nation at Risk served as a warning to the American public about the link between education and the economy: “Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world. We report to the American people that while we can take justifiable pride in what our schools and colleges have historically accomplished and contributed to the United States and the well-being of its people, the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people (A Nation at Risk 1983).” The federal role in education policy has been largely based upon the linkage between education and the economy. Global economic competition has only increased these comparisons.

Politicians have linked economic problems with education (Apple 1996; Hayes 2004; Smith, Miller-Kahn, and Jarvis 2004; Spring 2004). *A Nation at Risk*, led politicians to believe that stricter standards would prevent the supposed economic decline that would emerge without intervention. Schools were encouraged to go back to the basics of math and science (Hayes 2004). The ideas in No Child Left Behind stems from *A Nation at Risk* and other pieces of federal legislation on education. Schools are held accountable for student performances on standardized tests in three subjects. Politicians believe that education can help economic problems (Peterson and West 2003). The problem is that politicians have little knowledge about education or proper education policy (Spring 2004). No Child Left Behind was created to bring all children to an

acceptable score on standardized tests. Politicians believe that increased accountability will ensure that students are gaining a proper level of knowledge of the basics.

The problem with using education, as a solution for economic and cultural problems is that there is little research that supports this linkage (Apple 1996; Spring 2004). Some argue that encouraging the basics through accountability may actually threaten this country's place in the global economy. Students are tested in math, science, and reading. Other subjects are important in today's economy including foreign languages and cultural studies (Hayes 2006). One of the criticisms of No Child Left Behind and high stakes testing is that teachers feel the pressure to teach the test (Peterson and West 2003). By strictly learning the test, students would lose the ability to think creatively. This could put the nation at risk by stifling the creativity of an entire generation. Another criticism is that there is little proof that sweeping reforms, like No Child Left Behind, have made students more academically prepared for college (Hoyle 2008). Postsecondary education is important to be competitive in a global economy, and it is important that students are leaving high school with the skills necessary to excel in college. The global economy has significantly changed the United States as an economic power in the world. Politicians have used education policy as a solution for economic problems.

Diversity

Diversity is a common theme throughout the literature on K-12 education policy. It is also one of the most important aspects of No Child Left Behind. Title I is the focus of the entire legislation. This title focuses on, "improving the academic achievement of

the disadvantaged (Public Law 107-110). The disadvantaged populations include minority populations, students from low-income families, and migrant students. Schools must disaggregate data for racial, ethnic, and income groups (Apple 2006). From the beginning the legislation was sold as a civil rights issue (Fusarelli 2004; Loveless 2006; Hursh 2005). It is important that the achievement gap is closed between students in this country. The civil rights approach was one of the reasons why the legislation had support from the Democratic Party (Hursh 2005). An understanding on the issue of diversity and No Child Left Behind is extremely important in understanding the politics of this piece of legislation.

One of the problems with the legislation is that schools are judged by student performance by subgroup. One subgroup could fall below the requirements or an inadequate number of students completed the test and the entire school will be labeled failing (Fusarelli 2004). Schools that continue to have failing grades are punished under No Child Left Behind. This may cause districts to limit the number of diverse schools to prevent a large number of schools from facing punishment. Schools that serve at-risk students are single out by the federal government (Peterson and West 2003). Another possibility is that at-risk children will only receive instruction on how to do well on the assessment (Hayes 2006). This limits the level of education that at risk students are receiving compared to other students. The achievement gap is not being addressed if students are not receiving the same level of instruction.

The United States of America is a country of diversity. One of the criticisms of the legislation is that testing threatens diversity and places minority children at a

disadvantage. No Child Left Behind requires migrant students and students of other languages to acquire 'sufficient' English language skills. The language aspects of NCLB have a direct impact on these children (Spring 2004). In 2004, the National Association for Bilingual Education expressed their opposition towards the legislation (Loveless 2006). A problem with the test is that the questions are culturally biased (Spring 2007). Students that have different culturally backgrounds are at a disadvantage before the assessment begins. There are some studies that suggest that high stakes testing produces negative effects on the students that are included in the subgroups (Smith, Miller-Kahn, and Jarvis 2004).

The fact that No Child Left Behind was sold as a piece of civil rights legislation is important in understanding the political motivations behind its passage. There is discussion in the literature that suggests that the current method of accountability will not close the achievement gap in this country. The problem is that there was insufficient research conducted on how to close the achievement gap. Research was not conducted to explain the social reasons for inequalities in the schools (Hayes 2006). How does health care influence student achievement? What causes inequalities in schools? There are several questions that were not raised by the federal government (Apple 1996). The literature suggests that the overlying causes of inequalities must be addressed before the achievement gap can close.

The diversity theme also carries over into higher education. The inequalities that are evident in K-12 education continue among students who enter into higher education. African American students are less likely to enroll in colleges and universities than white

students (Harvey 2008). Retention and graduation rates among African American students, especially African American males, are lower than white students (Harvey 2008). Closing the achievement gap in K-12 education students among minority, migrant, and low-income students would have a direct impact on student success and persistence in higher education.

Changing Role of the States in K-12 Education

No Child Left Behind drastically changed the roles of federal, state, and local governments in education. The federal government gained a significant amount of power in a sector that was a primary function of the state and local governments (Apple 2006; Sunderman and Kim 2004). Governors also received more power under the legislation because education was a primary function of local governments (Fusarelli 2005). Under the 1994 reauthorization of the ESEA states were encouraged to make changes based on the ideas of accountability and testing. The difference between the 1994 reauthorization and the 2001 reauthorization was that before No Child Left Behind the federal government was reluctant to withhold money from the states (McCluskey 2007; Superfine 2005). This reluctance caused states to not follow through with the suggestions of the federal government.

Under No Child Left Behind states must comply with the requirements to receive federal funding (Public Law 107-110; Peterson and West 2004). Funding has been one of the biggest criticisms of the legislation. Shortly after the bill was signed into law Democrats began to argue that there is an inadequate amount of funding provided to the states (Hayes 2004; Hayes 2006). This became an important issue leading up to the 2004

Presidential election. States are facing funding shortfalls from the federal government and there several states are facing severe budget shortfalls (Sunderman and Kim 2004). States cannot afford to lose federal funding. Many states have lowered their standards to make it easier to achieve adequate yearly progress (Fusarelli 2004). This undermines the entire purpose of the legislation. Each state has a unique operationalization of progress that varies significantly by each state.

Funding and flexibility are the two most important political discussions between the states and the federal government (Fusarelli 2005). When the legislation was first enacted as law there was little opposition from the states. The entire law is over six hundred pages long and it is extremely complex. As time has passed, the federal government has received resistance from states (Loveless 2006; Superfine 2005). Connecticut and Utah are two states that have been extremely vocal against the legislation. Democratic governors have been the most vocal about their criticisms towards No Child Left Behind. Republican governors have been relatively quiet on this issue (Fusarelli 2005). There is a strong possibility that there are political motivations behind this reluctance. Republican governors may have been reluctant to criticize President Bush on such an important component of his domestic policy.

Higher Education

In September 2005, Secretary of Education Margaret Spellings announced the creation of a commission to examine the future of higher education in the United States of America. The commission was charged with the task of creating recommendations for a national strategy for higher education. The commission and the task were unique since

the federal government has historically played a limited role in higher education (Burke 2005). The literature reflects the call for reform in higher education policy. There is a particular focus on the influence of K-12 education on postsecondary policy and the political motivations behind the call for policy reform. There are several themes that are prevalent throughout the literature. These themes include: accountability, the role of the federal government in higher education, funding, the impact of state policies on higher education, and economics.

Accountability

Accountability is at the heart of both the Spellings Commission Report for higher education and No Child Left Behind for elementary and secondary education.

Accountability has become the buzzword of education policy and research (McLendon 2005). Although higher education does not have a No Child Left Behind accountability system, there are several mechanisms in place to measure institutional effectiveness.

Over the past two decades, individual colleges and universities have had to provide an increasing amount of data to accreditation agencies and state education boards (Burke 2005 and Heller 2001).

There are several criticisms of the current system of accountability in higher education. One criticism is that postsecondary education is not driven by evidence of student learning or institutional effectiveness (Dwyer, Millett, and Payne 2006 and Spellings Commission 2006). The data that individual colleges and universities provide is primary inputs (high school grades, test scores, etc) or outputs (graduation/retention rates); there is an absence of information that measures student learning. An institution

can graduate a large number of students, but there are several unanswered questions? Did the student learn the appropriate information needed to succeed in the workforce? Is a student from college x leaving with the same skills as student from college y? These are similar to the questions discussed during the implementation of No Child Left Behind. There is an argument that only a national system of accountability will resolve the issue of quality throughout higher education (Dwyer, Millett, and Payne 2006).

The Federal Government in Higher Education

The federal government has historically played a limited role in higher education in the United States (Burke 2005 and Trow 1999). The role of the federal government has primarily come from research funding and federal financial aid (Burke 2005 and Altbach, Berdahn, and Gumport 1999). This limited federal role is unique to the United States, as federal governments play a larger role in the rest of the developed world (Burke 2005). The limited role of the federal government is not unique to higher education. K-12 education, like higher education, had primarily been governed by the individual states. No Child Left Behind drastically changed the role of the federal government in K-12 education, and a call for a national system of accountability in higher education could yield the same results.

Historically accountability in higher education had largely been conducted through accreditation agencies (Trow 1999). There is an argument within the literature that the federal government will eventually play a larger role in postsecondary education. “Legislators are prepared to force the issue: Congress raised the question of quality during its recent hearings on the reauthorization of the Higher Education Act; all regional

accreditation agencies and more than 40 states now require evidence of student learning from their colleges and universities; and pressure is rising to extend a No Child Left Behind-style testing regime to higher education (Hersh 2005).” The Spellings Commission may have been the first step in the creation of a national system of accountability, much like *A Nation at Risk* was for K-12 education (Hersh 2005 and Traub 2007).

Funding

Funding is an issue that was evident throughout the literature. There was a particular focus on the competition between K-12 education and postsecondary education for funding and the influence of the economy on funding levels. The issue of funding is politically charged, and higher education often scarified for other programs-especially during an economic downturn. Politically it is difficult to raise taxes during a difficult economic cycle, and as a result states have to cut funding to programs and higher education represents one of the largest pieces of spending for states (Heller 2001 and Messick 1999).

Historically, K-12 education fares better difficult budget years than higher education (Southern Regional Education Board 2008). This is primarily a result of the absence of federal or judicial mandates on funding higher education (Heller 2001 and Messick 1999). States have a federal obligation to fund K-12 schools and federal health care programs. Struggling states are often left without a choice but to cut funding for higher education, even as enrollment continues to climb. The recession of the early 1990s had a large impact on higher education, with institutions receiving the largest budget cuts

since World War II (Martinez 2004). Postsecondary education has yet to feel the full effects of the sharp economic decline of 2008, but it is already evident that a similar trend has emerged. How can higher education be the solution for our economic difficulties when states underfund public institutions?

Impact of State Policies in Higher Education

Research suggests that there are four types of state higher education policies that directly impact on students: 1) appropriations to institutions, 2) amount of state financial aid to students, 3) tuition, and 4) policies that related to academic preparation in K-12 schools (Perna 2004). State policy makers directly influence the type of students that are attracted to public institutions base on these policies. A student may not be able to attend a four year institutions if state policies on tuition and financial aid to students do not make it financial feasible to attend these institutions.

State financial aid policies have evolved since the 1990s. State funding for merit based financial aid has increased dramatically, and at a faster rate than need based financial aid (Perna 2004). Florida's Bright Futures Program and Georgia's HOPE scholarship were used as models throughout the country in this shift to merit based funding. A drawback to this financial aid model is that it may place a college education out of reach for the students that need the money the most.

Market Forces and the Economy

Political actors in both the federal government and in state government have linked higher education and economic competitiveness. Many policymakers believe that

higher education is a critical component of economic development (Martinez 2004). In 2007, the National Governors' Association called on states to align public postsecondary education with state economic needs. The Spellings Commission Report consistently linked higher education with the economy. The Spellings Commission also stressed the point that college graduates are not leaving college with the skills necessary to succeed. "Over the past decade, literacy among college graduates has actually declined. Unacceptable numbers of college graduates enter the workforce without the skills employers say they need in an economy where knowledge matters more than ever (Spellings Commission 2006)."

The link between the economy and higher education illustrates the importance of a system of accountability. The current gaps in educational achievement may undermine American economic competitive edge in the globalized market (Callan, Finney, Kirst, Usdan and Venezia 2006.) The literature and the findings of the Spellings Commission tie higher education to the market. Our consumer driven economy has changed the way the public thinks about education. It is argue that the market will demand colleges and universities to adapt to the changing economy (Burke 2005, Paris 2007, Spellings Commission 2006). This market view of education is unique to the United States of America. "Markets are still a relatively minor factor in Europe, which on the whole does not provide a market for higher education, and whose government rather dislikes the idea of a market for higher education and its potential effects on quality and status (Trow 1999).

There is an argument in the literature that colleges and universities can improve their standing with policymakers if they create accountability mechanisms that assess their accomplishments on statewide economic priorities (Burke 2005). Postsecondary institutions often suffer a decline in state funding in difficult economic cycles, and this is one way to stress the importance of state funding of colleges and universities in the overcoming economic challenges.

There are many similarities in the literature between the link between the economy and postsecondary education and the link between K-12 education and the economy. *A Nation at Risk*, led politicians to believe that stricter standards would prevent the supposed economic decline that would emerge without intervention. Schools were encouraged to go back to the basics of math and science (Hayes 2004). The ideas in No Child Left Behind stems from *A Nation at Risk* and other pieces of federal legislation on education. Schools are held accountable for student performances on standardized tests in three subjects.

Is a comprehensive federal policy for higher education reform the answer to our economic crisis? The problem with using education as a solution for economic and cultural problems is that there is little research that supports this linkage (Apple 1996; Spring 2004). Some argue that encouraging the basics through accountability may actually threaten this country's place in the global economy. Students are tested in math, science, and reading. Other subjects are important in today's economy including foreign languages and cultural studies (Hayes 2006). By reducing learning to measurable student learning outcomes, higher education may be stripped of the very academic freedom that

defines higher learning in this country. This could put the nation at risk by stifling the creativity of an entire generation. The global economy has significantly changed the United States as an economic power in the world. Politicians have used education policy as a solution for economic problems.

Collaboration between K-12 and Higher Education

One of the recommendations of the Spellings Commission was to create a seamless transition from high school to college. “States’ K-12 graduation standards must be closely aligned with colleges and employer expectations, and states should also provide incentives for postsecondary institutions to work actively and collaboratively with K-12 schools to help underserved students improve college preparation and persistence (Spellings Commission 2006).” The high school to college transition is vital to student success in higher education. The federal government already has several federally funded grant programs (for example, Upward Bound) to strengthen this transition.

This transition is also discussed in the literature and in practice. Several states make reference to K-16 education to encourage partnerships between K-12 and higher education. “Legislators increasingly refer to K-16 and ‘seamless’ education when referencing their desire for K-12 and Higher Education to forge more partnerships (Martinez 2004).” States have developed different implementations of the K-16 model. Most statewide K-16 programs have one governing body that oversees K-12 and higher education and the development of teacher education programs. Florida is a unique because it has developed a K-20 system that covers the entire postsecondary system-

including graduate education. The literature suggests that such reforms improve the readiness of high school students reduces the number of students taking remedial courses in college (Callan, Finney, Kirst, Usdan, and Venezia 2006). One of the limitations of this push is reluctance among higher education policymakers and administrators to create a unified education system (Hoyle 2008).

CHAPTER THREE: DATA, ANALYSES, AND FINDINGS

Chapter Three describes the data, analyses, and findings of this examination of the impact public policies have on K-12 education and postsecondary education. This chapter also describes the process used to understand if these policies have a relationship with student success. An overview of the data, statistical analyses, and other methods designed to understand the impact of these policies is also included in this chapter. The chapter concludes by presenting the findings from the analyses.

Data

The data for this study were collected from the *Measuring Up* reports conducted by the National Center for Public Policy and Higher Education. Since 2000, the National Center for Public Policy and Higher Education has published a *Measuring Up* report every two years to evaluate how each state and the country as a whole are preparing students for life after high school. The reports award each state a grade based on their performance in six categories: preparation for college, participation, affordability, completion, benefits, and learning. The purpose of these grades is to provide states with feedback on the effectiveness of education in their state. In addition to the state report cards and the national report, the National Center for Public Policy and Higher Education has created a robust data set that provides education data for each state. This study uses components of this data set that was developed for each *Measuring Up* report.

Levels of Analysis

There are two levels of analysis examined in this study. The first level of analysis is state-by-state. All fifty states are examined in this study. The second is the macro level

of analysis. The macro level of analysis is used to examine the findings across all fifty states. It is important to use both levels of analysis because of the nature of education policy in the United States of America. Education is a function of the individual states, but there are federal policies that have an impact across the states. For example, No Child Left Behind is managed at the state level, but it is a national mandate.

Units of Analysis

The units of analysis that are used in this study are state-years. All fifty states are examined in this study. This approach is rather unusual since it is typical to focus on one state or a small group of states. State level analysis makes sense from a policy perspective, but a comparative study may generate sounder policy prescriptions. Data for all fifty states were collected for five years. The data that are used in this study span eight years, and are collected in two-year intervals. The following *Measuring Up* report years are used in this study: 2000, 2002, 2004, 2006, and 2008. There are two hundred and fifty total cases. The individual variables within the *Measuring Up* reports have varying capture dates, and these capture dates are used in the analyses. It is important to note that the reports provide data before No Child Left Behind and after the passage of No Child Left Behind. There is a limited amount of time to measure the impact of the legislation, but these data can be used to help uncover the immediate impact of this legislation.

Variables

There are fifteen variables used in this study. These variables include measures of student success in K-12 education, success in higher education, college enrollment, and college affordability. There are also variables that indicate if states have particular

education policies. Each variable used in this study is described. The variable descriptions are adapted from the *Measuring Up* technical guide.¹

Preparation Variables

Preparation One

Preparation One is a variable that measures the percentage of 8th grade students at or above proficient level on a national math assessment. For *Measuring Up* 2006 and 2008 the data for this variable come from the United States Department of Education's National Assessment of Educational Progress Report Card. For prior *Measuring Up* years the data come from the Department of Education's National Center for Education Statistics. Academic proficiency is a measurement that is established by the National Assessment Governing Board. Each state has to develop their assessments to meet these proficiencies.

Preparation Two

Preparation Two is a variable that measures the percentage of 8th grade students at or above proficient level on a national reading assessment. For *Measuring Up* 2006 and 2008 the data for this variable also come from the United States Department of Education's National Assessment of Educational Progress Report Card. For prior *Measuring Up* years the data come from the Department of Education's National Center for Education Statistics. Again, academic proficiency is a measurement established by the National Assessment Governing Board.

¹ http://measuringup2008.highereducation.org/about/technical_guide.php Date Accessed: February 14, 2009

Preparation Three

Preparation Three is a variable that measures the percentage of 8th grade students at or above proficient level on a national writing assessment. For *Measuring Up* 2006 and 2008 the data for this variable come from the United States Department of Education's National Assessment of Educational Progress Report Card. For prior *Measuring Up* years the data come from the Department of Education's National Center for Education Statistics. Academic proficiency is a measurement established by the National Assessment Governing Board.

Preparation Four

Preparation Four is a variable that measures the percentage of 8th grade low-income students at or above proficient level on a national math assessment. For *Measuring Up* 2006 and 2008 the data for this variable come from the United States Department of Education's National Assessment of Educational Progress Report Card. For prior *Measuring Up* years the data come from the Department of Education's National Center for Education Statistics. Academic proficiency is a measurement established by the National Assessment Governing Board.

Preparation Five

Preparation Five measures the number of students per one thousand high school graduates that receive scores in the top 20% on the SAT or ACT. The data comes from the College Board. The SAT scores are obtained from an unpublished data set. The ACT scores can be found on the ACT website. The 2007 data can be found at:
<http://www.act.org/news/data/07/statemenu.html>.

Enrollment Variables

Enrollment One

Enrollment One is a variable that measures the percentage of ninth grade students who finish high school in four years and attend college immediately after high school. This variable also takes into account the high school graduates who attend out of state institutions. The following calculation is used to create this variable (using 2006 as an example). The high school completion rate is calculated by dividing the number of public high school graduates in 2006 by the number of public school ninth graders in 1999. The college enrollment rate is calculated by dividing the number of college freshman in 2006 by the number of public high school graduates in 2006.

Enrollment Two

Enrollment Two measures the percentage of 18-24 year olds that are enrollment in college. The source for these data is the National Center of Education Statistics. This particular variable was taken from the Integrated Postsecondary Education Data System Enrollment Survey.

Enrollment Three

Enrollment Three is a variable that measures the percentage of students who obtain their high school credentials. The data for this variable come from the Bureau of the Census and the American Community Survey. The number of 18-24 year olds holding a high school completion is divided by the total population within that age group, excluding individuals who are still enrolled in high school or an alternative program.

College Variables

College One

College One is a variable that measures the first year retention rate in two-year public institutions. The source for these data is the National Center of Education Statistics. This particular variable was also taken from the Integrated Postsecondary Education Data System Enrollment Survey.

College Two

College Two is a variable that measures the first year retention rate in four-year public institutions. The source for these data is the National Center of Education Statistics. This particular variable was also taken from the Integrated Postsecondary Education Data System Enrollment Survey.

Affordability Variables

Affordability One

Affordability One is a variable that measures the percentage of a family's income necessary to fund an education at a two-year public institution for one academic year. The source for these data is the National Center of Education Statistics. This particular variable was taken from the Integrated Postsecondary Education Data System Enrollment Survey. This variable is based on the cost of attendance, the amount of student aid that is awarded, and the family contribution.

Affordability Two

Affordability Two is a variable that measures the percentage of a family's income that is necessary to fund an education at a four-year public institution. The source for

these data is the National Center of Education Statistics. This particular variable was also taken from the Integrated Postsecondary Education Data System Enrollment Survey. Again, this variable is based on the cost of attendance, the amount of student aid that is awarded, and the family contribution.

State Reform Variables

State Reform One

State Reform One is a variable that measures if a state has a policy that offers accelerated learning options. Accelerated learning options include policies for dual enrollment, AP courses, IB programs, or early college programs. This is a dichotomous variable that measures if a state has an official policy in this category. States that do not have a policy are coded 0 and states that do have a policy are coded 1. The information for this variable was taken from: http://www.wiche.edu/Policy/spido/search_issues.asp.²

State Reform Two

State Reform Two is a variable that measures if a state has a policy that integrates the curriculum between K-12 and postsecondary education. This is a dichotomous variable that measures if a state has an official policy in this category. States that do not have a policy are coded 0 and states that do have a policy are coded 1. The information for this variable was taken from: http://www.wiche.edu/Policy/spido/search_issues.asp.³

² Date Accessed: December 15, 2008

³ Date Accessed: December 15, 2008

State Reform Three

State Reform Three is a variable that measures if a state has a policy for early outreach programs. Early outreach programs include college test preparation, dropout prevention programs, college preparation programs, and transition programs. This is a dichotomous variable that measures if a state has an official policy in this category. States that do not have a policy are coded 0 and states that do have a policy are coded 1. The information for this variable was taken from:

http://www.wiche.edu/Policy/spido/search_issues.asp.⁴

Analyses and Findings

Three different analyses were utilized to test the research questions: descriptive analyses, correlational analyses, and multivariate analyses. The results and findings of these analyses is presented below.

Descriptive Analyses

All fifteen variables were subjected to descriptive analyses. Each variable was plotted for each *Measuring Up* report at the state level of analysis. These analyses provide a visualization of the evolution of each variable in each state over the time period examined in this study. Each state is unique and these analyses illustrate this point.

Appendix A graphs preparation variable one, preparation variable two, preparation variable three, and preparation four for each state. These variables measure the percentage of 8th grade students who score at or above proficient level on national assessments. The following subjects are measured: math, reading, writing, and the math

⁴ Data Accessed: December 15, 2008

scores for low-income students. The following capture dates are plotted: 1998, 2000, 2003, 2005, and 2007. In addition, Appendix H presents the national averages for each year plotted for preparation variable one, preparation variable two, preparation variable three, and preparation variable four.

Appendix B graphs the variable preparation five for each state. Preparation five measures the number of students per one thousand high school graduates who earn a SAT or ACT score in the top twenty percent. The following capture dates are plotted: 1999, 2001, 2003, 2005, and 2007. In addition, Appendix H presents the national averages for each year plotted for preparation five.

Appendix C graphs enrollment variable one for each state. Enrollment one measures the percentage of high school graduates that immediately enroll into a college or university after graduation. The following capture dates are plotted: 1996, 1998, 2000, 2002, and 2006.

Appendix D graphs enrollment variable two for each state. Enrollment two measures the percentage of 18-24 year olds that are enrolled in college in each state. The following capture dates are plotted: 1998, 2000, 2002, 2004, and 2007.

Appendix E graphs enrollment variable three for each state. Enrollment three measures the percentage of students that complete high school in each state. The following capture dates are plotted: 1998, 2000, 2002, 2004, and 2006.

Appendix F graphs college variables one and two for each state. The college variables measure first year retention rates. College one measures the percentage of first

year students who are retained after the first year two-year public institutions. College two measures the percentage of first year students who are retained after the first year in four-year public institutions. The following capture dates are plotted: 1999, 2000, 2001, 2004, and 2007.

Appendix G graphs affordability variables one and two for each state. The affordability variables measure the percentage of a family's income that is needed to pay for college in each state. Affordability one measures the percentage of income necessary to attend a two-year public institution. Affordability two measures the percentage of income necessary to attend a four-year public institution. The following capture dates are plotted: 2003-2004, 2005-2006, and 2007-2008.

Appendix I presents a table that indicates which states have implemented state reform one, state reform two, and state reform three. State reform one indicates if a state has a policy for early learning options. State reform two indicates if a state mandates K-12 and postsecondary curriculum alignment. State reform three indicates if a state has a policy that fosters college preparation. All fifty states are listed on the table, and there is a visual indication that represents the individual reforms.

Difference Scores

Two types of difference scores were created to understand how the variables have changed over a period of time. The difference scores were calculated for fifty states. These scores were obtained by subtracting the earliest data from the most recent data. The first difference score produced tests the difference between the first *Measuring Up* report and the last *Measuring Up* report. The first *Measuring Up* year is 2000 and the

most current *Measuring Up* year is 2008. The second difference score produced tests the difference since the implementation of No Child Left Behind. The first *Measuring Up* year used is 2004 and the most current *Measuring Up* year is 2008. The results of these calculations can be found in Appendix J.

Overall Difference Scores

The overall difference scores between *Measuring Up* 2000 and 2008 were found for preparation variables one, two, three, and four. Preparation one, two, three, and four measuring the percentage of 8th grade students who are at or above proficient level on national math, reading, and writing assessments. Preparation four measures the percentage of low-income students who score at or above proficient level on a math assessment. The following capture dates were used to find the difference scores: 1998 and 2007. The following summary tables only include those states that reported data in 1998 and 2007. Appendix J provides greater detail at the individual state level.

Table One provides of summary of the overall difference scores for the variable that measures 8th grade math scores. From 1998 to 2007 no states saw a negative change in the percentage of 8th graders scoring at or above a proficient level in math. A large number of states witnessed an increase of more than five percentage points. This suggests that students have become better prepared for the math assessment between 1998 and 2007.

Table 1: Summary of Overall Difference Scores for Preparation One

Variable	Negative Change		Positive Change	
	5 or less percentage points change	More than 5 percentage points change	5 or less percentage points change	More than 5 percentage points change
Percentage of 8 th Graders at or above Proficient Level on National Math Assessment			ALASKA, CONNECTICUT, HAWAII, IOWA, MAINE, MICHIGAN, MONTANA, NEBRASKA, NEW MEXICO, RHODE ISLAND, WEST VIRGINIA, WISCONSIN	ALABAMA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, DELAWARE, FLORIDA, GEORGIA, INDIANA, KENTUCKY, LOUISIANA, MARYLAND, MASSACHUSETTS, MINNESOTA, MISSISSIPPI, MISSOURI, NEW YORK, NORTH CAROLINA, NORTH DAKOTA, OREGON, SOUTH CAROLINA, TENNESSEE, TEXAS, UTAH, VERMONT, VIRGINIA, WASHINGTON, WYOMING

Table Two summarizes the overall difference scores for percentage of 8th graders that score at or above proficient level on a national reading assessment. The results in Table Two are in stark contrast to the results found in Table One. Fourteen states saw a negative change in reading tests scores from 1998 to 2007. New Mexico had a more than five percent negative change. Some of the same states that witnessed a positive change of more than five percent in math had a negative change in reading. What is at the root of

this phenomenon? Are students in these states being better prepared for math at the expense of reading? Is immigration influencing these results? Arizona, California, New York, North Carolina, New Mexico, and Oklahoma have been directly impacted by immigration. Could a large number of non-native speakers be influencing the results below?

Table 2: Summary of Overall Difference Scores for Preparation Two

Variable	Negative Change		Positive Change	
	Less than 5 percent change	More than 5 percent change	Less than 5 percent change	More than 5 percent change
Percentage of 8 th graders that score at or above proficient level on national reading assessment	ARIZONA, CALIFORNIA, CONNECTICUT, KENTUCKY, MAINE, MISSISSIPPI, NEVADA, NEW YORK, NORTH CAROLINA, OKLAHOMA, RHODE ISLAND, UTAH, WEST VIRGINIA	NEW MEXICO	ALABAMA, ARKANSAS, COLORADO, FLORIDA, GEORGIA, HAWAII, KANSAS, LOUISIANA, MARYLAND, MINNESOTA, MISSOURI, MONTANA, OREGON, SOUTH CAROLINA, TENNESSEE, TEXAS, VIRGINIA, WASHINGTON, WISCONSIN, WYOMING	DELAWARE MASSACHUSETTS

Table Three summarizes the overall difference scores for the percentage of 8th grade students the score at or above proficient level on the national writing assessment. Two states witnessed a negative change between 1998 and 2007. New Mexico and Texas had a negative change of less than five percent. New Mexico is the only state to have a negative change in two subject areas. Twenty-two states had a positive change of more

than five percent. Although two states witnessed a negative change in writing scores, the overall trend in this subject is promising.

Table 3: Summary of Overall Difference Scores for Preparation Three

Variable	Negative Change		Positive Change	
	Less than 5 percent change	More than 5 percent change	Less than 5 percent change	More than 5 percent change
Percentage of 8 th grade students at or above proficient level on national writing assessment	NEW MEXICO, TEXAS		ARIZONA, CALIFORNIA, HAWAII, KENTUCKY, LOUISIANA, MISSISSIPPI, NEVADA, NORTH CAROLINA, OKLAHOMA, VIRGINIA, WEST VIRGINIA	ALABAMA, ARKANSAS, COLORADO, CONNECTICUT, DELAWARE, FLORIDA, GEORGIA, MAINE, MARYLAND, MASSACHUSETTS, MINNESOTA, MISSOURI, MONTANA, NEW YORK, OREGON, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, UTAH, WASHINGTON, WISCONSIN, WYOMING

Table Four summarizes the percentage of low-income 8th grade students that score at or above proficient level on the national math assessment. This variable is extremely important in the context of education policy. The basis of No Child Left Behind is that our education system should provide opportunity for all students. Districts are required to break assessment results down by subgroups within the school. Students are broken into groups by ethnicity, race, and family income (Apple 2006). Between 1998 and 2007 only Nebraska had a negative change in the percentage of low-income students that score at or above proficient level. Twenty states had a positive change of more than five percent.

These results are very promising for low-income students. When did this change occur? Did the dramatic increase in the performance of low-income students evolve over this time period? Or is this a direct result of No Child Left Behind and a renewed focus on this group? This question will be addressed when the post No Child Left Behind difference score is calculated.

Table 4: Summary of Overall Difference Scores for Preparation Four

Variable	Negative Change		Positive Change	
	Less than 5 percent change	More than 5 percent change	Less than 5 percent change	More than 5 percent change
Percentage of low-income 8 th graders at or above proficient level on national math assessment	NEBRASKA		ALABAMA, ARIZONIA, CONNECTICUT, MAINE, MINNESOTA, MISSISSIPPI, NEW MEXICO, RHODE ISLAND UTAH, WEST VIRGINIA	CALIFORNIA, COLORADO, DELAWARE, FLORIDA, GEORGIA, HAWAII, INDIANA, KENTUCKY, LOUSIANA, MARYLAND, MASSACHUSETTS, MISSOURI, NORTH CAROLINA, NORTH DAKOTA, PENNSYLVANIA, TENNESSEE, TEXAS, VIRGINIA, WASHINGTON, WYOMING

The overall difference scores between *Measuring Up* 2000 and 2008 were found for preparation variable five. Preparation five measures the number of students per one thousand high school graduates that earn a SAT or ACT score in the top twenty percent. The following capture dates were used to find the difference scores: 1999 and 2007. Data for all fifty states was available for these calculations.

Table five summarizes the findings of the difference score calculations. These results are important because it provides insight the preparation of prospective college students. Between 1999 and 2007 three states had a negative change in the number of students earning SAT/ACT scores in the top twenty percent. Twenty-seven states had a positive change of more than fifty students per one thousand graduates. Twenty states had a positive change of more than fifty students per one thousand graduates.

Table 5: Summary of Overall Difference Scores for Preparation Five

Variable	Negative Change		Positive Change	
	Less than 50 students change	More than 50 students change	Less than 50 students change	More than 50 students change
The number of students per 1000 high school graduates that score in the top 20% on the SAT/ACT	ALASKA, ARIZONIA, MASSACHUSETTS		ALABAMA, ARKANSAS, CALIFORNIA, DELAWARE, FLORIDA, HAWAII, IDAHO, INDIANA, IOWA, MAINE, MARYLAND, MICHIGAN, MISSISSIPPI, MISSOURI, NEVADA, NEW JERSEY, NEW MEXICO, NORTH CAROLINA NORTH DAKOTA, OKALHOMA, OREGON, PENNSYLVANIA, RHODE ISLAND, TEXAS, WASHINGTON, WEST VIRGINIA, WISCONSIN	COLORADO, CONNECTICUT, GEORGIA, LOUSIANA, ILLINOIS, KANSAS, KENTUCKY, MINNESOTA, MONTANA, NEBRASKA, NEW HAMPSHIRE, NEW YORK, OHIO, SOUTH CAROLINA, SOUTH DAKOTA, TENNESSEE, UTAH, VERMONT, VIRGINIA, WYOMING

The overall difference scores between *Measuring Up* 2000 and 2008 were found for enrollment variable one. Enrollment variable one measures the percentage of students that enroll in college immediately after high school graduation. The following capture dates were used in the calculations: 1996 and 2006. Data for all fifty states was available for the calculations.

Table Six summarizes the overall difference scores for the percentage of students who enroll in college immediately after completing high school. Ten states have had a negative change in the percentage of high school graduates who immediately enroll in a college or university. Five states had a negative change of less than five percent, and five states had a change of more than five percent. Twenty-four states had a positive change of less than five percent, and sixteen states had a positive change of more than five percent.

Table 6: Summary of Overall Difference Scores for Enrollment One

Variable	Negative Change		Positive Change	
	Less than 5 percent change	More than 5 percent change	Less than 5 percent change	More than 5 percent change
Percentage of high school graduates who immediately enroll in college	IDAHO, ILLINOIS, IOWA, OREGON, UTAH	CALIFORNIA, HAWAII, NORTH DAKOTA, RHODE ISLAND, WASHINGTON	ALABAMA, ALASKA, ARIZONIA, DELAWARE, FLORIDA, INDIANA, KANSAS, MARYLAND, MASSACHUSETTS MICHIGAN, MONTANA, NEBRASKA, NEVADA, NEW JERSEY, NEW YORK, OHIO, PENNSYLVANIA, SOUTH CAROLINA, TEXAS, VERMONT, VIRGINIA, WEST VIRGINIA, WISCONSIN, WYOMING	ARKANSAS, COLORADO, CONNECTICUT, GEORGIA, KENTUCKY, LOUISIANA, MAINE, MINNESOTA, MISSISSIPPI, MISSOURI, NEW HAMPSHIRE, NEW MEXICO, NORTH CAROLINA, OKALHOMA, SOUTH DAKOTA, TENNESSEE

The overall difference scores between *Measuring Up* 2000 and 2008 were found for enrollment variable two. Enrollment two measures the percentage of 18-24 year olds enrolled in a postsecondary institution for each state. This variable is important because it provides insight on the total number of traditional aged college students that are attending classes in each state. The following capture dates were used to find the overall difference scores: 1998 and 2007. Data for all fifty states was available for the calculations.

Table 7: Summary of Overall Difference Scores for Enrollment Two

Variable	Negative Change		Positive Change	
	Less than 5 percent change	More than 5 percent change	Less than 5 percent change	More than 5 percent change
Percentage of 18-24 year olds enrolled in college	CALIFORNIA, LOUISIANA, ILLINOIS, MICHIGAN, MONTANA, NEBRASKA, NEW MEXICO, NEW YORK, NORTH DAKOTA, SOUTH DAKOTA, WASHINGTON, WISCONSIN	ALASKA, CONNECTICUT, HAWAII, MARYLAND, NEW JERSEY	ALABAMA, FLORIDA, GEORGIA, IDAHO, INDIANA, KANSAS, KENTUCKY, MAINE, MASSACHUSETTS MINNESOTA, MISSISSIPPI, MISSOURI, NEW HAMPSHIRE NORTH CAROLINA, OHIO, OKALHOMA, PENNSYLVANIA, SOUTH CAROLINA, TENNESSEE, TEXAS, UTAH, VIRGINIA, WEST VIRGINIA, WYOMING	ARIZONIA, ARKANSAS, COLORADO, DELAWARE, IOWA, NEVADA, OREGON, RHODE ISLAND, VERMONT

Table Seven summarizes the overall difference scores for the percentage of 18-24 year olds enrolled in college. Seventeen states had a negative change in the percentage of traditional college aged students enrolled in college. Alaska, Connecticut, Hawaii, Maryland, and New Jersey had a negative change of more than five percent. Nine states had a positive change of more than five percent. The results of this analysis illustrate that there is little uniformity the changes that took place between 1998 and 2007.

The overall difference scores between *Measuring Up* 2000 and 2008 were found for enrollment variable three. Enrollment three measures the percentage of students that

complete high school. This variable is important because the ultimate failure in K-12 education is the failure of a student to earn high school credentials. It is impossible to for K-12 to influence higher education without students that graduate high school. The following capture years were used to calculate the overall difference scores: 1998 and 2006. All fifty states are represented in this analysis.

Table Eight summarizes the overall difference scores for the percentage of students that have completed high school. Eleven states have had a negative change in the number of students who complete high school between 1998 and 2006. Most states were within five percentage points of the 1998 percentage. Only Arizona, Nevada, Oregon, and Rhode Island witness a positive change of more than five percent. It is troublesome that states have witnessed a decrease in the number of students who earn a high school credential.

Table 8: Summary of Overall Difference Scores for Enrollment Three

Variable	Negative Change		Positive Change	
	Less than 5 percent change	More than 5 percent change	Less than 5 percent change	More than 5 percent change
Percentage of students that have completed high school	DELAWARE, GEORGIA, INDIANA, KANSAS, MARYLAND, MICHIGAN, MISSOURI, MONTANA, SOUTH CAROLINA, SOUTH DAKOTA, WISCONSIN		ALABAMA, ALASKA, ARKANSAS, CALIFORNIA, COLORADO, CONNECTICUT, FLORIDA, HAWAII, IDAHO, ILLINOIS, IOWA, KENTUCKY, LOUISIANA, MAINE, MASSACHUSETTS MINNESOTA, MISSISSIPPI, NEBRASKA, NEW HAMPSHIRE NEW JERSEY, NEW MEXICO, NEW YORK, NORTH CAROLINA, NORTH DAKOTA, OHIO, OKALHOMA, PENNSYLVANIA, TENNESSEE, TEXAS, UTAH, VERMONT, VIRGINIA, WASHINGTON, WEST VIRGINIA, WYOMING	ARIZONIA, NEVADA, OREGON, RHODE ISLAND,

The overall different scores analyses yielded very interesting results. There were several findings that are of particular interest to the purpose of this study. This study focuses on data over a period of time that covers five reports that were published between 2000 and 2008. During this time period there have been significant changes in the individual indicators of student success. During this time period no state witnessed a

negative change in 8th grade math scores. All of the states that reported math scores during this entire period witnessed a positive change in these scores. The evolution of readings scores has not been as successful. Fourteen states have had a negative change in 8th grade reading scores. 8th grade writing scores have improved dramatically during this period of time. Twenty-two states have had a percent increase of more than five percent. The math scores of low-income students have also improved dramatically, with twenty states witnessing a percent increase of more than five percent.

There were also significant changes in indicators for graduating seniors that would be entering postsecondary education. Forty-seven states have had an increase in SAT/ACT scores. While this increase is promising, the result on the number of students completing high school is not as promising. Eleven states have had a decrease in the percentage of students who have completed high school. Additional analyses will be conducted to see if these difference scores are a result of a long-term trend or if these changes to occurred since the implementation of No Child Left Behind.

Post No Child Left Behind Difference Scores

The Post No Child Left Behind difference scores between *Measuring Up* 2004 and 2008 were found for preparation variables one through five, enrollment variables two and three, and affordability variables one and two. The overall difference score for enrollment variable one (percentage of high school students who immediately enroll in college) was calculated, but was not calculated for the post No Child Left Behind difference score analysis. This is due to the fact that there was only one captured date for the variable that was collected after the legislation was implemented. The affordability

variables were only calculated for the post No Child Left Behind analysis since the variable was only collected in the post No Child Left Behind reports. Appendix J provides greater detail at the individual state level.

The post No Child Left Behind difference scores were found for preparation variables one, two, three and four. The four preparation variables measure the percentage of 8th graders that score at or above proficient level on national assessments. Preparation one measures math scores, preparation two reading scores, preparation three writing scores, and preparation four measures math scores for low-income students. The following capture dates were used to find the post No Child Left Behind difference score: 2003 and 2007. Three years were captured in this analysis.

Table Nine summarizes the post No Child Left Behind difference scores for the percentage of 8th grade students that score at or above proficient level on national math assessments. Since the implementation of No Child Left Behind four states have had a negative change in the percentage of students at or above proficient level in math. The overall differences scores illustrated in Table One found that no states witnessed a negative change, but this is not the case between 2003 and 2007. Minnesota, New York, and West Virginia had a negative change of less than five percent. Eleven states had a positive change of more than five percent. A majority of the states witnessed a positive change of less than five percent.

Table 9: Summary of Post No Child Left Behind Difference Scores for Preparation One

Variable	Negative Change		Positive Change	
	5 or less percentage points change	More than 5 percentage points change	5 or less percentage points change	More than 5 percentage points change
Percentage of 8 th graders at or above proficient level on national math assessment	MINNESOTA, NEW YORK, WEST VIRGINIA		ALABAMA, ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, CONNECTICUT, DELAWARE, FLORIDA, GEORGIA, HAWAII, ILLINOIS, INDIANA, IOWA, KENTUCKY, LOUISIANA, MAINE MICHIGAN, MISSISSIPPI, MISSOURI, MONTANA, NEBRASKA, NEVADA, NEW HAMPSHIRE, NEW MEXICO, NORTH CAROLINA, OHIO, OKLAHOMA, OREGON, RHODE ISLAND, SOUTH DAKOTA, TENNESSEE, UTAH, WASHINGTON, WISCONSIN, WYOMING	IDAHO, KANSAS, MARYLAND, MASSACHUSETTS, NEW JERSEY, NORTH DAKOTA, PENNSYLVANIA, SOUTH CAROLINA, TEXAS, VERMONT, VIRGINIA

Table Ten provides a summary of the post No Child Left Behind difference scores for the percentage of 8th graders that score at or above a proficient level on national reading assessments. The results of the total difference scores presented in Table Two

illustrated the fourteen states had a negative change in reading scores. The post No Child Left Behind analysis found that twenty-five states had a negative change between 2003 and 2007. Two states had a negative change of more than five percent, and not one state had a positive change of more than five percent. Why are reading scores decreasing in the long term and since the implementation of No Child Left Behind? The decline is exaggerated in the post No Child Left Behind analysis.

Table 10: Summary of Post No Child Left Behind Difference Scores for Preparation Two

Variable	Negative Change		Positive Change	
	Less than 5 percent change	More than 5 percent change	Less than 5 percent change	More than 5 percent change
Percentage of 8 th graders at or above proficient level on national reading assessment	ALABAMA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, ILLINOIS, INDIANA, LOUISIANA, MICHIGAN, MISSISSIPPI, MISSOURI, NEW HAMPSHIRE, NEW MEXICO, NEW YORK, NORTH CAROLINA, OKLAHOMA, RHODE ISLAND, SOUTH DAKOTA, UTAH, VIRGINIA, WEST VIRGINIA, WISCONSIN	KENTUCKY, NORTH DAKOTA	ALASKA, CONNECTICUT, DELAWARE, FLORIDA, GEORGIA, IDAHO, IOWA, KANSAS, MAINE, MARYLAND, MASSACHUSETTS, MINNESOTA, MONTANA, NEBRASKA, NEVADA, NEW JERSEY, OHIO, OREGON, PENNSYLVANIA, SOUTH CAROLINA, TENNESSEE, TEXAS, VERMONT, WASHINGTON, WYOMING	

Table Eleven provides a summary of the post No Child Left Behind difference scores for the percentage of 8th graders at or above proficient level on national writing

assessments. The overall difference scores found that two states witnessed a negative change, and twenty-two states had a positive change of more than five percent. In comparison, the No Child Left Behind analysis found that ten states have had a negative change in the number of students at or above proficient levels on the writing assessment. Ohio had had a decrease of more than five percent. Seven states had a positive change of more than five percent. Similar to the results in Table 10 for preparation variable two, the decline in preparation variable three is highlighted in the post No Child Left Behind analysis. Why is this happening?

Table 11: Summary of Post No Child Left Behind Difference Scores for Preparation Three

Variable	Negative Change		Positive Change	
	Less than 5 percent change	More than 5 percent change	Less than 5 percent change	More than 5 percent change
Percentage of 8 th graders at or above proficient level on national writing assessment	DELAWARE, LOUISIANA, MISSOURI, NEW MEXICO, NORTH CAROLINA, OKLAHOMA, TEXAS, VERMONT, VIRGINIA	OHIO	ALABAMA, ARIZONIA, CALIFORNIA, FLORIDA, GEORGIA, HAWAII, IDAHO, INDIANA, KANSAS, KENTUCKY, MAINE, MARYLAND, MASSACUSETTS, MICHIGAN, MISSISSIPPI, MONTANA, NEBRASKA, NEVADA, NEW YORK, NORTH DAKOTA, OREGON, PENNSYLVANIA, RHODE ISLAND, SOUTH CAROLINA, WASHINGTON, WEST VIRGINIA	ARKANSAS, COLORADO, CONNECTICUT, MINNESOTA, TENNESSEE, UTAH, WYOMING

Table Twelve summarizes the post No Child Left Behind difference scores for the percentage of low-income 8th graders that score at or above proficient level on national math assessments. The results of the overall difference score analysis found that between 1998 and 2007 only Nebraska had a negative change in the percentage of low-income students that score at or above proficient level. Twenty states had a positive change of more than five percent. The post No Child Left Behind analysis found that four states had a negative change of less than five percent. In the overall difference score analysis Alabama, Connecticut, and Minnesota had a positive change of less than five percent, but in the post No Child Left Behind analysis these states had a negative change of less than five percent. This suggests that No Child Left Behind was not the root cause of the percent changes that were witnessed in the overall difference score analysis.

Table 12: Summary of Post No Child Left Behind Difference Scores for Preparation Four

Variable	Negative Change		Positive Change	
	Less than 5 percent change	More than 5 percent change	Less than 5 percent change	More than 5 percent change
Percentage of low income 8 th graders that score at or above proficient level on national math assessment	ALABAMA, CONNECTICUT, MINNESOTA , MONTANA		ALASKA, ARIZONIA, ARKANSAS, CALIFORNIA, COLORADO, FLORIDA, GEORGIA, HAWAII, IDAHO, ILLINOIS, INDIANA, IOWA, KANSAS, KENTUCKY, LOUISIANA, MAINE, MARYLAND, MICHIGAN, MISSISSIPPI, MISSOURI, NEBRASKA, NEVADA, NEW HAMPSHIRE NEW MEXICO, NEW YORK, NORTH CAROLINA, OHIO, OKLAHOMA, OREGON, RHODE ISLAND, SOUTH DAKOTA, TENNESSEE, UTAH, VIRGINIA, WASHINGTON, WEST VIRGINIA, WYOMING	DELAWARE, MASSACHUSETTS, NEW JERSEY, NORTH DAKOTA, PENNSYLVANIA, SOUTH CAROLINA TEXAS, WISCONSIN VERMONT

The post No Child Left Behind difference scores were found for preparation variable five. Preparation variable five measures the number of students per one thousand high school graduates that score in the top twenty percent on the ACT or SAT. Are high

school graduates better prepared since the implementation of No Child Left Behind? The SAT/ACT scores are not a result of No Child Left Behind, but all students have been affected by the legislation. The following capture years were used in this analysis: 2003 and 2007.

Table Thirteen summarizes the post No Child Left Behind difference scores for the number of students per one thousand graduates that score in the top twenty percent on the SAT or ACT. The overall difference scores found that three states had a negative change in the number of students earning SAT/ACT scores in the top twenty percent. Twenty-seven states had a positive change of more than fifty students per one thousand graduates. Twenty states had a positive change of more than fifty students per one thousand graduates. The post No Child Left Behind analysis yielded different results. Seven states have seen a negative change in the number of students earning top SAT/ACT scores in the post No Child Left Behind era. Massachusetts has witnessed a negative change of more than fifty students. Only six states have witnessed a positive change of more than fifty students. What is the cause of this sharp contrast between the total difference scores and the post No Child Left Behind difference scores? Could it be a result of a long-term trend? Or has No Child Left Behind had adverse effects in some states?

Table 13: Summary of Post No Child Left Behind Difference Scores for Preparation Five

Variable	Negative Change		Positive Change	
	Less than 50 students change	More than 50 students change	Less than 50 students change	More than 50 students change
Number of students per one thousand graduates that score in the top 20% on the SAT/ACT	ALASKA, ARIZONIA, MAINE, NEVADA, NEW JERSEY, NORTH CAROLINA	MASSACHUSETTS	ALABAMA, ARKANSAS, CALIFORNIA, CONNECTICUT, DELAWARE, FLORIDA, GEORGIA, HAWAII, IDAHO, ILLINOIS, INDIANA, IOWA, KANSAS, KENTUCKY, MARYLAND, MICHIGAN, MISSISSIPPI, MISSOURI, MONTANA, NEW HAMPSHIRE, NEW MEXICO, NEW YORK, NORTH DAKOTA, OKALHOMA, OHIO, OREGON, PENNSYLVANIA, RHODE ISLAND, SOUTH CAROLINA, TENESSEE, TEXAS, UTAH, VERMONT, VIRGINIA, WASHINGTON, WEST VIRGINIA, WISCONSIN	COLORADO, LOUSIANA, MINNESOTA, NEBRASKA, SOUTH DAKOTA, WYOMING

The post No Child Left Behind difference scores were found for enrollment variable two. Enrollment variable two measures the percentage of 18-24 year olds enrolled in college in each state. This variable is troublesome in the post No Child Left

Behind analysis because the limited lag time. The results of these analyses are limited.

The following capture dates were utilized in these calculations: 2004 and 2007.

Table Fourteen summarizes the post No Child Left Behind difference scores for the number of 18 to 24 year olds enrolled in college. The findings of the overall difference scores analysis illustrated that there was little uniformity in the findings. There were states that had both significant and marginal positive and negative changes. The results of the post No Child Left Behind analysis yield similar results.

Table 14: Summary of Post No Child Left Behind Difference Scores for Enrollment Two

Variable	Negative Change Decrease		Positive Change Increase	
	Less than 5 percent change	More than 5 percent change	Less than 5 percent change	More than 5 percent change
Enrollment 2	CALIFORNIA, GEORGIA, ILLINOIS, MARYLAND, MICHIGAN, MONTANA, NEBRASKA, NEW MEXICO, NORTH DAKOTA, OHIO, OREGON, SOUTH CAROLINA, SOUTH DAKOTA, TENNESSEE, WASHINGTON	ALASKA, CONNECTICUT, HAWAII, NEW YORK, NEW JERSEY	ALABAMA, ARIZONIA, ARKANSAS, COLORADO, DELAWARE, FLORIDA, LOUSIANA, IDAHO, KANSAS, KENTUCKY, MAINE, MASSACHUSETTS MINNESOTA, MISSISSIPPI, MISSOURI, NEVADA, NEW HAMPSHIRE NORTH CAROLINA, OKALHOMA, PENNSYLVANIA, TEXAS, UTAH, VIRGINIA, WISCONSIN, WYOMING	INDIANA, IOWA, RHODE ISLAND, VERMONT, WEST VIRGINIA

The post No Child Left Behind difference scores were found for enrollment variable three. Enrollment variable three measures the percentage of students that complete high school. The purpose of No Child Left Behind is to ensure that all students have an opportunity to succeed in this country, and graduating high school is an ultimate goal of K-12 education. The following capture dates were used in this analysis: 2004 and 2006.

Table Fifteen provides a summary of the post No Child Left Behind difference scores for the percentage of students who graduate from high school. The overall difference scores found that eleven states have had a negative change in the number of students who complete high school and only Arizona, Nevada, Oregon, and Rhode Island witness a positive change of more than five percent. The post No Child Left Behind analysis found that ten states had a negative change in the number of students who complete high school. Montana has seen a negative change of more than five percent since the implementation of No Child Left Behind. Only Vermont has had a positive change of more than five percent.

Table 15: Summary of Post No Child Left Behind Difference Scores for Enrollment Three

Variable	Negative Change		Positive Change	
	Less than 5 percent change	More than 5 percent change	Less than 5 percent change	More than 5 percent change
Percentage of students who have completed high school	CALIFORNIA, GEORGIA, INDIANA, LOUISIANA, MICHIGAN, MISSOURI, SOUTH CAROLINA, SOUTH DAKOTA, WISCONSIN	MONTANA	ALABAMA, ALASKA, ARIZONA, ARKANSAS, COLORADO, CONNECTICUT, DELAWARE, FLORIDA, HAWAII, IDAHO, ILLINOIS, IOWA, KANSAS, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS MINNESOTA, MISSISSIPPI, NEBRASKA, NEVADA, NEW HAMPSHIRE NEW JERSEY, NEW MEXICO, NEW YORK, NORTH CAROLINA, NORTH DAKOTA, OHIO, OKALHOMA, OREGON, PENNSYLVANIA, RHODE ISLAND, TENNESSEE, TEXAS, UTAH, VIRGINIA, WASHINGTON, WEST VIRGINIA, WYOMING	VERMONT

The post No Child Left Behind difference scores were found for affordability variables one and two. Affordability one and two measures the percentage of a family

income that needed to pay for a college education. Affordability variable one measures two year public institutions and affordability variable two measures four year public institutions. The affordability variables are used as a control variable in this study. These variables were not analyzed in the total difference score analyses because the first year that this variable was available was in *Measuring Up* 2004. The following years were used in the calculations: 2003-2004 and 2007-2008.

Table Sixteen summarizes the post No Child Left Behind difference scores for the affordability in two -year public institutions. Twelve states have had a negative change of less than five percent. These twelve states require have become more affordable since the implementation of No Child Left Behind. Four states have had a positive increase of more than five percentage points. A majority of the states have had a positive change of less than five percent. Since the implementation of No Child Left Behind a majority of two year institutions have either increased or decreased in affordability by less than five percentage points.

Table 16: Summary of Post No Child Left Behind Difference Scores for Affordability One

Variable	Negative Change Decrease		Positive Change Increase	
	Less than 5 percent change	More than 5 percent change	Less than 5 percent change	More than 5 percent change
Affordability 1	ARIZONA, ARKANSAS, GEORGIA, LOUISIANA, MISSISSIPPI, MONTANA, NEW MEXICO, NEW YORK, SOUTH CAROLINA, TENNESSEE, WASHINGTON, WYOMING		ALABAMA, ALASKA, CALIFORNIA, COLORADO, CONNECTICUT, DELAWARE, FLORIDA, HAWAII, IDAHO, ILLINOIS, INDIANA, IOWA, KANSAS, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, MICHIGAN, MISSOURI, NEBRASKA, NEVADA, NEW JERSEY, NORTH CAROLINA, NORTH DAKOTA, OHIO, OKALHOMA, OREGON, RHODE ISLAND, TEXAS, UTAH, VERMONT VIRGINIA, WEST VIRGINIA, WISCONSIN	MINNESOTA, NEW HAMPSHIRE PENNSYLVANIA, SOUTH DAKOTA,

Table Seventeen summarizes the post No Child Left Behind difference scores for the affordability of four-year public institutions. Eighteen states have had a negative change since the 2003-2004 academic year. Seven states have become more affordable by more than five percentage points. Eight states have become less affordable by more

than five percentage points. Compared to two-year institutions, there have been more significant changes to affordability in four year public institutions.

Table 17: Summary of Post No Child Left Behind Difference Scores for Affordability Two

Variable	Negative Change Decrease		Positive Change Increase	
	Less than 5 percent change	More than 5 percent change	Less than 5 percent change	More than 5 percent change
Affordability 2	ARIZONIA, ARKANSAS, CALIFORNIA, MARYLAND, MISSISSIPPI, NEW YORK, NORTH CAROLINA, SOUTH DAKOTA, VERMONT, WEST VIRGINIA, WASHINGTON	FLORIDA, GEORGIA, LOUSIANA, NEW MEXICO, SOUTH CAROLINA, TENESSEE, WYOMING	ALASKA, CONNECTICUT, HAWAII, IDAHO, ILLINOIS, INDIANA, IOWA, KANSAS, MAINE, MASSACHUSETTS, MICHIGAN, MISSOURI, MONTANA, NEBRASKA, NEVADA, NEW HAMPSHIRE NEW JERSEY, OHIO, OKALHOMA, OREGON, RHODE ISLAND, TEXAS, UTAH, VIRGINIA	ALABAMA, COLORADO, DELAWARE, KENTUCKY, MINNESOTA, NORTH DAKOTA, PENNSYLVANIA, WISCONSIN

The post No Child Left Behind difference scores analyses yielded interesting results. Most of the results were counterintuitive to the ultimate goal of federal education legislation. The purpose of No Child Left Behind was to use standardized testing to ensure all students are learning the appropriate information. The overall difference score analyses found that states have witnessed changes in test scores, and some of these differences have been negative changes. The post No Child Left Behind analyses

illustrated that states have seen changes since the implementation of the legislation, but these changes have not always been the positive changes that are expected. Three states have had a negative change in 8th grade math scores, twenty-five states have had a negative change in 8th grade reading scores, and ten states have had a negative change in 8th grade writing scores. One of the most interesting findings from these analyses came from the affordability variables. Surprisingly, a college education has become more affordable in several states between the 2003-2004 and 2007-2008 academic years. Twelve states had a negative change in the percentage of household income that was needed to afford an education at a two-year public institution, and eighteen states had a negative change in the percentage of household income that was needed to afford an education at a four-year public institution.

Correlational Analyses

Correlational analyses were conducted to understand the substantive bivariate associations/relationships between variables. Two difference correlatoinal analyses were conducted. The first analysis was conducted without the state reform variables, and the second analyses included the state reform variables. A Pearson's r correlation was used to measure the relationship between variables in both analyses.

In addition to exploring the bivariate associations between variables, the correlational analyses serve as a diagnostic for multicollinearity. In multivariate regression models, multicollinearity does not lead to a biased estimates and an increased likelihood of committing Type I errors (rejecting the null hypothesis when there is no actual statistically significant relationship between the independent and dependent

variables). Rather, the presence of multicollinearity makes a researcher more likely to commit Type II errors (i.e., failing to reject the null hypothesis when there is an actual statistically significant relationship between the explanatory factors and the phenomenon of interest). So, it can be argued the presence of multicollinearity has a conservative effect on the substantive interpretation of one's findings.

Correlation Matrix without State Reform Variables

Table Twenty-Seven presents the results of the correlational analysis of twelve of the variables. This analysis includes data from all five *Measuring Up* reports. The only variables that are not included are the state reform variables. The state reform variables were not included because these were the only variables that were not collected over a period of time. The state reform variables measure if a state currently has a particular piece of legislation. A Pearson's r correlation was used in this analysis.

Findings

The results of the correlation without the state reform variables yielded several statistically significant and positive correlations. There were several relationships between the variables that measure student success in K-12 education. These variables include student test scores and high school completion. The variables that measure the percentage of 8th grade students that score at or above proficient level on math, reading, and writing are statistically significant and positively correlated with each other. The percentage of low-income 8th grade students that score at or above proficient level on the math assessment also has a statistically significant relationship with the three other 8th grade assessments. The 8th grade test scores also have a statistically significant and

positive relationship with SAT/ACT scores. The 8th grade test scores and SAT/ACT scores have a significant relationship with the percentage of students who complete high school.

There results of the correlational analysis also highlighted relationships between variables that measure K-12 student success and variables that measure postsecondary enrollment and success. Table Eighteen summarizes the correlations between the K-12 preparation variables and college enrollment and retention variables. The five preparation variables have a statistically significant and positive relationship with college enrollment in two-year and four-year public institutions. It is not surprising that SAT/ACT scores are correlated with college enrollment. The percentage of 8th grade students that score at or above proficient level on the math, reading, and writing assessments have a statistically significant relationship with retention rates in four-year public institutions.

Table 18: Correlations between K-12 Preparation Variables and College Enrollment and Retention Variables

		Enrollment One	Enrollment Two	College One	College Two
Preparation One	R	.527**	.366**	.089	.277**
	Sig	.000	.000	.193	.000
	N	236	236	218	232
Preparation Two	R	.586**	.326**	.174*	.328**
	Sig	.000	.000	.011	.000
	N	222	222	212	220
Preparation Three	R	.448**	.336**	.088	.408**
	Sig	.000	.000	.224	.000
	N	204	204	195	203
Preparation Four	R	.430**	.251**	.112	-.092
	Sig	.000	.000	.106	.173
	N	224	224	210	222
Preparation Five	R	.467**	.318**	.067	.120
	Sig	.000	.000	.310	.059
	N	250	250	229	246

There were several statistically significant findings between the college enrollment variables, college retention rates, and college affordability. The percentage of students who enter college immediately after high school has a statistically significant a positive relationship with retention rates in two-year and four-year public institutions. Another interesting bivariate relationship is that the percentage of students who immediately enter college after high school has a statistically significant relationship with affordability at four-year public institutions. Affordability of two-year and four-year public institutions has a statistically significant relationship with the percentage of 18-24 year olds enrolled in college. First year retention rates at four-year public institutions have a statistically significant relationship with the affordability of four-year public institutions.

Counterintuitive Non-Findings

The results of the correlational analysis uncovered a number of statistically significant and positive relationships. In addition to the significant findings, the analysis also uncovered a number of counterintuitive non-findings. One of the most interesting non-statistically significant relationships is that SAT/ACT scores do not have a relationship with freshman retention rates at two-year and four-year public institutions. This is an interesting non-finding because one would think that higher SAT/ACT scores would have an impact on the percentage of students continue their postsecondary education past beyond the first year. One of the statistically significant findings of this analysis was that 8th grade math, reading, and writing scores have a relationship with retention rates at four-year public institutions. One of the non-findings is that 8th grade

math and writing scores do not have a relationship with retention rates at two-year public institutions. The analysis also uncovered that retention rates at four-year institutions have a relationship with college affordability. This relationship was not present in two-year public institutions.

Correlation Matrix with State Reform Variables

Table Twenty-Eight presents the results of the correlational analysis all fifteen variables. This analysis includes data from the 2008 *Measuring Up* report. The state reform variables were not collected over a period of time. The variables indicate if a state had a particular policy as of January 2009. The most recent data was used to uncover the bivariate relationships between the *Measuring Up* variables and the state reforms. A Pearson's r correlation was used in this analysis. This analysis will focus on the statistically significant relationships variables have with the state reforms.

Findings

The correlational analysis that included the state reform variables uncovered one statistically significant relationship that was unique compared to the analysis without the state reforms. State reform variable one provides an opportunity for students to pursue accelerated learning options. These learning options include dual enrollment, AP/IB, and early college. This variable had a statistically significant and negative relationship with college affordability at two-year and four-year public institutions. This was the only statistically significant negative relationship uncovered in the correlational analyses. The affordability variables measure the percentage of a household income that is needed to pay for a college education. This is the only variable in this study where a percent

decrease is a positive occurrence. This statistically significant finding suggests that the presence of this particular state policy has a negative impact on the percentage of a household income needed to afford a college education. A correlational analysis does not uncover causation, and this is an interesting finding that can be further developed in a multivariate model.

Counterintuitive Non-Findings

There were several counterintuitive non-statistically significant relationships in the correlational analysis that included the state reform variables. Hypothetically state policies that are put into place to improve student success should have some influence over variables that measure student achievement. The results of this analysis uncovered that this is not the case with these three particular policies. One of the most interesting non-findings is that the three state reforms do not have a statistically significant relationship with each other. State reform one opens pathways for student to pursue accelerated learning options that include dual enrollment and AP/IB courses. This variable did not have a statistically significant relationship with SAT/ACT scores, high school completion, college enrollment, or freshman retention rates. These findings were very interesting because this reform did not have a relationship other variables that are directly influenced by accelerate learning options. Students that pursue these accelerated learning options should the students who have a greater probability to enroll in college and complete high school.

State reform two indicates if a state has a policy for K-12 and postsecondary curriculum alignment. The purpose of curriculum alignment is to ease the transition from

K-12 education to postsecondary education. In theory these students enter the university better prepared for college level coursework. The findings of this analysis indicate that K-12/postsecondary curriculum alignment does not have a statistically significant relationship with freshmen retention rates in both two-year and four-year public institutions.

State reform three is a variable that measures if a state has a policy for early outreach programs. Early outreach programs include college test preparation, dropout prevention programs, college preparation programs, and transition programs. This variable includes programs that assist with college test preparation, but it does not have a statistically significant relationship with SAT/ACT scores. Even more interesting was the fact that this variable did not have a statistically significant relationship with high school completion or college enrollment. A relationship with college retention rates was also absent. The purpose of this reform is to better prepare students to enroll and succeed in college, but this variable did not have one statistically significant relationship with the variables that are used to measure these goals.

The non-findings of this analysis were extremely informative. Are these reforms doing anything? Are state policy makers wasting their time implementing such pieces of legislation? Could it be possible that the actual results of these reforms cannot be measured through college enrollment numbers, test scores, or high school completion? Are the students who are utilizing these resources the students that already have a greater probability for educational success? These results of this analysis created additional questions rather than providing substantive answers.

Multivariate Analyses

OLS Regressions

One simple and then five (5) sets of somewhat more complex models were investigated through OLS Regressions.

The first simple model utilized the K-12 preparation variables. Preparation five measures the number of students per one thousand graduates that earn scores in the top twenty percent on the SAT/ACT. The SAT/ACT variable was modeled as a function of preparation variable one, preparation variable two, preparation variable three, and preparation variable four. Preparation variables one through four measure the percentage of 8th grade students at or above proficient level on national assessments. Preparation one measures math scores, preparation two reading scores, preparation three writing scores and preparation five measures the math scores for low-income students. Table Nineteen presents the results from this model. The only statistically significant variable is preparation one (math scores) – which is positively related to SAT/ACT scores. Specifically, a one unit increase in the math variable is associated with a 3.4 unit increase in SAT or ACT score.

Table 19: SAT/ACT Scores as a Function of 8th Grade Test Scores in Math, Reading, Writing, and Low-Income Math

	Model 1 PV5 by PV1- PV4
8th Grade Math Test Scores	3.355* (1.303)
8th Grade Reading Test Scores	-.415 (.965)
8th Grade Writing Test Scores	.3757 (.609)
8th Grade Low Income Students' Math Scores	-.666 (1.065)
Constant	75.202 (14.200)
	N = 196 F(4,47) = 30.08 Prob > F = 0.000 R-squared = 0.483

*** p <= .001; ** p <= .01; * p <= .05

The first set of models explored first-year college retention rates at two-year institutions. First, retention was modeled as a function of preparation variable one (math), preparation variable two (reading), preparation variable three (writing), preparation variable four (low-income math), preparation five (SAT/ACT scores), and affordability. Then, retention was modeled as a function of the performance variables, affordability, and the three state reform variables. No variables in either model were statistically significant related to the first year college retention rates at two-year institutions.

The second set of models examined the first-year college retention rates at four-year institutions. Similarly to the previous set of models, retention was first modeled as a function of preparation variable one (math), preparation variable two (reading), preparation variable three (writing), preparation variable four (low-income math), and affordability. Then, retention was modeled as a function of performance, affordability, and the three state reform variables. Table Twenty presents these results. Across both the simple model including only the performance and affordability measures and the more complex model including performance, affordability, and state reforms, only math and low-income math were statistically significant as a function of retention. As expected, math scores have a positive impact on college retention. In comparison, low-income math is negatively related to retention.

Why do math scores positively relate to retention, but low-income math scores negatively relate? This may be because low-income students often have a more difficult time persisting in college. Is this a function of testing? More low-income students are earning scores at or above a proficient level since 2000. Do these findings support the hypothesis that educators are teaching to the test rather than teaching skills that will develop critical thinking and other academic skills that are needed to be successful in college? This negative relationship may indicate that these higher scores are enabling more students to enroll in college, but these students cannot persist in their education.

Table 20: First-Year College Retention at Four-Year Institutions as a Function of Preparation, Affordability, and State Reforms

	Model 1 4-yr Ret	Model 2 4-yr Ret w/ State
8th Grade Math Test Scores	.722*** (.184)	.685** (.231)
8th Grade Reading Test Scores	-.040 (.141)	-.141 (.351)
8th Grade Writing Test Scores	.112 (.069)	.106 (.123)
8th Grade Low Income Students' Math Scores	-.831*** (.174)	-.649** (.216)
# scores in top 20% on SAT/ACT per 1,000 grads	-.033 (.018)	-.031 (.020)
4-yr Institution Affordability	.133 (.075)	.089 (.107)
State Reform 1		-3.211 (2.242)
State Reform 2		-.558 (1.145)
State Reform 3		.789 (1.243)
Constant	66.169 (3.356)	70.527 (4.155)
	N = 134 F(6,47) = 18.62 Prob > F = 0.000 R-squared = 0.489	N = 48 F(9,47) = 9.52 Prob > F = 0.000 R-squared = 0.519

*** p <= .001; ** p <= .01; * p <= .05

The third set of models explored the relationships between college enrollment immediately after high school with performance and affordability variables. A more complex model was developed using performance, affordability, and state reform

variables. The simple and the complex models were using both the two-year and four-year institutional context. Table Twenty-One illustrated the findings. In the simple models including only the performance and affordability variables, reading and SAT/ACT scores were both statistically significant and positively related to college enrollment immediately after high school. In the models including the state reform variables, however, no statistically significant relationships were found. This was not a function of multicollinearity. The correlation coefficients were examined between the state reforms and the preparation variables are multicollinearity is not present.

Table 21: The Percentage of High School Graduates Who Immediately Enroll in College as a Function of Preparation, Affordability, and State Reforms

	Model 1 Enroll 1 by Afford 1	Model 2 Enroll 1 by Afford 2	Model 3 Model 1 w/ State Reforms	Model 4 Model 2 w/ State Reforms
8th Grade Math Test Scores	.185 (.243)	.229 (.244)	.283 (.365)	.278 (.344)
8th Grade Reading Test Scores	.393* (.193)	.387* (.194)	.408 (.611)	.241 (.579)
8th Grade Writing Test Scores	-.045 (.202)	-.084 (.200)	.009 (.246)	.034 (.254)
8th Grade Low Income Students' Math Scores	-.037 (.322)	-.085 (.317)	-.427 (.505)	-.337 (.535)
# scores in top 20% on SAT/ACT per 1,000 grads	.046* (.020)	.047* (.020)	.038 (.029)	.044 (.029)
2-yr Institution Affordability	-.196 (.209)		-.077 (.311)	
4-yr Institution Affordability		-.042 (.128)		.105 (.182)
State Reform 1			-.703 (2.150)	.168 (2.324)
State Reform 2			.372 (1.776)	.110 (1.871)
State Reform 3			-1.093 (1.873)	-.934 (1.890)
Constant	21.7111 (5.303)	18.784 (4.646)	24.739 (8.605)	21.016 (7.225)
	N = 134	N = 134	N = 48	N = 48
	F(6,47) = 6.06	F(6,47) = 5.78	F(9,47) = 3.27	F(9,47) = 3.27
	Prob > F = 0.000	Prob > F = 0.000	Prob > F = 0.004	Prob > F = 0.004
	R-squared = 0.383	R-squared = 5.913	R-squared = 0.397	R-squared = 6.175

*** p <= .001; ** p <= .01;

* p <= .05

In the fourth set of models, the impact of first, the performance and affordability variables, and then, the performance, affordability, and state reform variables on college

enrollment of 18-24 year olds was examined. Table Twenty-Two presents these findings. In two-year institutions, math and affordability are statistically significant and positively related to college enrollment of 18-24 year olds. Substantively speaking this means that, as math scores increase, college enrollment of 18-24 year olds also increases. In terms of affordability, as the percentage of family income that is needed to pay for college increases, college enrollment increase. This may seem counterintuitive; however, this may be a function of the current economic climate in the United States. More students wish to go to college and may be willing to pay more to do so. The competitive job market requires individuals to obtain a college education, and students are willing to put their financial futures at risk to obtain an education.

At four-year institutions, only affordability is statistically significant and positively related to college enrollment of 18-24 year olds. Again, this seems counterintuitive; however, the same phenomena as discussed in above in the two-year setting may also be in operation at four-year institutions. It is possible that this phenomenon is occurring to an even greater degree at four year institutions as four-year degrees are viewed as increasingly necessary for even entry-level positions. Similarly to the third set of models discussed above, when the state reform variables are included, no statistically significant relationships were found. This was not a function of multicollinearity. The correlation coefficients were examined between the state reforms and the preparation variables are multicollinearity is not present.

Table 22: Percentage of 18-24 Year Olds Enrolled in College as a Function of Preparation, Affordability, and State Reforms

	Model 1 Enroll 2 by Afford 1	Model 2 Enroll 2 by Afford 2	Model 3 Model 1 w/ State Reforms	Model 4 Model 2 w/ State Reforms
8th Grade Math Test Scores	.283* (.118)	.171 (.112)	.101 (.188)	-.062 (.238)
8th Grade Reading Test Scores	-.060 (.115)	-.097 (.121)	.366 (.298)	.404 (.348)
8th Grade Writing Test Scores	-.058 (.089)	-.028 (.085)	-.253 (.131)	-.183 (.158)
8th Grade Low Income Students' Math Scores	-.157 (.141)	-.020 (.131)	-.158 (.196)	-.027 (.210)
# scores in top 20% on SAT/ACT per 1,000 grads	.016 (.011)	.020 (.011)	.002 (.014)	.000 (.015)
2-yr Institution Affordability	.279* (.117)		.400 (.255)	
4-yr Institution Affordability		.236*** (.068)		.221 (.154)
State Reform 1			-.671 (1.894)	-.518 (2.049)
State Reform 2			-.737 (1.224)	-1.071 (1.310)
State Reform 3			.150 (1.112)	.420 (1.178)
Constant	22.177 (2.475) N = 134 F(6,47) = 6.59 Prob > F = 0.000 R-squared = 0.201	22.851 (2.082) N = 134 F(6,47) = 8.51 Prob > F = 0.000 R-squared = 3.751	21.674 (4.721) N = 48 F(9,47) = 3.65 Prob > F = .002 R-squared = 0.317	25.111 (3.564) N = 48 F(9,47) = 3.18 Prob > F = 0.004 R-squared = 0.285

*** p <= .001; ** p <= .01;

* p <= .05

In the fifth set of models, the final college enrollment variable (high school completion rate) is also modeled as a function of performance and affordability. A more complex model was created using performance, affordability, and the state reforms. Each model was placed in the context of both the two-year institutions and four-year

institutions. Table Twenty-Three presents these results. In the simple models, only the reading performance variable is statistically significantly and positively related to high school completion. In the more complex models that include the state reforms, only affordability is statistically significant and positively related to high school completion. This relationship seems odd. How does college affordability a function of high school completion? A possible explanation for this could be the pressure of upward social mobility. The high cost of college enrollment could deter students from academic achievement. A college degree is an important component of obtaining a middle class lifestyle. Without a college degree individuals are left with limited possibilities. These roadblocks could serve as deterrence for some students to complete high school.

Table 23 High School Completion as a Function of Preparation, Affordability, and State Reforms

	Model 1 Enroll 3 by Afford 1	Model 2 Enroll 3 by Afford 2	Model 3 Model 1 w/ State Reforms	Model 4 Model 2 w/ State Reforms
8th Grade Math Test Scores	-.086 (.091)	-.100 (.095)	-.053 (.136)	-.166 (.148)
8th Grade Reading Test Scores	.272** (.095)	.262** (.095)	.031 (.262)	.004 (.289)
8th Grade Writing Test Scores	-.024 (.076)	-.027 (.072)	.077 (.097)	.132 (.103)
8th Grade Low Income Students' Math Scores	.210 (.126)	.229 (.129)	.263 (.200)	.381 (.220)
# scores in top 20% on SAT/ACT per 1,000 grads	.013 (.011)	.014 (.011)	.016 (.010)	.016 (.011)
2-yr Institution Affordability	.012 (.095)		.249* (.125)	
4-yr Institution Affordability		.044 (.047)		.184* (.086)
State Reform 1			.899 (.984)	1.279 (1.036)
State Reform 2			.126 (.793)	-.186 (.729)
State Reform 3			-.092 (.758)	.143 (.782)
Constant	77.439 (3.242) N = 134 F(6,47) = 5.41 Prob > F = 0.000 R-squared = 0.383	76.796 (2.463) N = 134 F(6,47) = 5.78 Prob > F = 0.000 R-squared = 0.387	73.077 (3.161) N = 48 F(9,47) = 4.54 Prob > F = 0.000 R-squared = 0.466	74.243 (2.479) N = 48 F(9,47) = 6.56 Prob > F = 0.000 R-squared = 0.477

*** p <= .001; ** p <= .01;

* p <= .05

Analysis of Research Questions

Research Question One: Has there been a change in the scores on national assessments since the implementation of No Child Left Behind?

High stakes testing was one of the results of the legislation. No Child Left Behind required states to hold schools accountable by requiring all students to perform at a satisfactory level on standardized tests in reading, math, and science. A majority of states have also developed standardized tests to measure writing skills. The purpose of the legislation is to, “close the achievement gap with accountability, flexibility, and choices, so that no child is left behind (Public Law 107-110.)” No Child Left Behind was signed into law in 2002, but a large majority of states already had national assessments in place to measure student achievement.

Did No Child Left Behind improve standardized test scores? The difference score analyses that were conducted in this chapter discussed this question in depth. Since the implementation of No Child Left Behind there have been declines in the percentage of students who are at or above a proficient level. Three states have witnessed a negative difference in math, twenty-five had a decline in reading, and ten states had a decline in writing. At the state level of analysis it can be concluded that No Child Left Behind has not improved test scores. There are several states that have witnessed a decline in test scores.

When conducted this analysis at the macro level, one can draw different conclusions. Table Twenty-Four provides the descriptive statistics for 8th grade test scores in math, reading, writing, and the test scores for low-income students in math in 1998. Table Twenty-Five provides descriptive statistics for 8th grade test scores in math, reading, writing, and the test scores for low-income math in 2007. At the macro level there have been significant changes in the percentage of students at or above a proficient

level on these examinations. For example, in 1998 22.1% of 8th grade students scored at or above proficient level on the math assessment and in 2007 this number increased to 31.5%. This suggests that the answer to this research question depends on the unit of analysis.

Table 24: Descriptive Statistics for Preparation Variables *Measuring Up 2000*

	Preparation One	Preparation Two	Preparation Three	Preparation Four
N Valid	40	36	35	31
N Missing	10	14	15	19
Mean	22.1	28.8	22.6	8.9
Median	22	29	23	7
Mode	14	29	25	6
Std. Deviation	7.4	6.1	6.5	5.6
Minimum	7	18	11	2
Maximum	35	42	44	22

Table 25: Descriptive Statistics for Preparation Variables *Measuring Up 2008*

	Preparation One	Preparation Two	Preparation Three	Preparation Four
N Valid	50	50	48	50
N Missing	0	0	2	0
Mean	31.5	30.3	30.9	16.6
Median	34	31	31	17
Mode	35	28	32	13
Std. Deviation	7.8	6.4	8.1	4.9
Minimum	14	17	15	6
Maximum	51	43	56	29

Research Question Two: Is No Child Left Behind having an impact on higher education?

No Child Left Behind was one of the most significant pieces of education legislation in our countries history. This legislation drastically changed the role of the federal government in education and changed the classroom experience for all students. It

would be impossible for higher education to be completely insulated from such an influential piece of legislation. Is there a relationship between test scores in K-12 and retention rates? Is there a relationship between test scores and college enrollment? Or could rising costs be hindering students from enrolling or staying in college?

Table Eighteen summarizes the correlations between K-12 test scores and college enrollment and retention. SAT/ACT scores have a statistically significant and positive relationship with college enrollment. The percentage of 8th graders at or above proficient level math and writing assessments has a statistically significant and positive relationship with college enrollment and retention rates in four-year public institutions. The variable that measures the percentage of 8th grade students at or above proficient level on national reading assessments has a statistically significant relationship with college enrollment and retention rates at two-year and four-year public institutions. These findings suggest that No Child Left Behind has had an impact on higher education.

Research Question Three: Are state education policies having an influence on test scores, graduation rates, and college enrollment?

Prior to No Child Left Behind, education was primarily a function of state and local governments. State and local governments had the power to create their own standards and to determine the material that is important to the students in their specific districts. States have also developed policies that create linkages between K-12 education and higher education. These policies included accelerated learning options- dual enrollment, AP/IB courses, and early college, K-12 and postsecondary curriculum

alignment, and early outreach programs- including test preparation, drop-out prevention programs, transition programs, and early college counseling.

Are the linkages between K-12 and higher education a direct result of these policies? Do these policies make a difference? The correlational analyses between the state reform variables and the college preparation and enrollment variables suggest that these policies do not make a difference. The state reform variables did not have a statistically significant bivariate relationship with SAT/ACT scores, college enrollment, or high school graduation. The findings from these analyses suggest that state reforms are not having an impact on test scores, high school graduation, and college enrollment.

Table 26: Correlations between State Reform Variables and College Preparation and Enrollment Variables

		Preparation Five	Enrollment One	Enrollment Two	Enrollment 3
State Reform One	R	.136	.092	-.018	-.035
	Sig	.348	.527	.901	.808
	N	50	50	50	50
State Reform Two	R	.102	.009	-.029	.028
	Sig	.479	.952	.839	.849
	N	50	50	50	50
State Reform Three	R	-.025	-.039	.029	-.105
	Sig	.864	.785	.840	.457
	N	50	50	50	50

** Correlation is significant at the 0.01 Level

* Correlation is significant at the 0.05 Level

Table 27: Correlation Matrix without State Reforms

		Prep 1	Prep 2	Prep 3	Prep 4	Prep 5	Enroll 1	Enroll 2	Enroll 3	College 1	College 2	Afford 1	Afford 2
Preparation One	R	1	.835**	.771**	.835**	.682**	.527**	.366**	.536**	.089	.277**	.215**	.303**
	Sig		.000	.000	.000	.000	.000	.000	.000	.193	.000	.008	.000
	N	236	219	202	224	236	236	236	236	218	232	150	150
Preparation Two	R	.835**	1	.760**	.645**	.590**	.586**	.326**	.541**	.174*	.328**	.262**	.363**
	Sig	.000		.000	.000	.000	.000	.000	.000	.011	.000	.001	.000
	N	219	222	204	213	222	222	222	222	212	220	150	150
Preparation Three	R	.771**	.760**	1	.501**	.603**	.448**	.336**	.394**	.088	.408**	.346**	.409**
	Sig	.000	.000		.000	.000	.000	.000	.000	.224	.000	.000	.000
	N	202	204	204	196	204	204	204	204	195	203	134	134
Preparation Four	R	.835**	.645**	.501**	1	.507**	.430**	.251**	.502**	.112	-.092	.176*	.099
	Sig	.000	.000	.000		.000	.000	.000	.000	.106	.173	.031	.227
	N	224	213	196	224	224	224	224	224	210	222	150	150
Preparation Five	R	.682**	.590**	.603**	.507**	1	.536**	.318**	.391**	.067	.120	.103	.135
	Sig	.000	.000	.000	.000		.000	.000	.000	.310	.059	.208	.099
	N	236	222	204	224	250	250	250	250	229	246	150	150
Enrollment One	R	.527**	.586**	.448**	.430**	.536**	1	.536**	.615**	.181**	.242**	.058	.169*
	Sig	.000	.000	.000	.000	.000		.000	.000	.006	.000	.481	.039
	N	236	222	204	224	250	250	250	250	229	246	150	150
Enrollment Two	R	.366**	.326**	.336**	.251**	.318**	.536**	1	.521**	.098	.312**	.279**	.375**
	Sig	.000	.000	.000	.000	.000	.000		.000	.141	.000	.001	.000
	N	236	222	204	224	250	250	250	250	229	246	150	150
Enrollment Three	R	.536**	.541**	.394**	.502**	.391**	.615**	.521**	1	.169*	.144*	.143	.202*
	Sig	.000	.000	.000	.000	.000	.000	.000		.010	.023	.082	.013
	N	236	222	204	224	250	250	250	250	229	246	150	150
College One	R	.089	.174*	.088	.112	.067	.181**	.098	.169*	1	.171**	.155	-.017
	Sig	.193	.011	.224	.106	.310	.006	.141	.010		.010	.063	.838
	N	218	212	195	210	229	229	229	229	229	228	145	145
College Two	R	.277**	.328**	.408**	-.092	.120	.242**	.312**	.144*	.171**	1	.311**	.427**
	Sig	.000	.000	.000	.173	.059	.000	.000	.023	.010		.000	.000
	N	232	220	203	222	246	246	246	246	228	246	149	149
Affordability One	R	.215**	.262**	.346**	.176*	.103	.058	.279**	.143	.155	.311**	1	.752**
	Sig	.008	.001	.000	.031	.208	.481	.001	.082	.063	.000		.000
	N	150	150	134	150	150	150	150	150	145	149	150	150
Affordability Two	R	.303**	.363**	.409**	.099	.135	.169*	.375**	.202*	-.017	.427**	.752**	1
	Sig	.000	.000	.000	.227	.099	.039	.000	.013	.838	.000	.000	
	N	150	150	134	150	150	150	150	150	145	149	150	150

Table 28: Correlation Matrix with State Reforms

		Prep 1	Prep 2	Prep 3	Prep 4	Prep 5	Enroll 1	Enroll 2	Enroll 3	College 1	College 2	Afford 1	Afford 2	State 1	State 2	State 3
Preparation One	R	1	.914**	.716**	.836**	.438**	.275	.275	.558**	.007	.399**	.301*	.429**	-.034	.008	-.152
	Sig		.000	.000	.000	.001	.053	.053	.000	.962	.004	.034	.002	.816	.057	.287
	N	50	50	48	50	50	50	50	50	50	50	50	50	50	50	50
Preparation Two	R	.914**	1	.828**	.723**	.519**	.567**	.371**	.599**	-.038	.413**	.446**	.508**	-.070	-.058	-.092
	Sig	.000		.000	.000	.000	.000	.008	.000	.792	.003	.001	.000	.631	.699	.526
	N	50	50	48	50	50	50	50	50	50	50	50	50	50	50	50
Preparation Three	R	.716**	.828**	1	.386**	.425**	.504**	.228	.502**	-.031	.509**	.411**	.413**	-.075	-.188	-.047
	Sig	.000	.000		.007	.003	.000	.119	.000	.836	.000	.004	.004	.614	.201	.752
	N	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Preparation Four	R	.836**	.723**	.386**	1	.290*	.333*	.217	.497**	.136	.109	.199	.243	-.054	.085	-.173
	Sig	.000	.000	.007		.041	.018	.130	.000	.345	.452	.165	.090	.712	.558	.230
	N	50	50	48	50	50	50	50	50	50	50	50	50	50	50	50
Preparation Five	R	.438**	.519**	.425**	.290*	1	.502**	.150	.379**	.026	-.021	.043	.102	.136	.102	-.025
	Sig	.001	.000	.003	.041		.000	.299	.007	.859	.882	.765	.481	.348	.479	.864
	N	50	50	48	50	50	50	50	50	50	50	50	50	50	50	50
Enrollment One	R	.275	.567**	.504**	.333*	.502**	1	.441*	.571**	.172	.353*	.197	.297*	.092	.009	-.039
	Sig	.053	.000	.000	.018	.000		.001	.000	.234	.012	.171	.038	.527	.952	.785
	N	50	50	48	50	50	50	50	50	50	50	50	50	50	50	50
Enrollment Two	R	.275	.371**	.228	.217	.150	.441*	1	.453**	.096	.434*	.443**	.434**	-.018	-.029	.029
	Sig	.053	.008	.119	.130	.299	.001		.001	.507	.002	.001	.002	.901	.839	.840
	N	50	50	48	50	50	50	50	50	50	50	50	50	50	50	50
Enrollment Three	R	.558**	.599**	.502**	.497**	.379**	.571**	.453**	1	.145	.361*	.420**	.458**	-.035	.028	-.105
	Sig	.000	.000	.000	.000	.007	.000	.001		.315	.010	.002	.001	.808	.849	.457
	N	50	50	48	50	50	50	50	50	50	50	50	50	50	50	50
College One	R	.007	-.038	-.031	.136	.026	.172	.096	.145	1	.097	.081	-.175	.092	-.239	.072
	Sig	.962	.792	.836	.345	.859	.234	.507	.315		.501	.576	.225	.527	.094	.521
	N	50	50	48	50	50	50	50	50	50	50	50	50	50	50	50
College Two	R	.399**	.413**	.509**	.109	-.021	.353*	.434*	.361*	.097	1	.505**	.454**	-.194	-.153	.016
	Sig	.004	.003	.000	.452	.882	.012	.002	.010	.501		.000	.001	.178	.290	.912
	N	50	50	48	50	50	50	50	50	50	50	50	50	50	50	50
Affordability One	R	.301*	.446**	.411**	.199	.043	.197	.443**	.420**	.081	.505**	1	.705**	-.304*	-.133	-.029
	Sig	.034	.001	.004	.165	.765	.171	.001	.002	.576	.000		.000	.032	.357	.840
	N	50	50	48	50	50	50	50	50	50	50	50	50	50	50	50
Affordability Two	R	.429**	.508**	.413**	.243	.102	.297*	.434**	.458**	-.175	.454**	.705**	1	-.318**	.049	-.186
	Sig	.002	.000	.004	.090	.481	.038	.002	.001	.225	.001	.000		.025	.737	.195
	N	50	50	48	50	50	50	50	50	50	50	50	50	50	50	50
State Reform One	R	-.034	-.070	-.075	-.054	.136	.092	-.018	-.035	.092	-.194	-.304*	-.318*	1	.257	.173
	Sig	.816	.631	.614	.712	.348	.527	.901	.808	.527	.178	.032	.025		.072	.230
	N	50	50	48	50	50	50	50	50	50	50	50	50	50	50	50
State Reform Two	R	.008	-.058	-.188	.085	.102	.009	-.029	.028	-.239	-.153	-.133	.049	.257	1	-.040
	Sig	.057	.699	.201	.558	.479	.952	.839	.849	.094	.290	.357	.737	.072		.782
	N	50	50	48	50	50	50	50	50	50	50	50	50	50	50	50
State Reform Three	R	-.152	-.092	-.047	-.173	-.025	-.039	.029	-.105	.072	.016	-.029	-.186	.173	-.040	1
	Sig	.287	.526	.752	.230	.864	.785	.840	.457	.521	.912	.840	.195	.230	.782	
	N	50	50	48	50	50	50	50	50	50	50	50	50	50	50	50

CHAPTER FOUR: CONCLUSIONS, POLICY PRESCRIPTIONS, AND RECOMMENDATIONS FOR FUTURE RESEARCH

Education is one of the most fundamental components of our society.

Policymakers have used legislative reforms to improve the quality of education that is received in this country. The purpose of this study was to examine the relationship between education policy and student achievement, with careful attention to possible linkages between K-12 and higher education. This chapter will summarize the findings of this study, offer policy prescriptions, and make recommendations for future research.

Summary of Findings

The analyses yielded a number of findings that uncover the relationships between education policy and indicators of student success. Three types of analyses were conducted in this study: descriptive, correlational, and multivariate. The findings from each analysis will be discussed. The findings of primary interest can be classified by overall changes between 1998 and 2007 (*Measuring Up* 2000 and 2008) and post-No Child Left Behind changes.

There were many interesting findings that resulted from the descriptive analyses. One of the most interesting results was that many of the preparation variables trended towards positive overall changes between 1998 and 2007, but the post No Child Left Behind analyses uncovered that many states have witnessed a negative change during this time period. The analysis for the variable that measured the percentage of 8th grade students at or above proficient level in math uncovered that all in the analysis states had a positive change. The post No Child Left Behind analysis found that four states have had a

negative change in the percentage of 8th graders at proficient level in math since the implementation of No Child Left Behind. The results for 8th grade reading were also very interesting. The overall difference score analyses found that fourteen states had a negative change in reading scores. The results of the post No Child Left Behind analysis were shocking- twenty five states have had a negative change since the implementation of the legislation.

The final finding of primary interest was from the variable measuring high school completion. High School graduation is the ultimate measure of success in student achievement in K-12 education. The post No Child Left Behind analysis found that ten states have had a percentage decrease in the percentage of students earning a high school credential since the implementation of the legislation. The findings from the descriptive analyses are particularly interesting because they uncover the changes that have occurred at the state level of analysis. The macro level data can mask the unique relationships that are taking place in the states.

There were several findings of primary interest within the correlational analyses. A key finding from these analyses was that the four preparation variables that measure 8th grade test scores were highly correlated and all of the relationships were statistically significant. Affordability was used as a control variable in the multivariate models, but these variables had some interesting bivariate relationships in the correlational models. The affordability of four-year public institutions had a statistically significant relationship with the percentage of 18-24 year olds enrolled in college and with the first year retention rates in four-year public institutions.

Some of the most interesting results from the correlational analyses were the counterintuitive non-findings that were uncovered. Interestingly, SAT/ACT scores did not have a statistically significant relationship with college retention. The state reform variables only revealed one statistically significant relationship. No statistically significant bivariate relationships between the state reform variables and variables that measured preparation, college enrollment, college retention, or high school graduation were found. This is an important (non) finding because these state reforms are intended to improve these indicators of student success. The state reform variables played a virtually useless role in the correlational model.

The multivariate analyses uncovered several findings of primary interest to this research. First-year retention rates at two-year institutions are not a function of variables that measure preparation or a function of college affordability. Retention rates at four-year institutions have a different relationship with these variables. Math and low-income math were had a significant relationship with first-year college retention at four-year institutions. Interestingly, math has a positive relationship with retention while low-income math had a negative relationship with retention. The models that explored the relationship between college enrollment immediately after high school and preparation and affordability also yielded interest results. This analysis found that reading scores and SAT/ACT scores had a statistically significant and positive relationship with college enrollment. Interestingly, these relationships are washed out by the state reform variables in a more complex model. The state reform variables were not significant in any of the

multivariate models. This supports the findings of the correlational analyses that the state reforms play a marginal role in indicators of student success.

Analysis of Research Questions

Research Question One: Has there been a change in the scores on national assessments since the implementation of No Child Left Behind?

High stakes testing was one of the results of the legislation. No Child Left Behind required states to hold schools accountable by requiring all students to perform at a satisfactory level on standardized tests in reading, math, and science. A majority of states have also developed standardized tests to measure writing skills. The purpose of the legislation is to, “close the achievement gap with accountability, flexibility, and choices, so that no child is left behind (Public Law 107-110.)” No Child Left Behind was signed into law in 2002, but a large majority of states already had national assessments in place to measure student achievement.

Did No Child Left Behind improve standardized test scores? The difference score analyses that were conducted in this chapter discussed this question in depth. Since the implementation of No Child Left Behind there have been declines in the percentage of students who are at or above a proficient level. Three states have witnessed a negative difference in math, twenty-five had a decline in reading, and ten states had a decline in writing. At the state level of analysis it can be concluded that No Child Left Behind has not improved test scores. There are several states that have witnessed a decline in test scores.

When conducted this analysis at the macro level, one can draw different conclusions. Table Twenty-Four provides the descriptive statistics for 8th grade test scores in math, reading, writing, and the test scores for low-income students in math in 1998. Table Twenty-Five provides descriptive statistics for 8th grade test scores in math, reading, writing, and the test scores for low-income math in 2007. At the macro level there have been significant changes in the percentage of students at or above a proficient level on these examinations. For example, in 1998 22.1% of 8th grade students scored at or above proficient level on the math assessment and in 2007 this number increased to 31.5%. This suggests that the answer to this research question depends on the unit of analysis.

Research Question Two: Is No Child Left Behind having an impact on higher education?

No Child Left Behind was one of the most significant pieces of education legislation in our countries history. This legislation drastically changed the role of the federal government in education and changed the classroom experience for all students. It would be impossible for higher education to be completely insulated from such an influential piece of legislation. Is there a relationship between test scores in K-12 and retention rates? Is there a relationship between test scores and college enrollment? Or could rising costs be hindering students from enrolling or staying in college?

Table Eighteen summarizes the correlations between K-12 test scores and college enrollment and retention. SAT/ACT scores have a statistically significant and positive relationship with college enrollment. The percentage of 8th graders at or above proficient

level math and writing assessments has a statistically significant and positive relationship with college enrollment and retention rates in four-year public institutions. The variable that measures the percentage of 8th grade students at or above proficient level on national reading assessments has a statistically significant relationship with college enrollment and retention rates at two-year and four-year public institutions. These findings suggest that No Child Left Behind has had an impact on higher education. It will take more time (and more data) to fully understand this relationship. This is a direct result of the limited time lag since No Child Left Behind was implemented.

Research Question Three: Are state education policies having an influence on test scores, graduation rates, and college enrollment?

Prior to No Child Left Behind, education was primarily a function of state and local governments. State and local governments had the power to create their own standards and to determine the material that is important to the students in their specific districts. States have also developed policies that create linkages between K-12 education and higher education. These policies included accelerated learning options- dual enrollment, AP/IB courses, and early college, K-12 and postsecondary curriculum alignment, and early outreach programs- including test preparation, drop-out prevention programs, transition programs, and early college counseling.

Are the linkages between K-12 and higher education a direct result of these policies? Do these policies make a difference? The correlational analyses between the state reform variables and the college preparation and enrollment variables suggest that these policies do not make a difference. The state reform variables did not have a

statistically significant bivariate relationship with SAT/ACT scores, college enrollment, or high school graduation. Additionally, the state reform variables were not significant in any of the multivariate models. The findings from these analyses suggest that state reforms are not having an impact on test scores, high school graduation, and college enrollment.

Policy Prescriptions

The purpose of educational reforms is to improve the quality of education and to improve student achievement. This thesis demonstrates, however, that education policy may not produce the intended results in student achievement. Both federal and state reforms have fallen short of producing the results that would be necessary to label the pieces of legislation successful. The analyses and findings from this study yield several policy prescriptions to improve the relationship between education policy and student success. The following policy prescriptions were made based on the available literature and the study findings:

1. States should receive the funding necessary to fulfill the federal mandates in No Child Left Behind.

One of the fiercest criticisms No Child Left Behind is that it is an unfunded mandate (Apple 2006, Hayes 2004, Hayes 2006, and Peterson & West 2003). No Child Left Behind dramatically altered public education, and the system of accountability in this country. These dramatic changes require states, school districts, and educators to allocate a significant amount of resources to satisfy the mandates within the legislation (Peterson & West 2003). Tests alone will not close the achievement gap, and without sufficient

resources the lofty goals of the legislation will never be achieved (Fusarelli). The first policy prescription would ensure that individual states and school districts receive the level of support that is necessary to improve student achievement and close the achievement gap for all students.

The results of this study illustrated that there have been changes in standardized test scores at the macro level since the implementation of No Child Left Behind. These results are not as promising when they are broken down at the state level of analysis. There were a number of states that have witnessed a percent decrease in the percentage of 8th graders at or above proficient level on national assessments since the legislation was implemented. This undermines the idea that the legislation will improve the level of achievement for all students. The federal government should ensure that states are receiving the proper support to increase student achievement. Individual states cannot be expected to dramatically increase standardized test scores without the proper resources. The results of this study support this idea.

2. Future alterations to the existing legislation should shift focus away from high stakes standardized testing.

It has been argued that No Child Left Behind marked the emergence of an ideological consensus on a system of high stakes accountability rather than a bold new approach to education policy (Fusarelli). One of the criticisms of No Child Left Behind and the accountability movement is that authentic learning will be replaced by intensive test preparation, especially historically low performing students (Apple, Hayes, Fusarelli). Are these students better off today than they were before No Child Left Behind? Does

this method of assessment undermine the ideological goals within the legislation? Were the improvements in low-income 8th grade math scores found in the descriptive analysis real improvements? Or did the students become better prepared to take a test rather than better prepared for math? It is possible that the current system of accountability will undermine the higher education in the United States. It is important that policymakers understand the full impact of high stakes testing. The relationships between K-12 and higher education that were evident in this study are preliminary. It will take time for the students who have been affected by No Child Left Behind to filter into the postsecondary system. It is vital that policymakers prepare for the future demand for higher education that will be influenced by No Child Left Behind. “Even states with minimal demographic growth can expect increases in demand for postsecondary education if K-12 academic preparation improves (Martinez 2004).” It is important to shift focus away from testing for the health of the entire system of education.

3. Policymakers and educational leaders should establish stronger (and more apparent) linkages between K-12 and postsecondary systems of education.

Policymakers have turned to K-16 reforms to improve the relationship between K-12 schools and postsecondary institutions (Callan, Finney, Kirst, Usdan, and Venezia). The K-16 reference encourages the creation of a seamless system of education where there are robust partnerships between schools and colleges/universities (Martinez). The results of these analyses indicate that there are relationships between high school preparation variables and college enrollment/retention. Policymakers should focus on developing real relationships between the systems of education. It is important for states to develop a

functional P-16 system. This is a policy recommendation that has been pushed by the federal government through the Spelling's Commission Report.

4. Policymakers should establish methods to assess if the individual state reforms are having an impact on student achievement to ensure resources are being properly allocated.

This policy prescription involves adjusting state reforms to ensure the individual state reforms are effectively influencing student achievement. The state reform variables did not have a statistically significant bivariate relationship with SAT/ACT scores, college enrollment, college retention, or high school graduation. The findings from these analyses suggest that state reforms are not having an impact on test scores, high school graduation, and college enrollment. How can these reforms be causal agents for improvements in student achievement when the reforms are not even related to the variables that measure achievement? This was one of the most intriguing findings in this study. Currently, state policymakers are faced with a catastrophic budget situation, and education funding is being adversely impacted by economic conditions. Why are states allocating resources on programs/reforms that do not have a relationship with indicators of student success? It is important that states retain programs that have a positive influence on student achievement, but currently no relationship is evident. Where is the breakdown between the objective and results? It is vital that policymakers develop an understanding of this process.

Recommendations for Future Research

Levels of Analysis

One of the areas of further research is to focus on a different level of analysis. This study focused on the state level of analysis. This study also utilized the macro level of analysis to look across the fifty cases used in the analyses. It was that the level of analysis made a difference in the findings. This was evident in addressing the research question on the impact of No Child Left Behind on test scores. On the macro level it was evident that test scores have increased, but at the state level of analysis there were different findings. Future research could focus on the regional level of analysis. Are there regional differences in the variables analyzed in this study? Are there regional trends with the variables? Are these regional trends a result of historical cultural differences, demographics, or accrediting body?

Units of Analysis

One area for future research could be to change the units of analysis. One of the limitations of this study was the limited time frame. A future study could create a more longitudinal study that increases the time frame that is examined. This time frame would go back further in time, but would look further into the long-term effects of No Child Left Behind. How will No Child Left Behind evolve in the next ten years? Twenty years? How will higher education be impacted as more students who have been educated in the era of high stakes accountability enter postsecondary education? This study was able to capture the immediate impact of the legislation, but further research will have to be conducted uncover the long-term effects.

Another area of future research is to shift the focus away from the data that is reported to the missing data. There are particular variables that were missing for states. This was especially the case for the test score variables. Why did particular states begin to report results before other states? Is this a regional phenomenon? What are these missing variables telling us? Are these missing variables due to accrediting bodies? Or are there deeper historical/cultural effects at work? Missing data are often disregarded, but it is possible that these data are telling a deeper story.

Broader Impact Dependent Variables

What is the broader impact of No Child Left Behind? The *Measuring Up* reports include data on the longer-term impact of education. Future research could focus on these long-term educational goals. These goals include human capital development, work force development, earning potential state GDP per capital, and citizen engagement. Is No Child Left Behind having an impact on longer-term educational goals? How will the legislation impact students as they progress into adulthood? What will be the impact on the individual states or on the country as a whole? The legislation will be worthless if it has a negative impact on productivity in adulthood. This research would have to be conducted in the future once there is sufficient data available to measure these questions.

Alternative Explanations

Alternative explanations would also have to be considered in future research. Can the No Child Left Behind preparation variables in K-12 education be considered college preparation variables? Should we actually expect 'teaching to the test' preparation to be correlated with college success? Are these students obtaining the critical thinking skills

that are necessary to be successful in postsecondary education? Is No Child Left Behind lowering educational standards? Will the impact of high stakes testing be felt in higher education? Are students entering college with the ability to take a standardized test, but without the ability to think independently and critically? Will college professors lower their standards to fit the incoming student body?

Another alternative explanation would focus on the impact of state financial aid policies. State financial aid policies have evolved since the 1990s. State funding for merit based financial aid has increased dramatically, and at a faster rate than need based financial aid (Perna 2004). Florida's Bright Futures Program and Georgia's HOPE scholarship were used as models throughout the country in this shift to merit based funding. Are these policies creating linkages between K-12 education and postsecondary education? Are these policies making college more affordable for all students? Or are these policies helping the students that would attend college regardless of the merit - based assistance? Are these policies regional? Are the students who receive these awards better prepared for college? This is an area of research that would be very interesting to explore.

Further Exploration of Correlational and Multivariate Findings

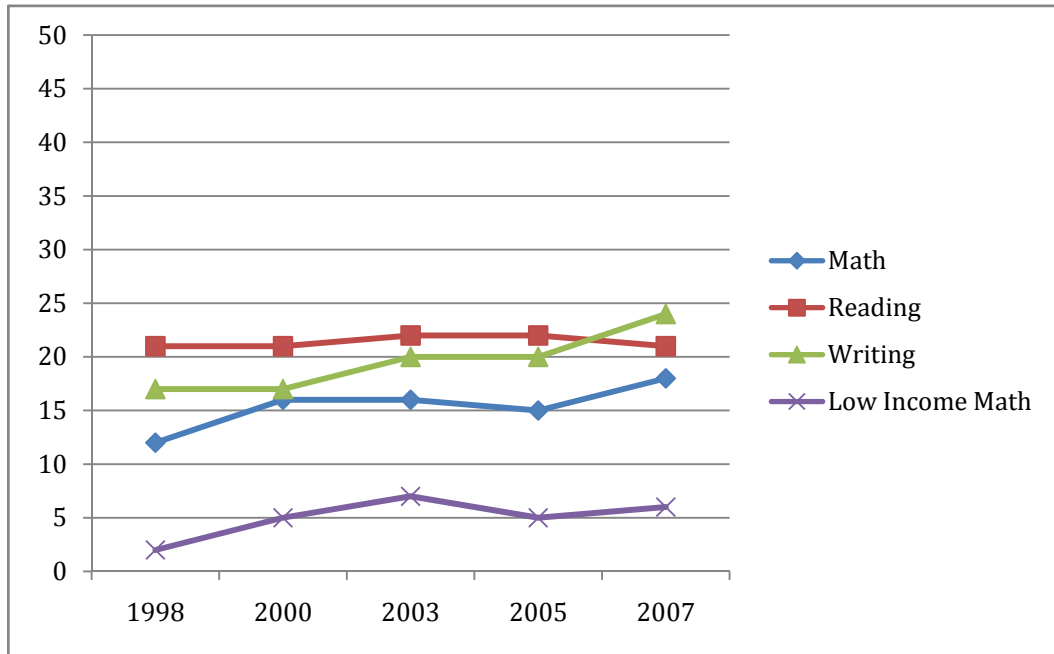
The final area of further research would further explore the correlational and multivariate findings. These analyses would focus on the seemingly counterintuitive correlational and multivariate findings in this study. What is at the root of these counterintuitive findings (or non-findings)? Further exploration would expand the multivariate analyses to logistic regressions. Logistic regressions would be used to gain a

better understand of the state reform variables. To conduct these analyses the individual dates for each reform will have to be collected and corresponding data for the reform years will have to be collected for the preparation, enrollment, and retention variables. By unpacking some of these findings a greater understanding of the relationships can be developed.

The state reform variables offer the most interesting opportunity for further exploration. The most interesting outcome of this study was the fact that the state reform variables did not have an impact on indicators of student success. Why were the state reform variables insignificant in both the correlational and multivariate analyses? State policymakers enact these reforms with an objective. The underlying objective in these reforms is student success. This study uncovered that these reforms are not having an impact on variables that measure student success. Where is the breakdown between the state objectives and the outcomes? Is there a problem in the implementation of these reforms? Future research would explore this phenomenon.

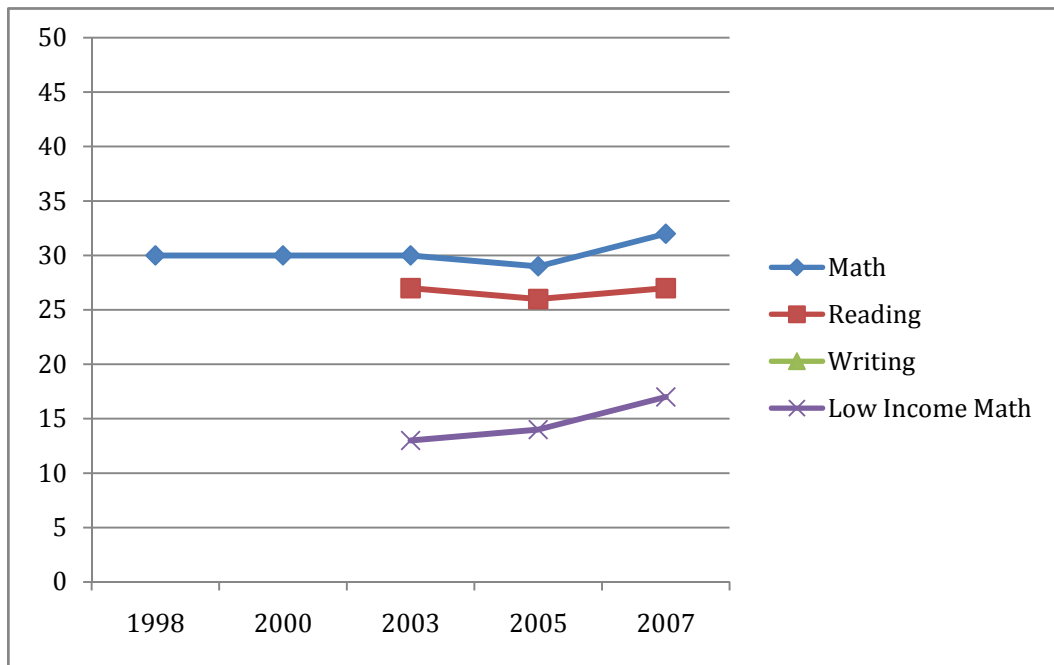
APPENDIX A
PERCENTAGE OF 8TH GRADERS AT OR ABOVE PROFICIENT
LEVEL ON NATIONAL ASSESSMENTS BY STATE

Alabama



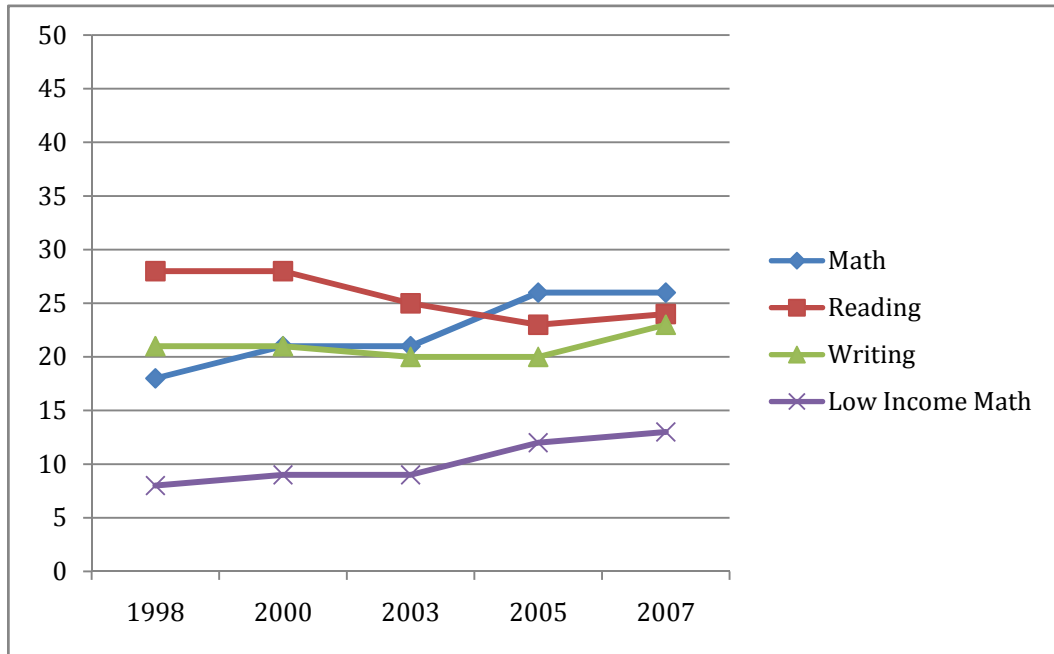
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Alaska



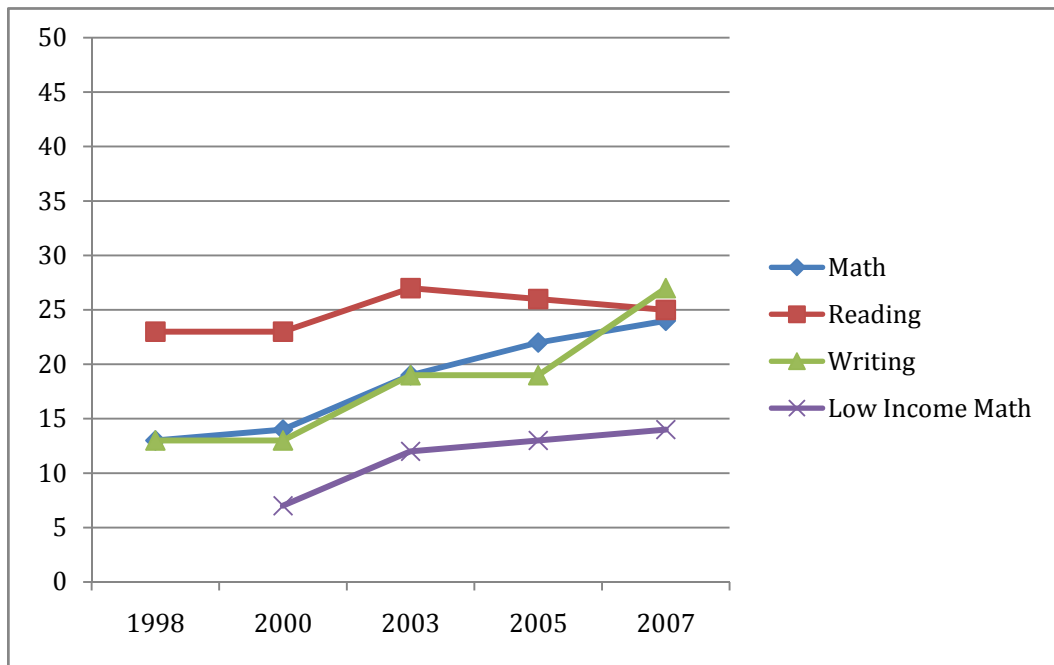
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Arizona



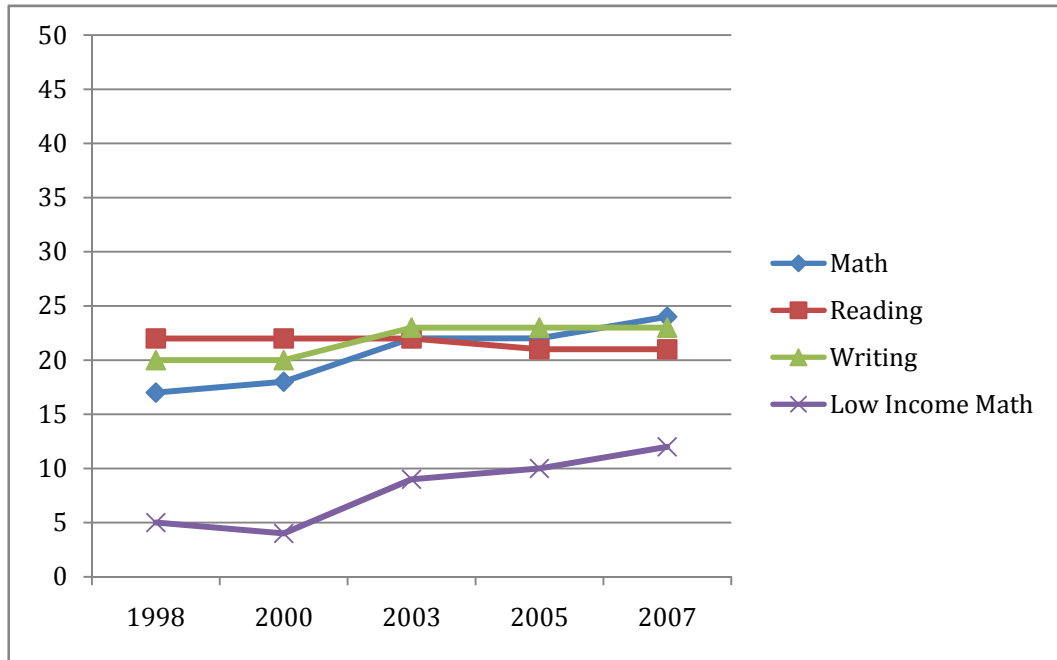
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Arkansas



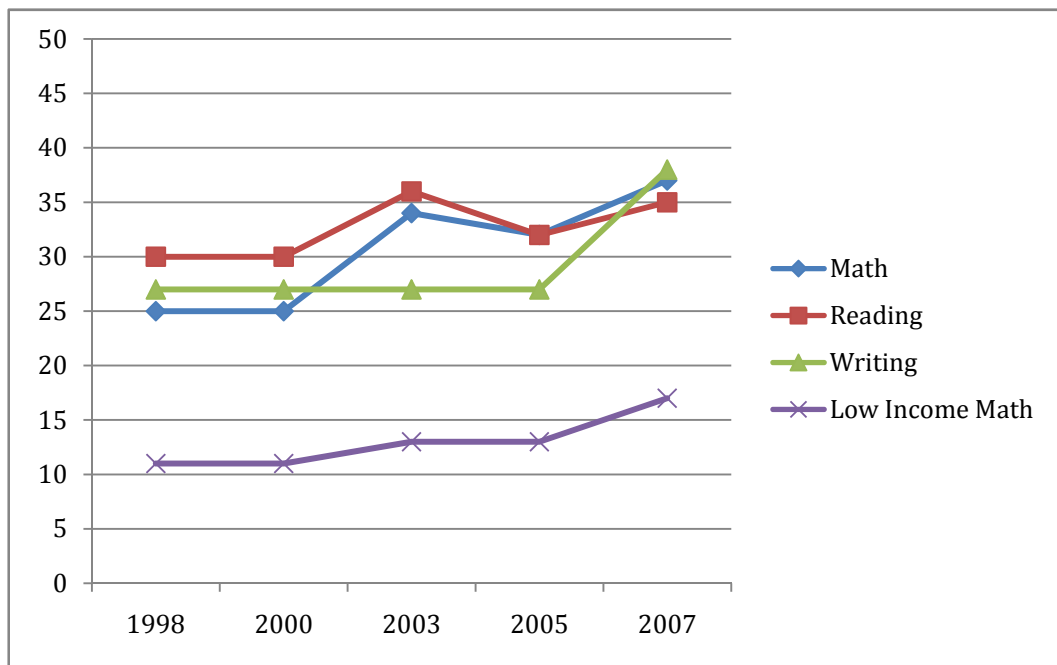
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

California



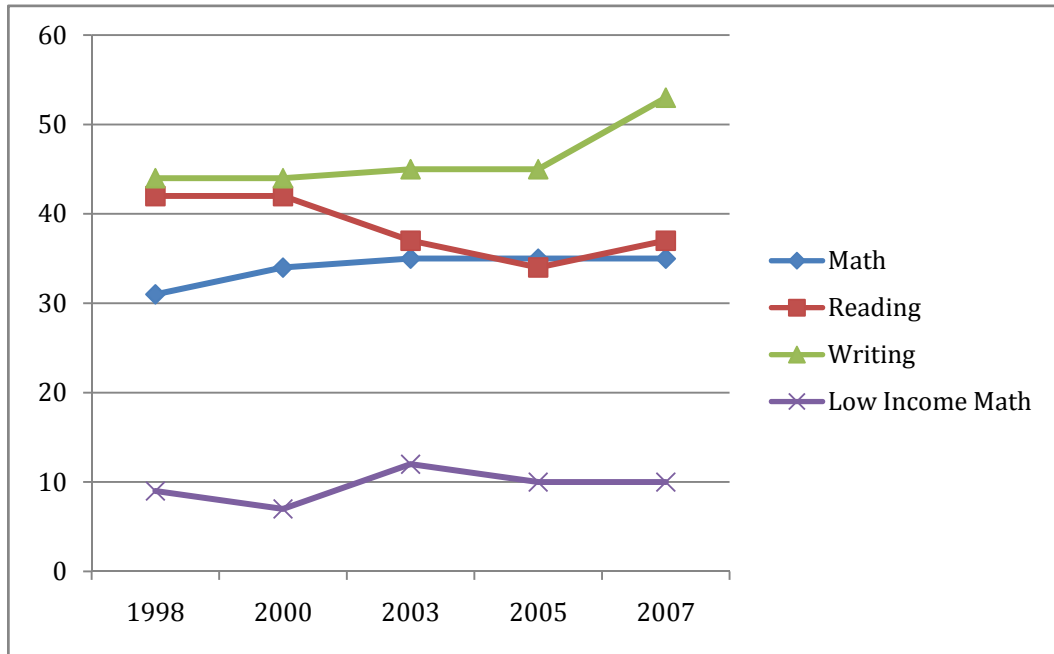
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Colorado



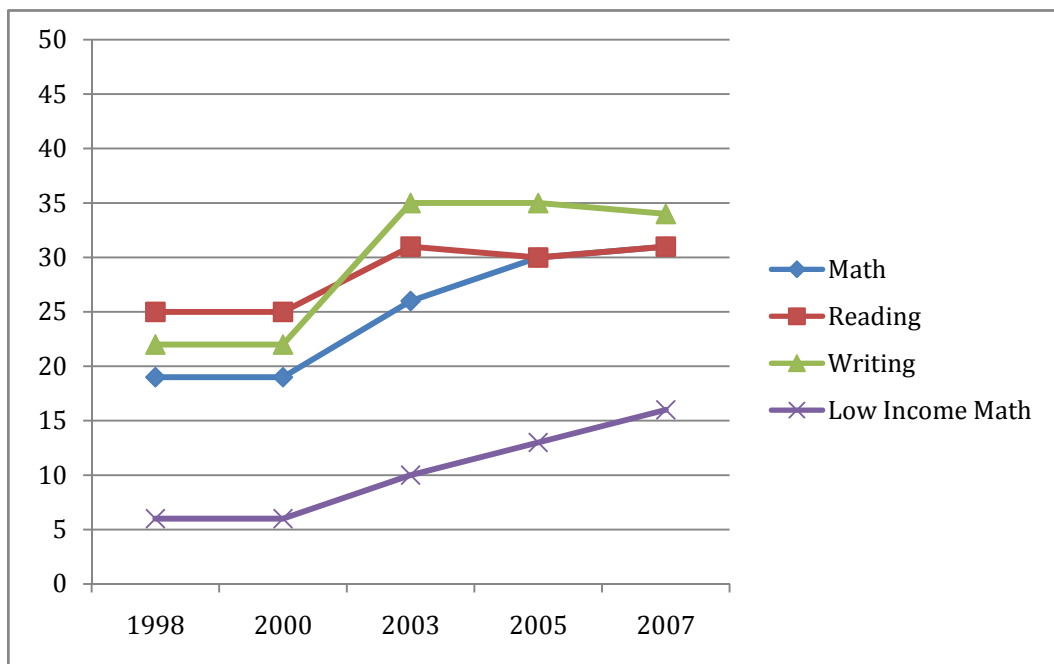
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Connecticut



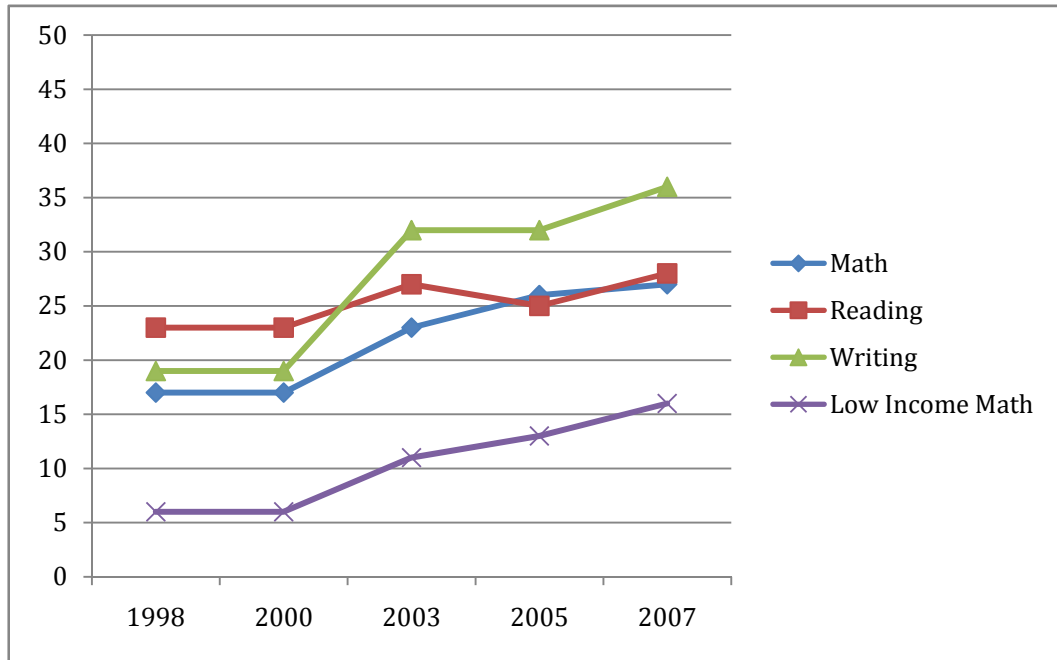
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Delaware



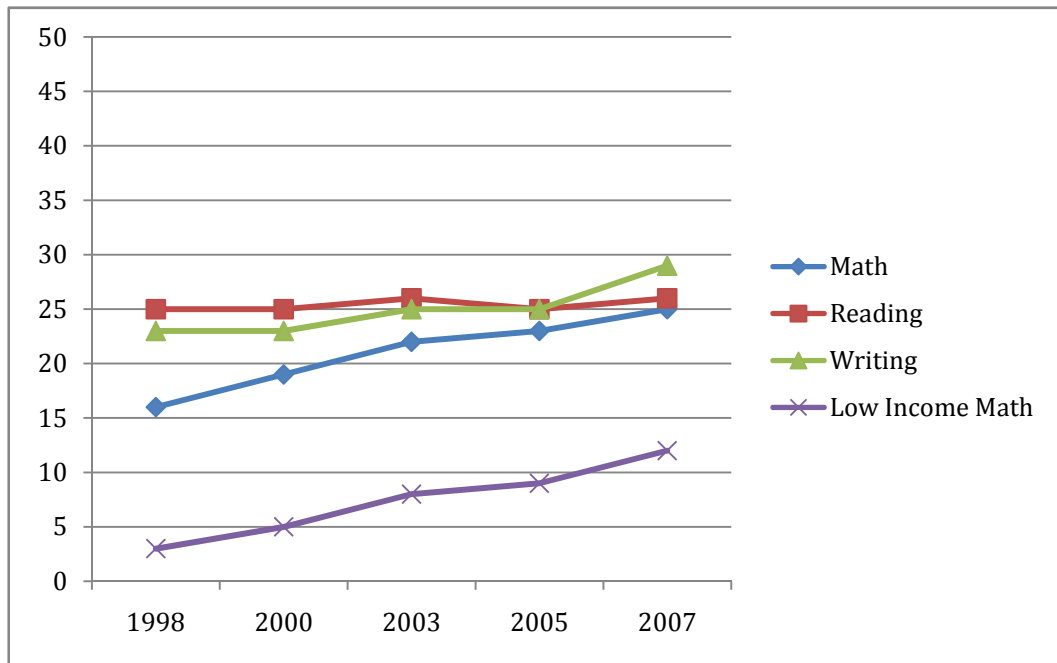
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Florida



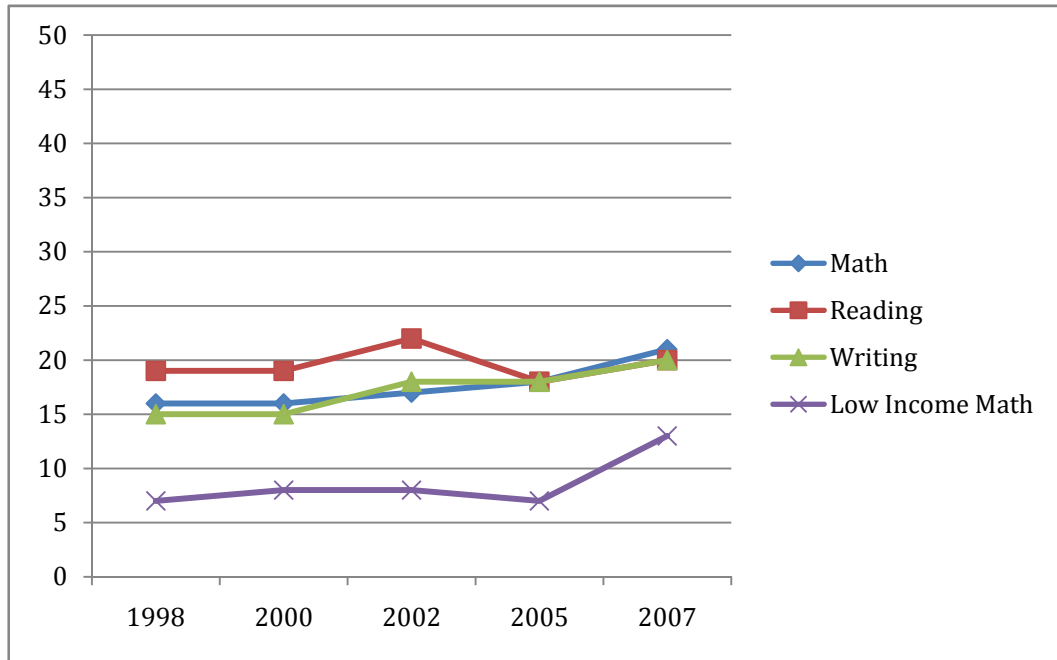
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Georgia



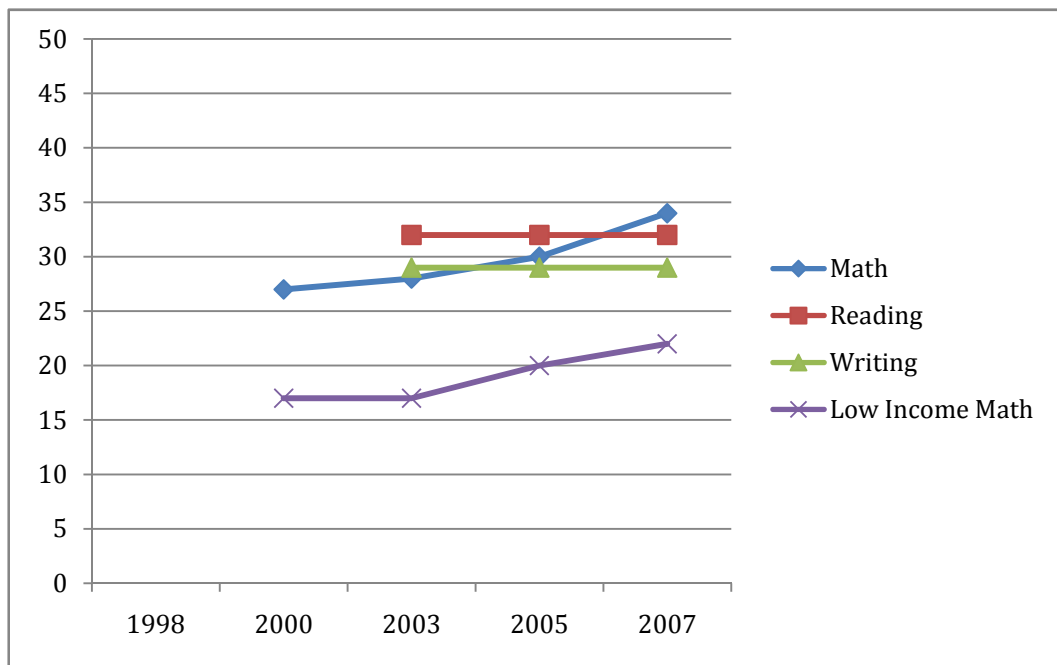
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Hawaii



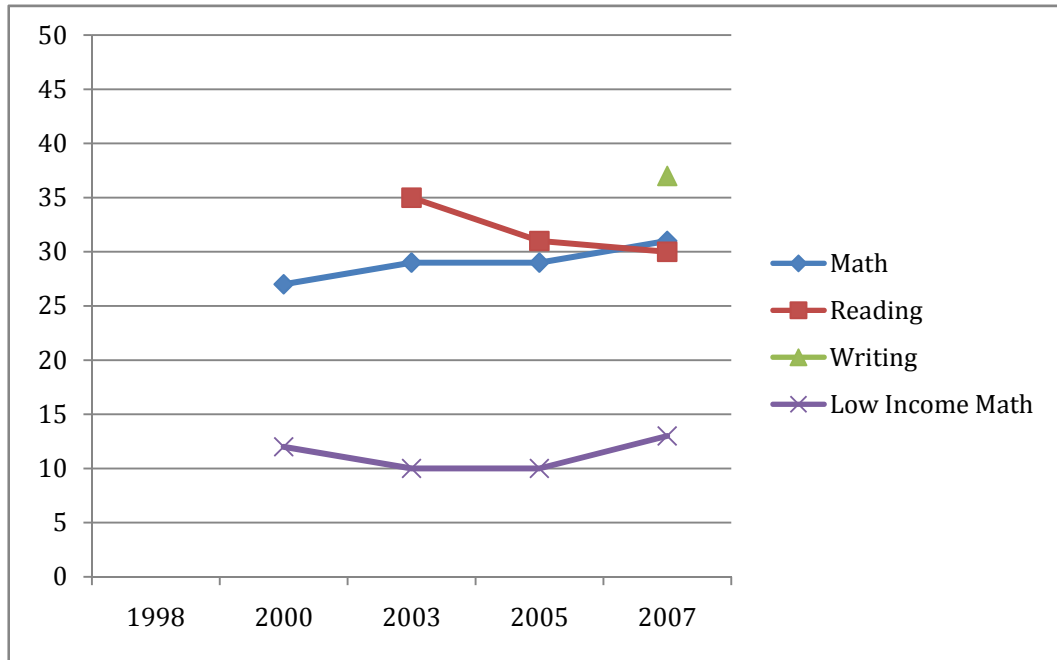
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Idaho



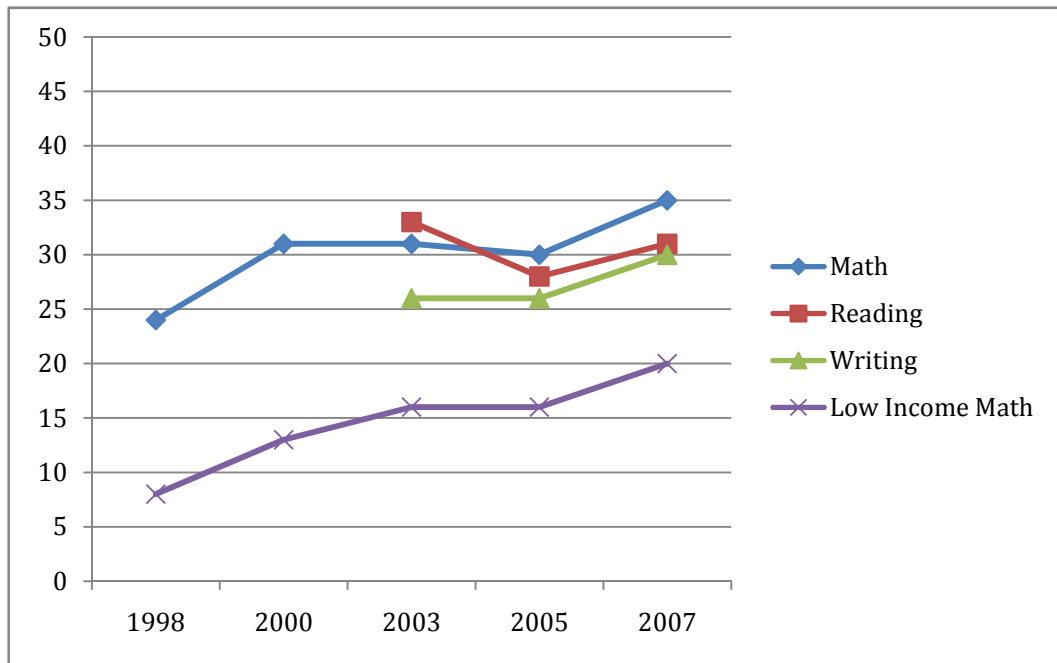
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Illinois



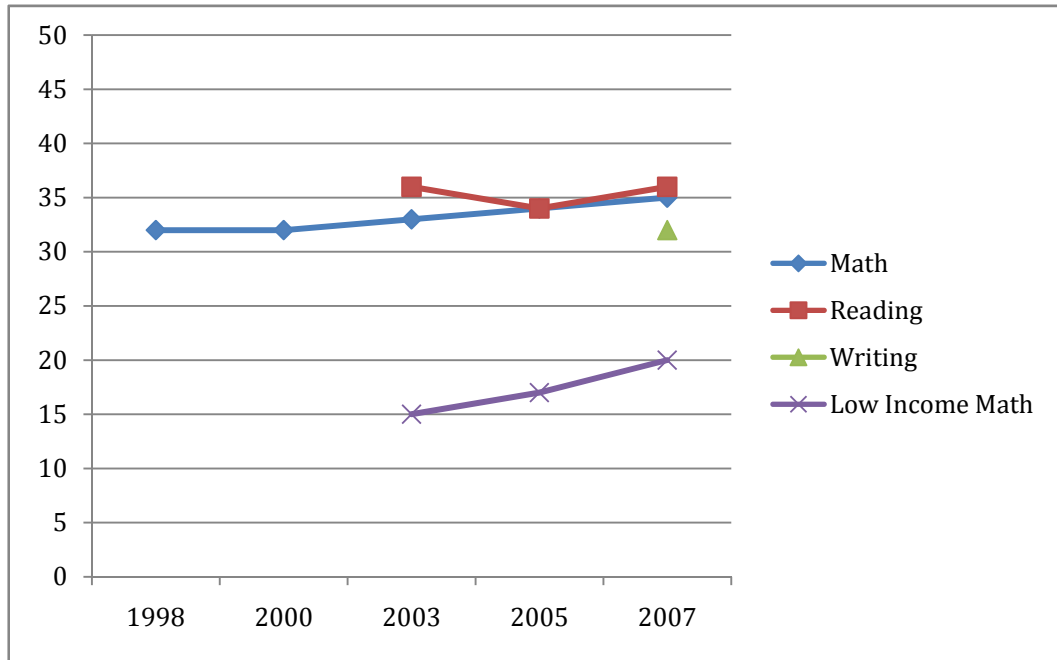
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Indiana



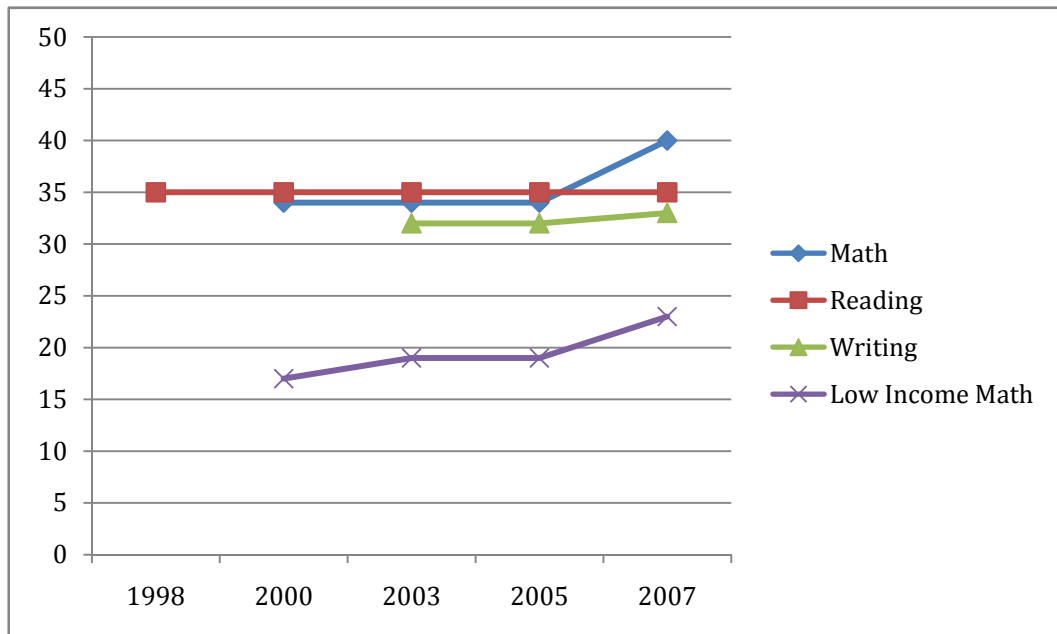
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Iowa



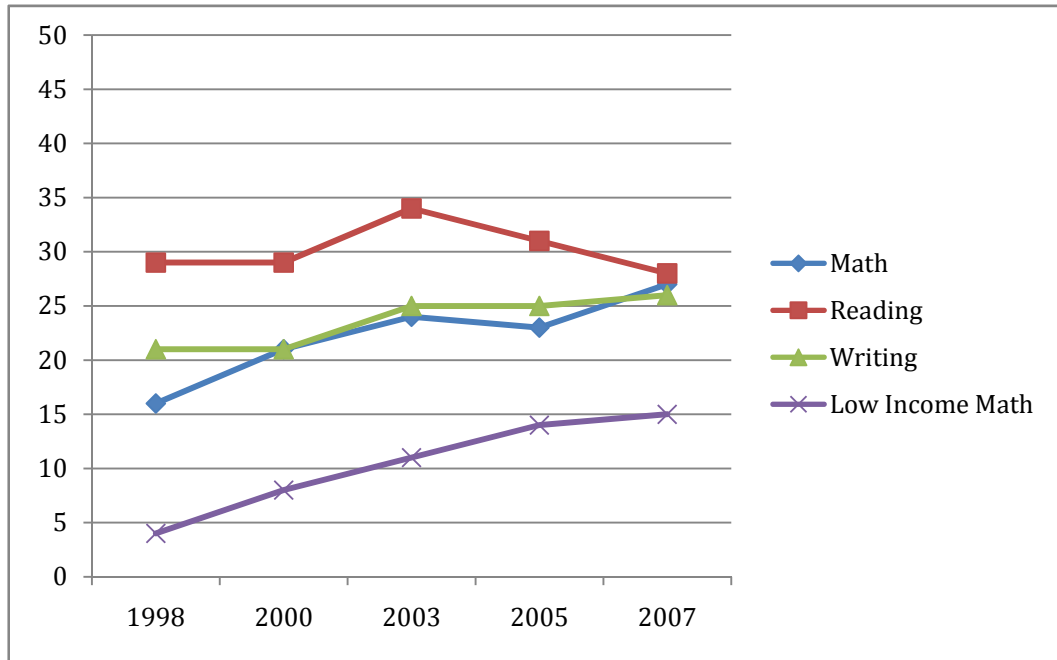
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Kansas



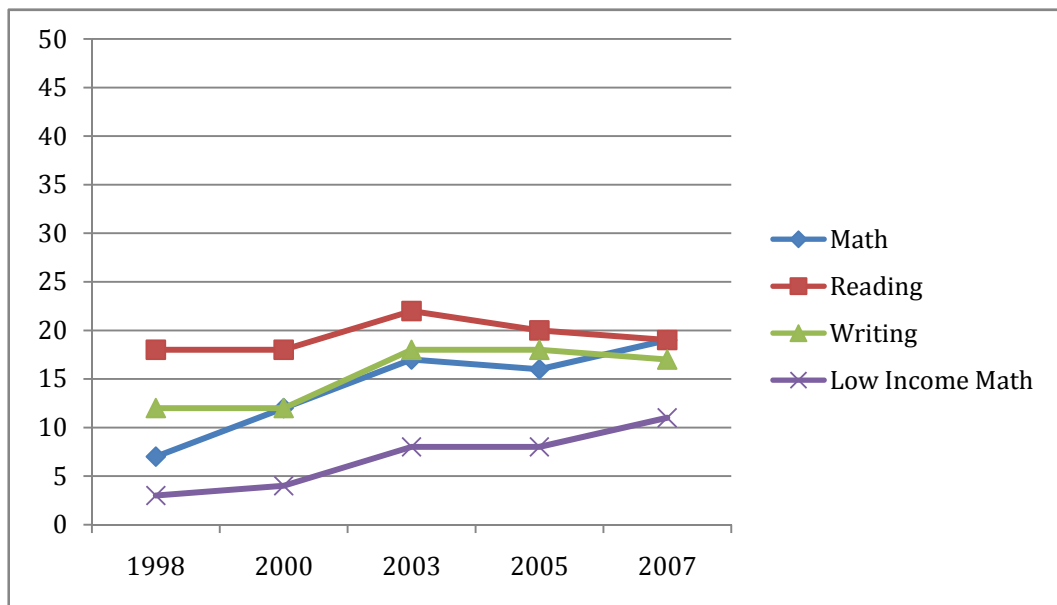
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Kentucky



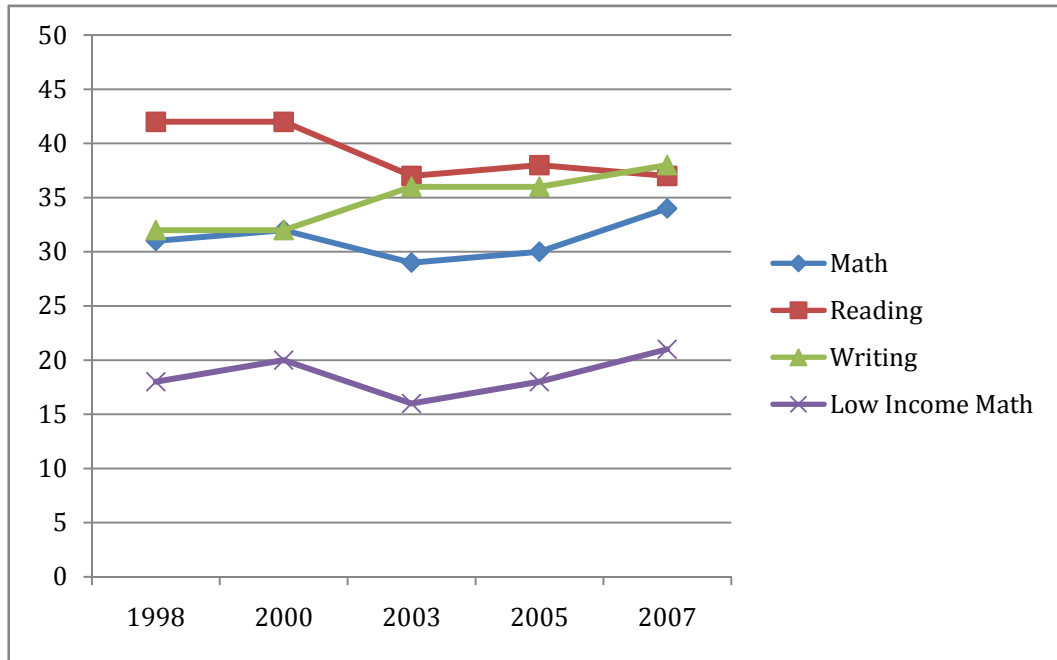
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Louisiana



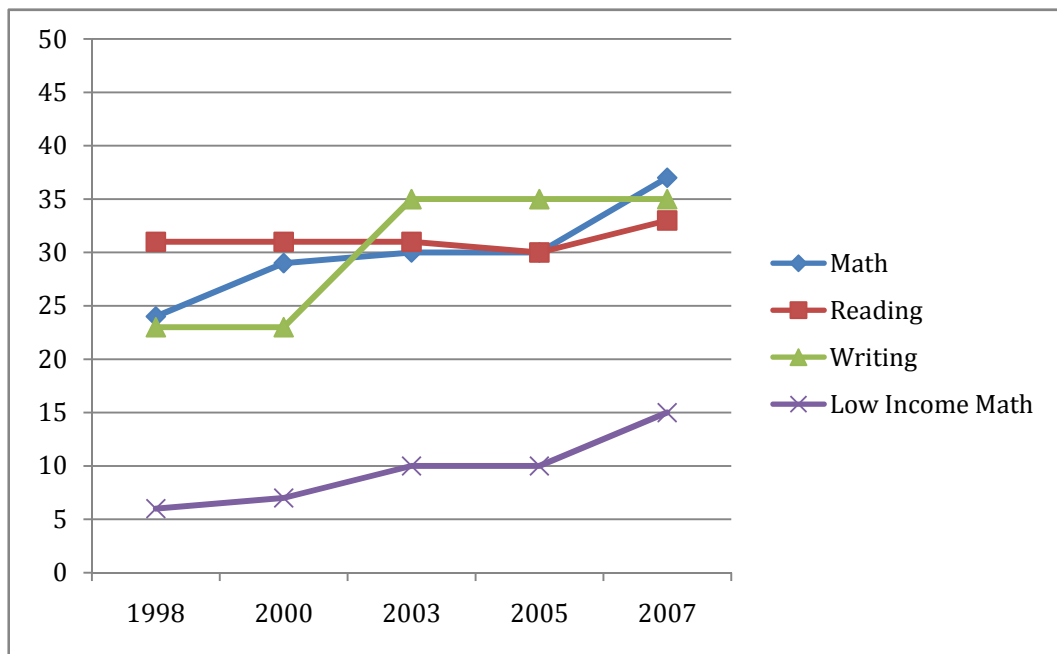
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Maine



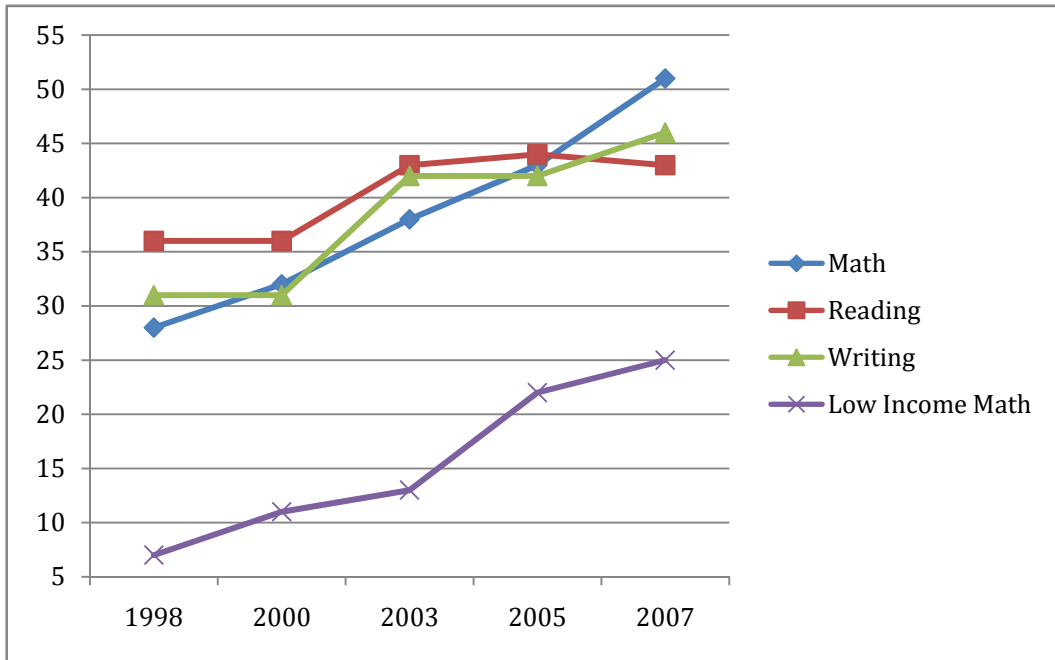
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Maryland



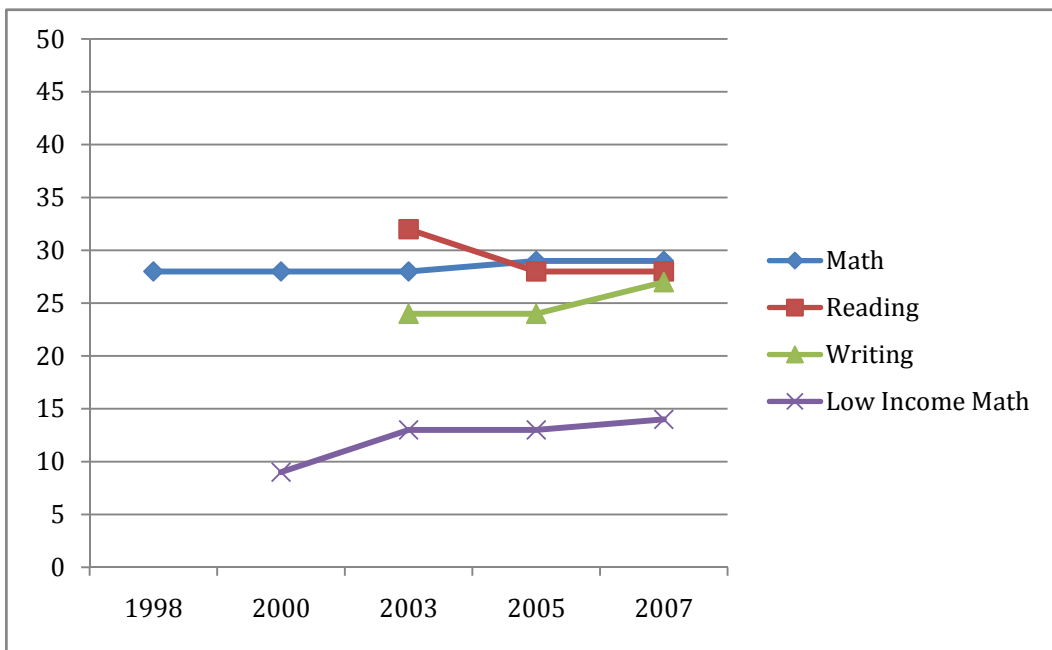
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Massachusetts



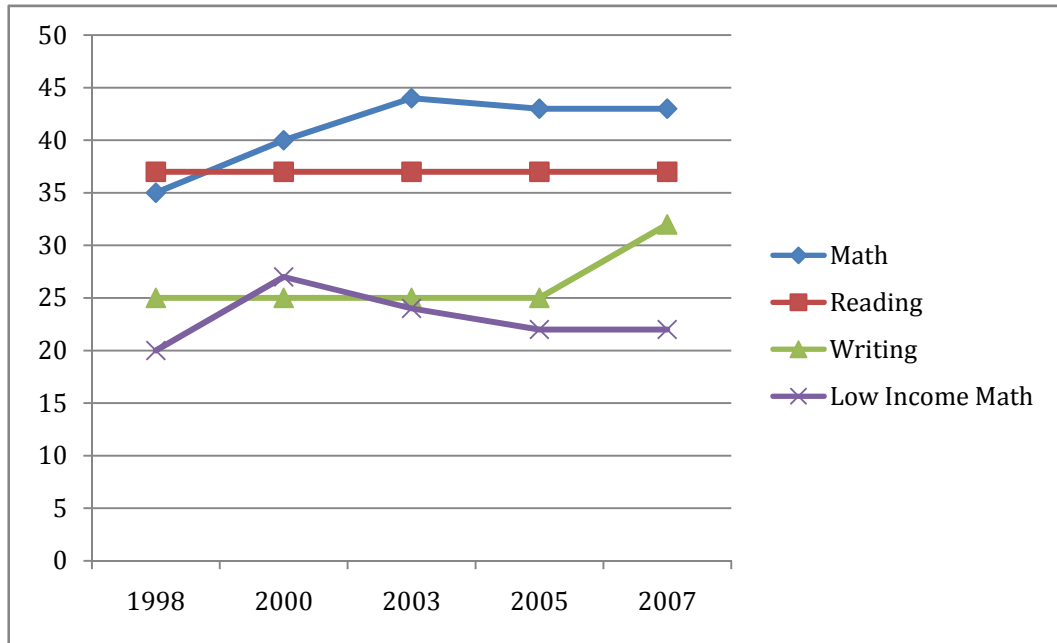
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Michigan



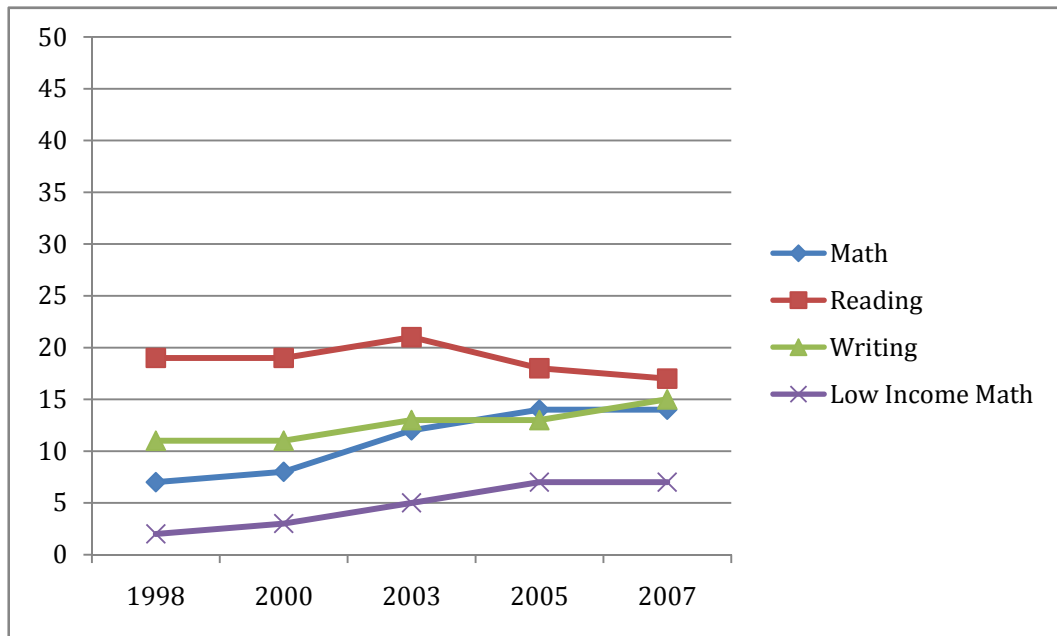
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Minnesota



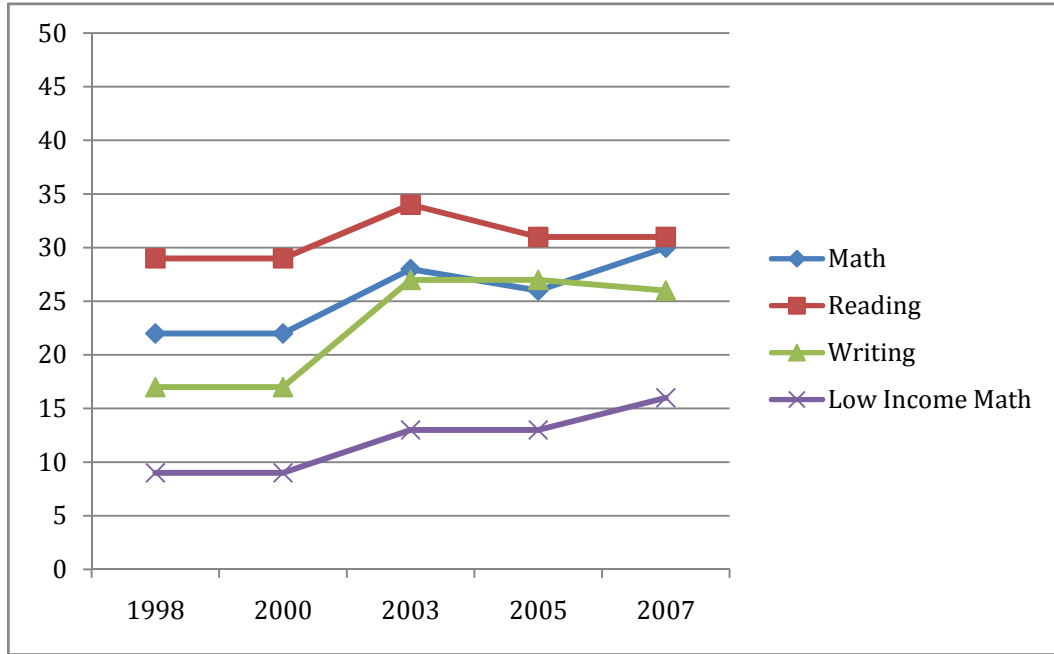
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Mississippi



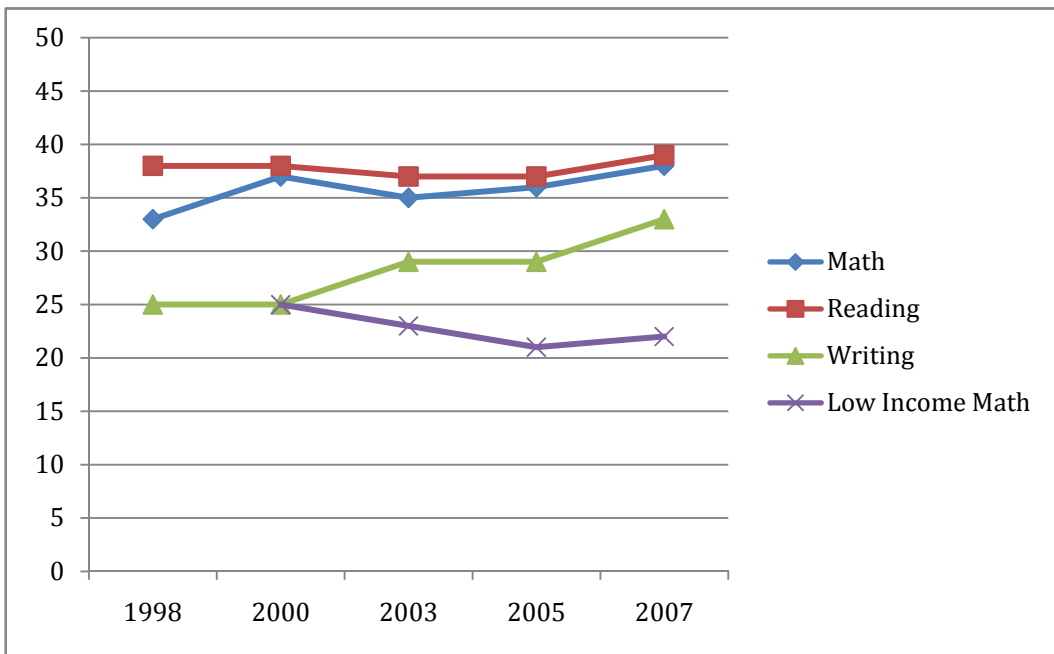
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Missouri



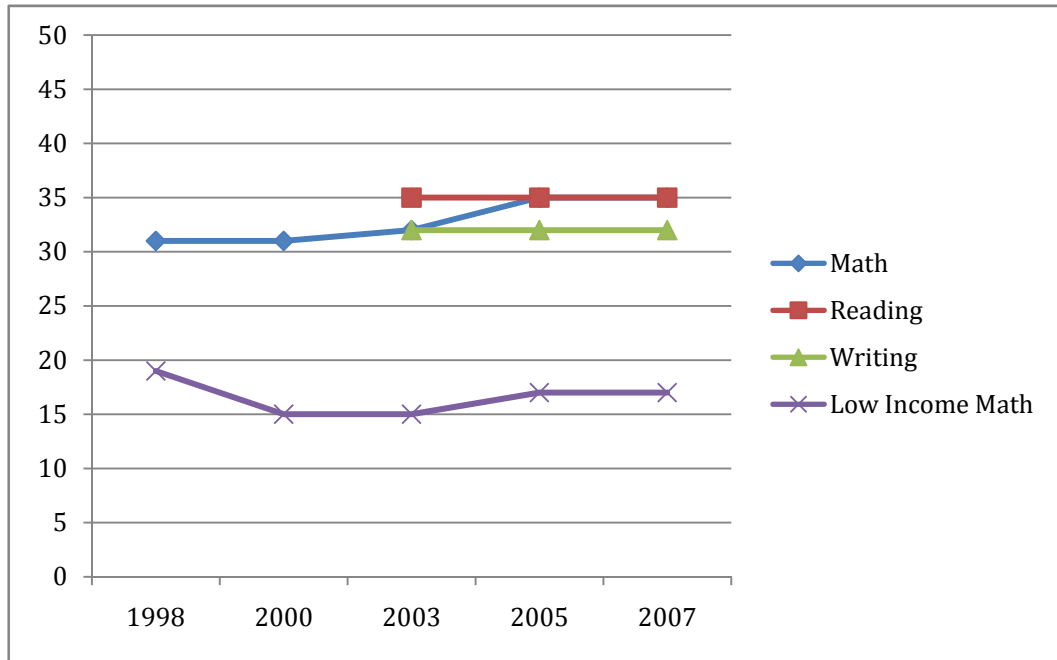
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Montana



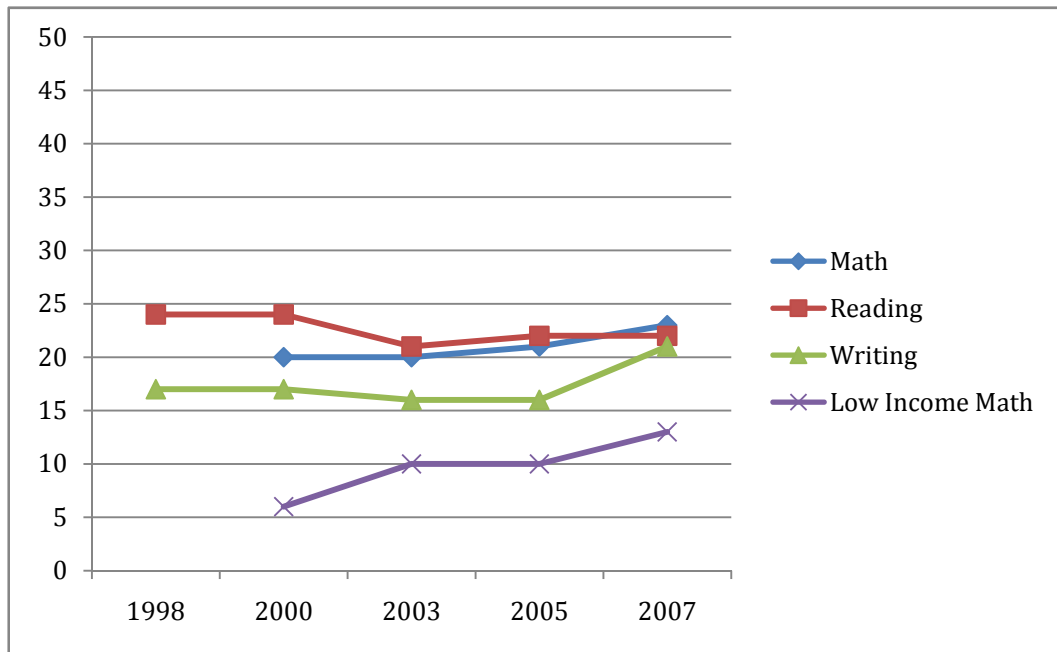
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Nebraska



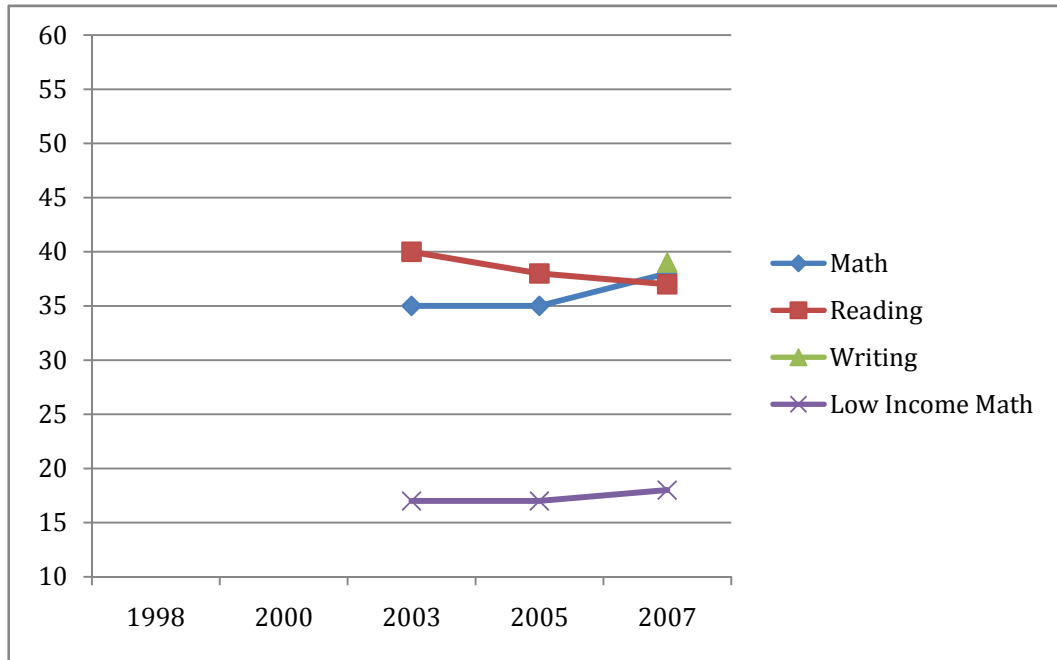
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Nevada



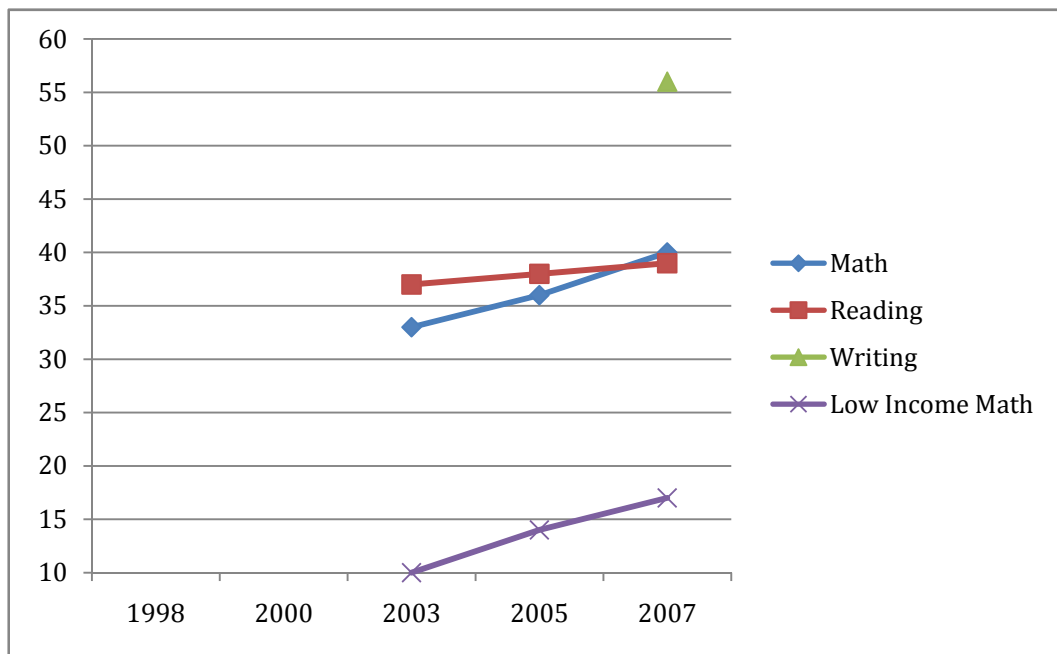
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New Hampshire



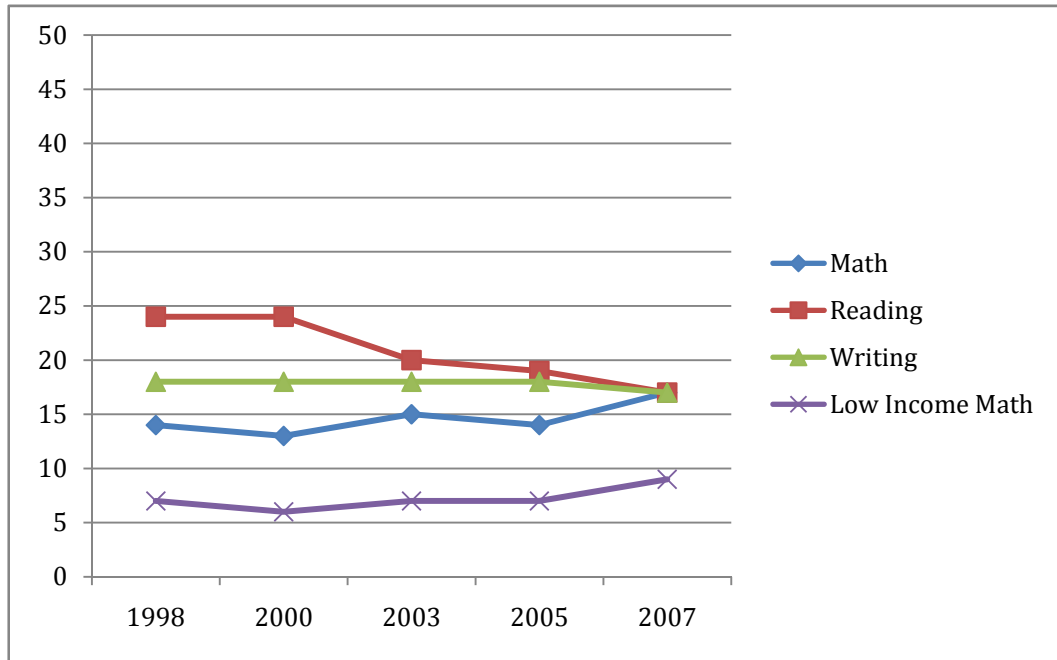
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New Jersey



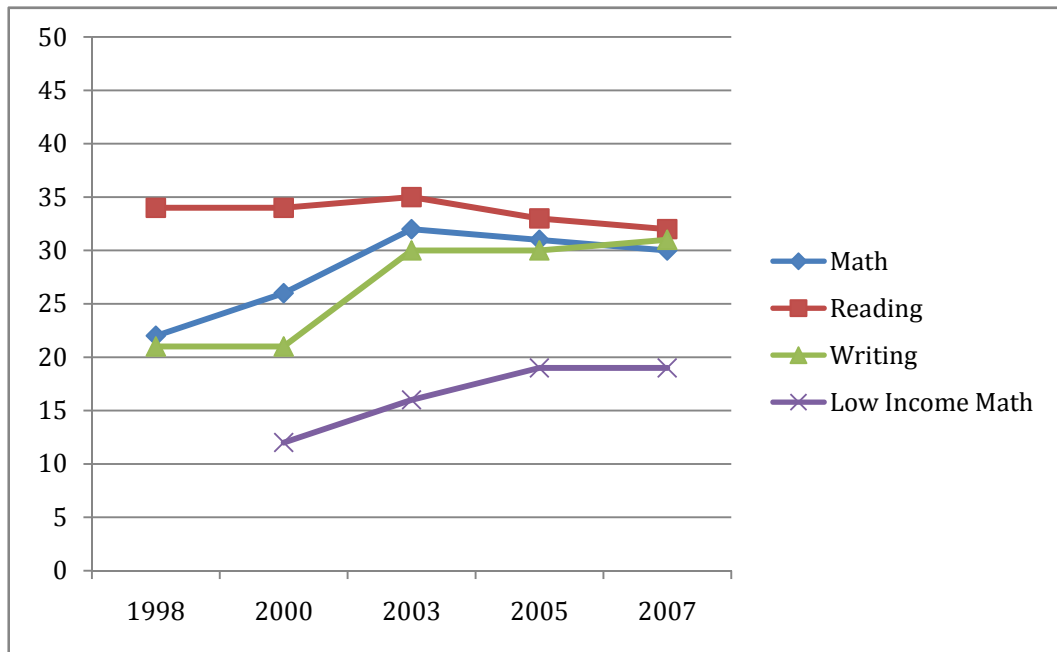
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New Mexico



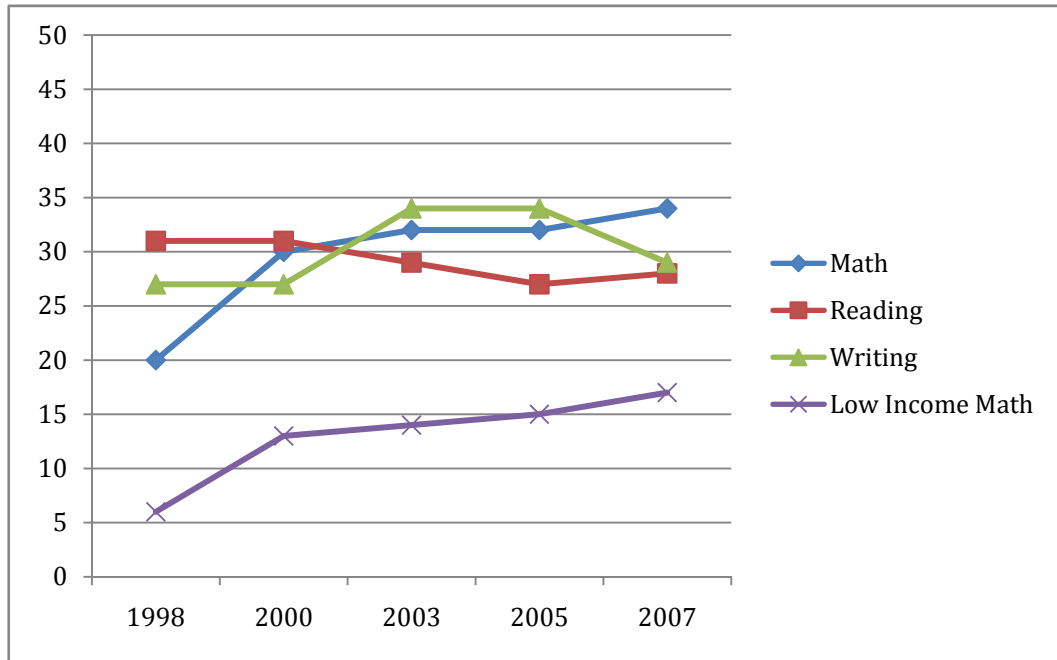
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New York



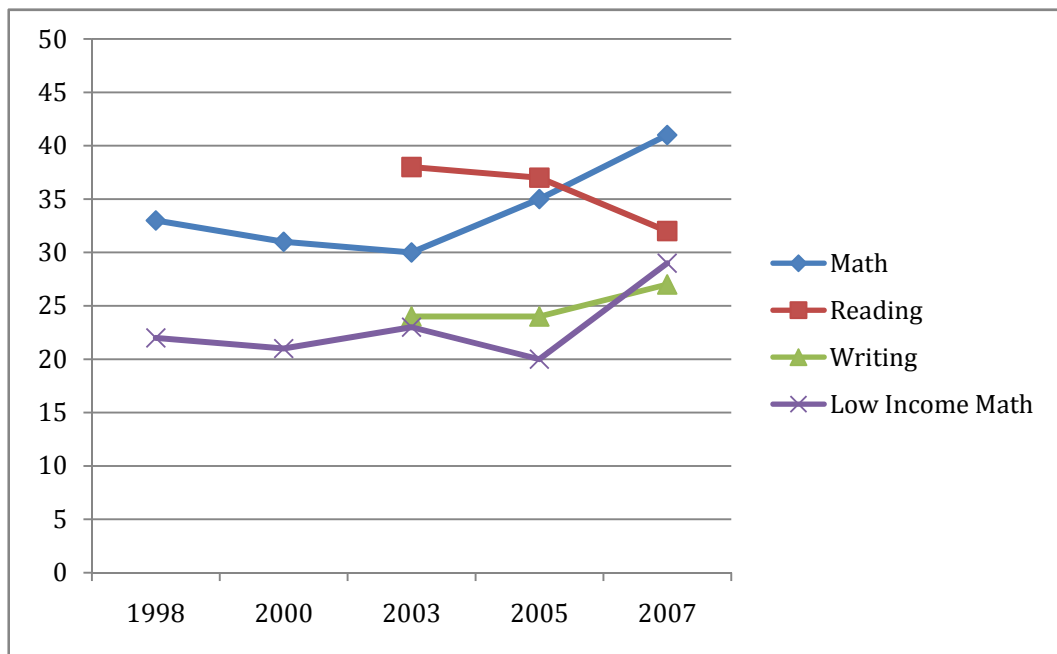
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

North Carolina



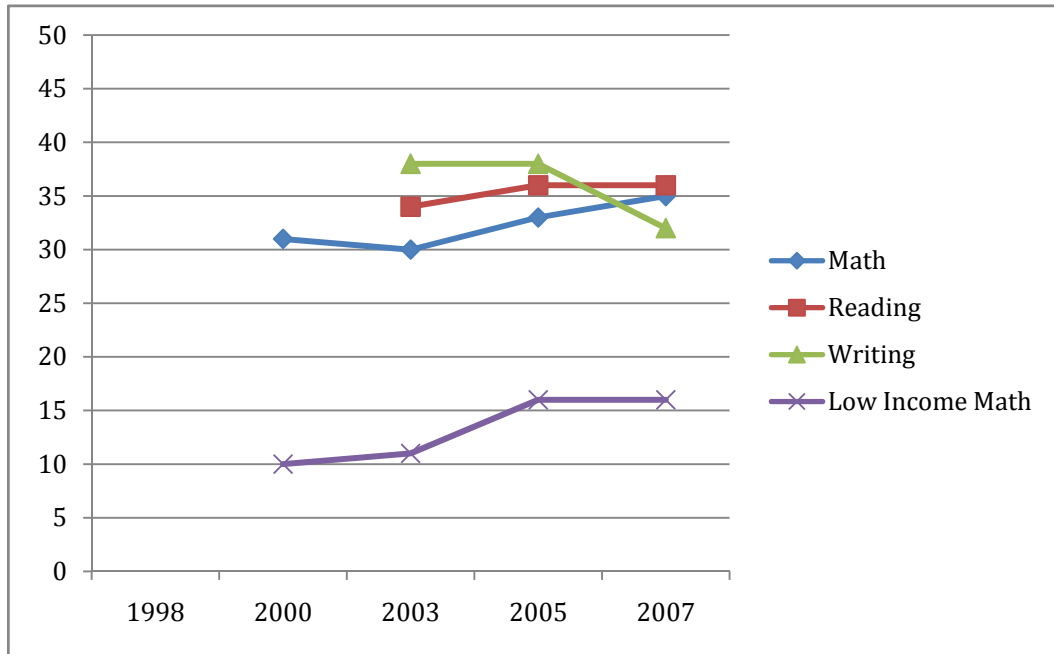
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North Dakota



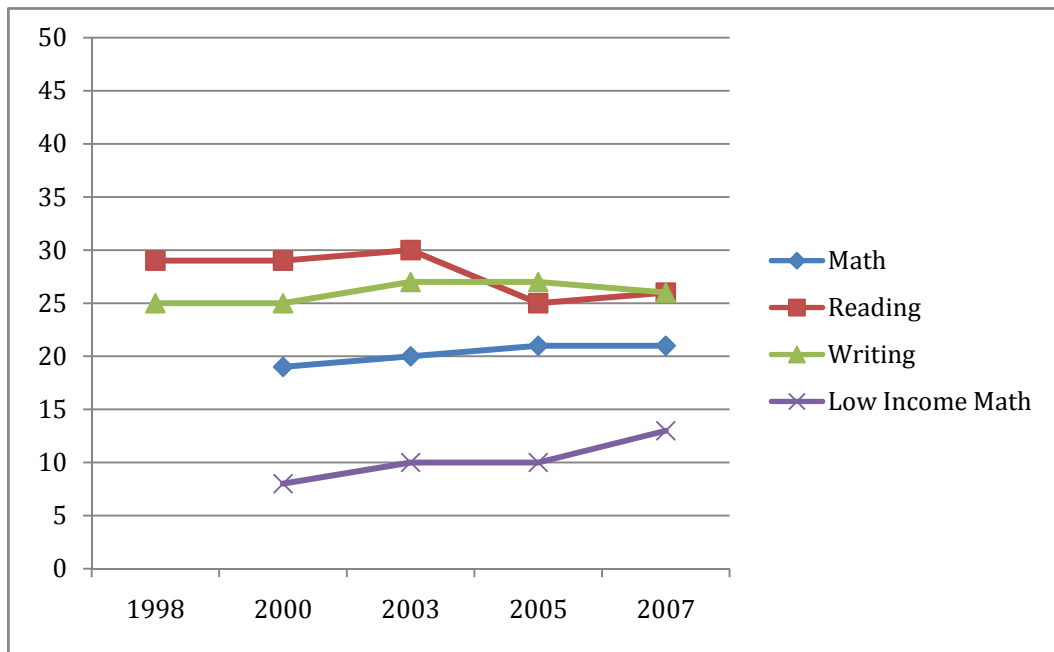
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Ohio



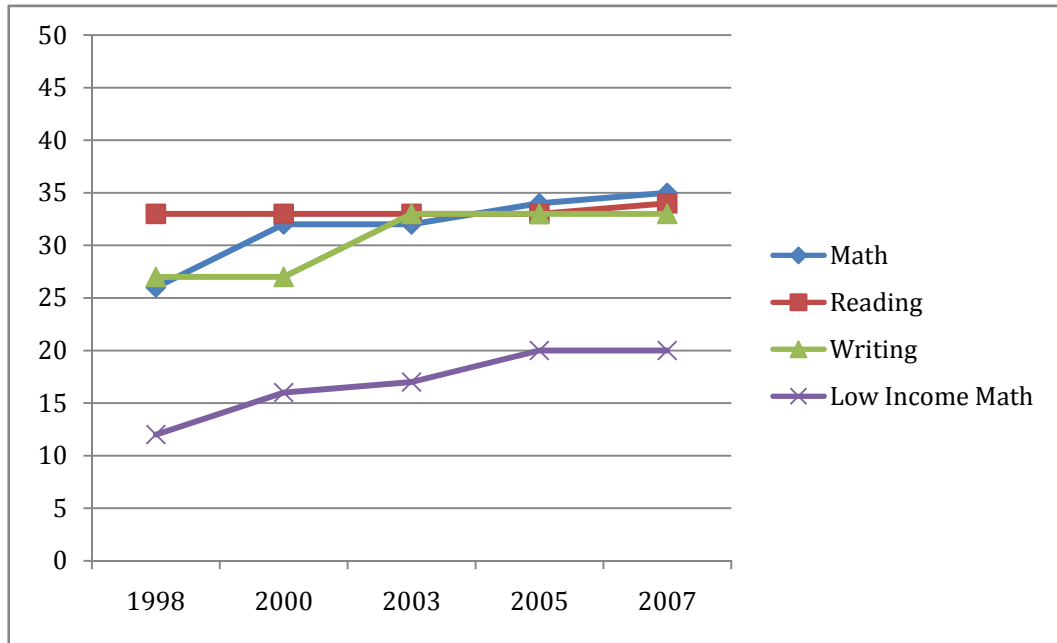
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Oklahoma



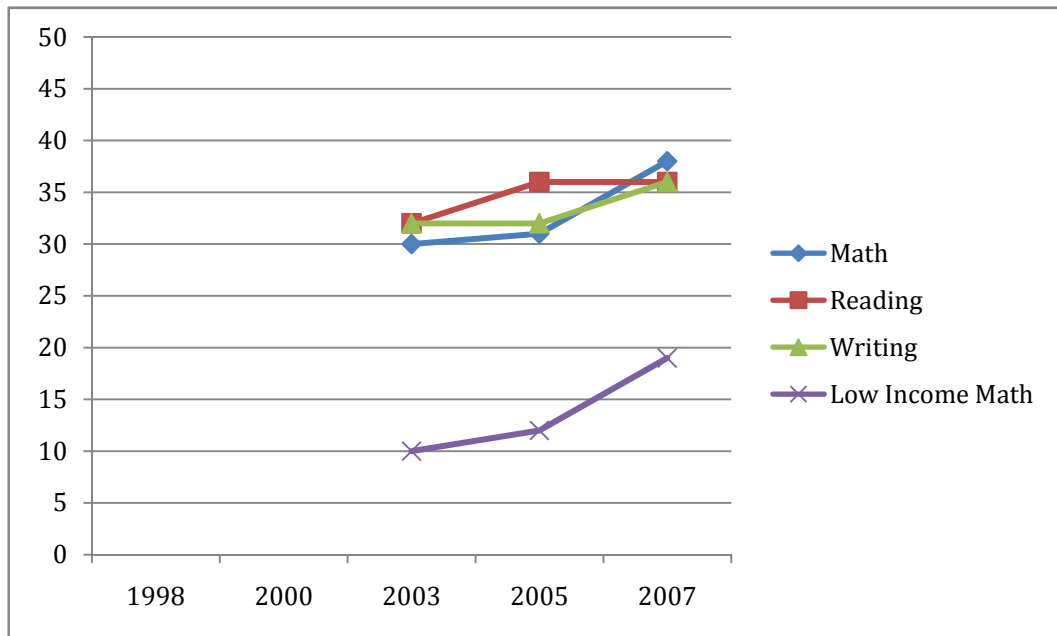
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Oregon



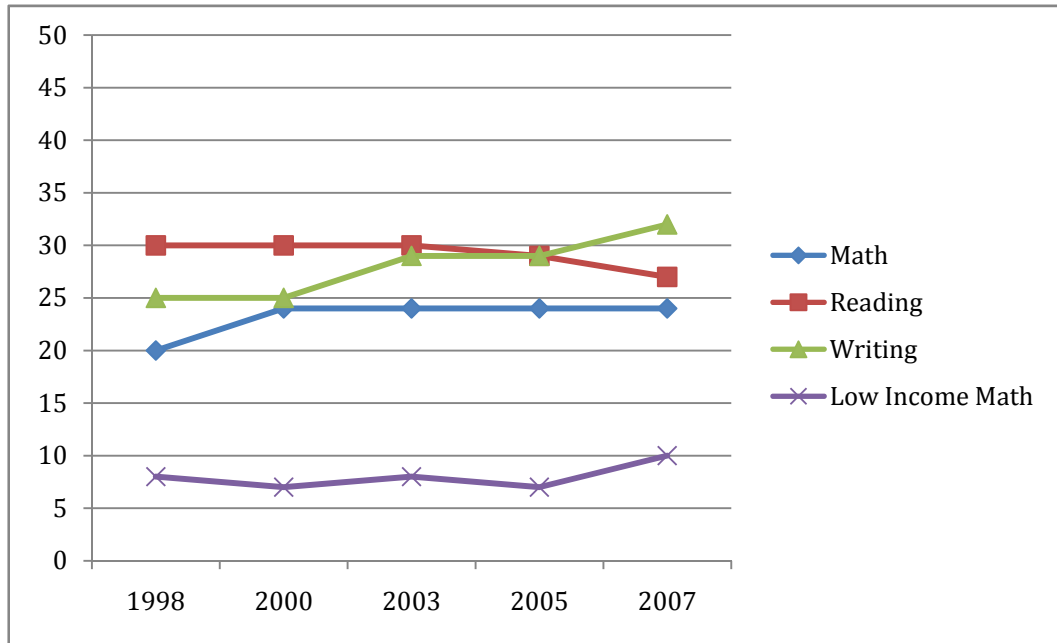
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Pennsylvania



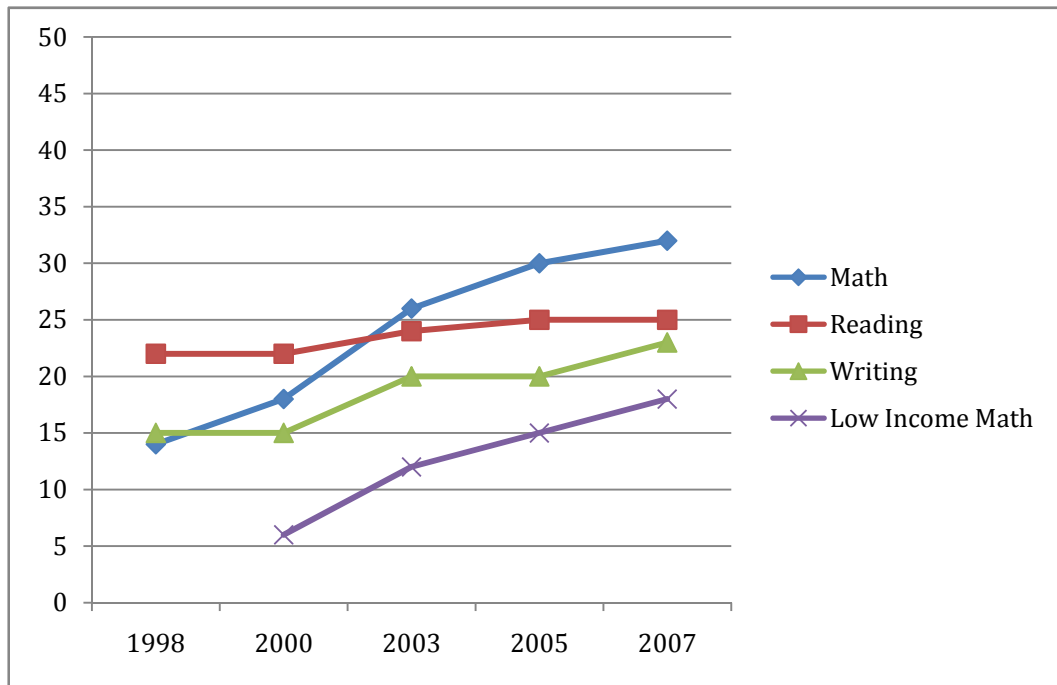
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Rhode Island



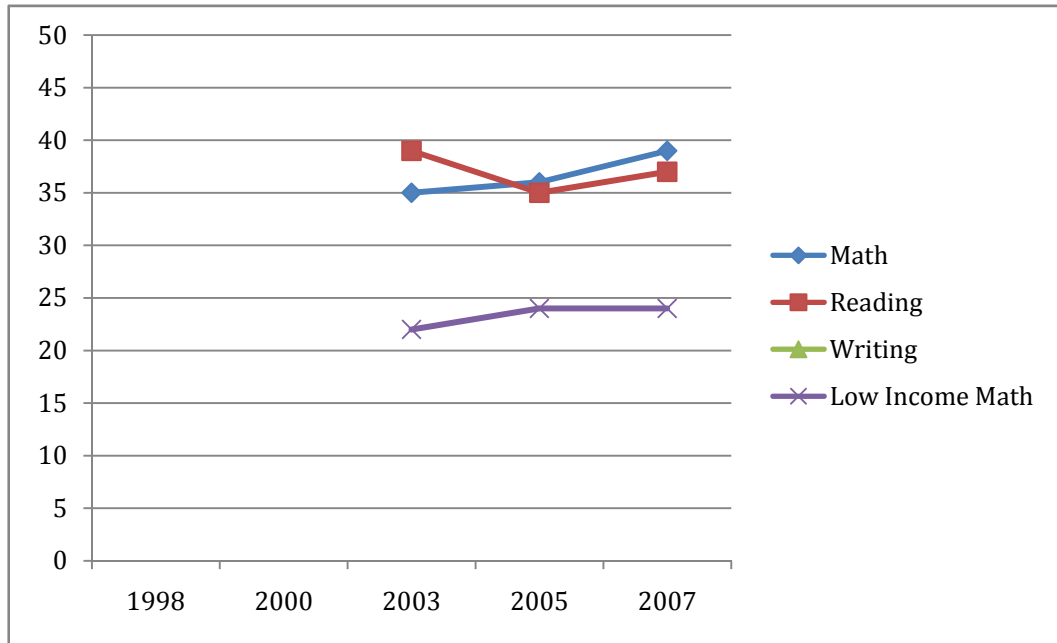
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

South Carolina



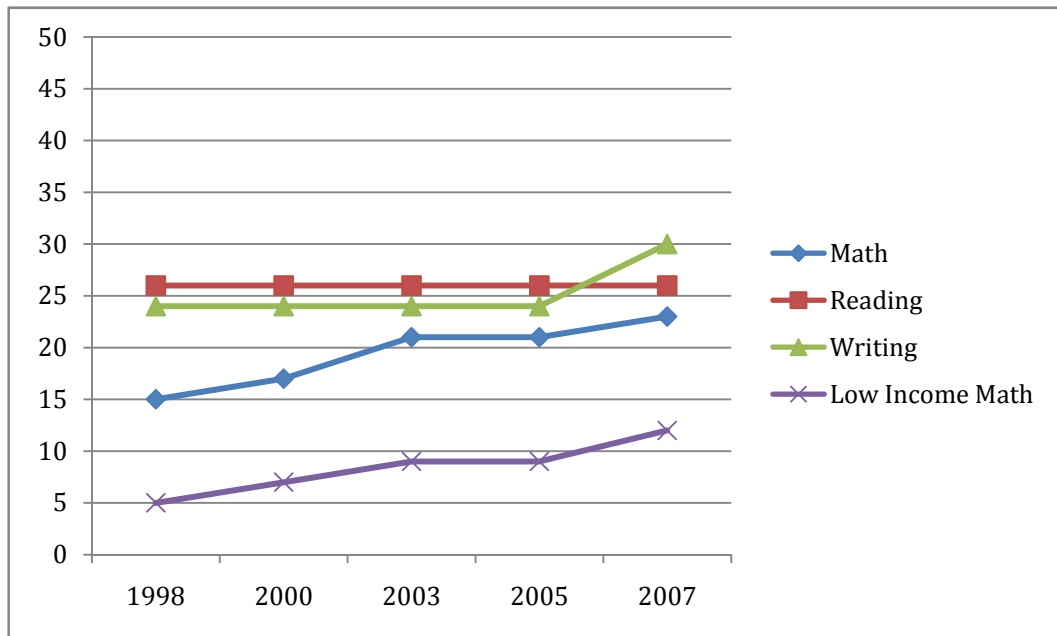
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South Dakota



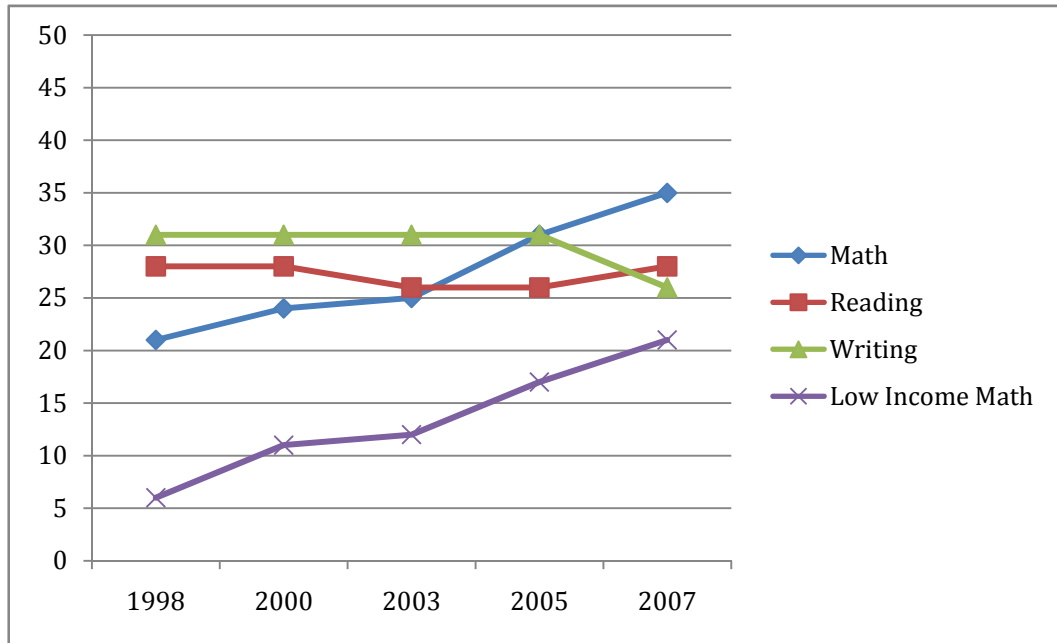
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Tennessee



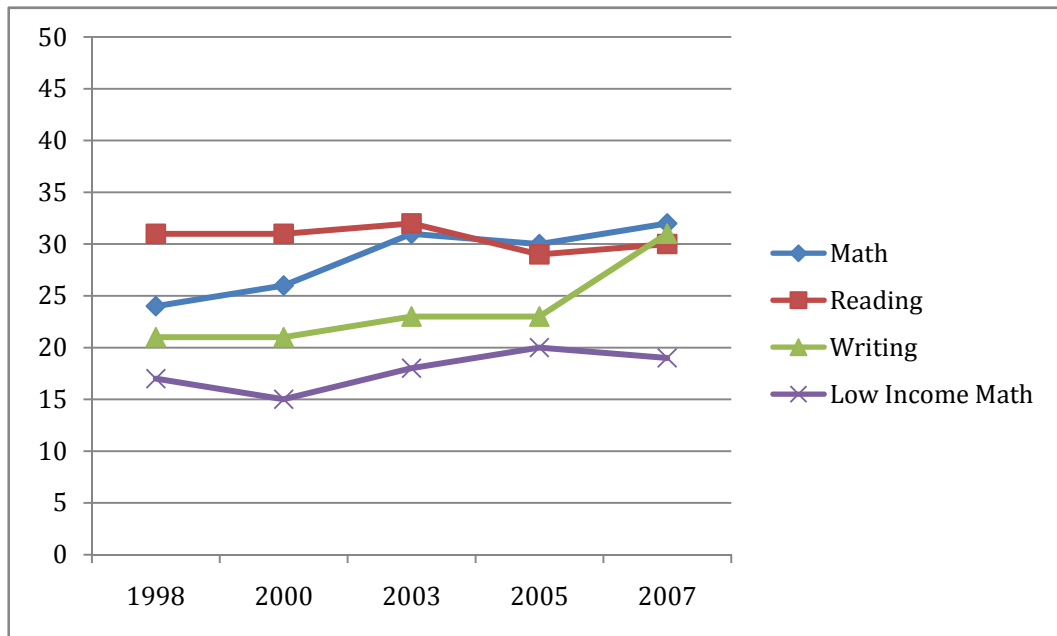
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Texas



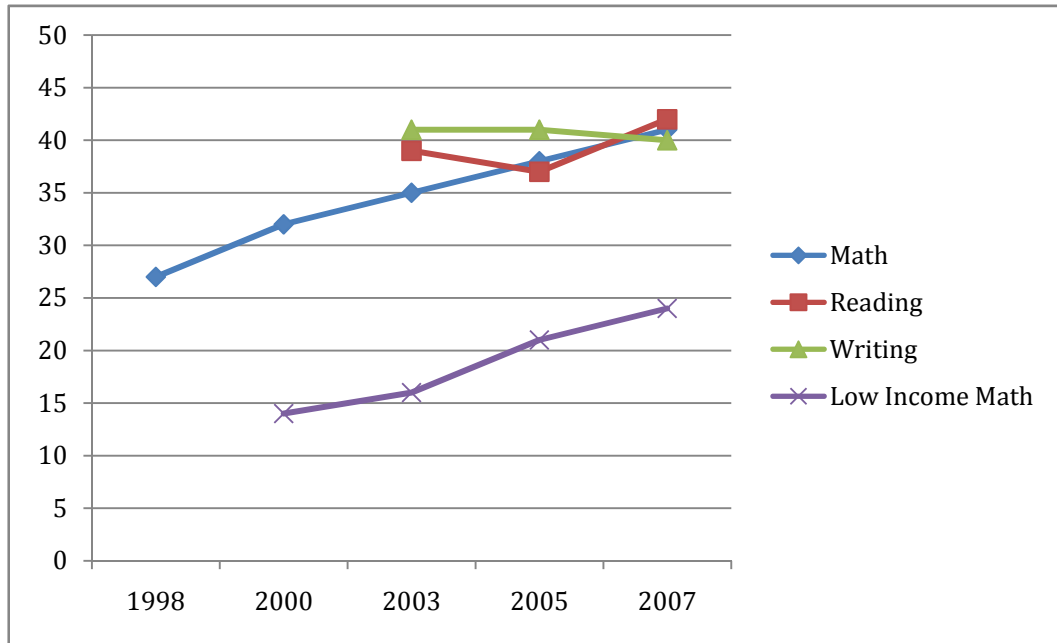
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Utah



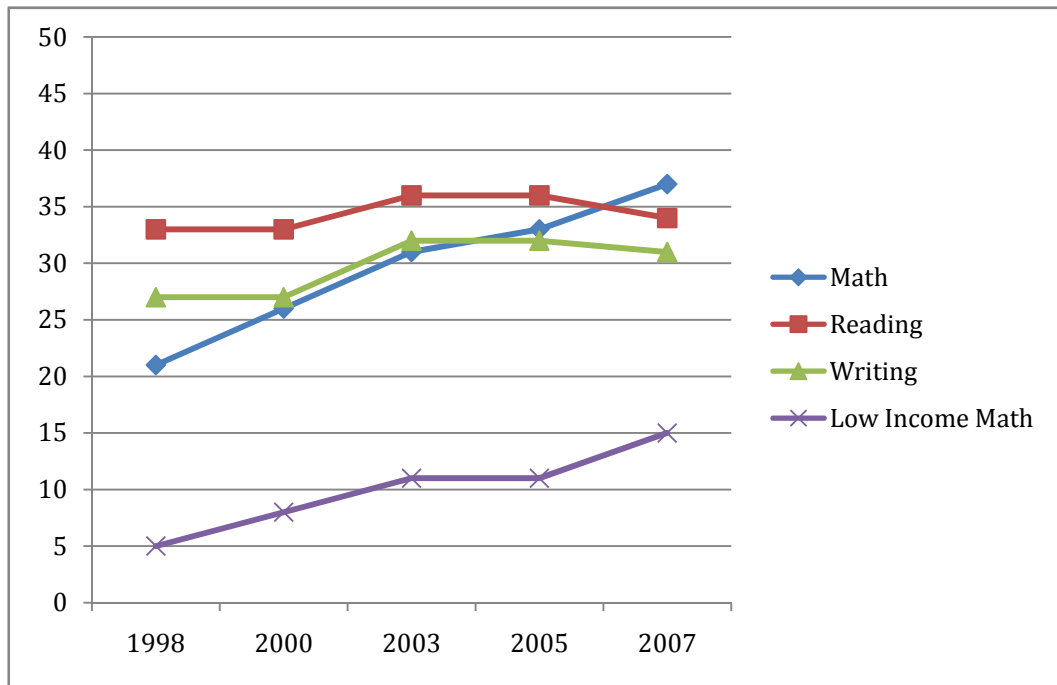
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Vermont



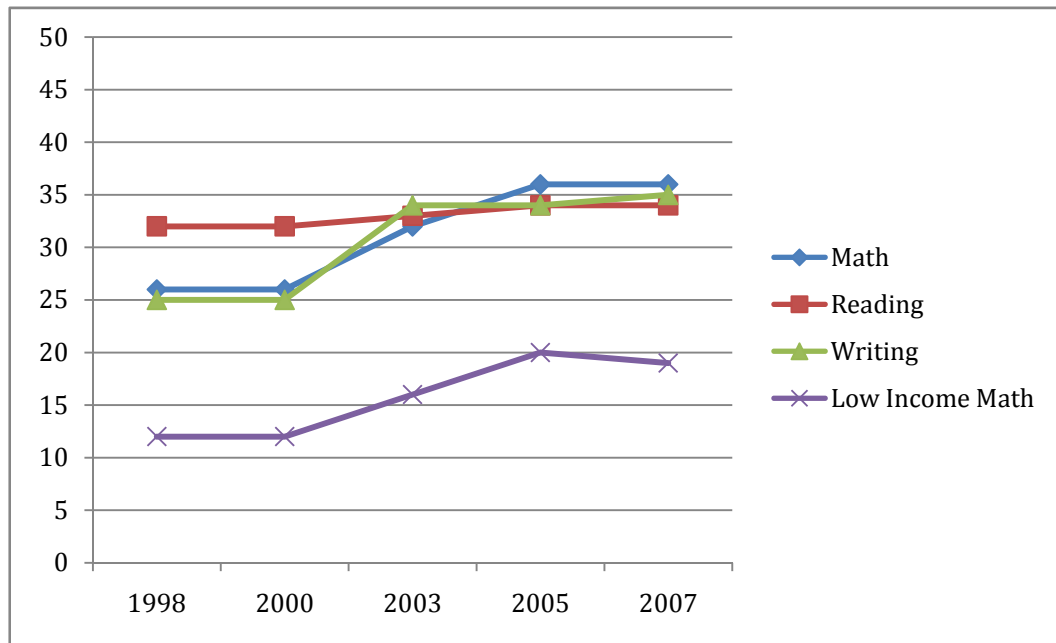
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Virginia



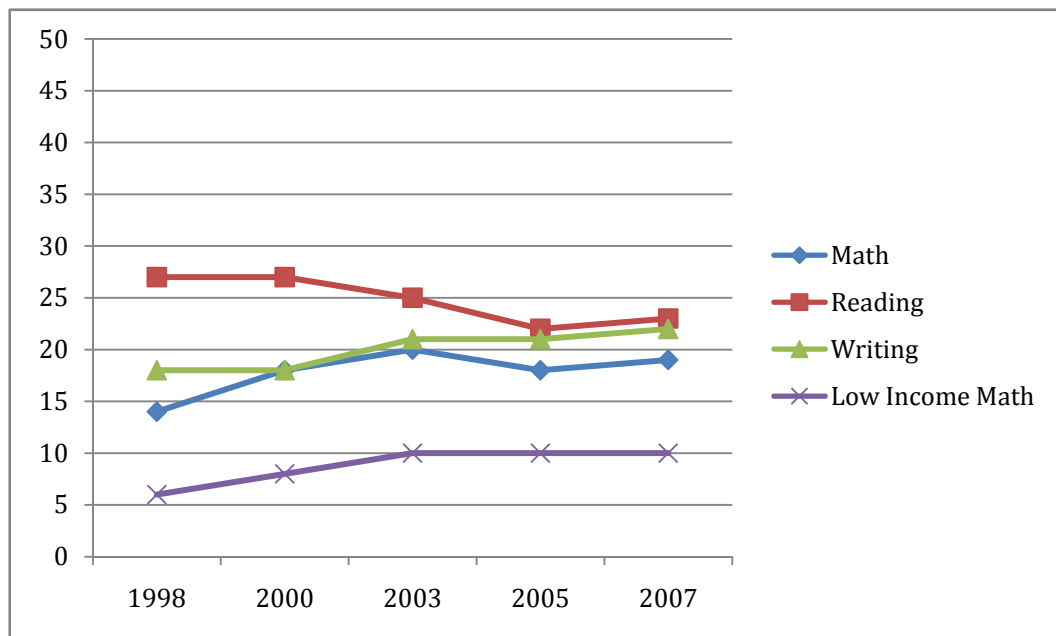
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Washington



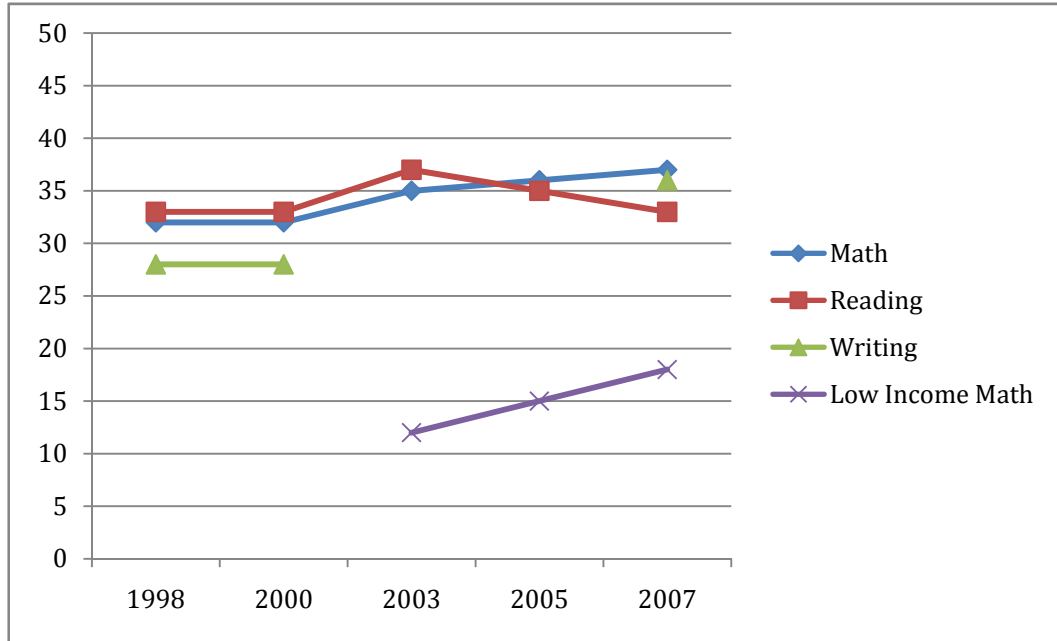
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

West Virginia



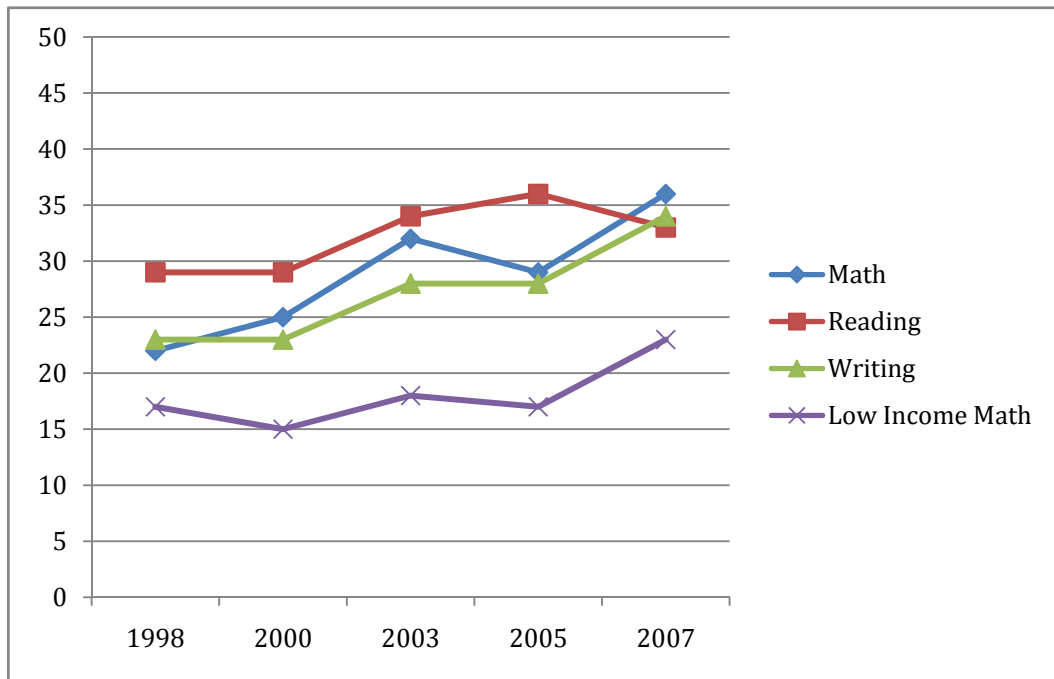
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Wisconsin



Source: Measuring Up 2000, 2002, 2004, 2006, 2008

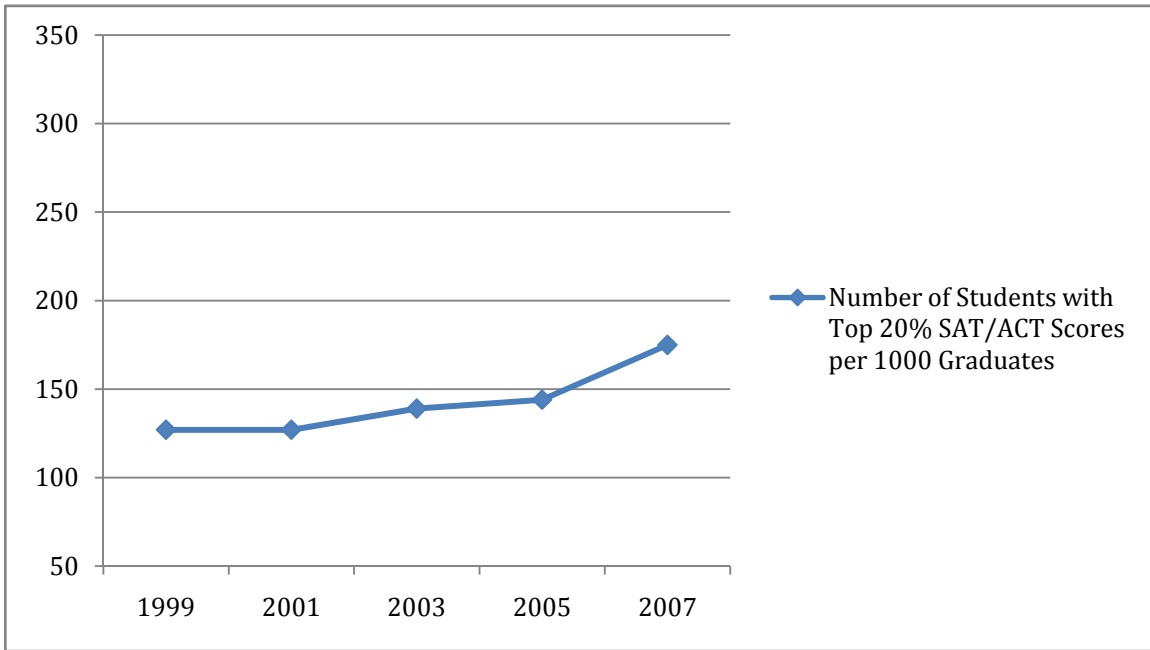
Wyoming



Source: Measuring Up 2000, 2002, 2004, 2006, 2008

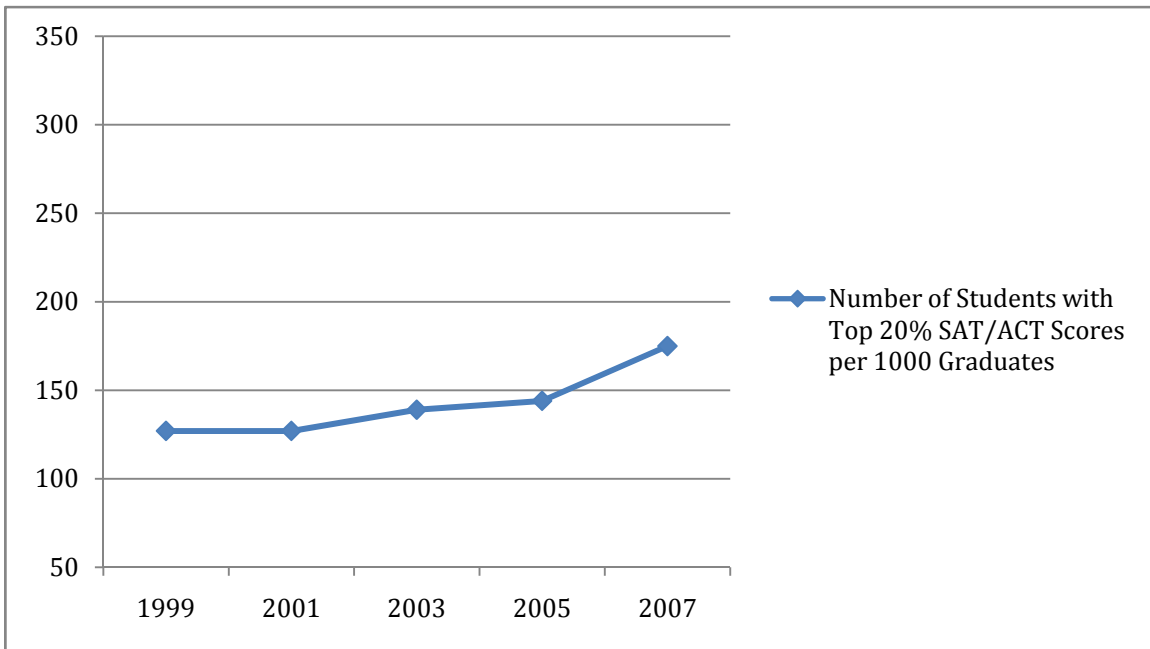
APPENDIX B
NUMBER OF STUDENTS WITH SAT/ACT SCORES IN THE TOP
TWENTY PERCENT PER ONE THOUSAND HIGH SCHOOL
GRADUATES BY STATE

Alabama



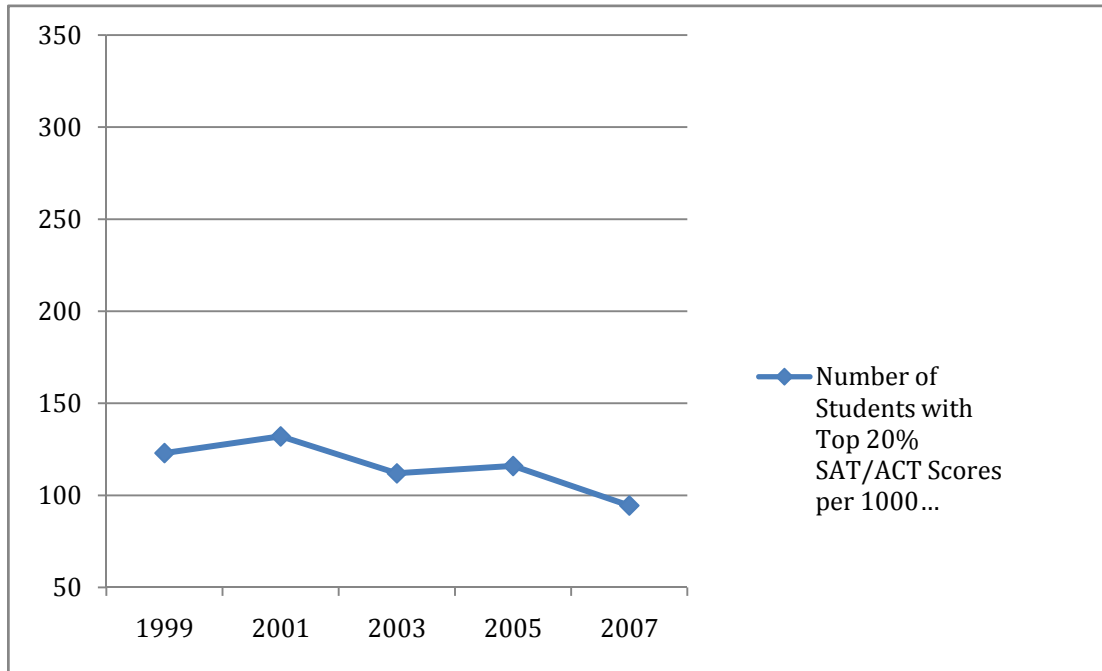
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Alaska



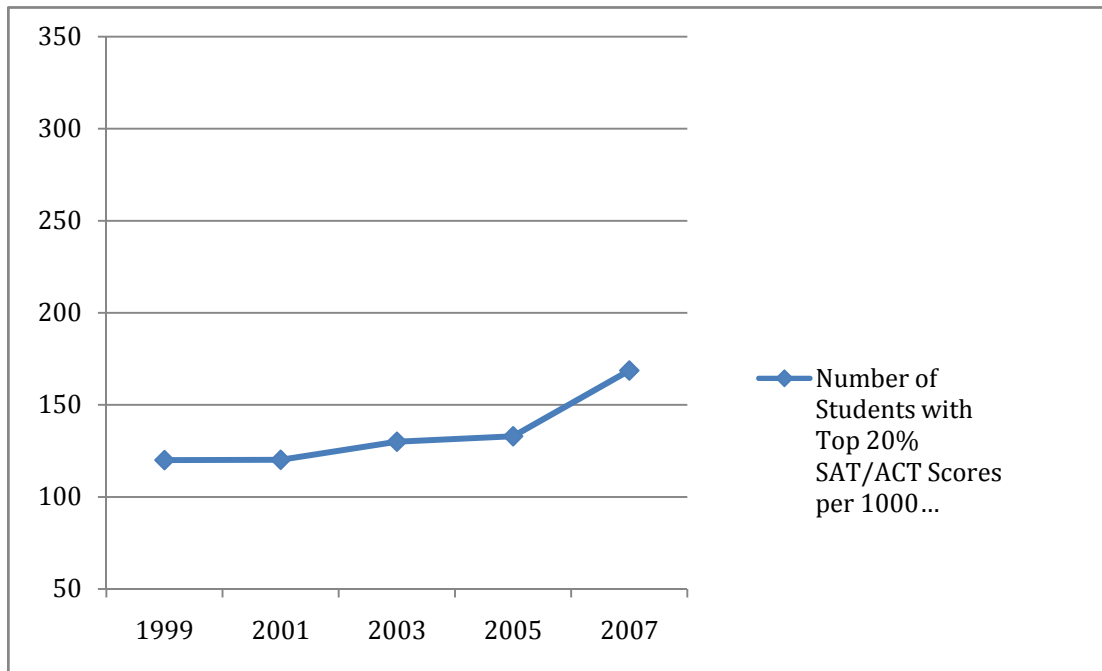
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Arizona



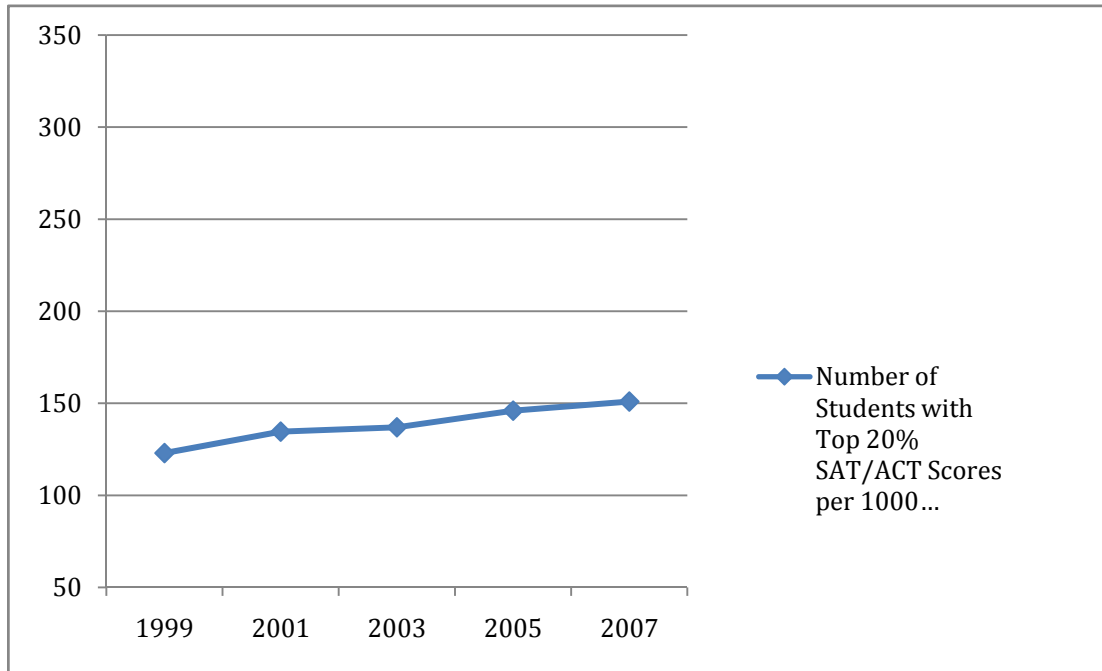
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Arkansas



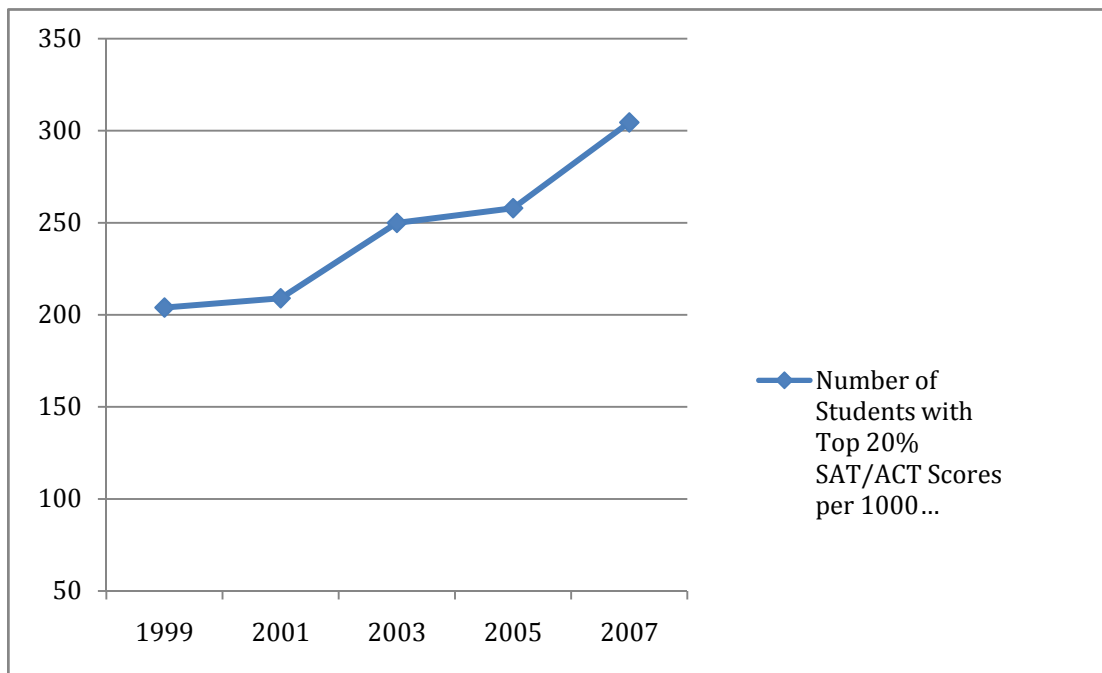
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

California



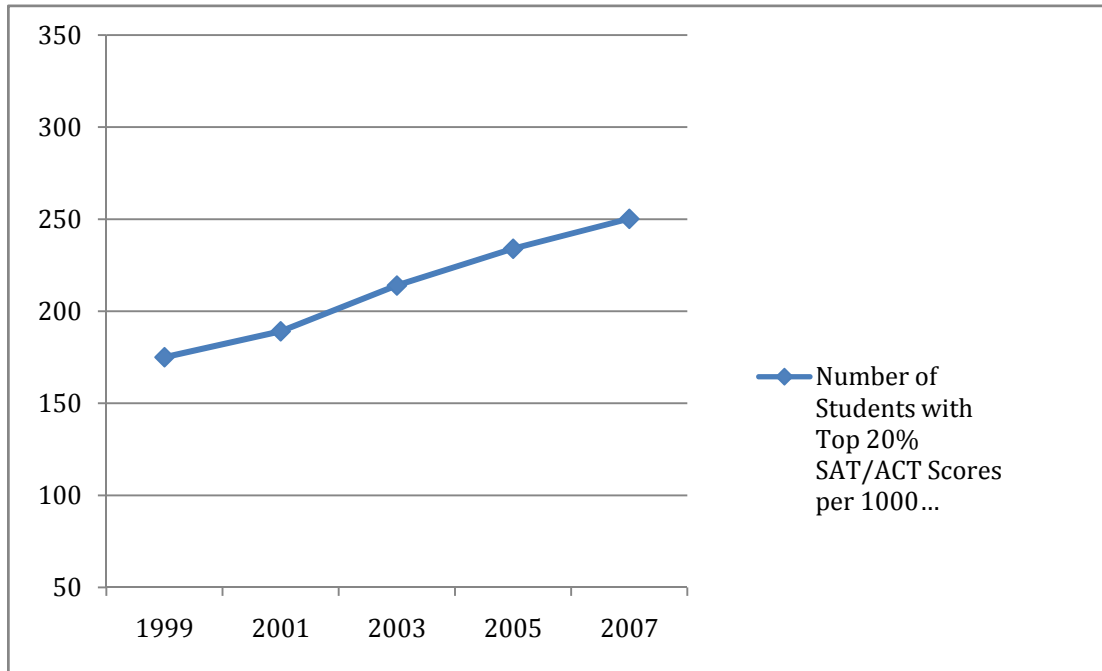
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Colorado



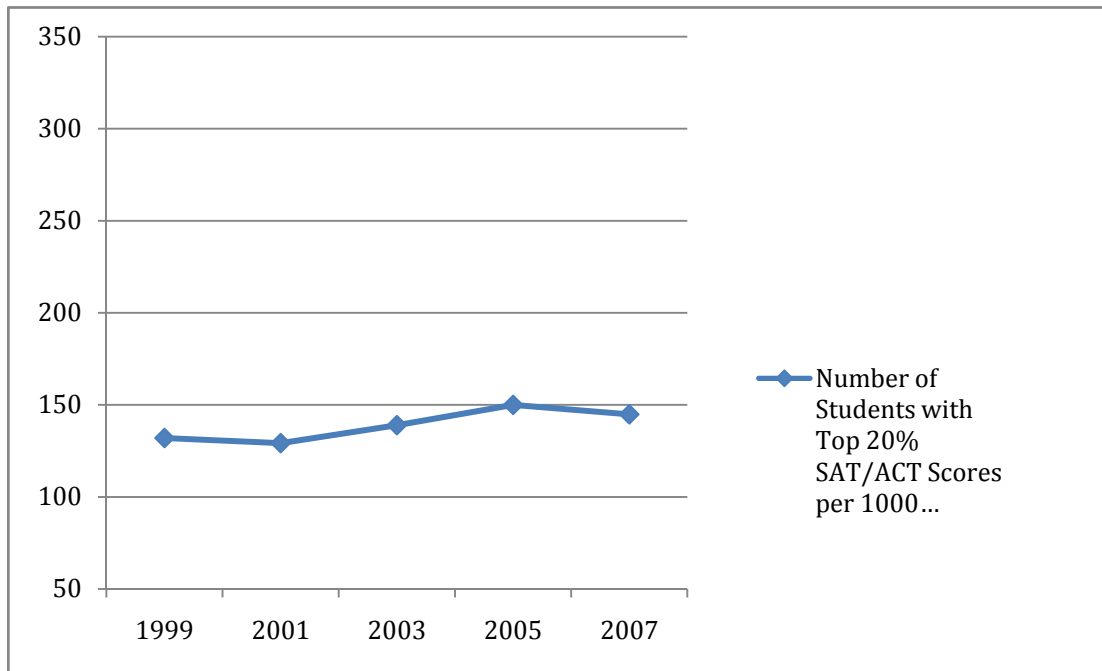
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Connecticut



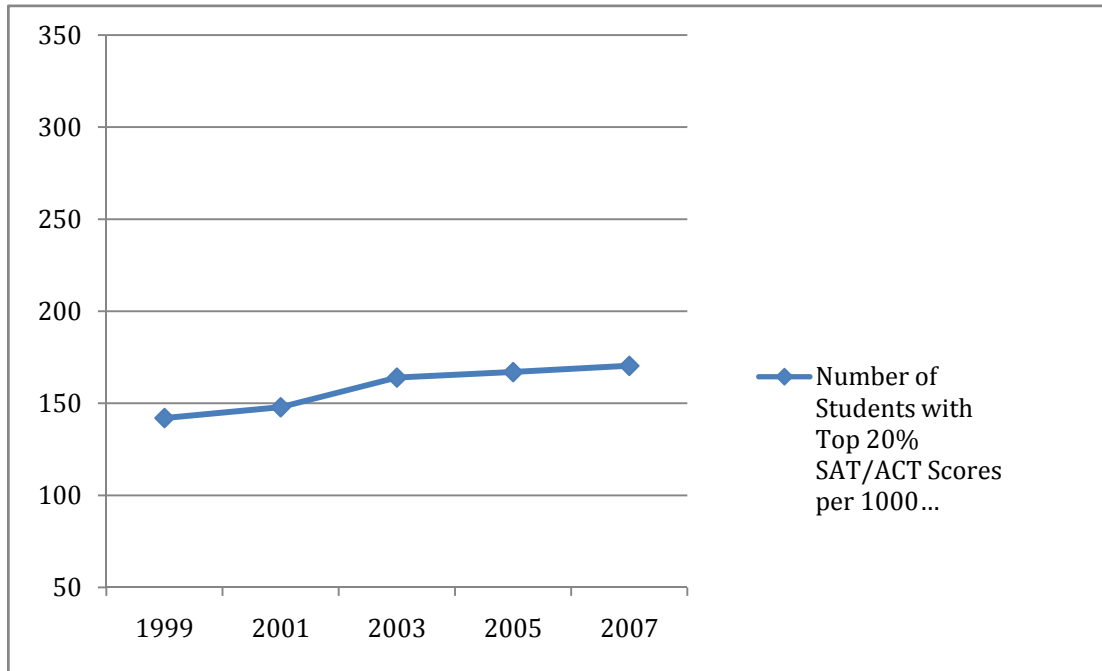
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Delaware



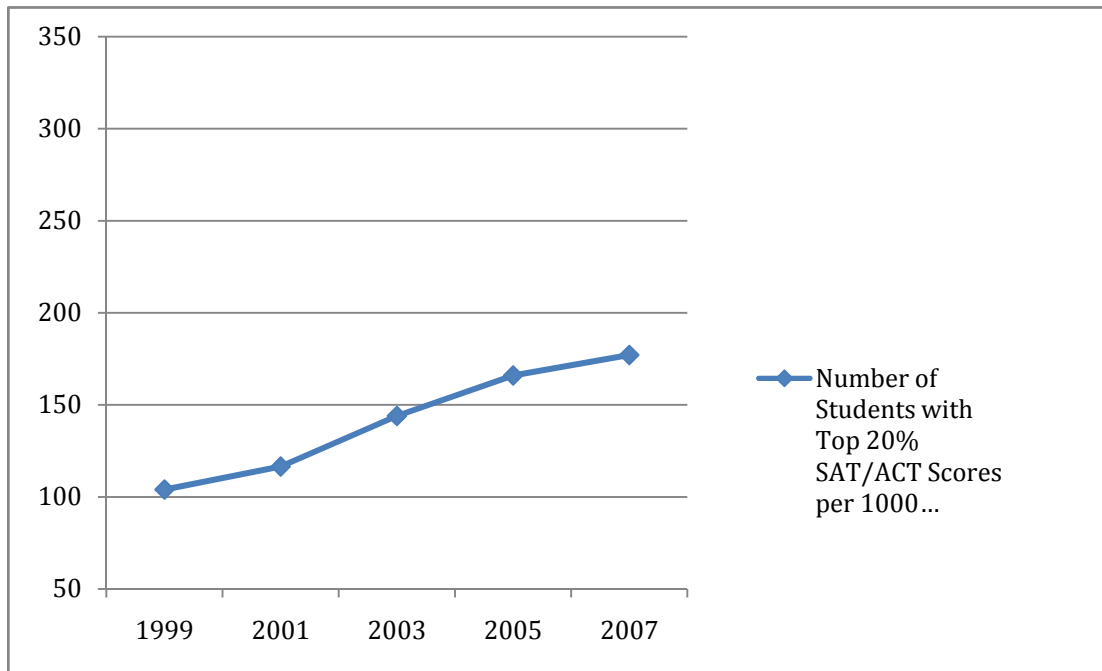
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Florida



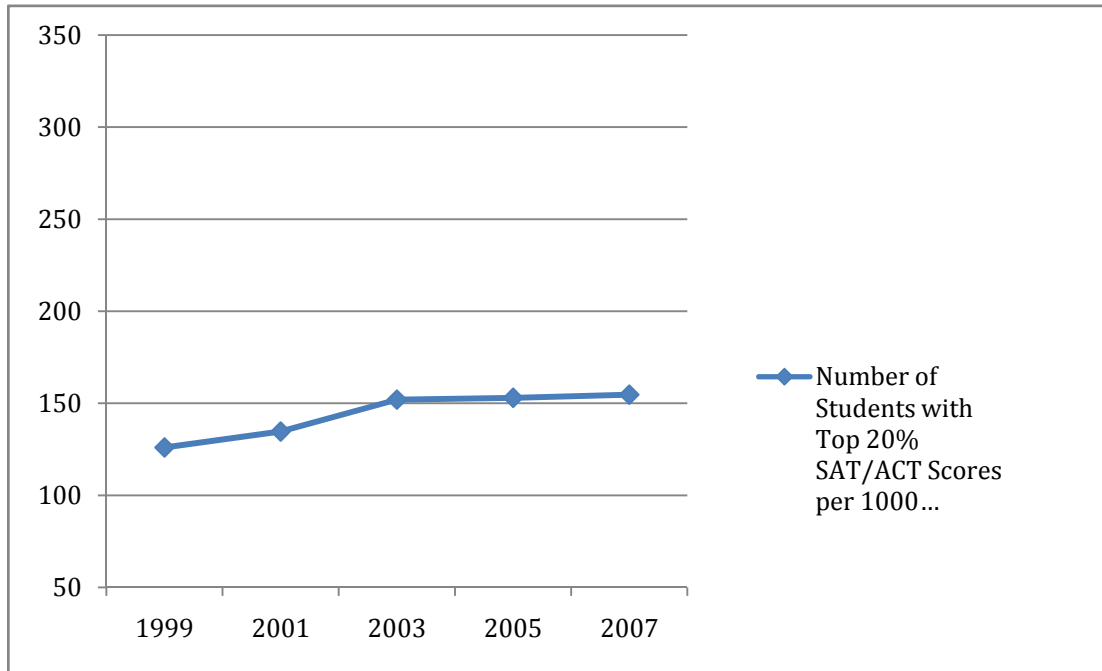
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Georgia



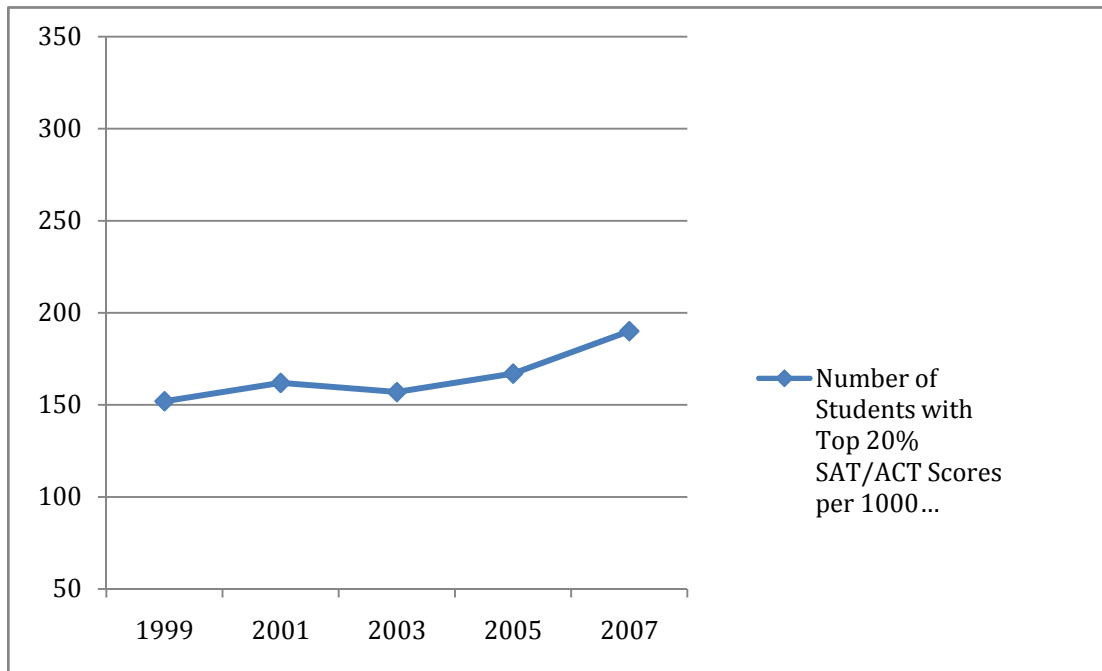
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Hawaii



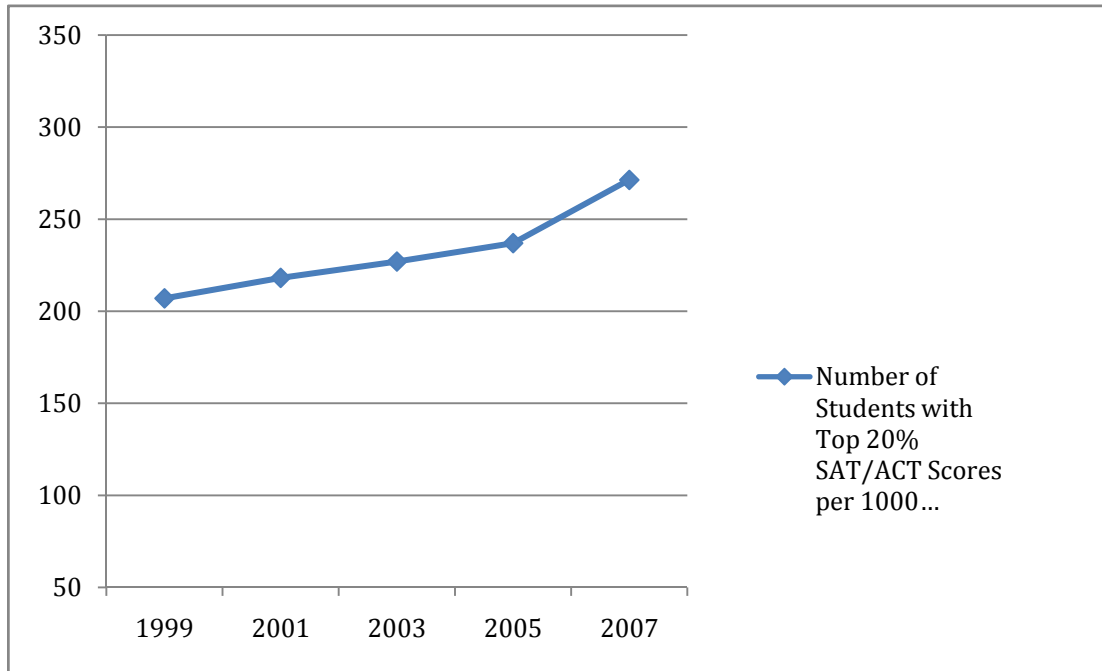
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Idaho



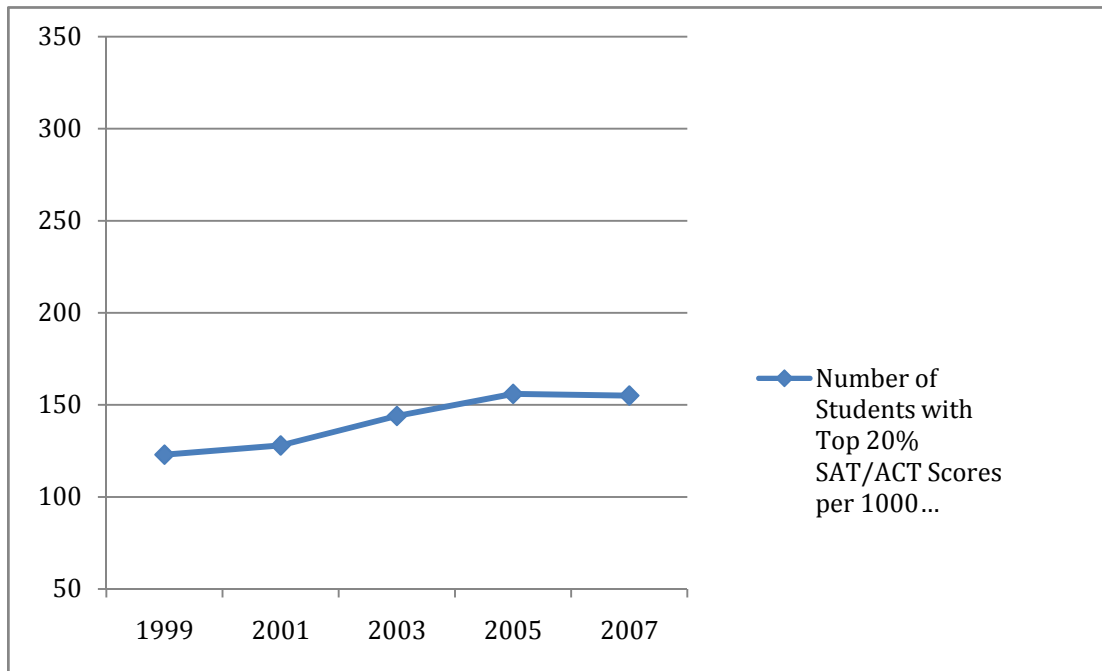
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Illinois



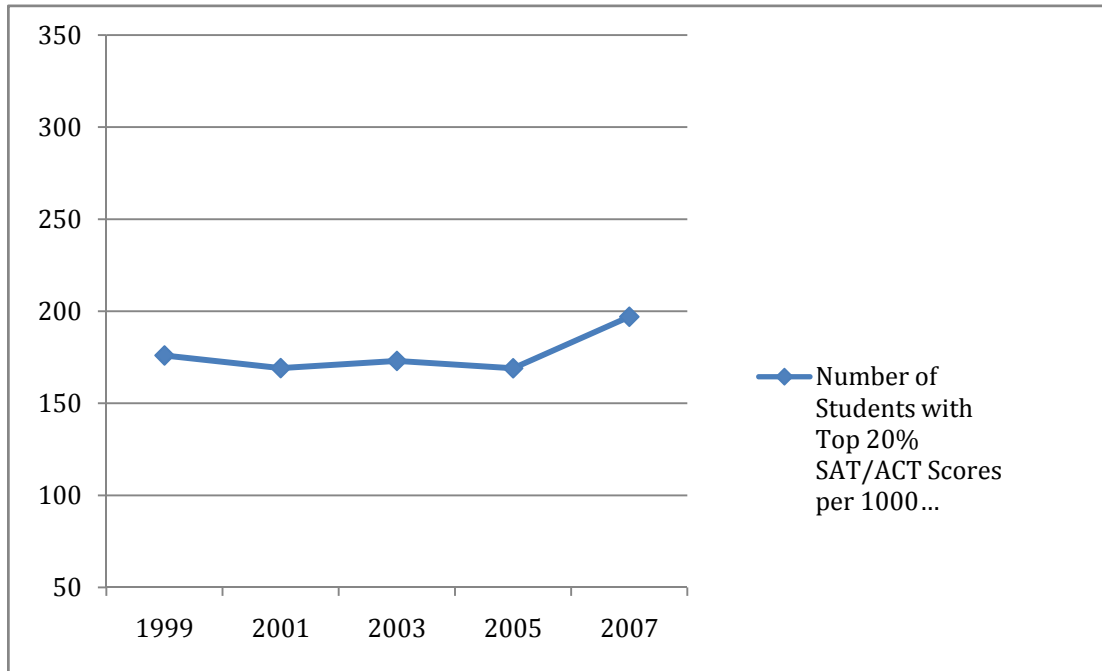
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Indiana



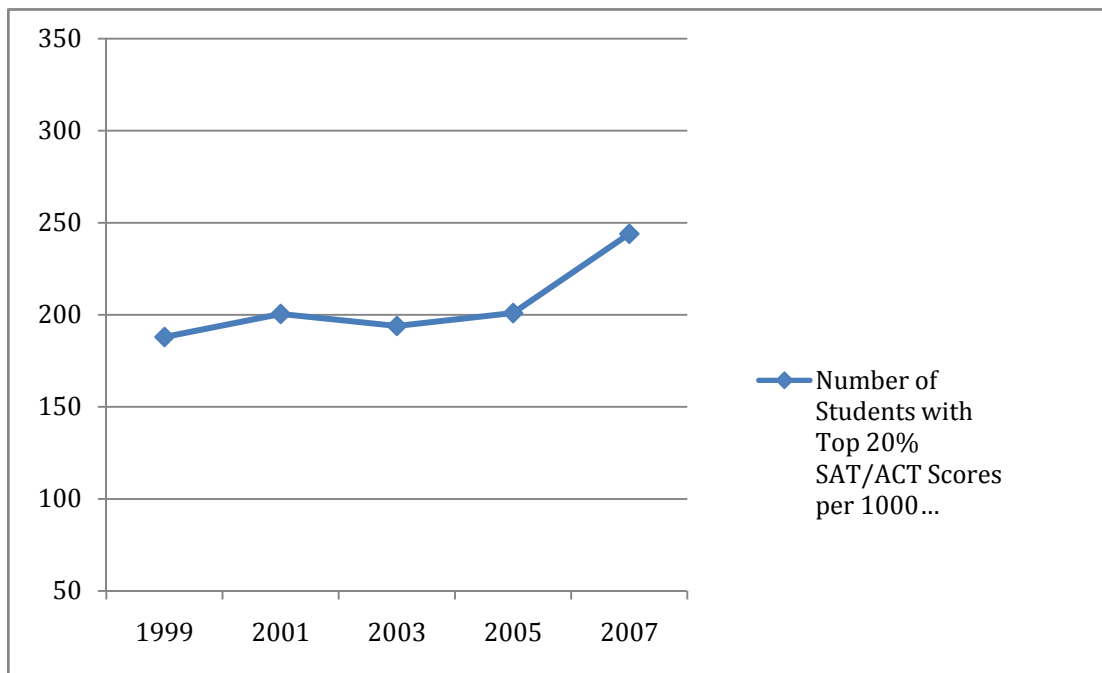
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Iowa



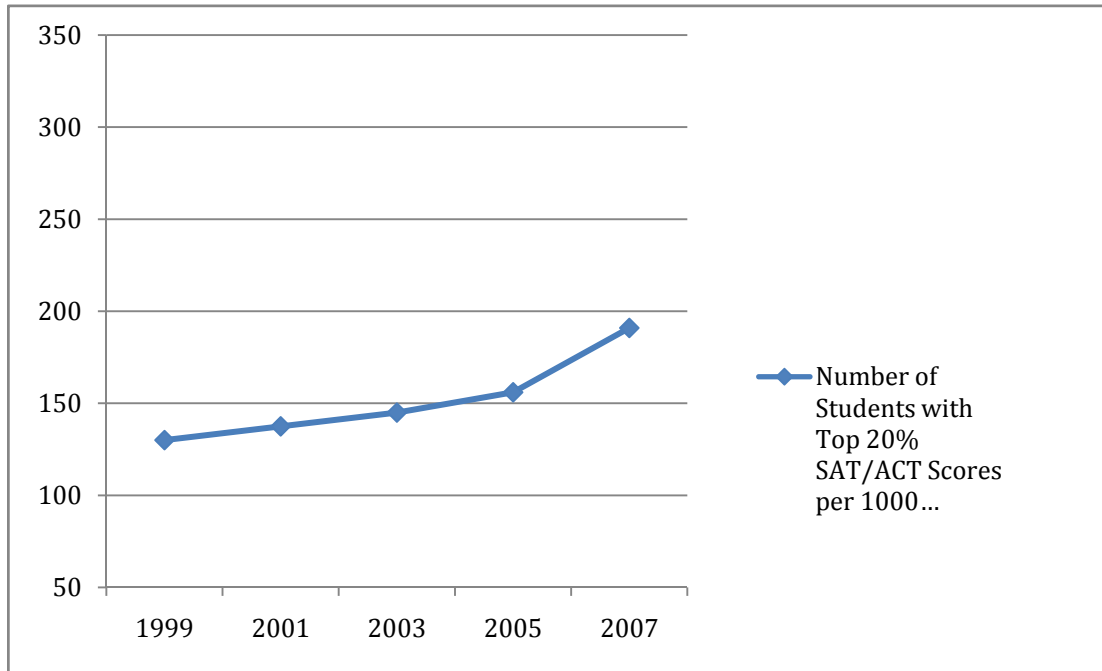
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Kansas



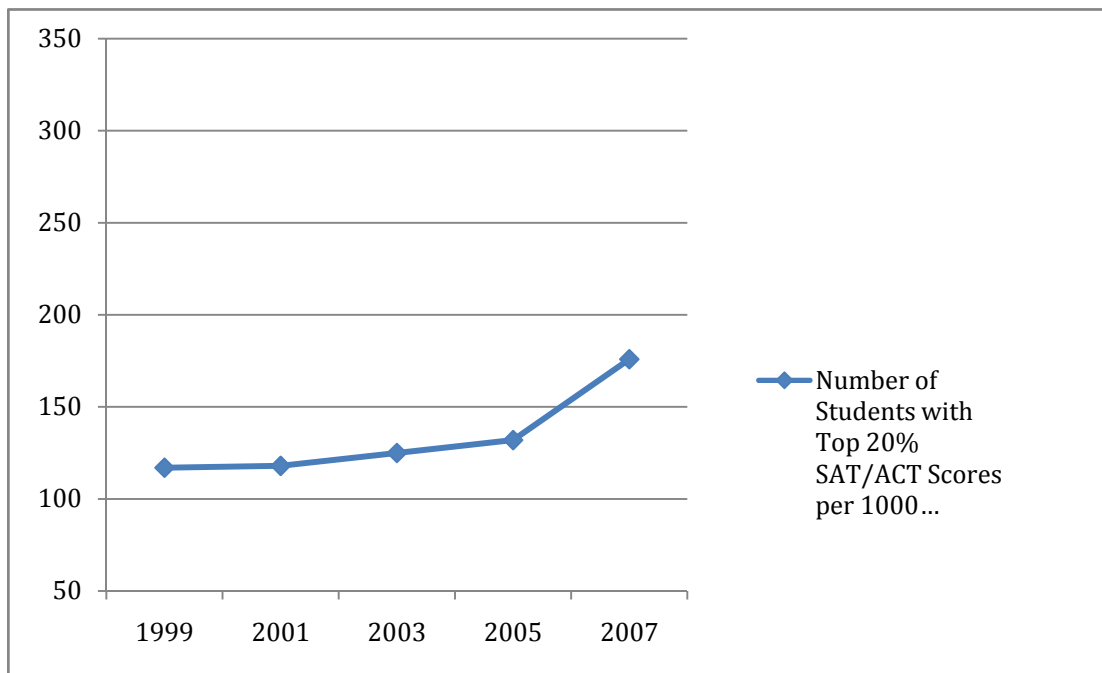
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Kentucky



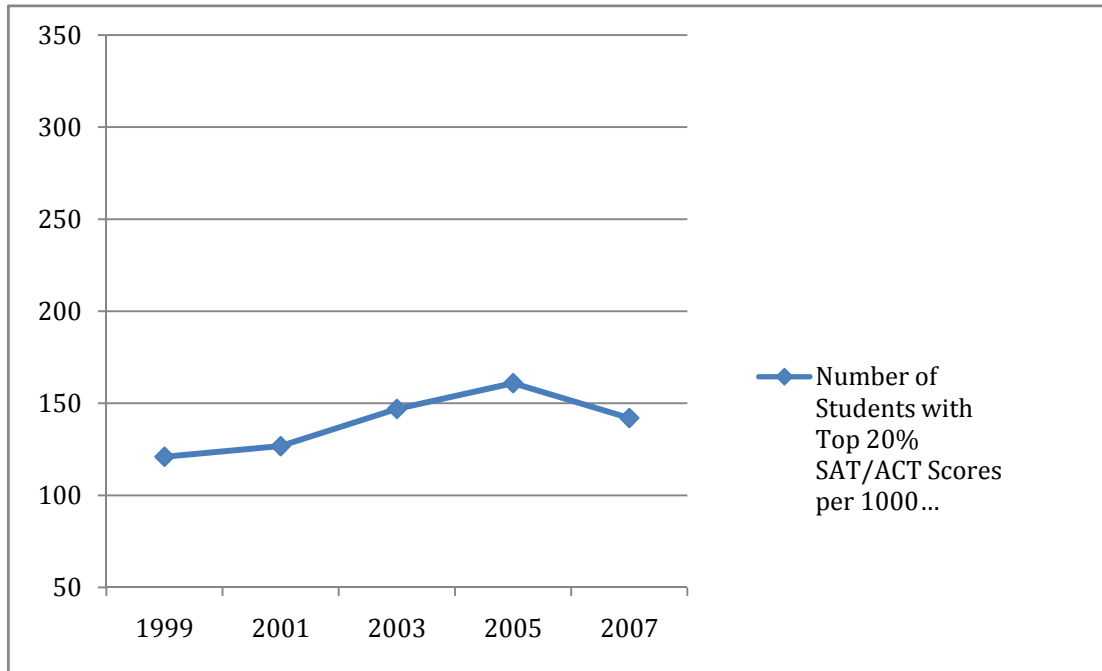
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Louisiana



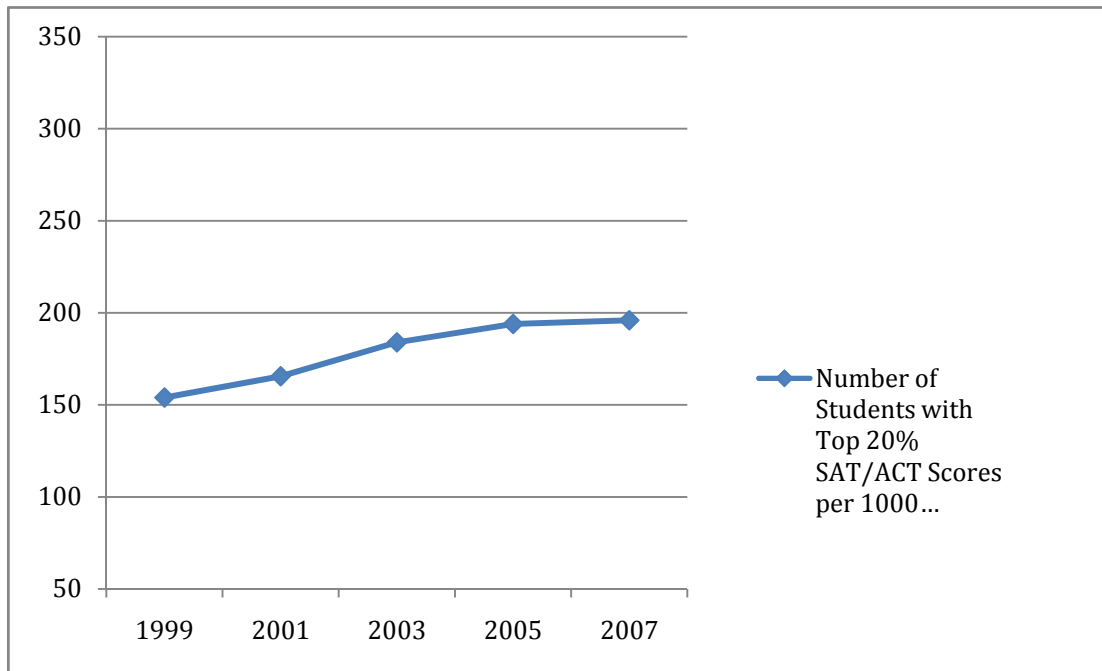
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Maine



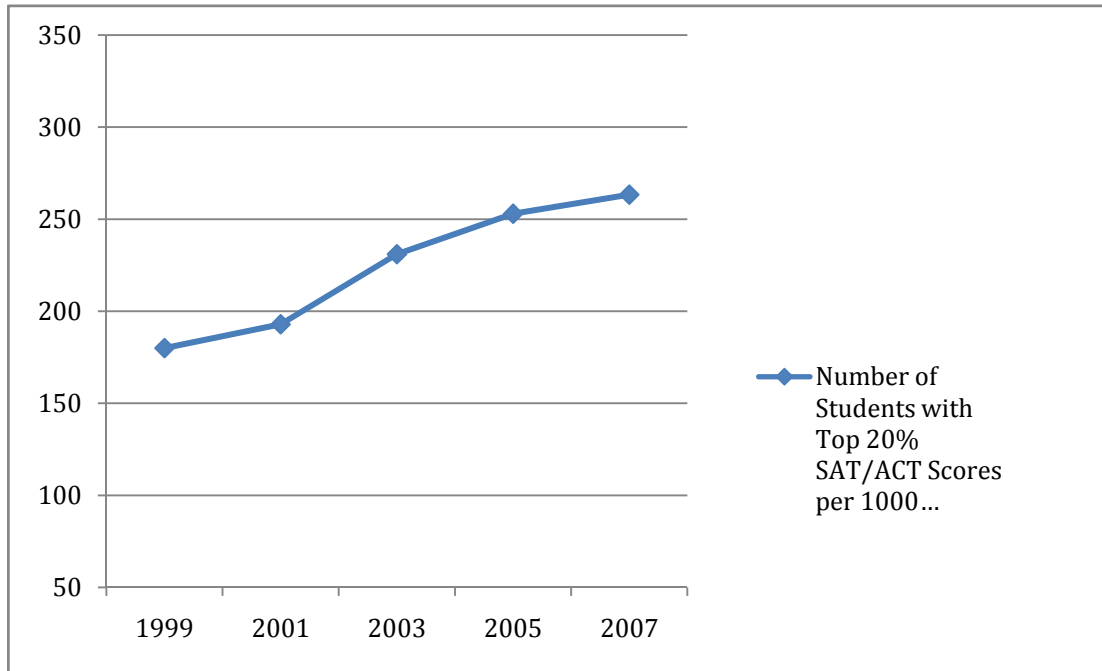
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Maryland



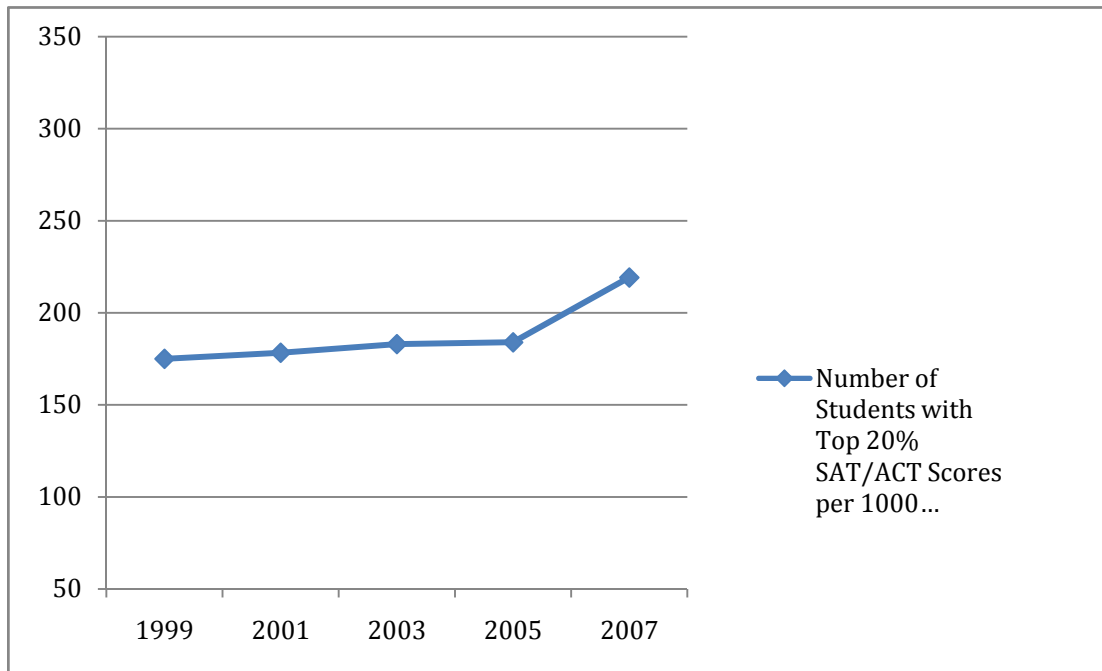
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Massachusetts



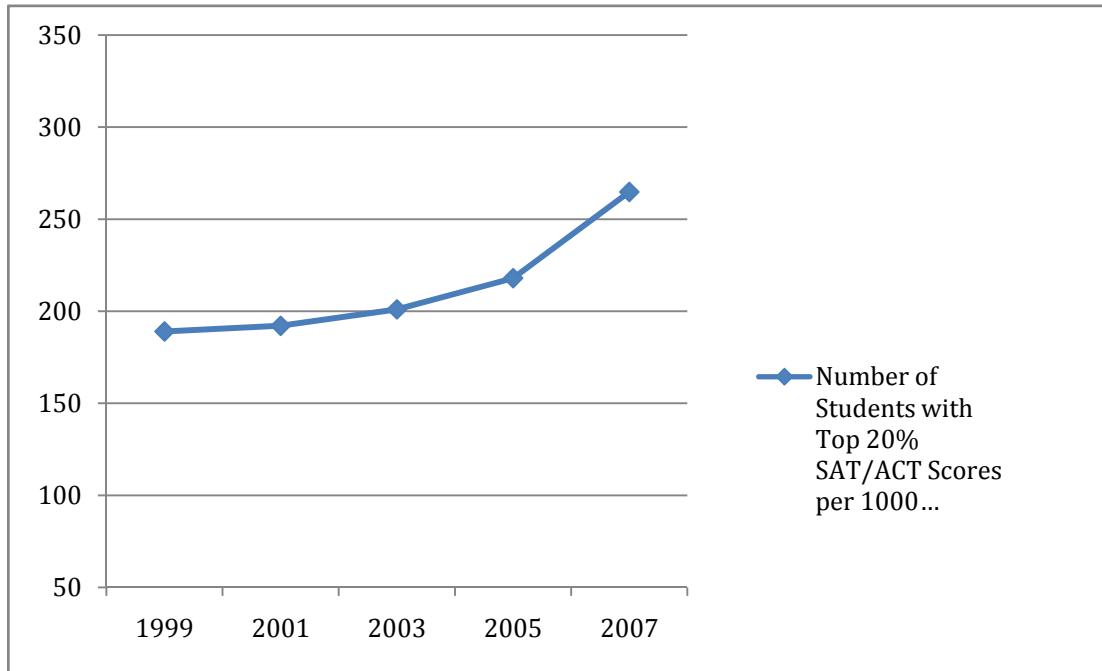
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Michigan



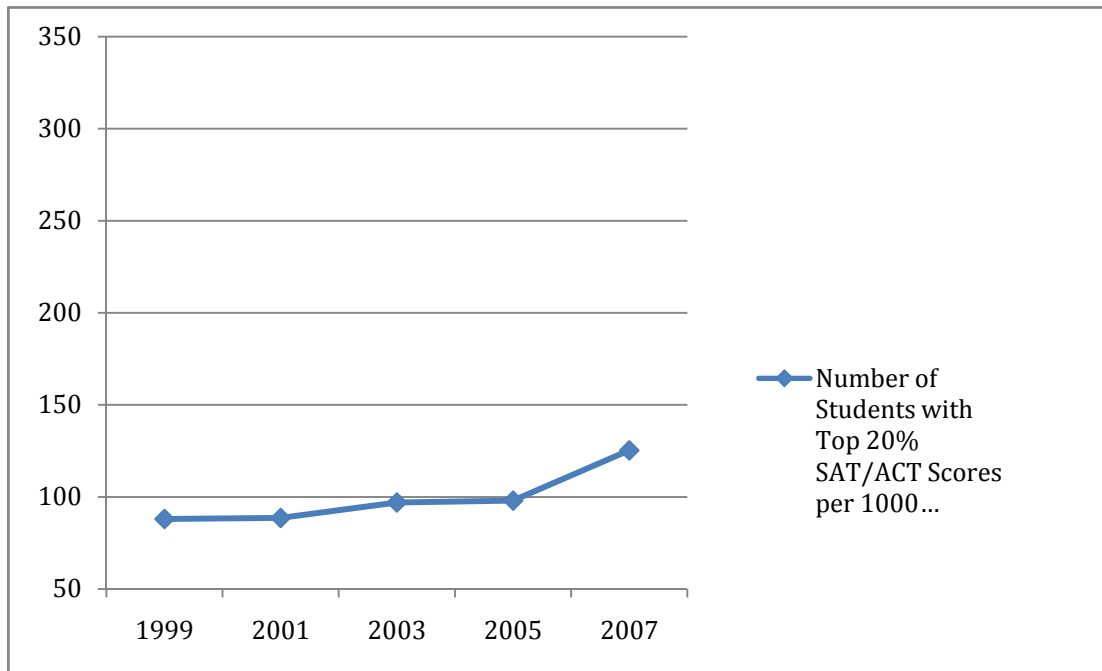
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Minnesota



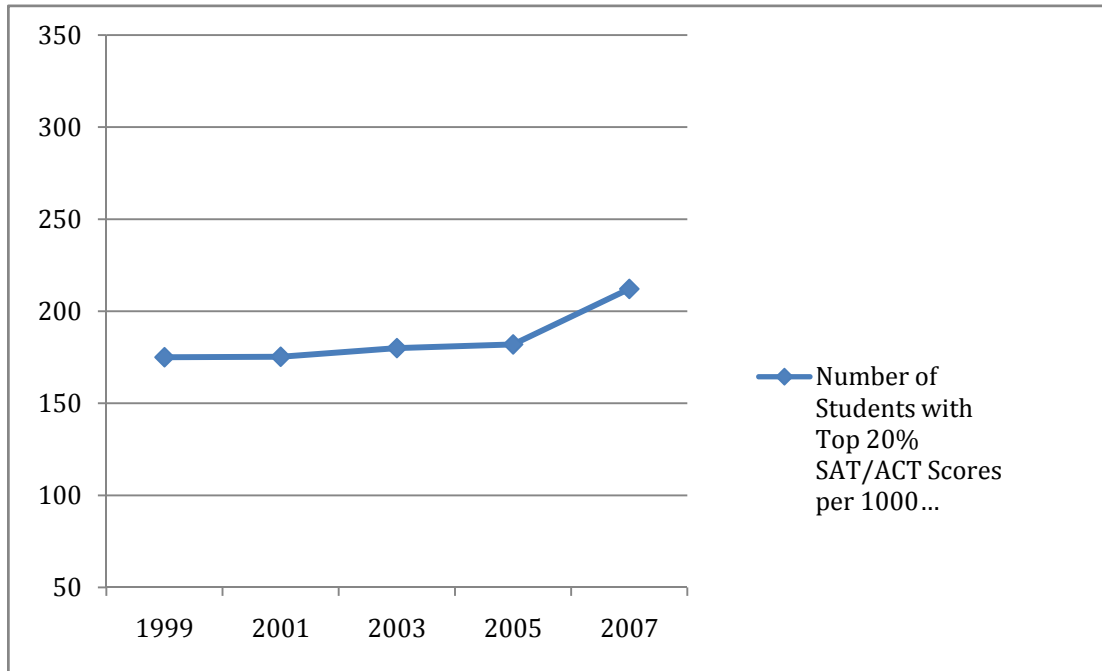
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Mississippi



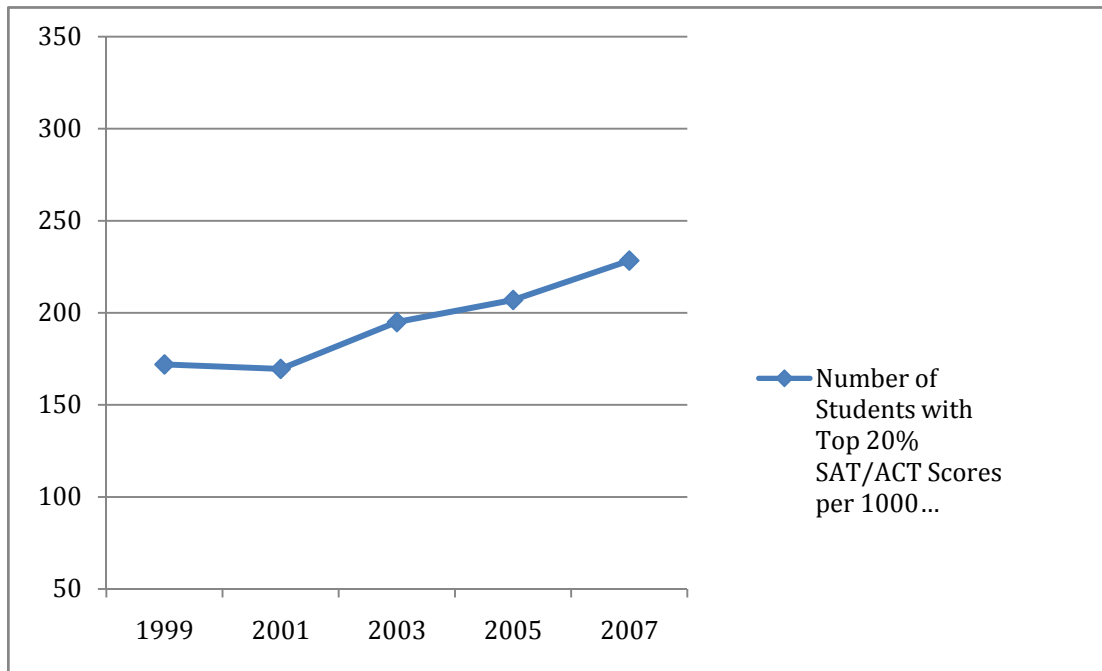
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Missouri



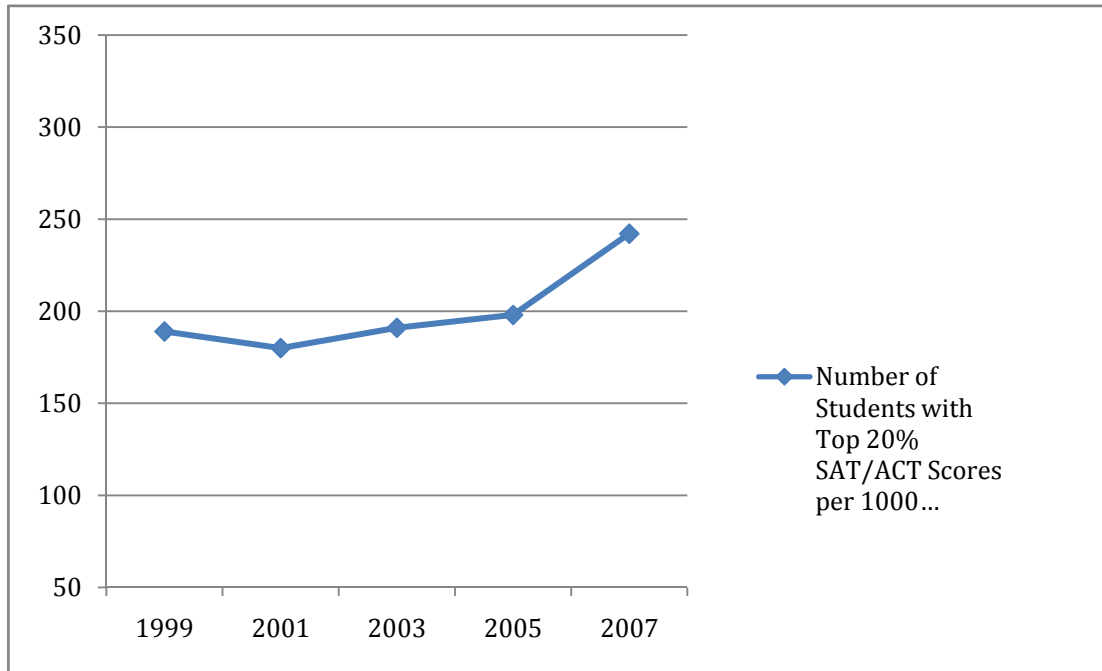
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Montana



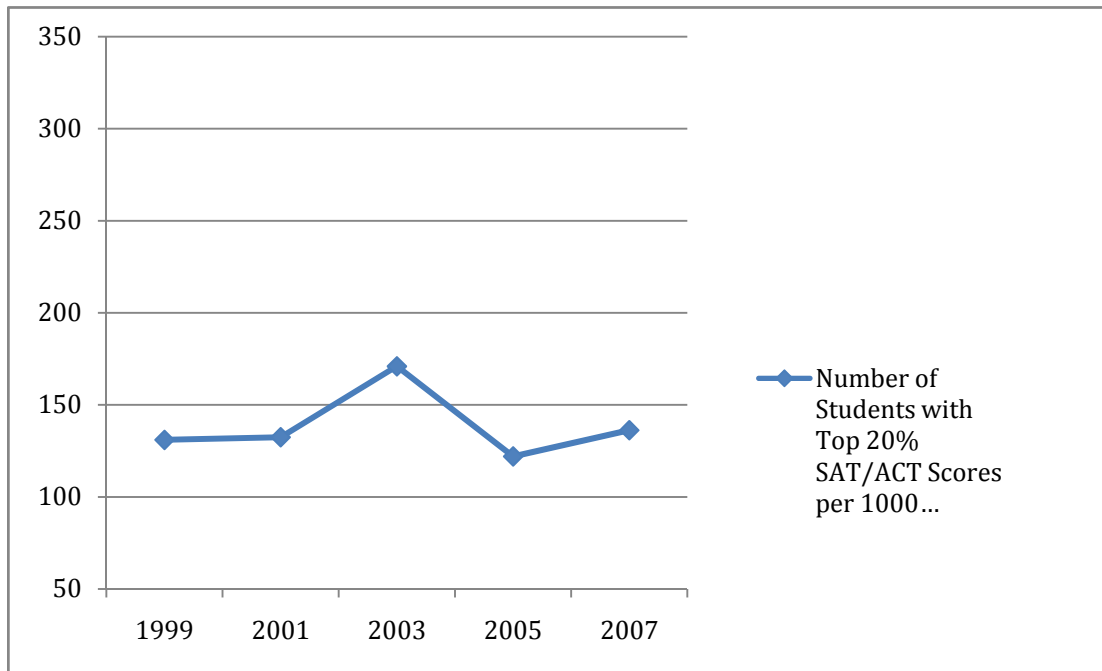
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Nebraska



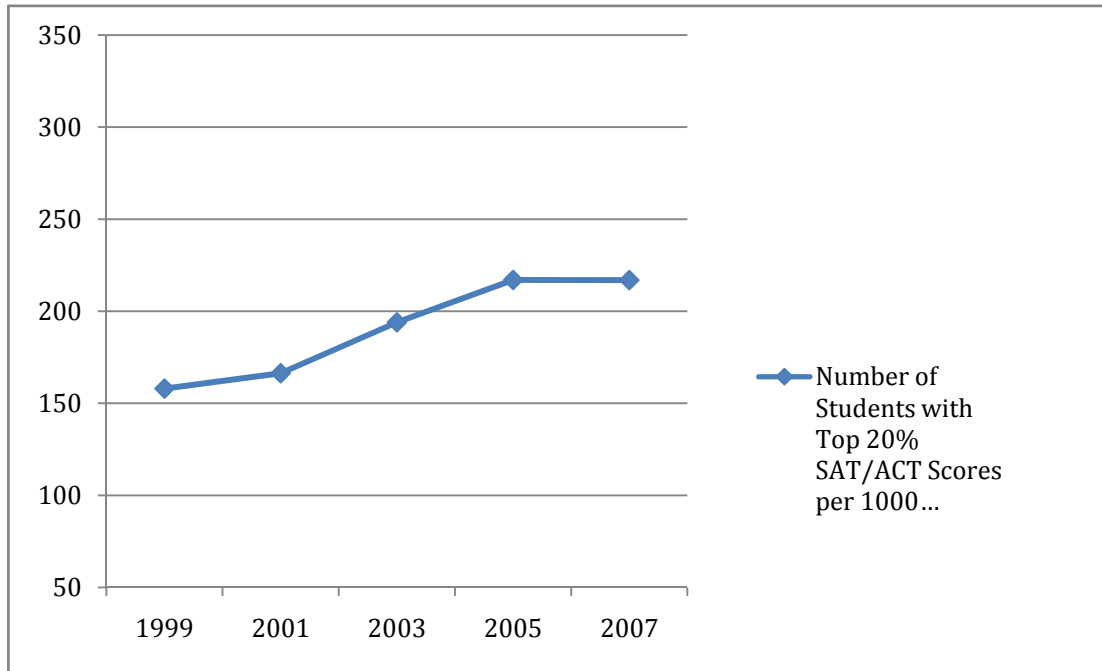
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Nevada



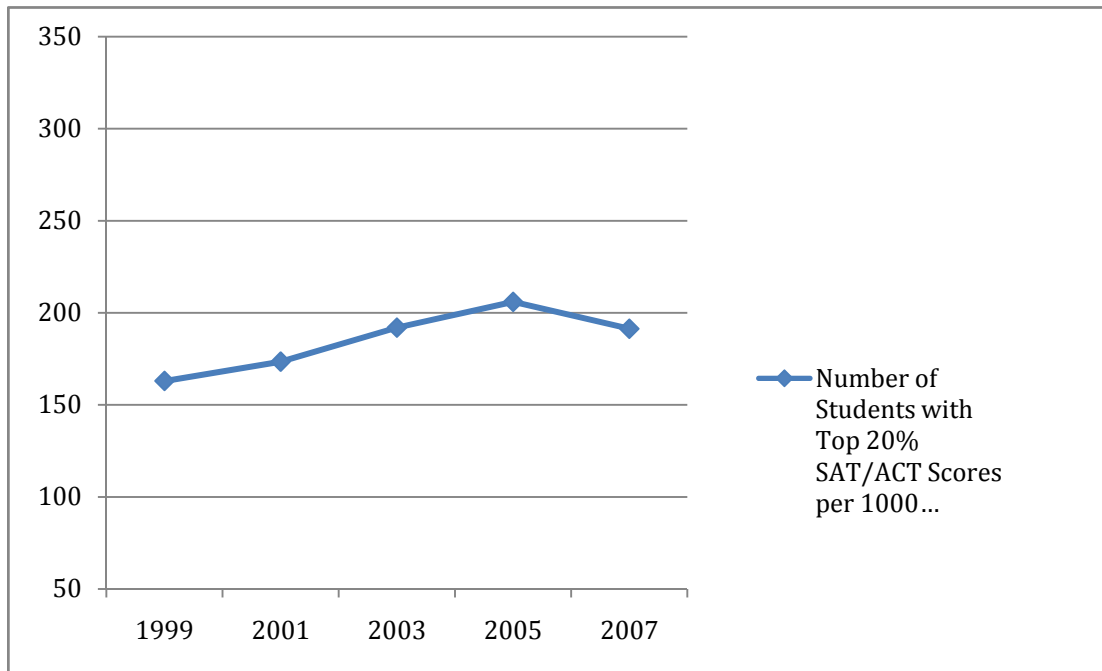
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New Hampshire



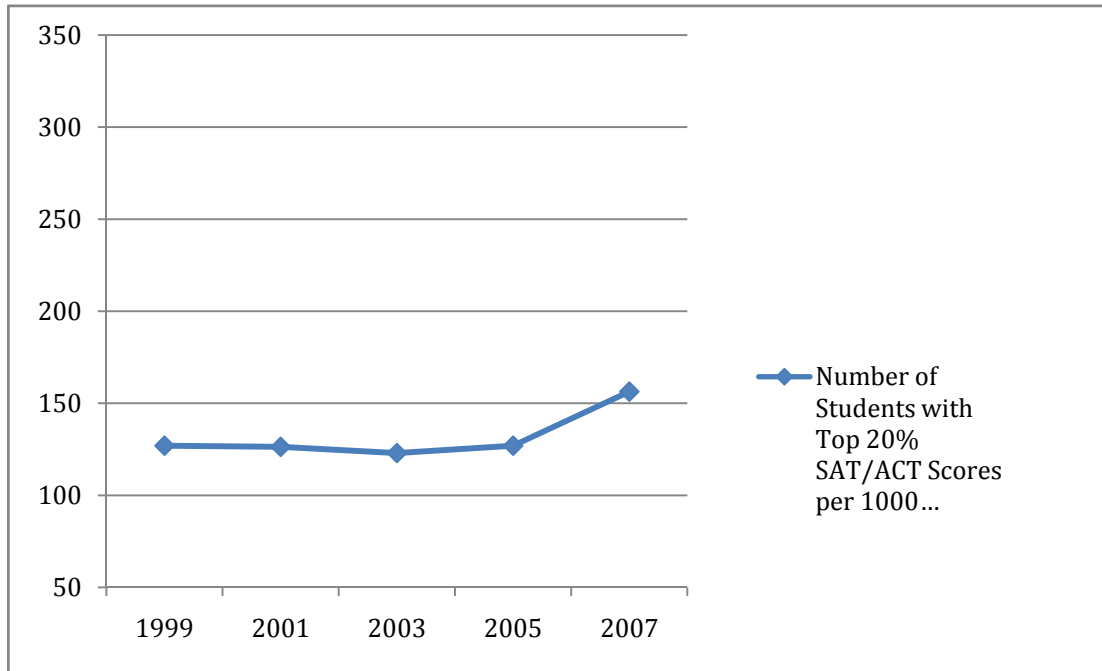
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New Jersey



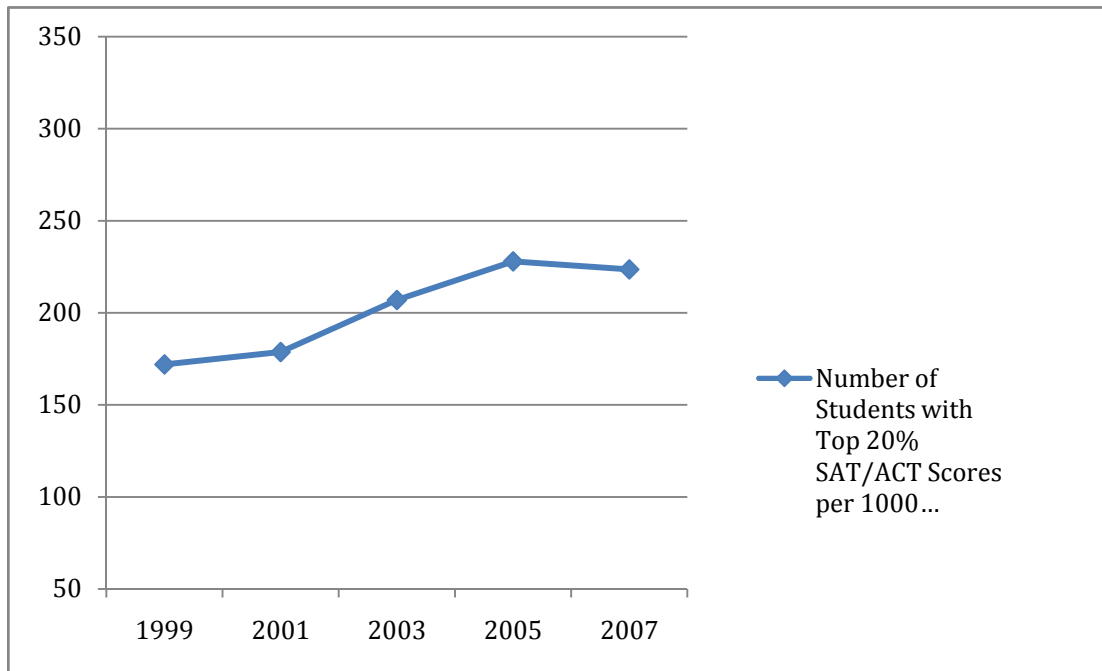
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New Mexico



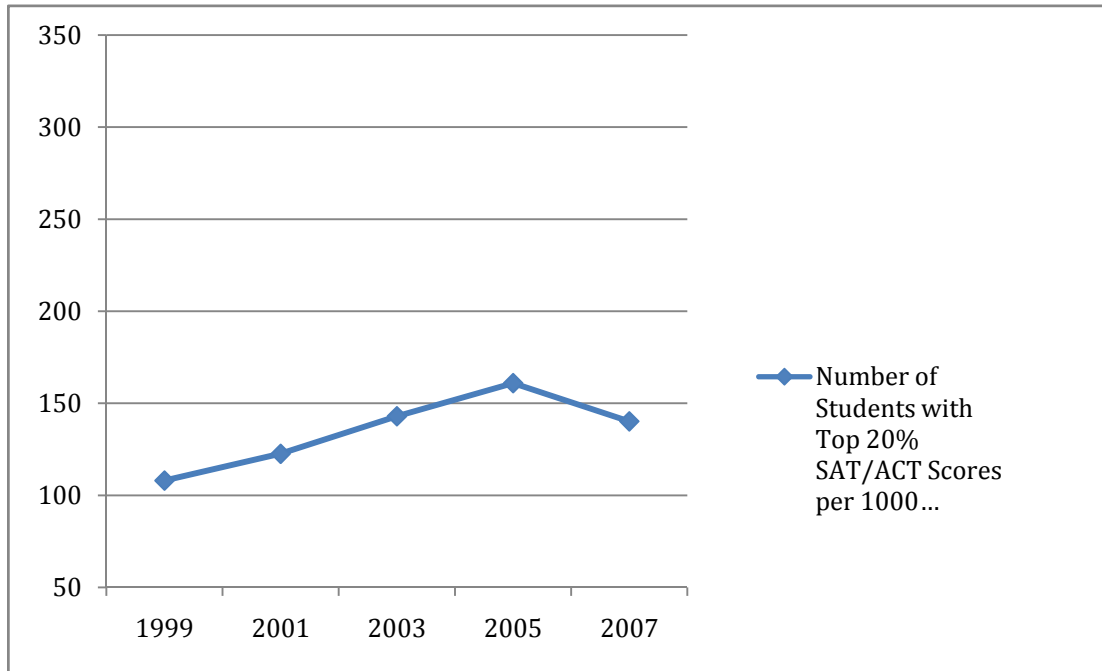
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New Jersey



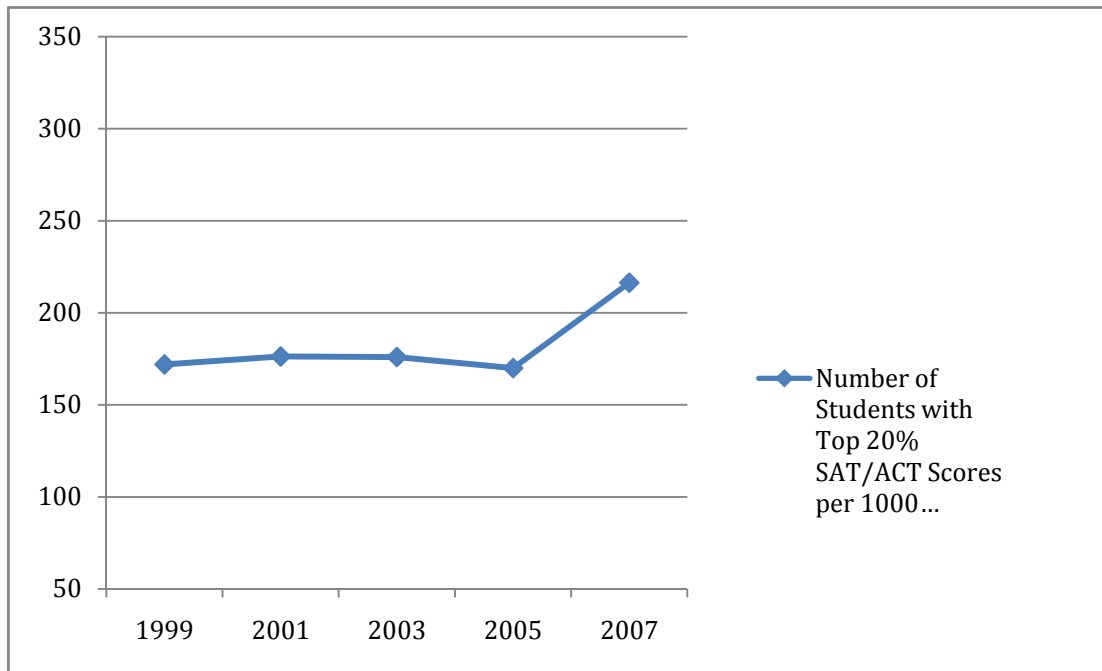
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

North Carolina



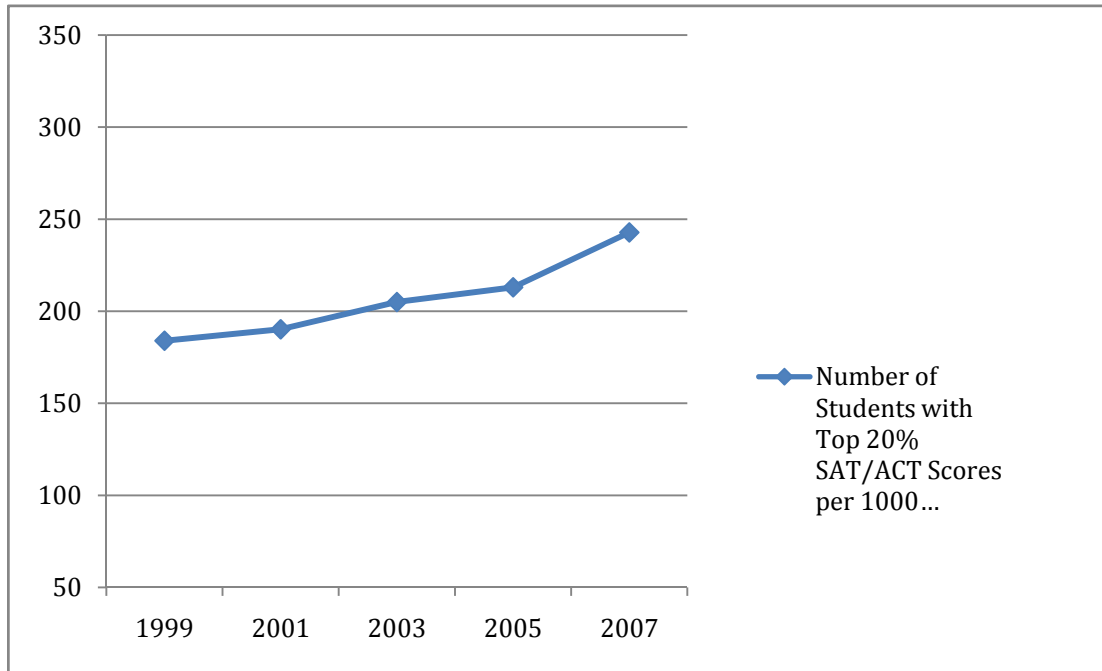
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

North Dakota



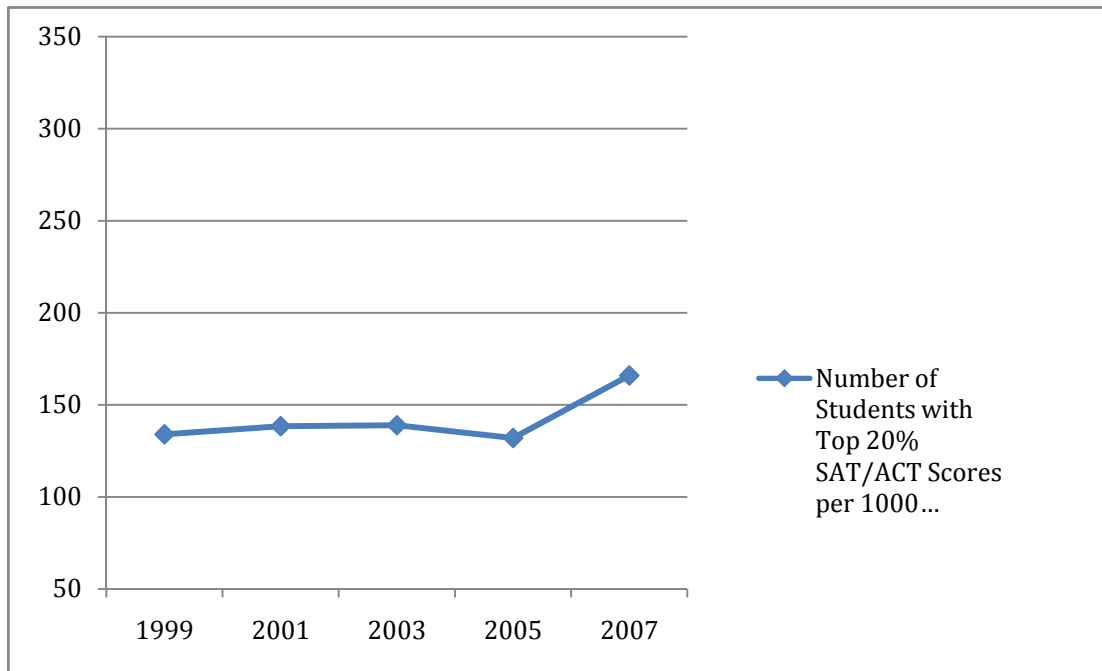
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Ohio



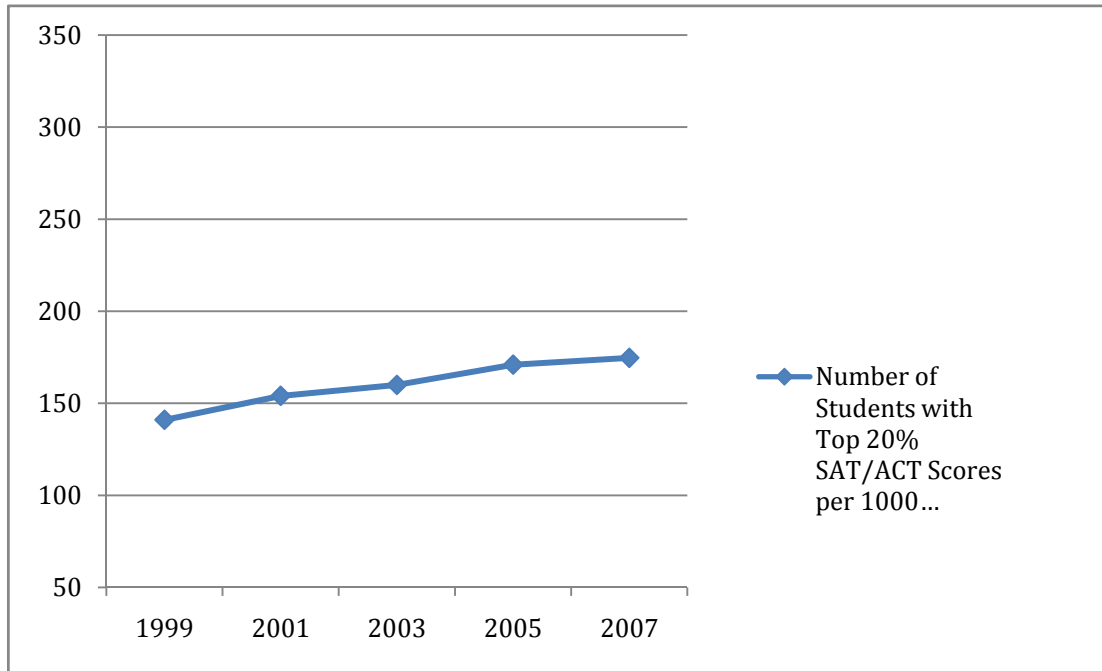
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Oklahoma



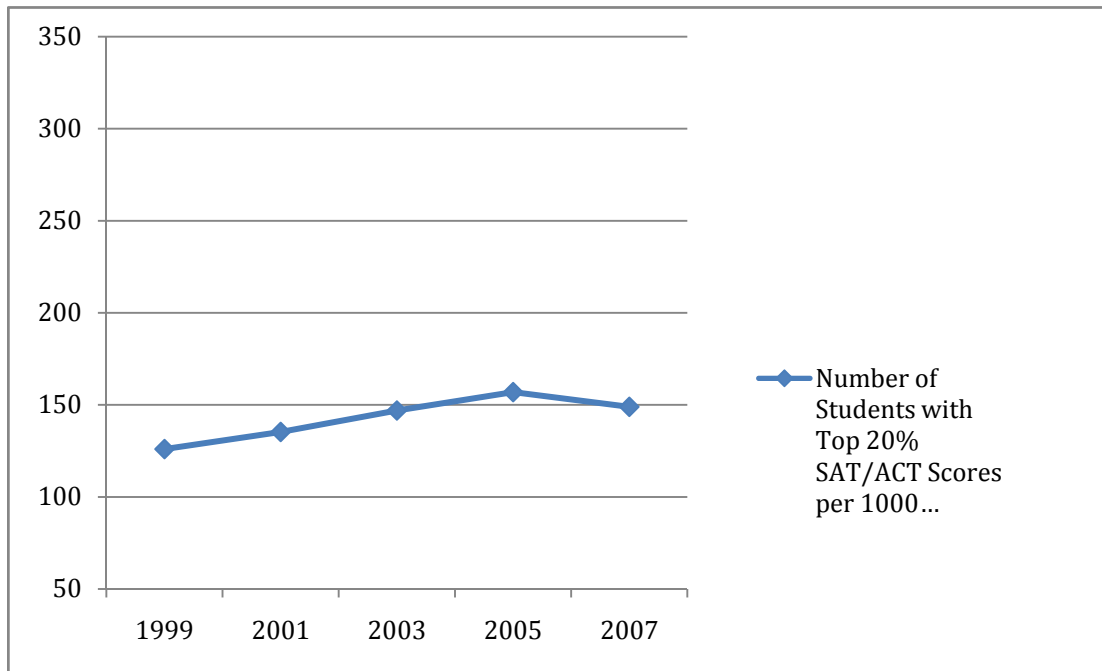
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Oregon



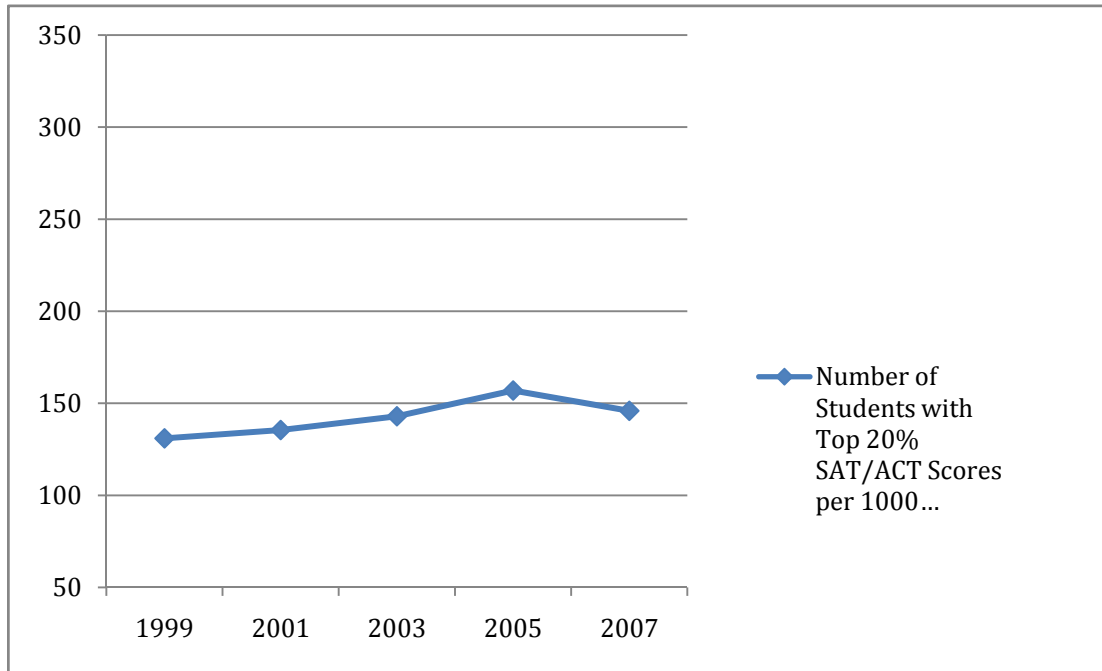
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Pennsylvania



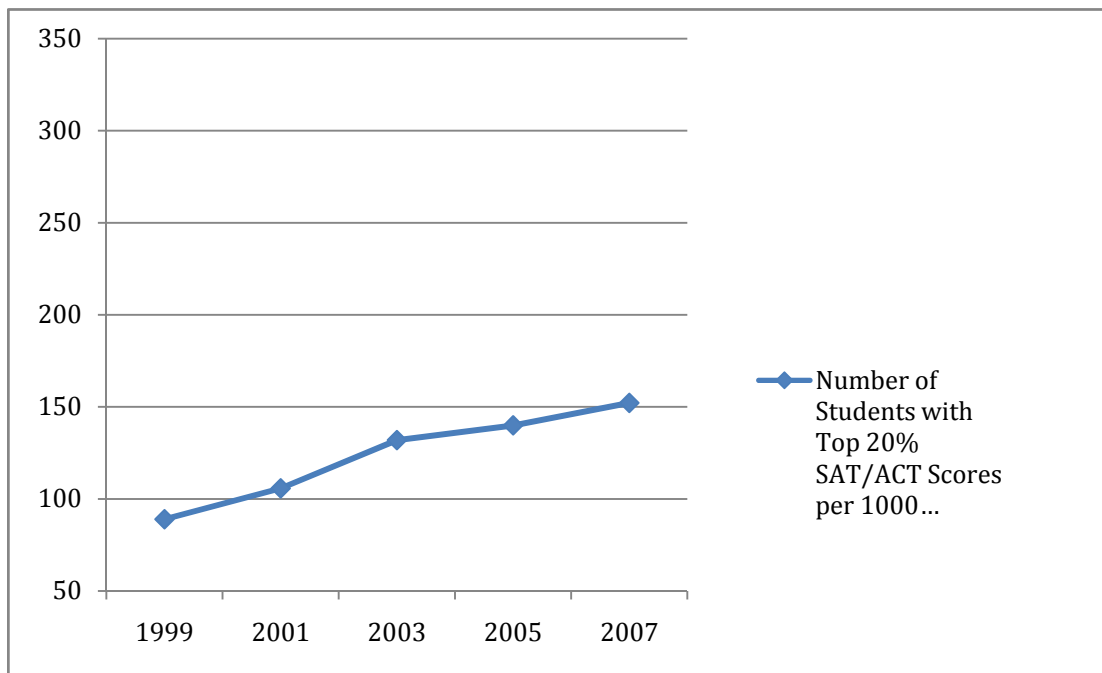
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Rhode Island



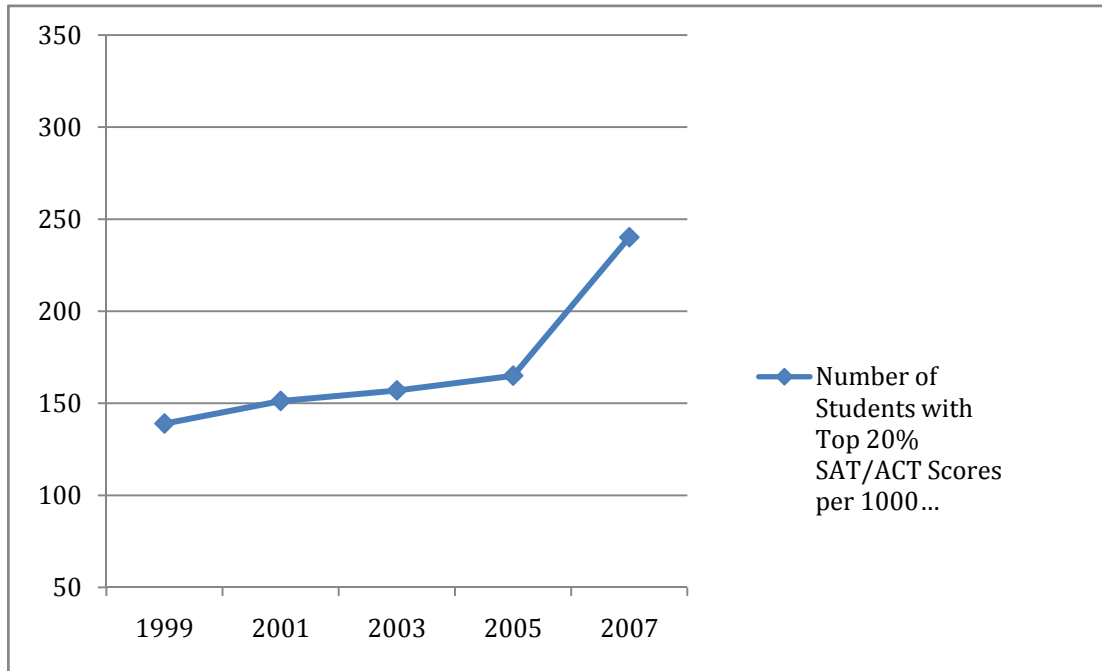
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

South Carolina



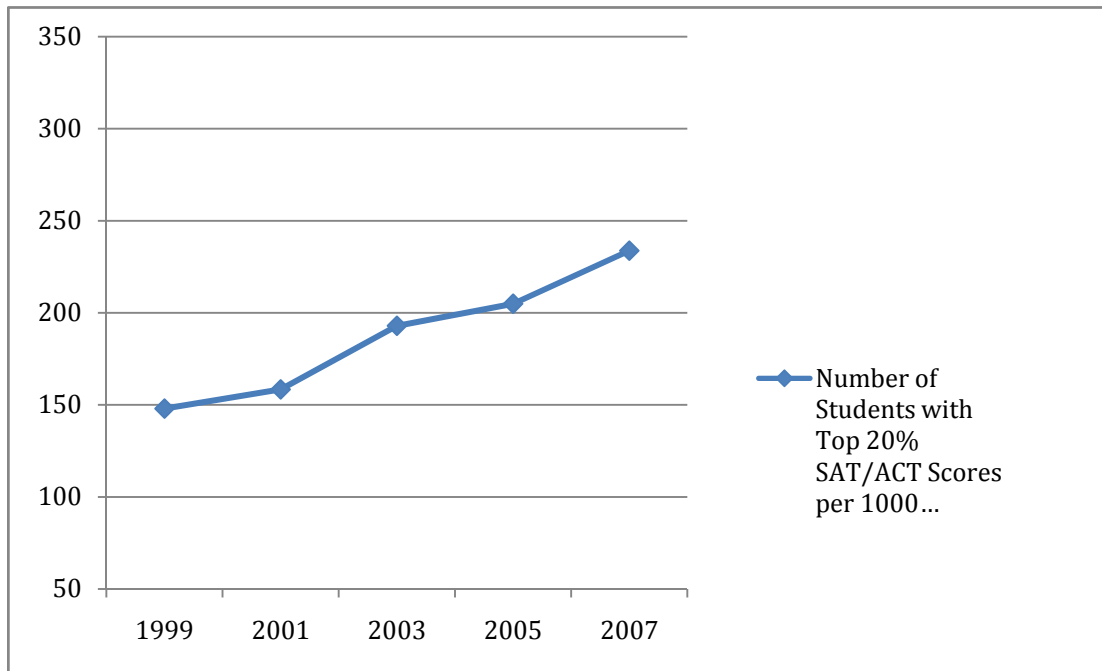
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

South Dakota



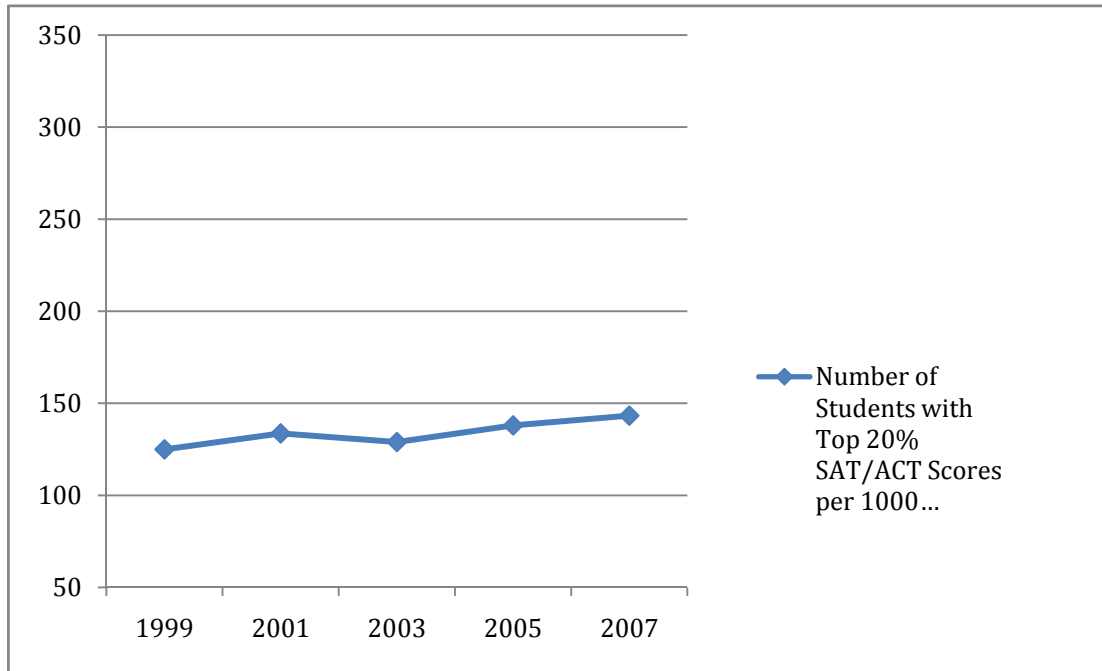
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Tennessee



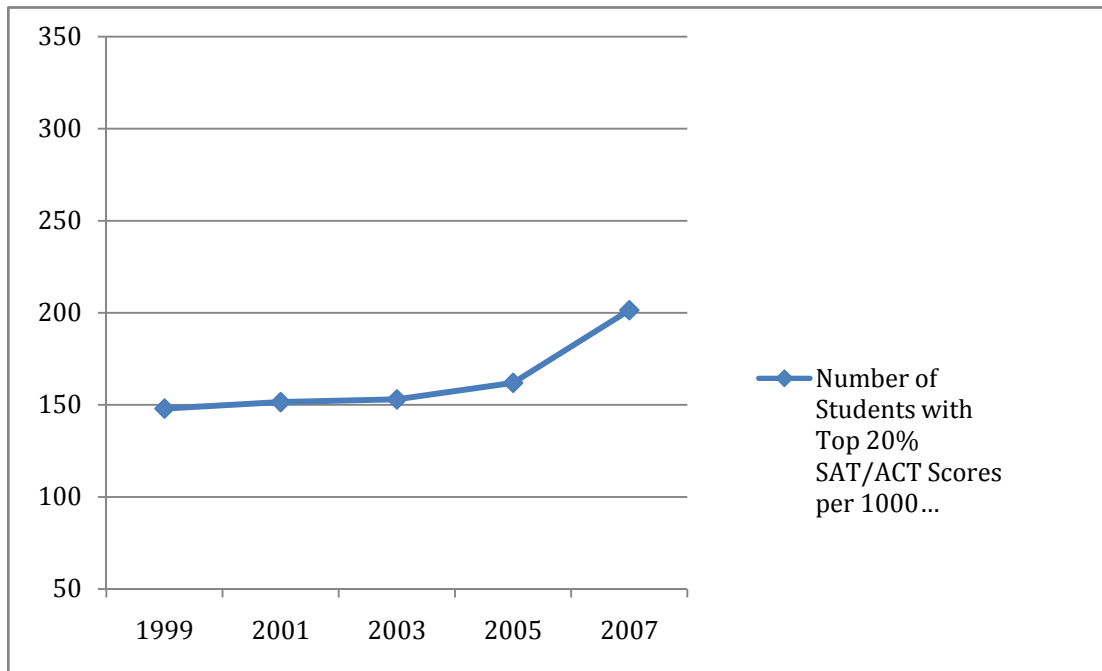
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Texas



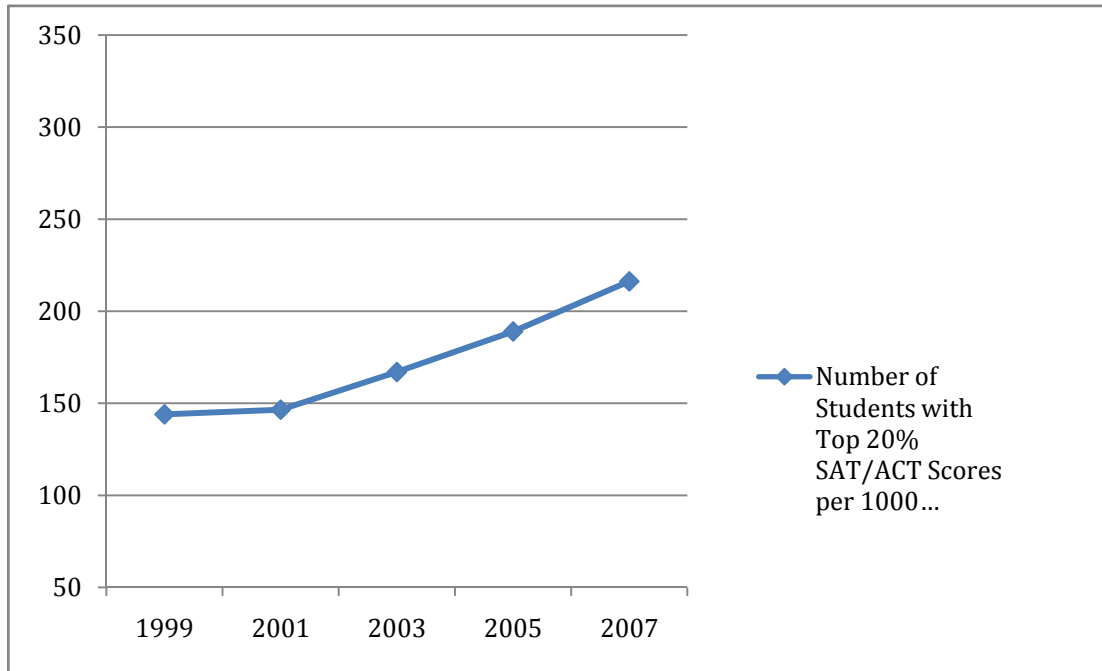
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Utah



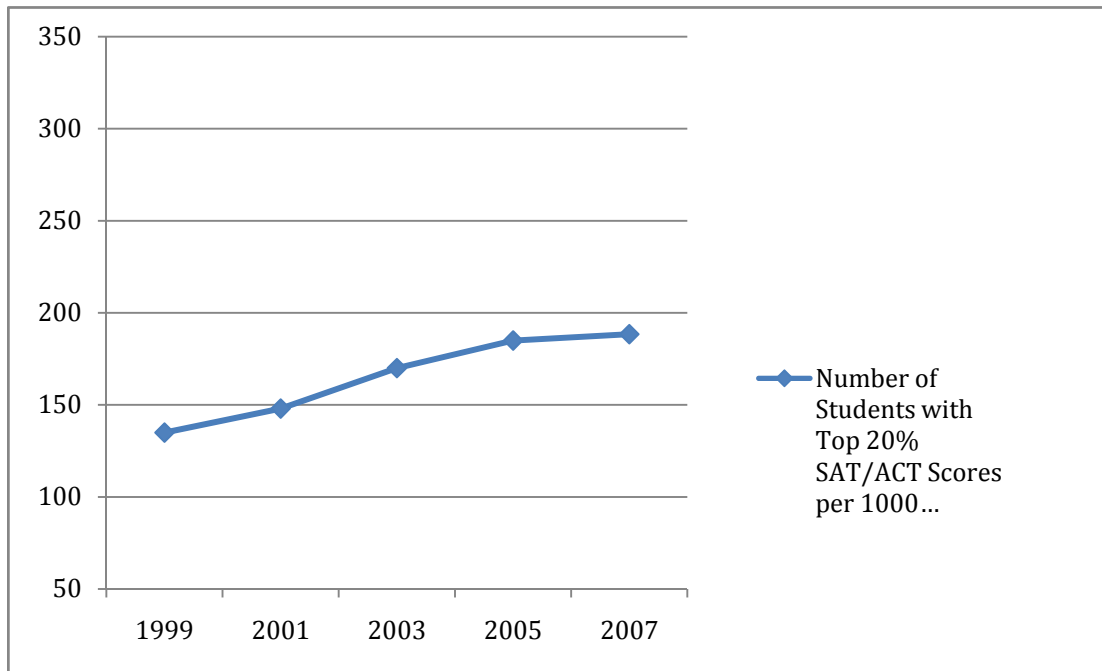
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Vermont



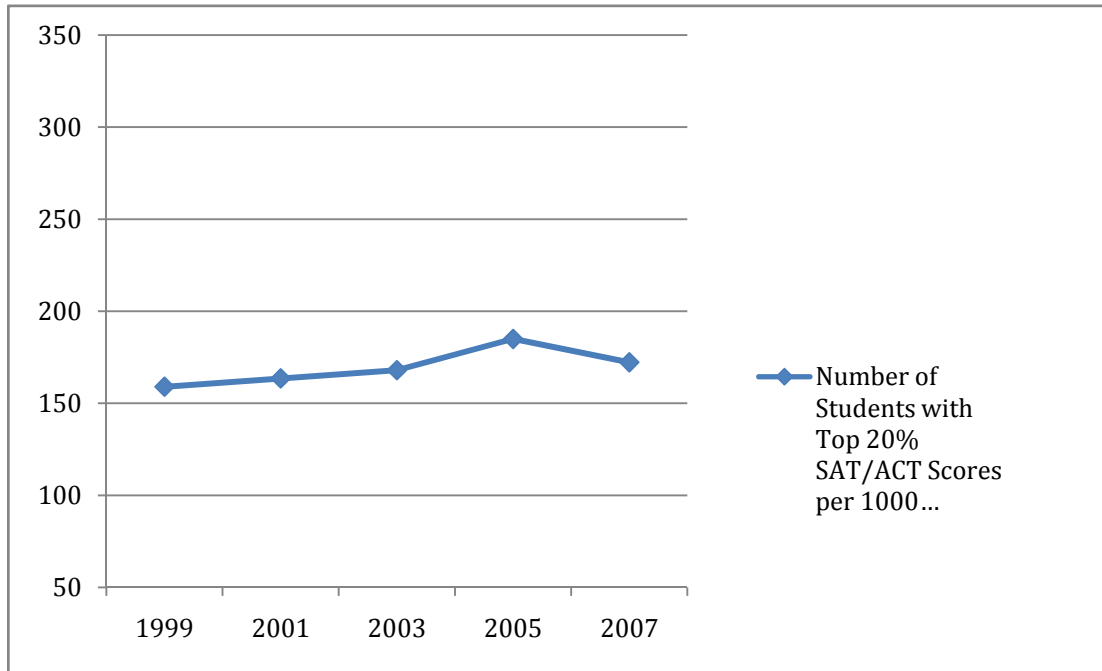
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Virginia



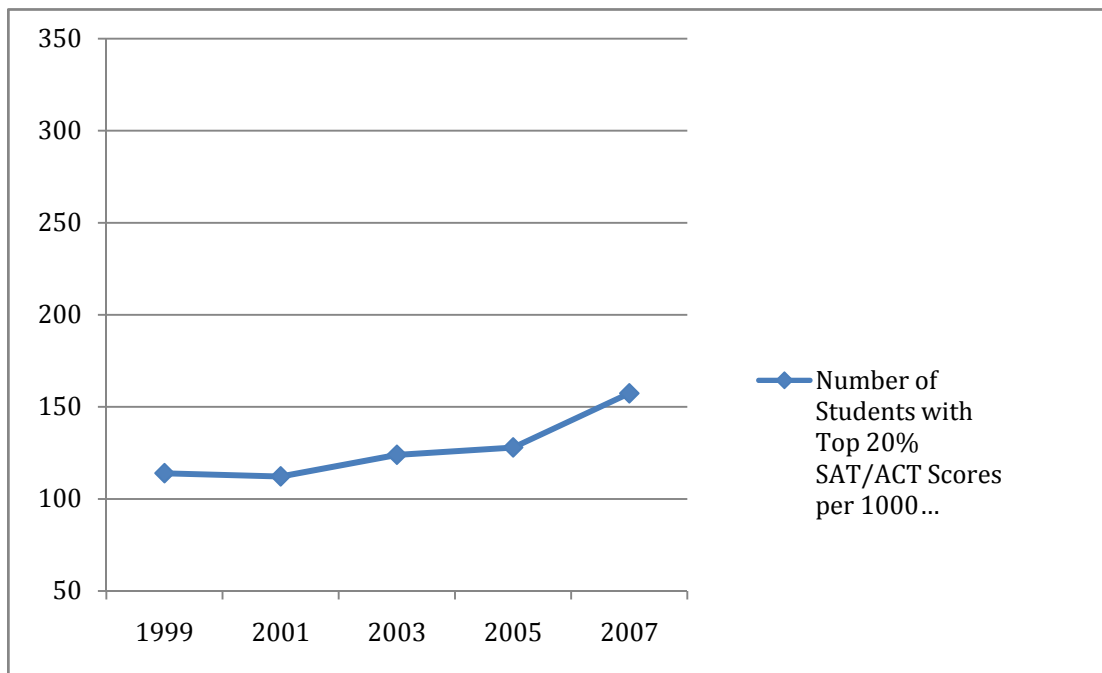
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Washington



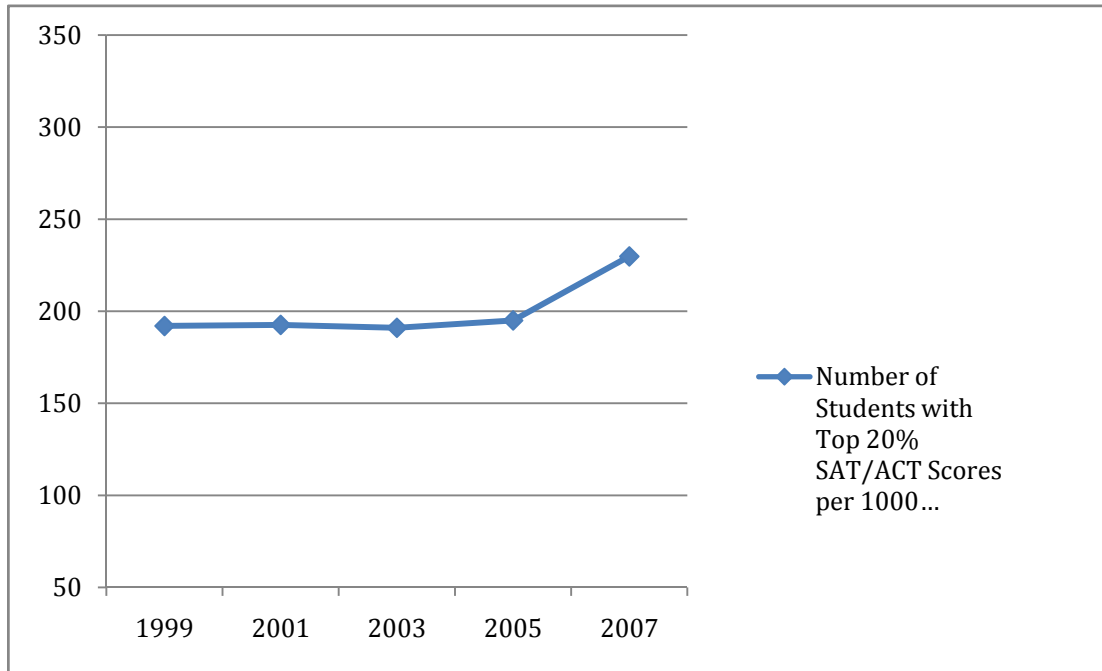
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

West Virginia



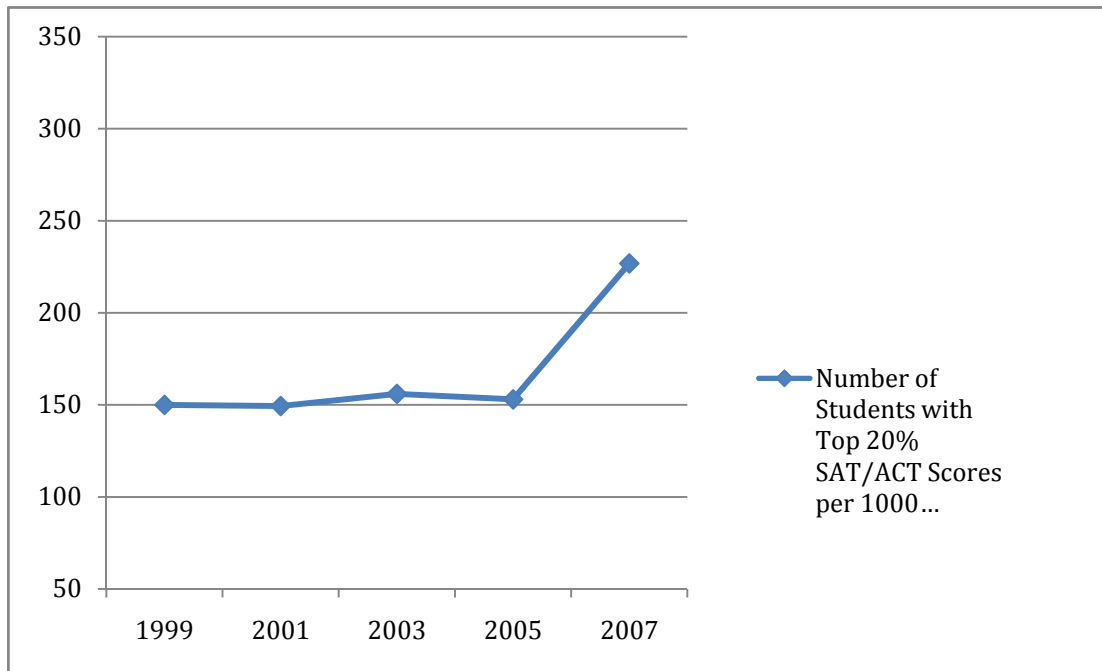
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Wisconsin



Source: Measuring Up 2000, 2002, 2004, 2006, 2008

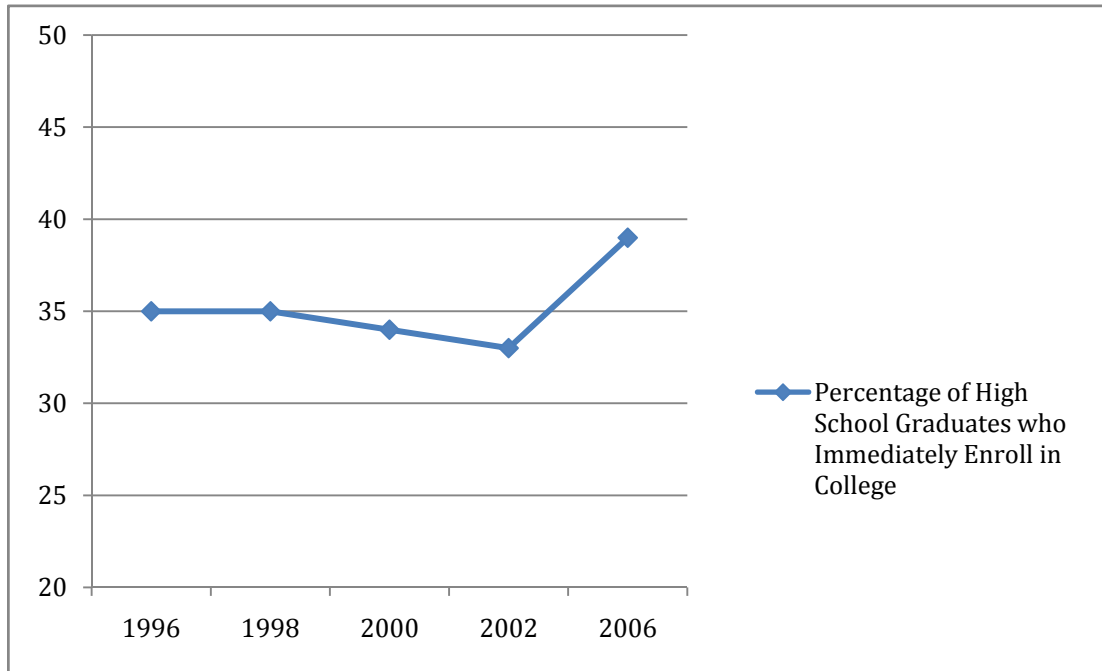
Wyoming



Source: Measuring Up 2000, 2002, 2004, 2006, 2008

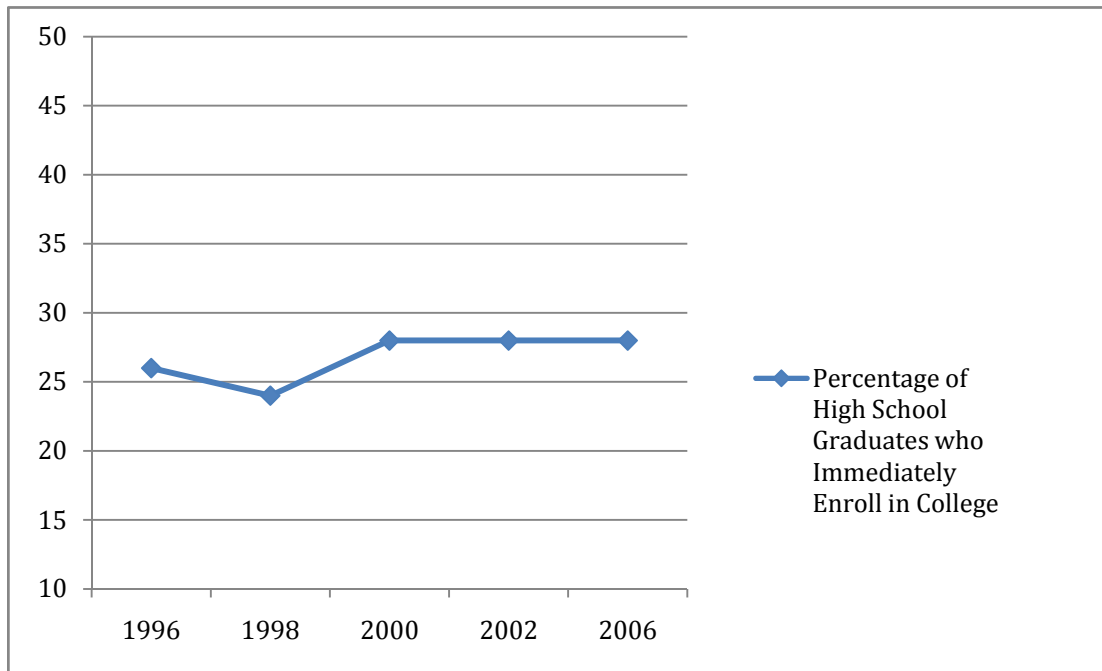
APPENDIX C
PERCENTAGE HIGH SCHOOL GRADUATES WHO IMMEDIATELY
ENTER COLLEGE BY STATE

Alabama



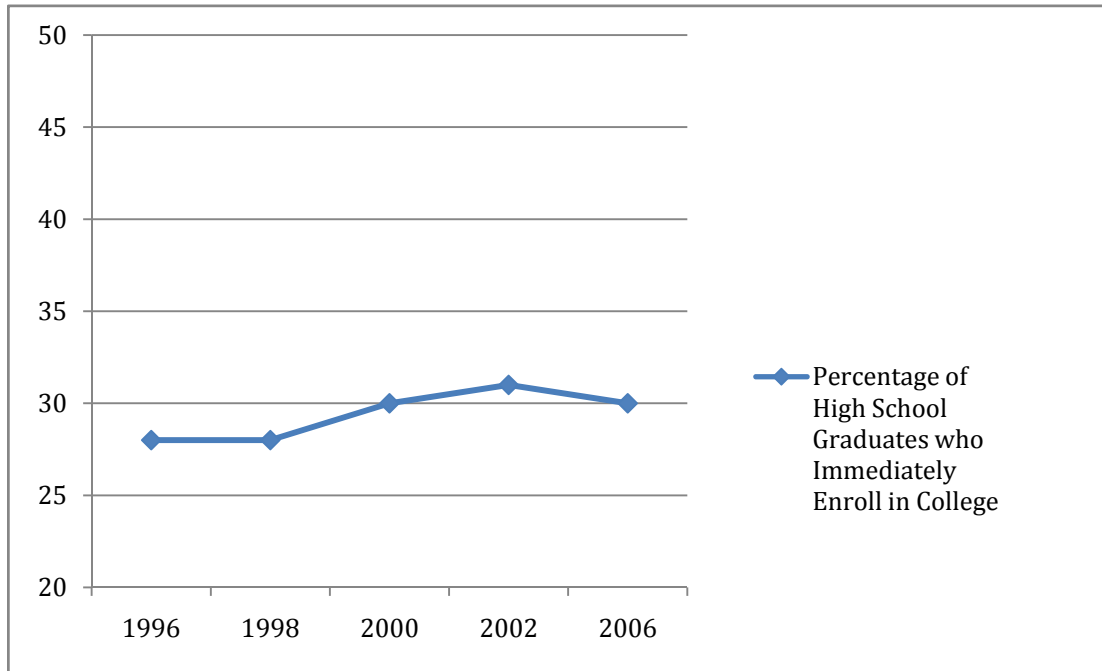
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Alaska



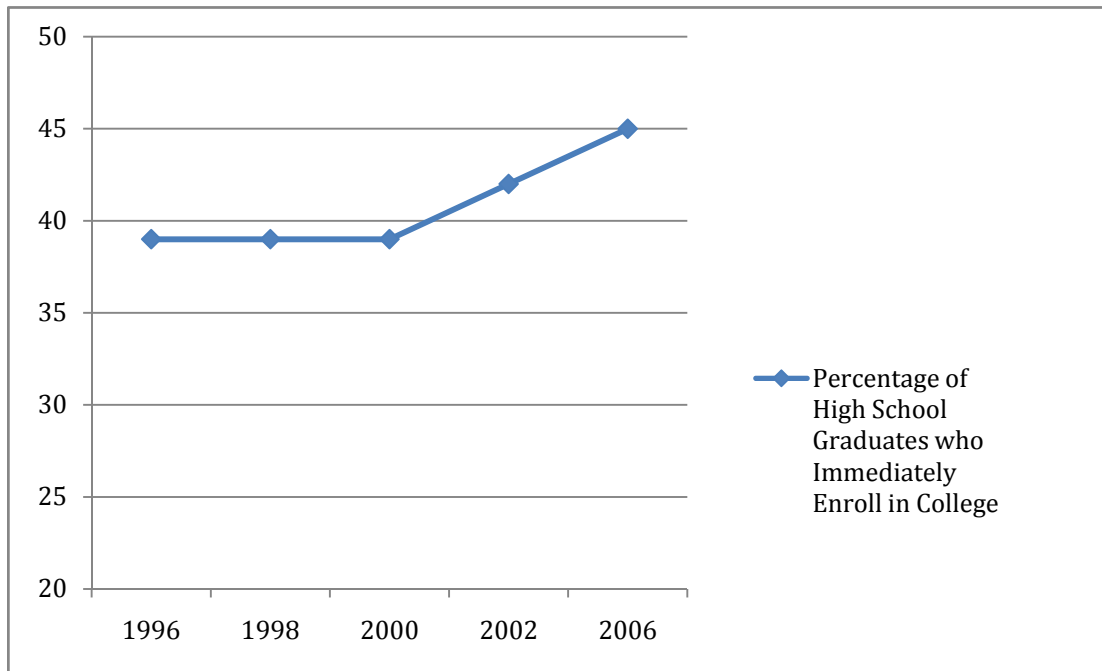
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Arizona



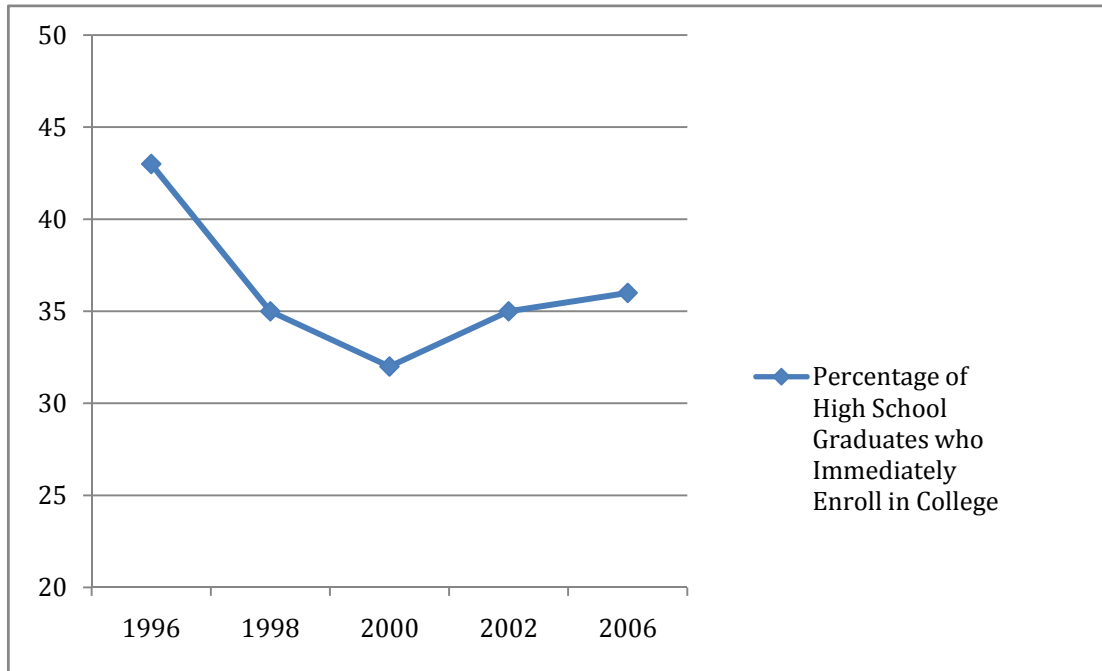
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Arkansas



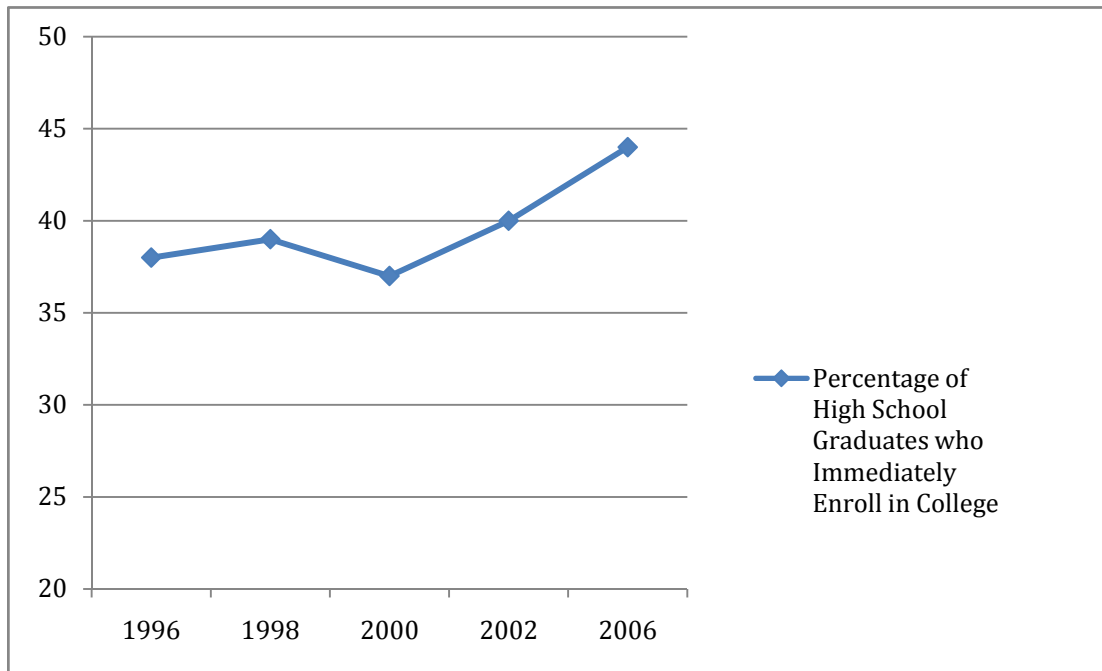
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

California



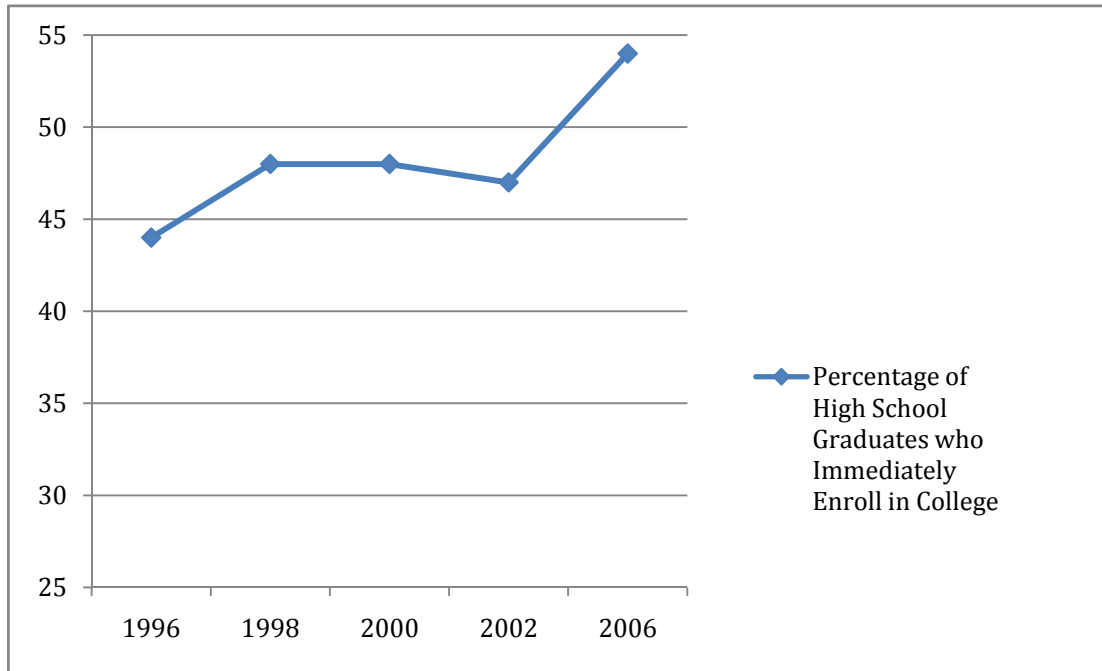
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Colorado



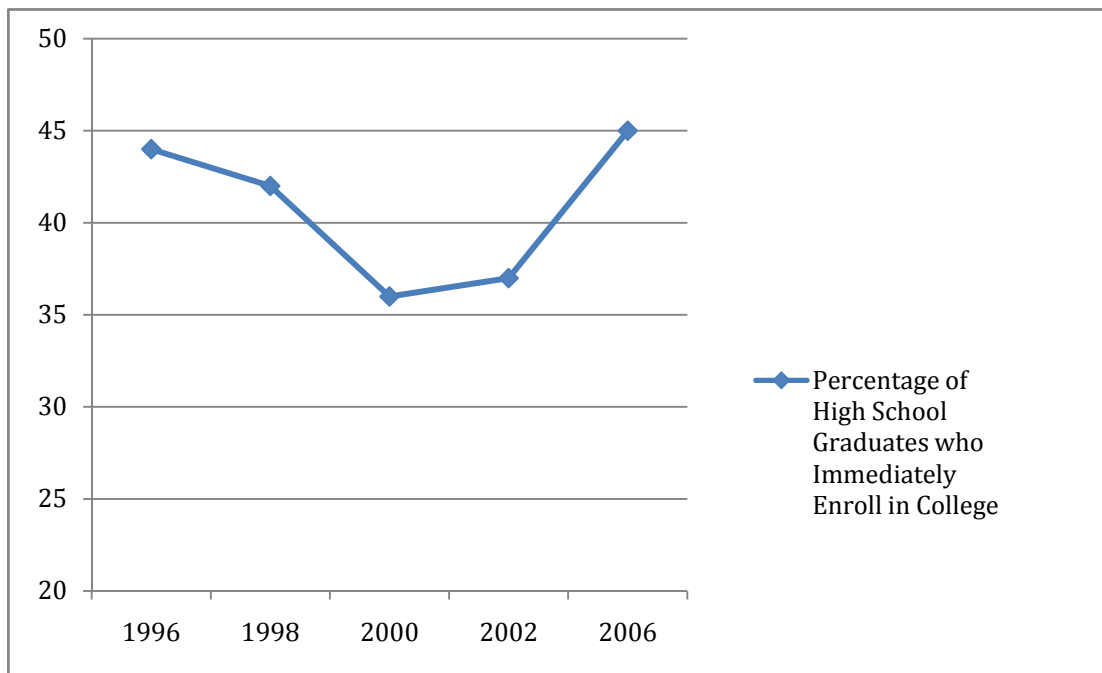
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Connecticut



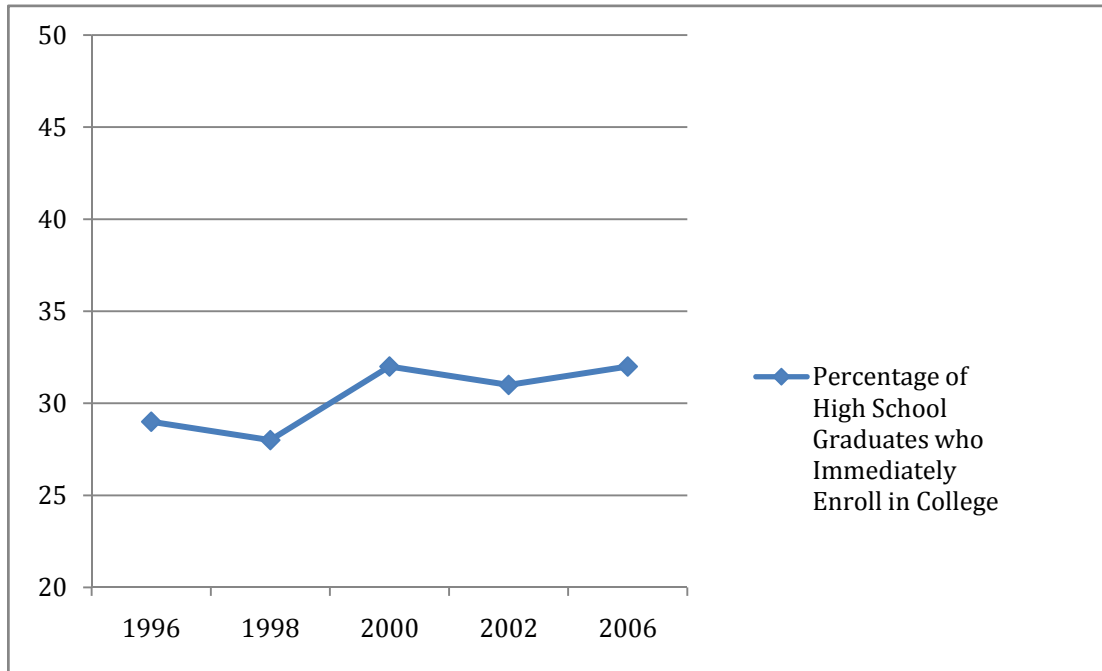
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Delaware



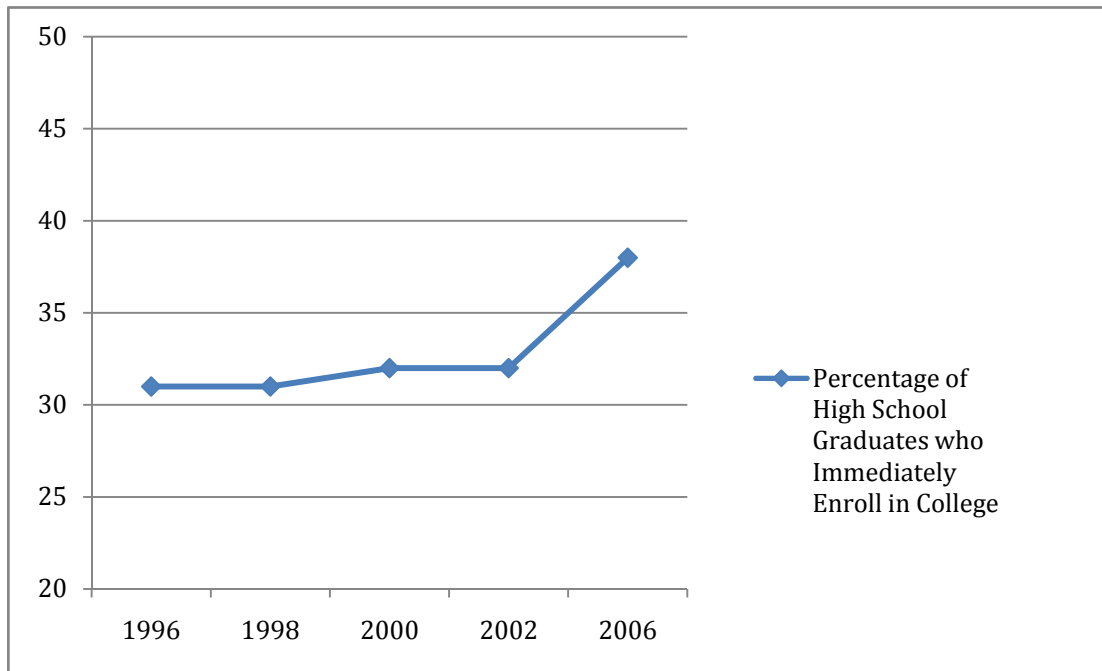
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Florida



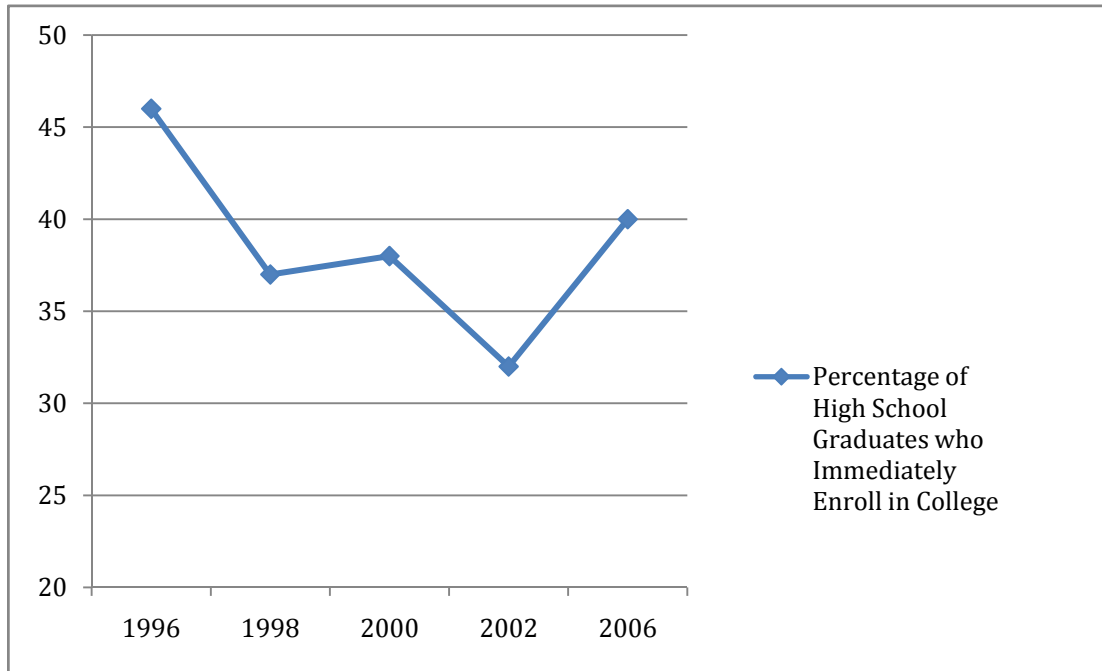
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Georgia



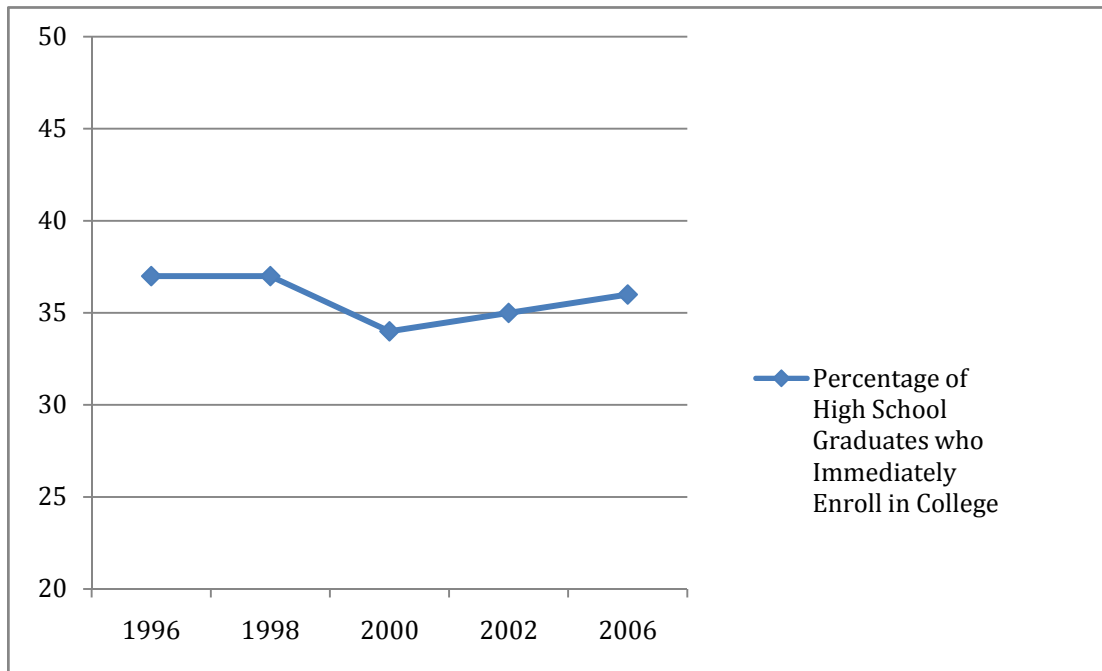
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Hawaii



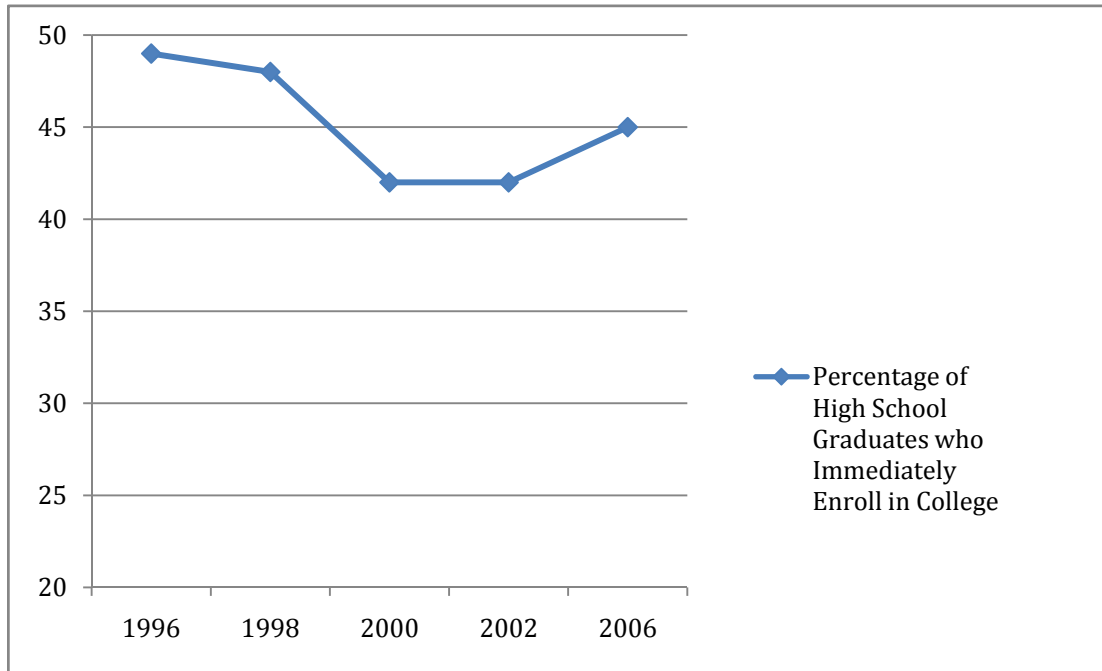
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Idaho



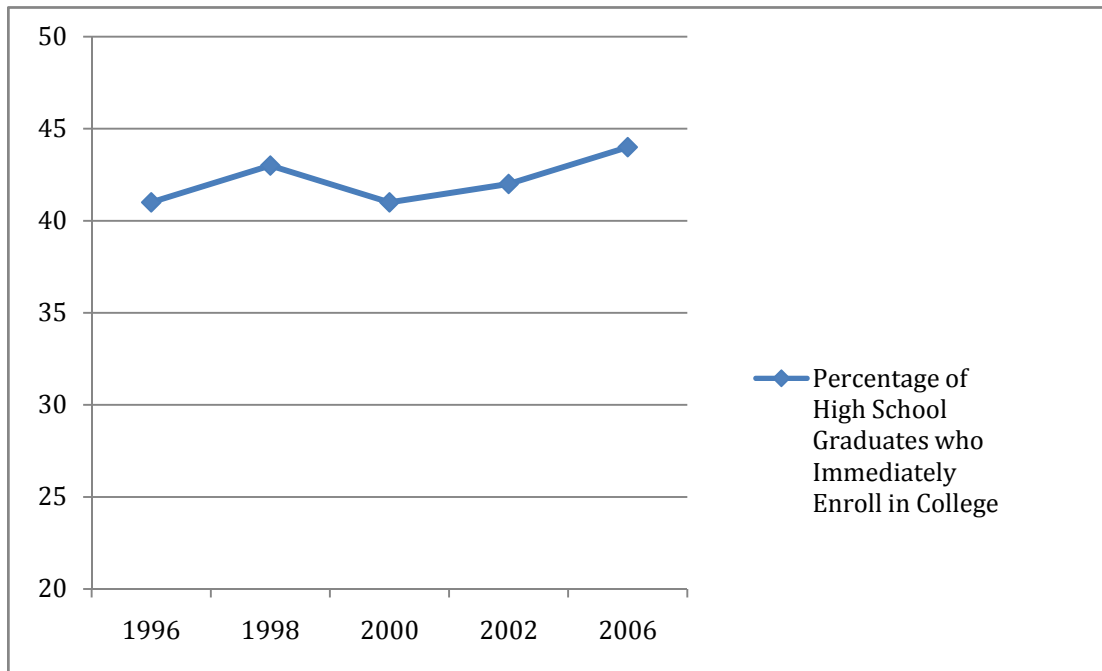
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Illinois



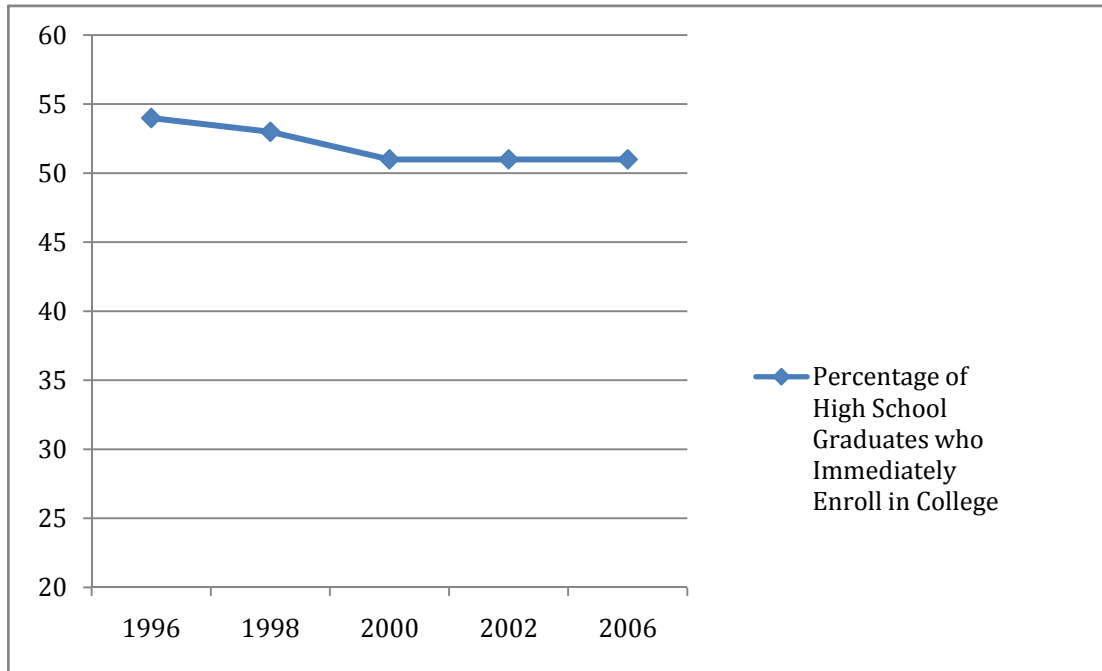
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Indiana



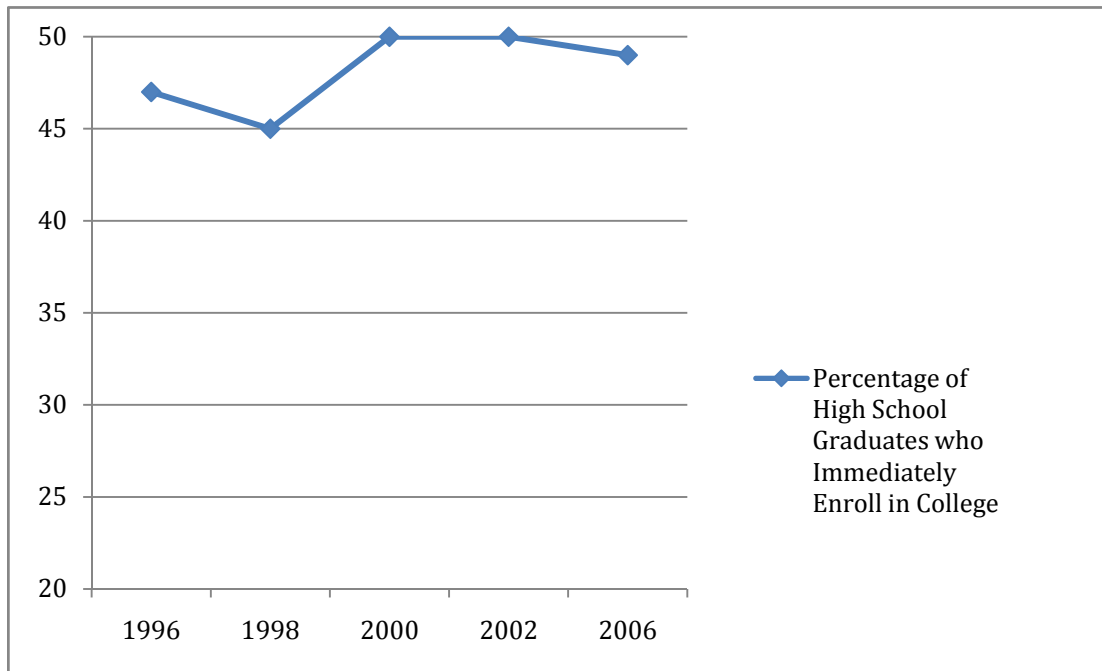
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Iowa



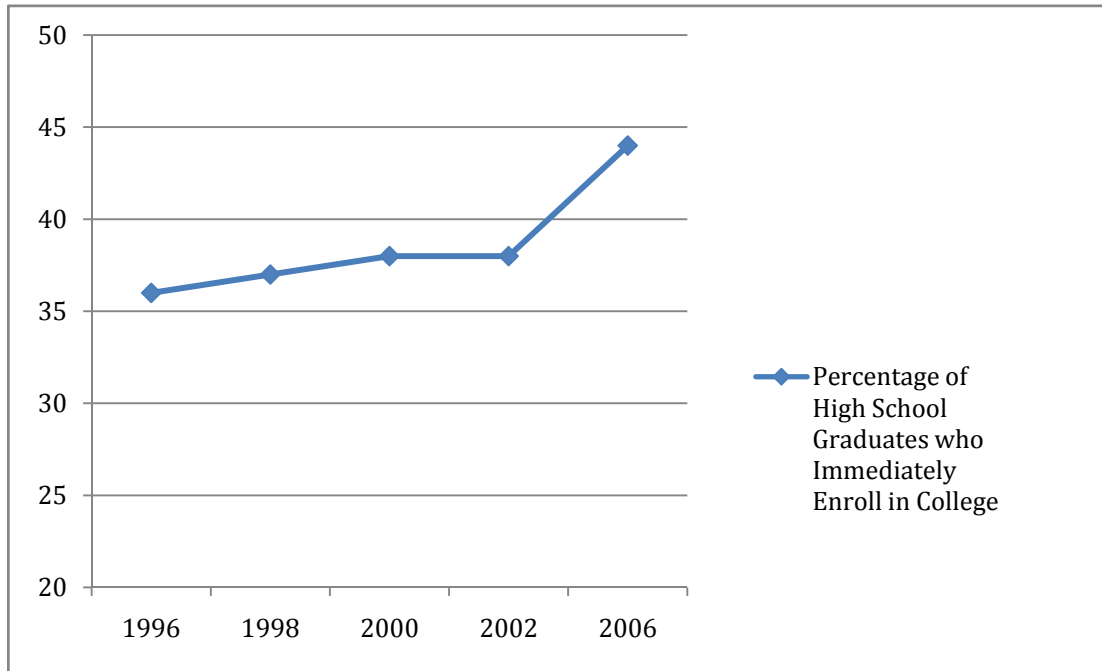
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Kansas



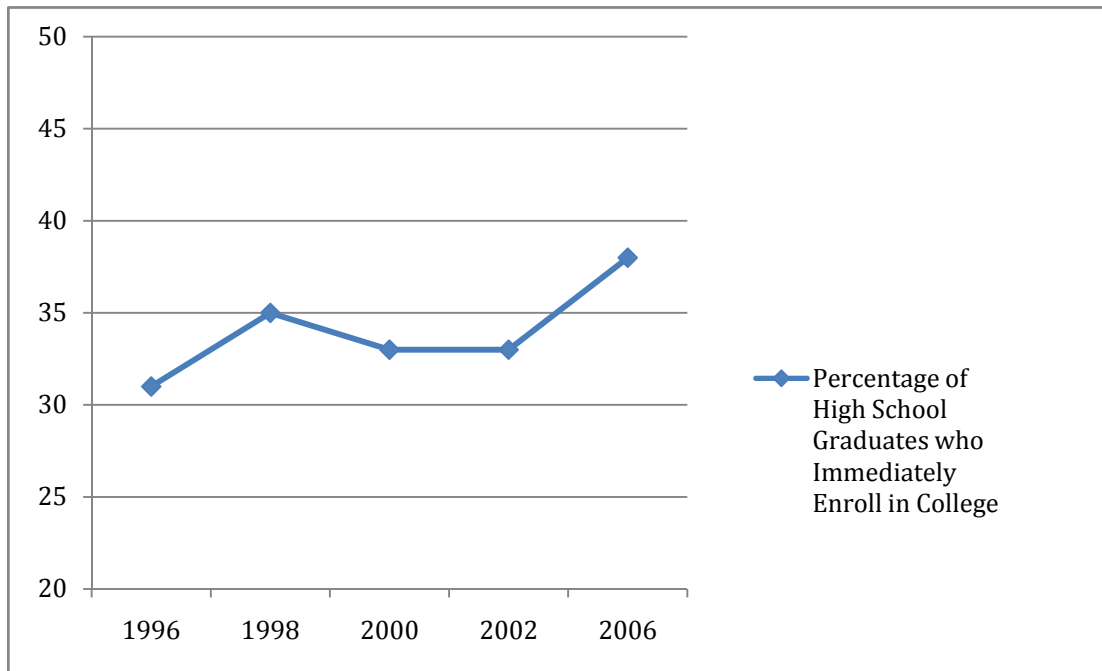
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Kentucky



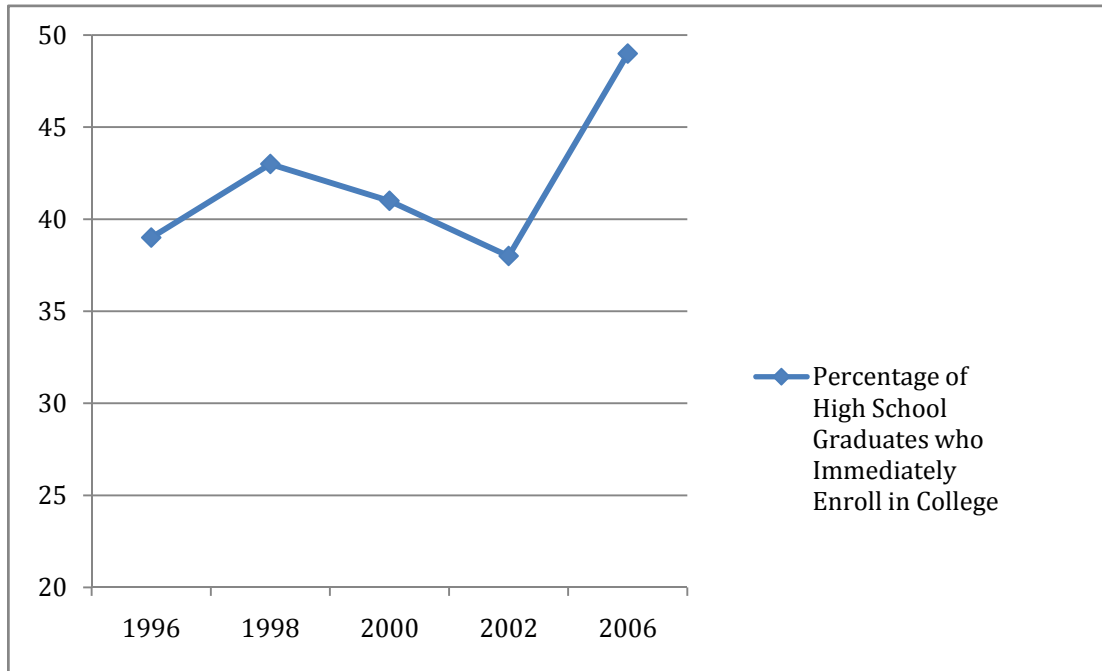
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Louisiana



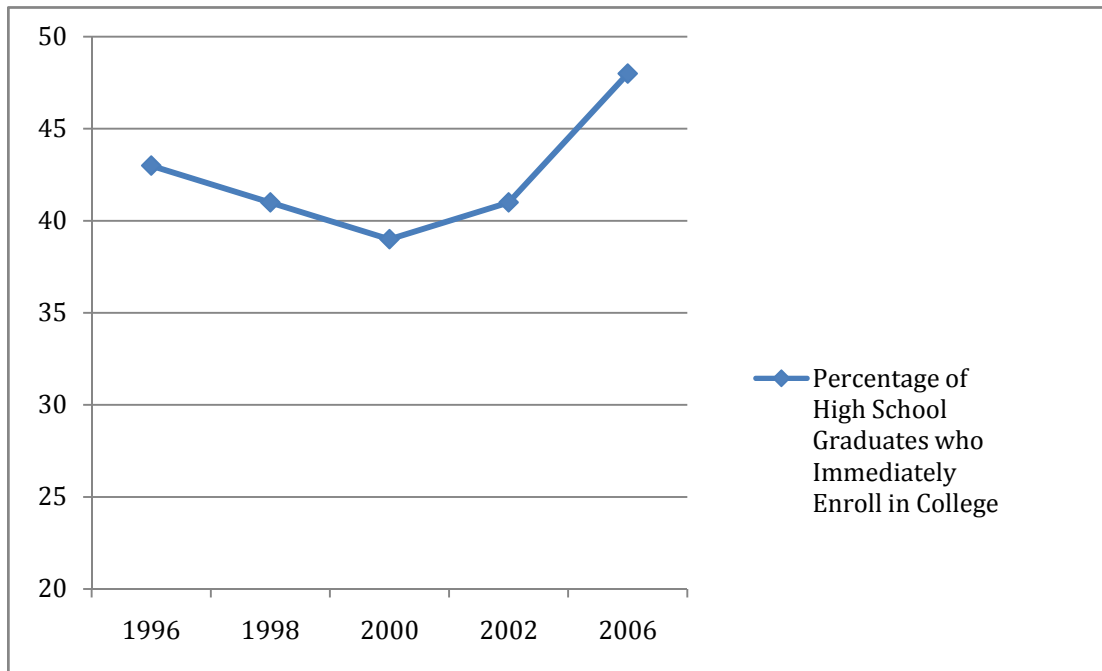
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Maine



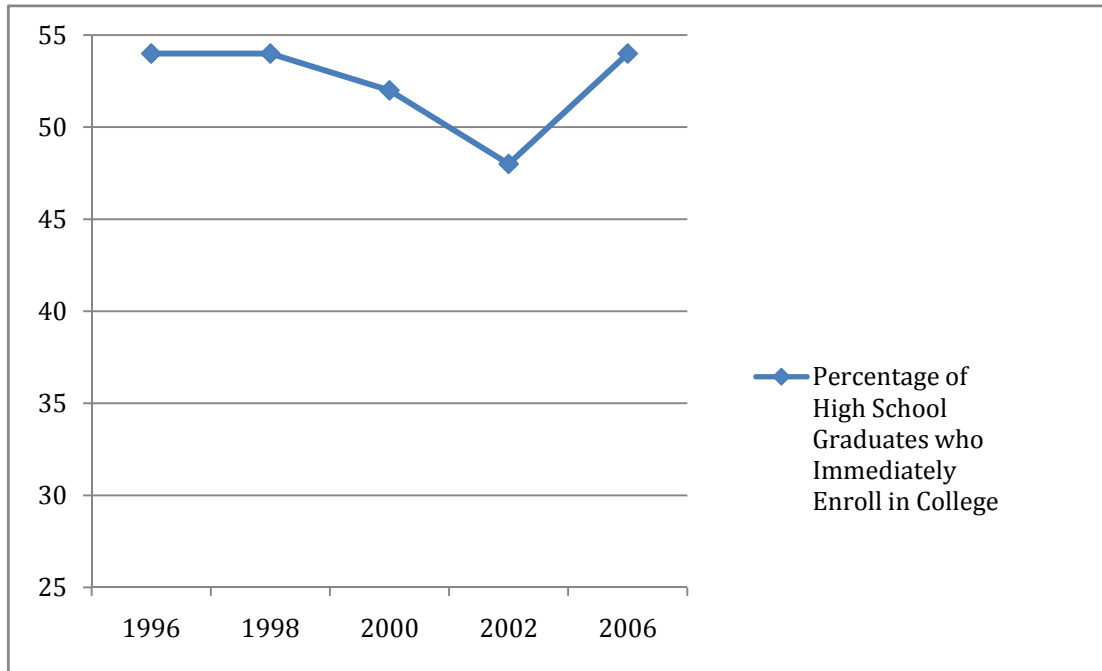
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Maryland



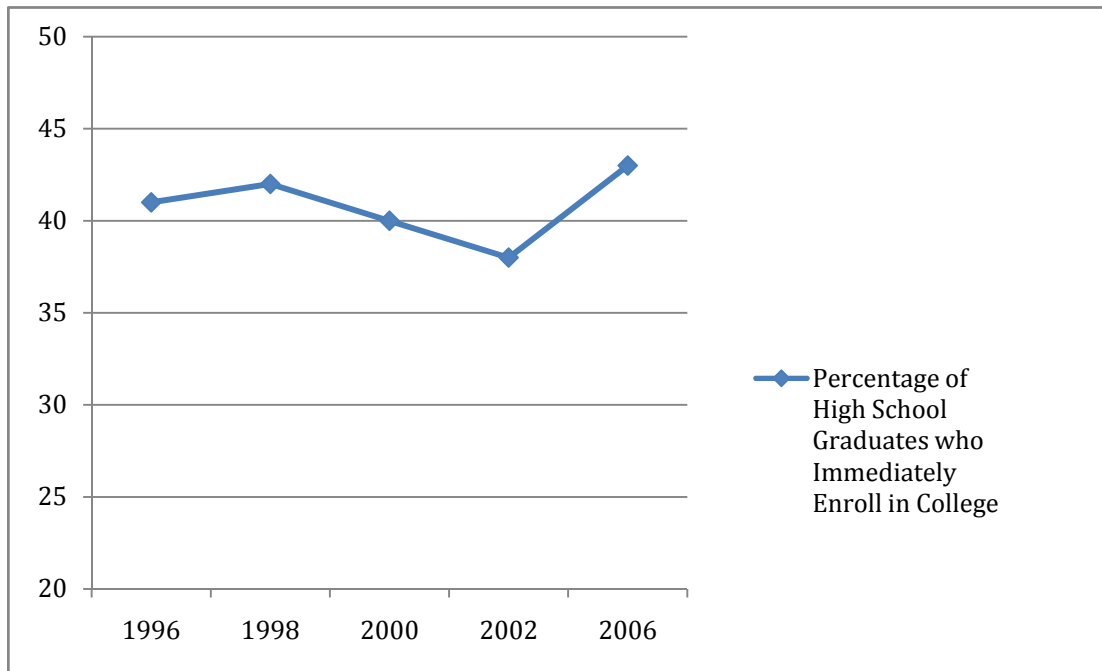
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Massachusetts



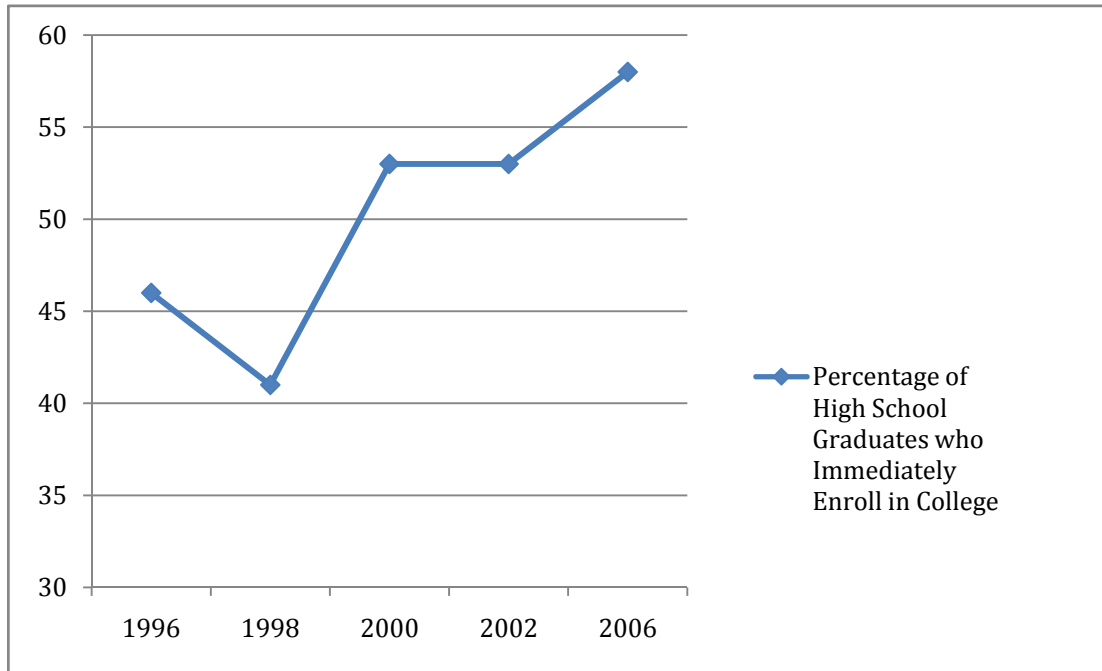
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Michigan



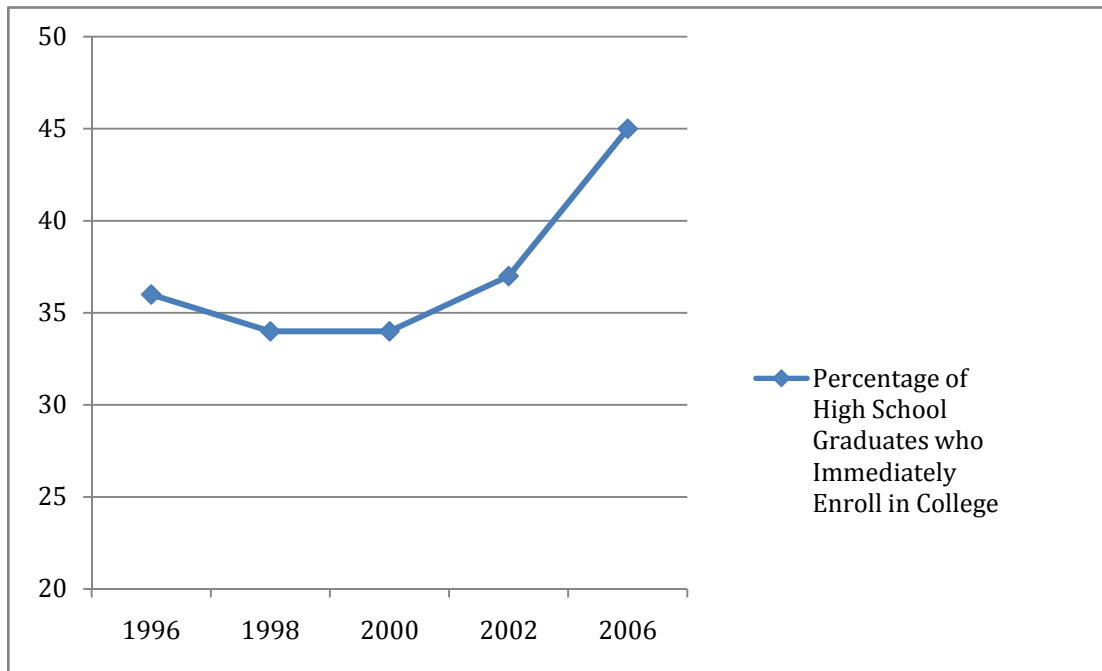
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Minnesota



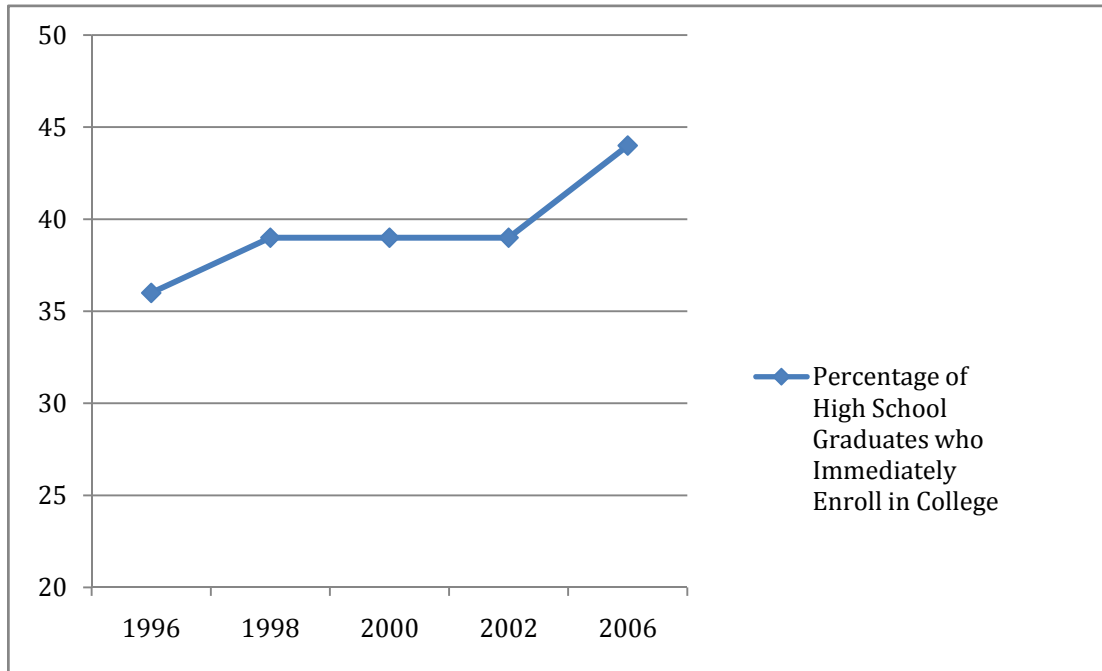
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Mississippi



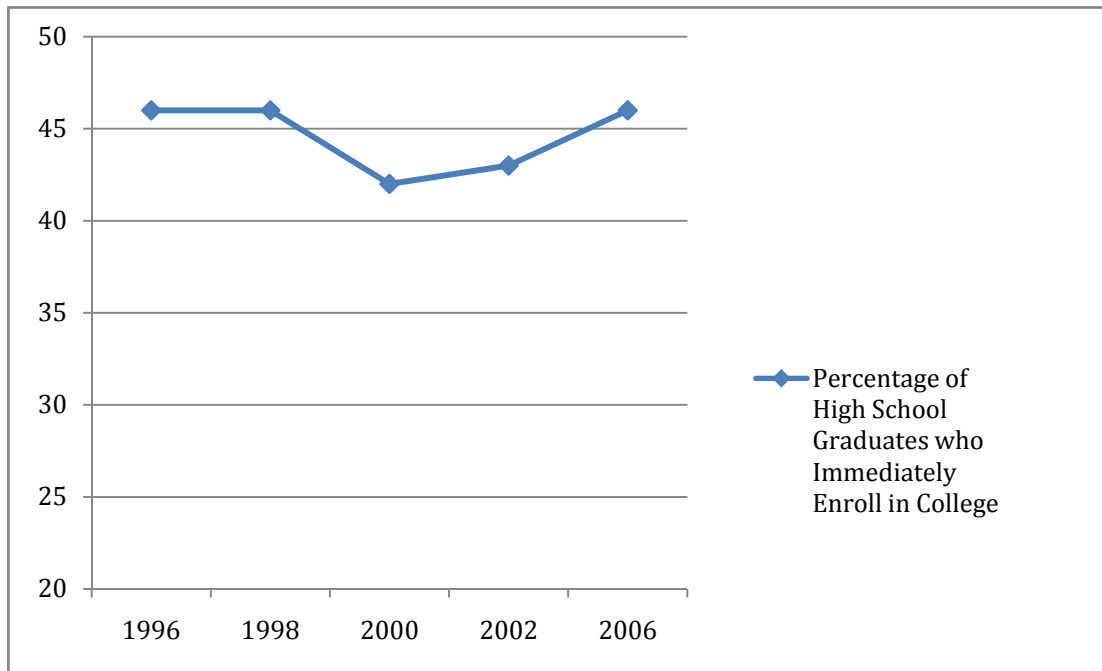
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Missouri



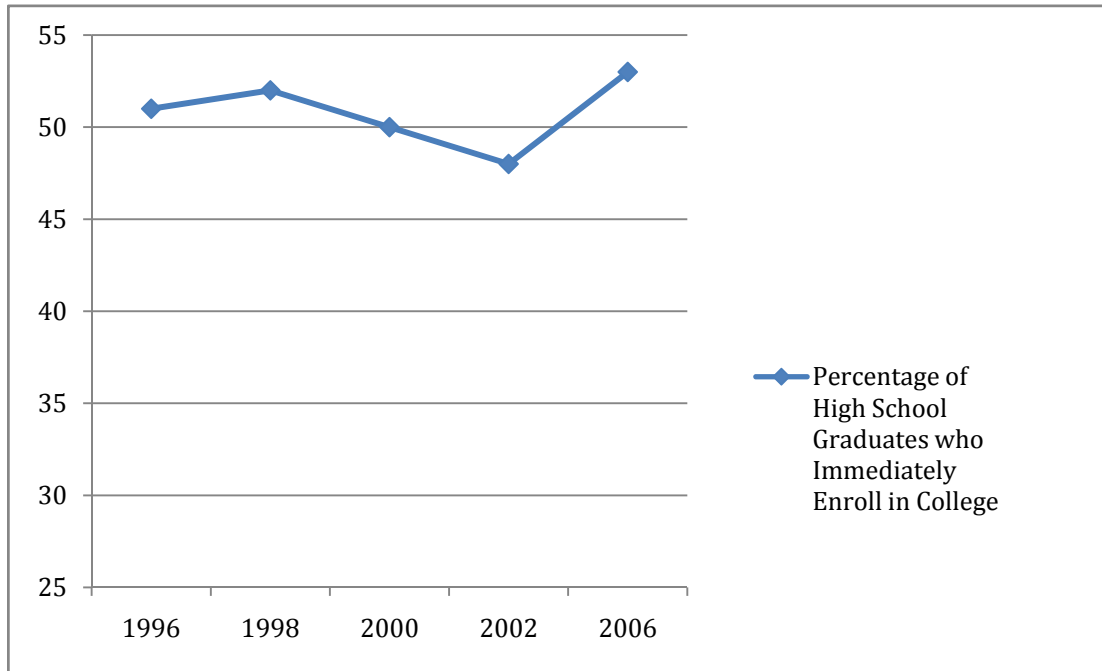
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Montana



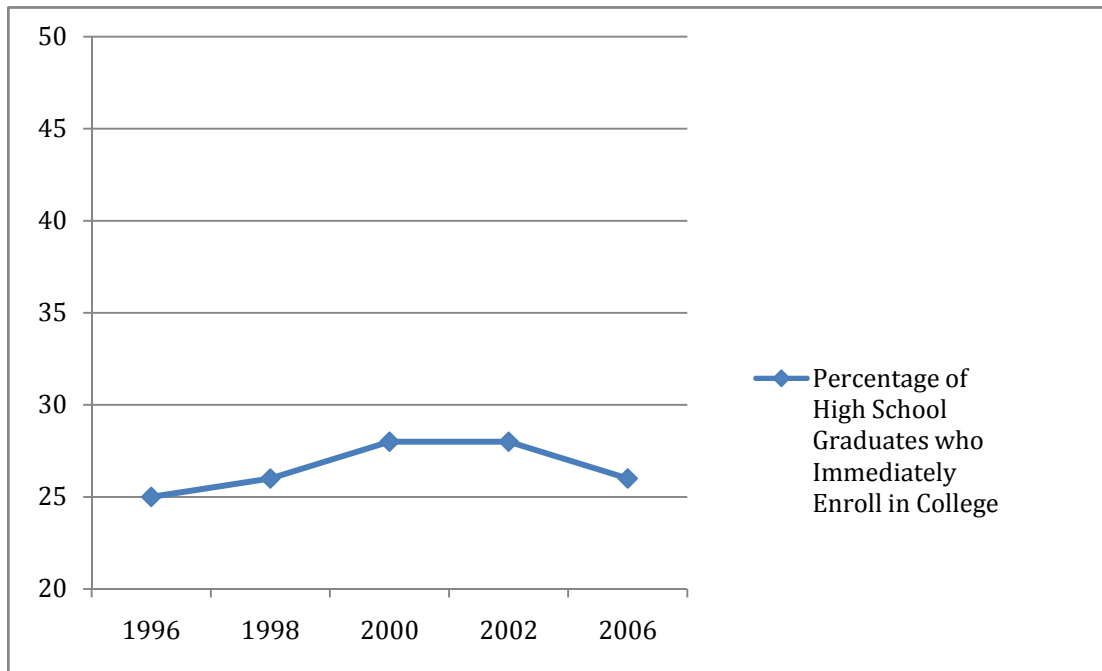
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Nebraska



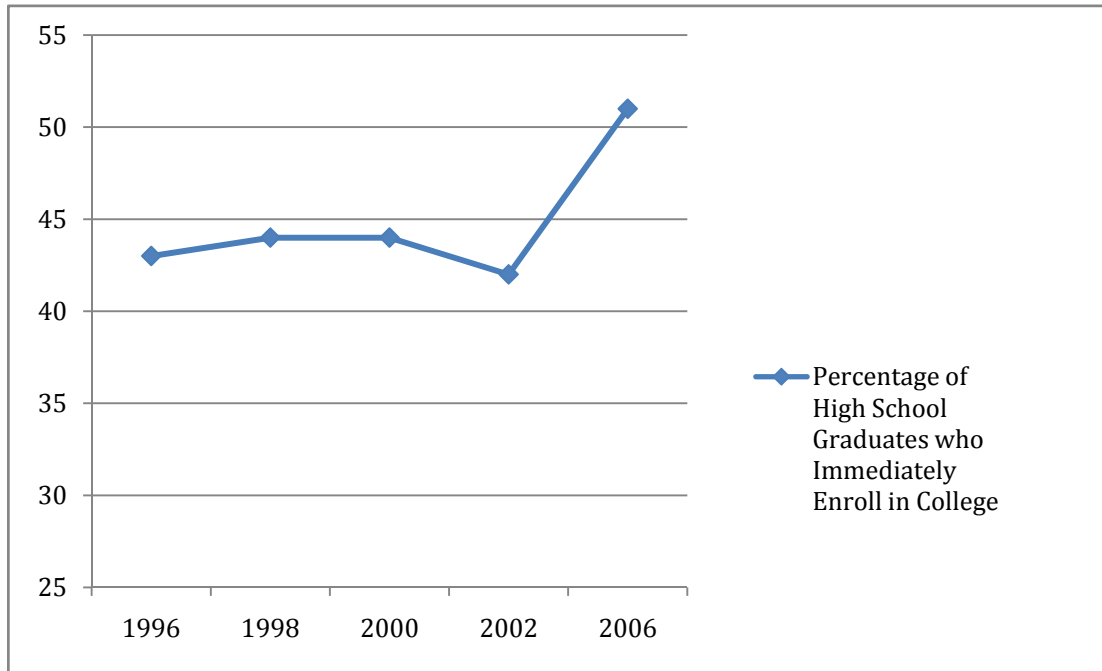
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Nevada



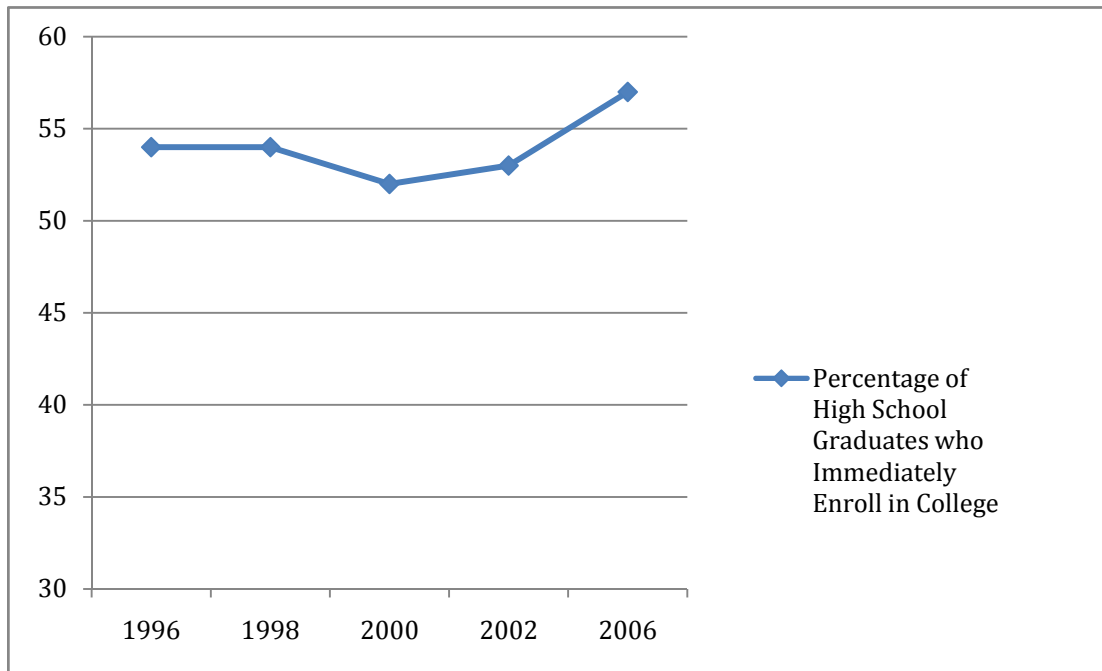
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New Hampshire



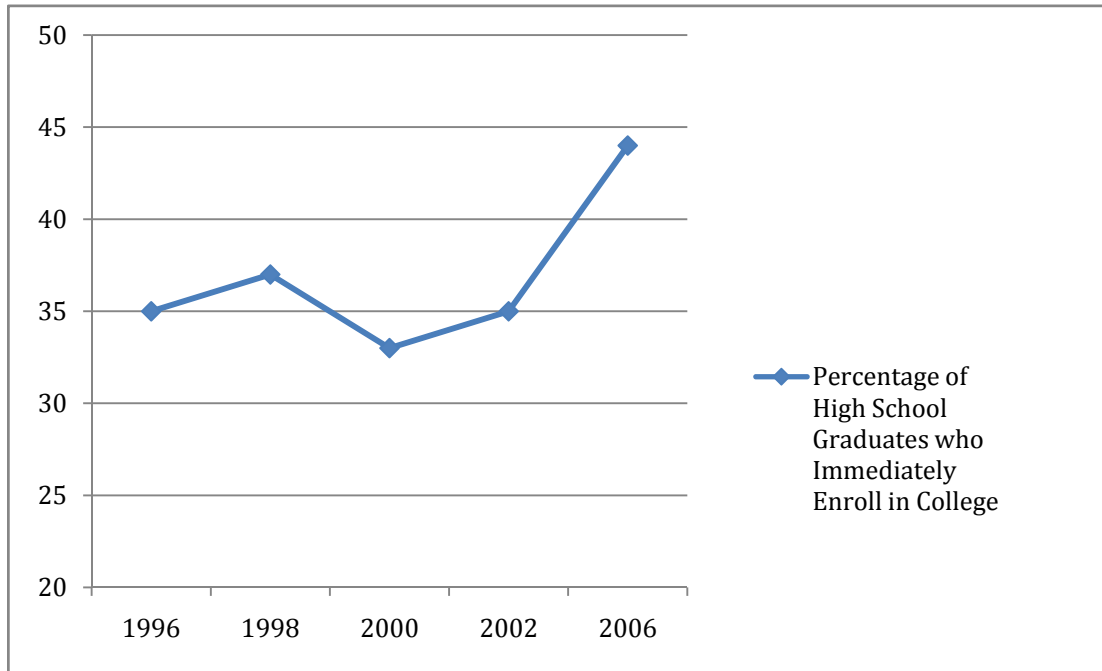
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New Jersey



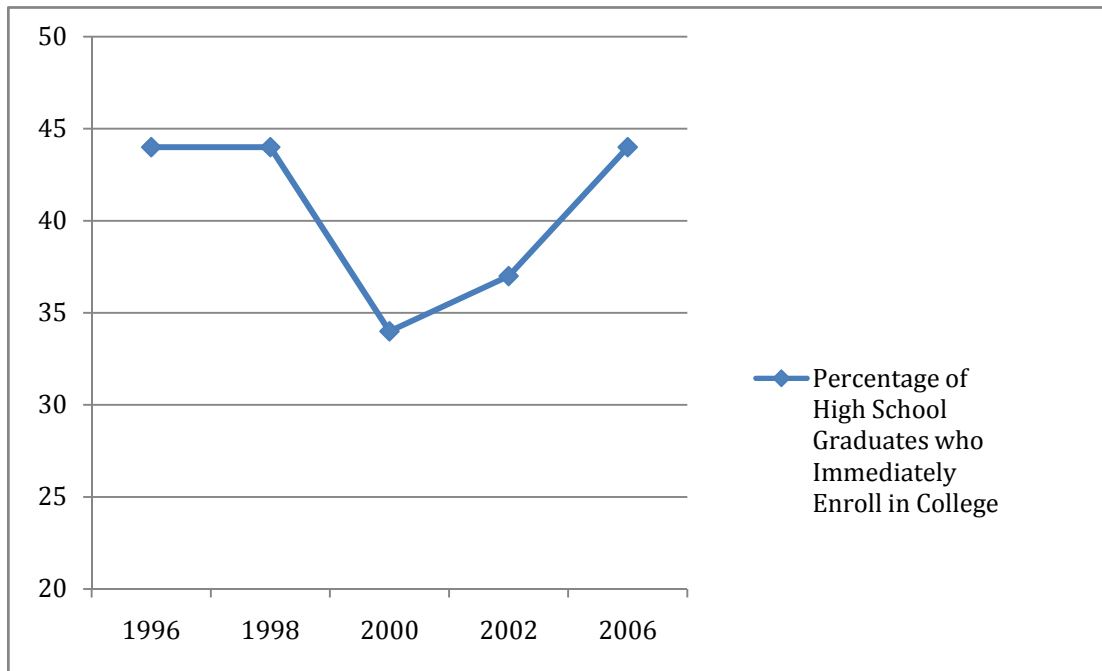
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New Mexico



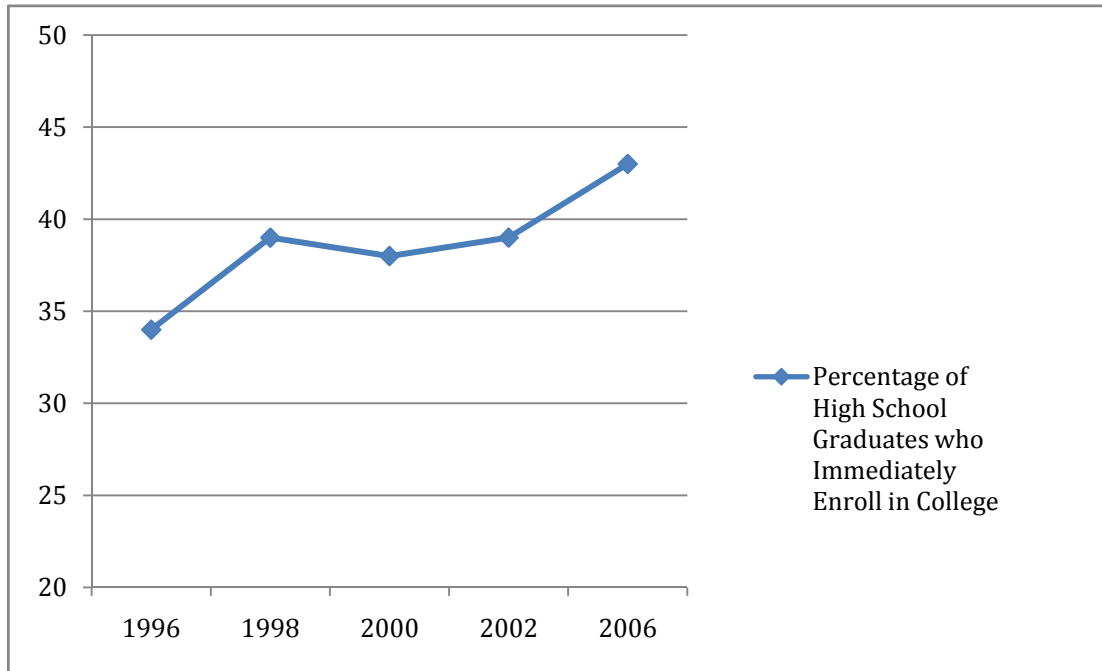
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New York



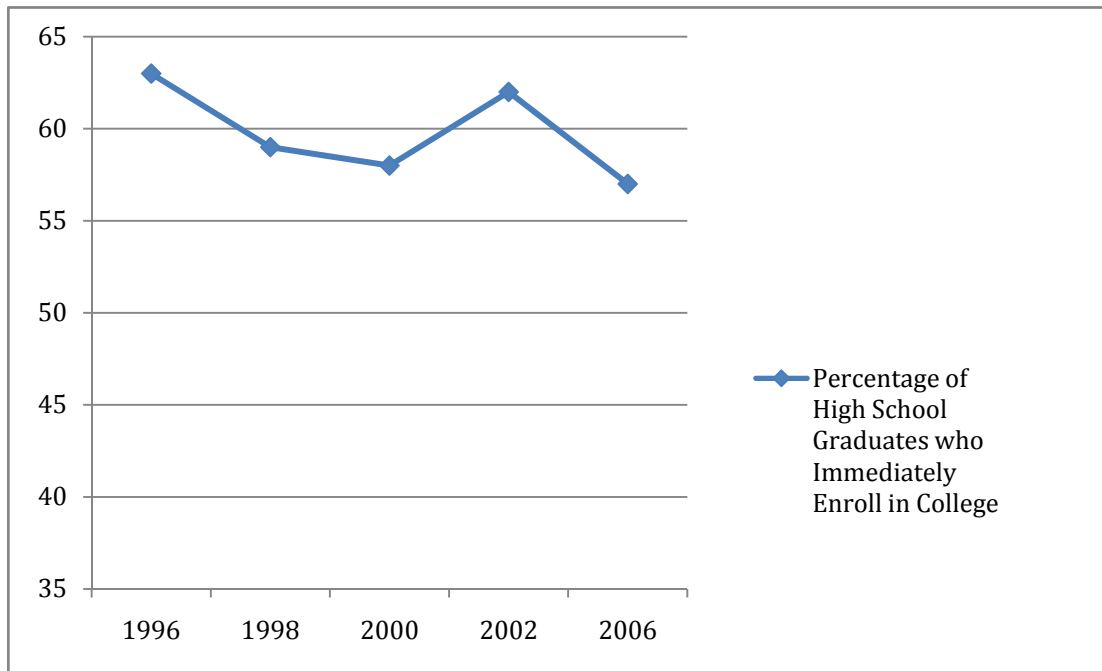
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

North Carolina



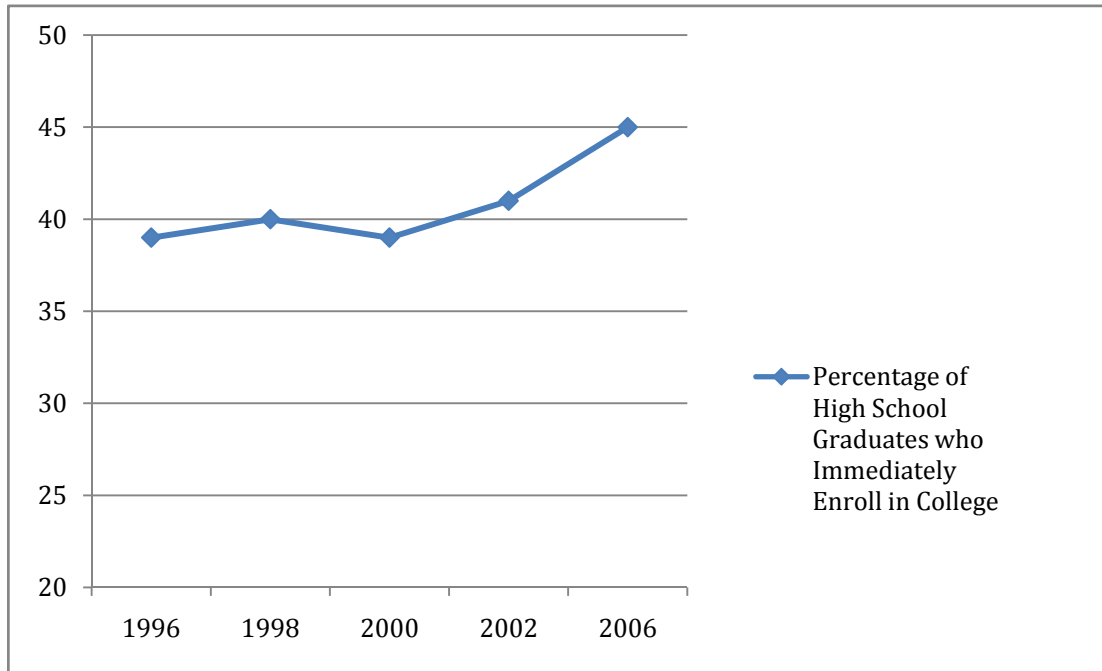
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North Dakota



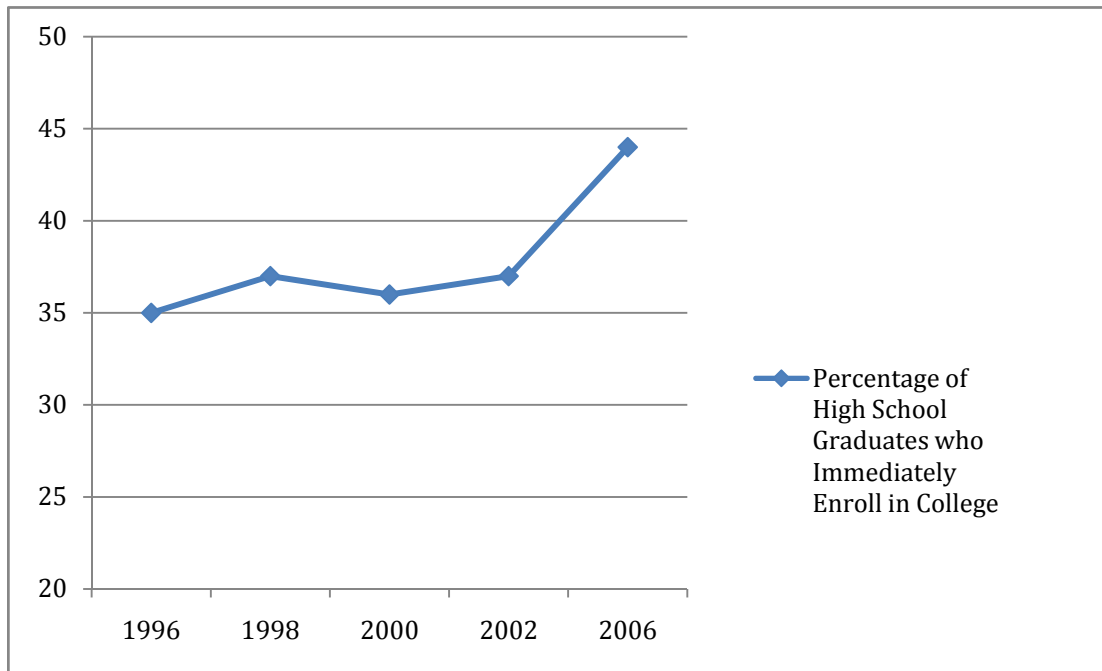
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Ohio



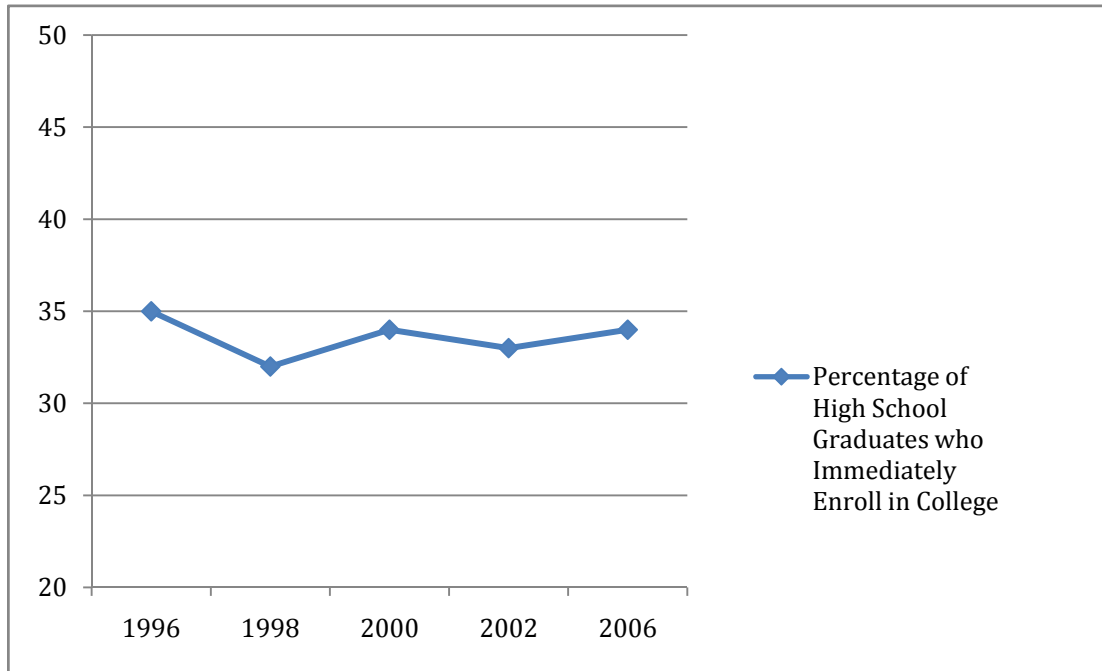
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Oklahoma



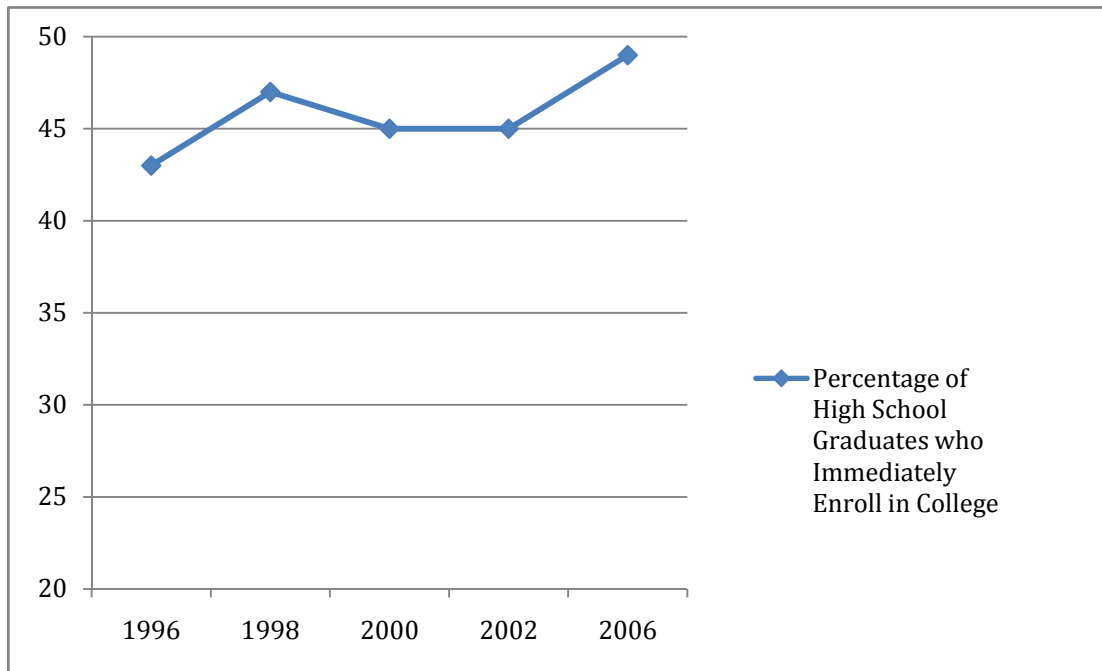
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Oregon



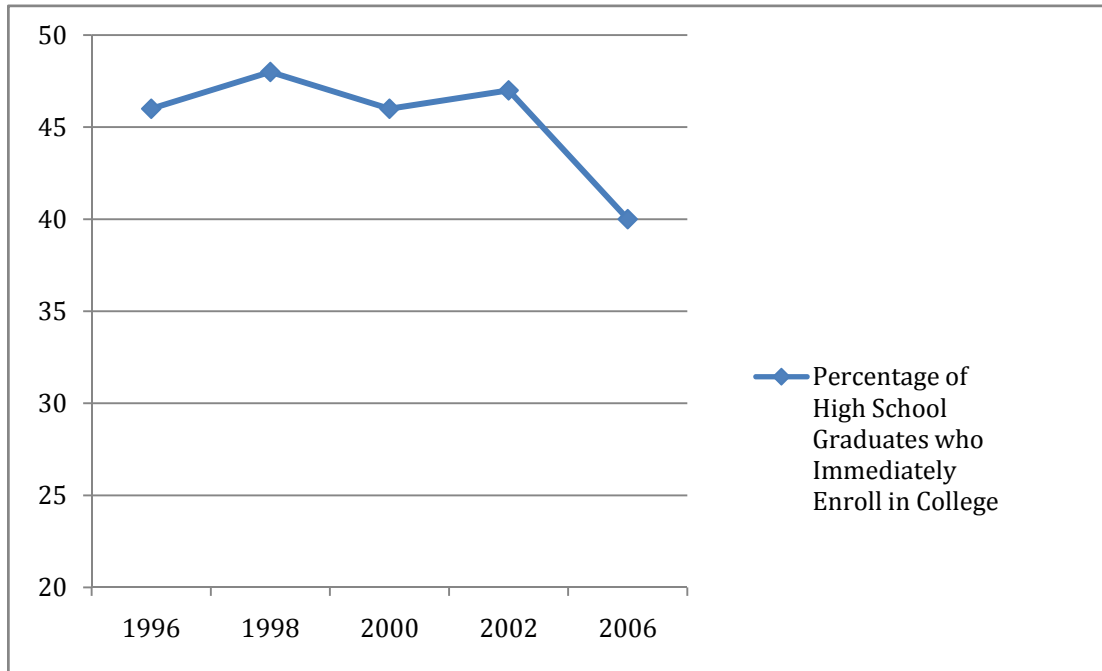
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Pennsylvania



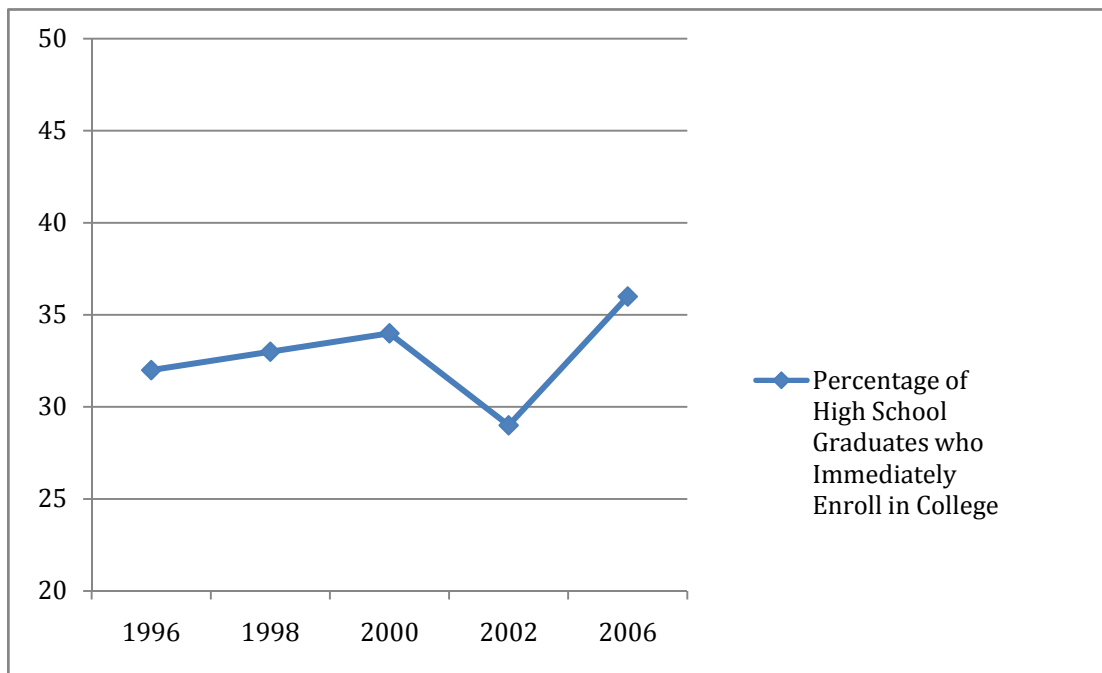
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Rhode Island



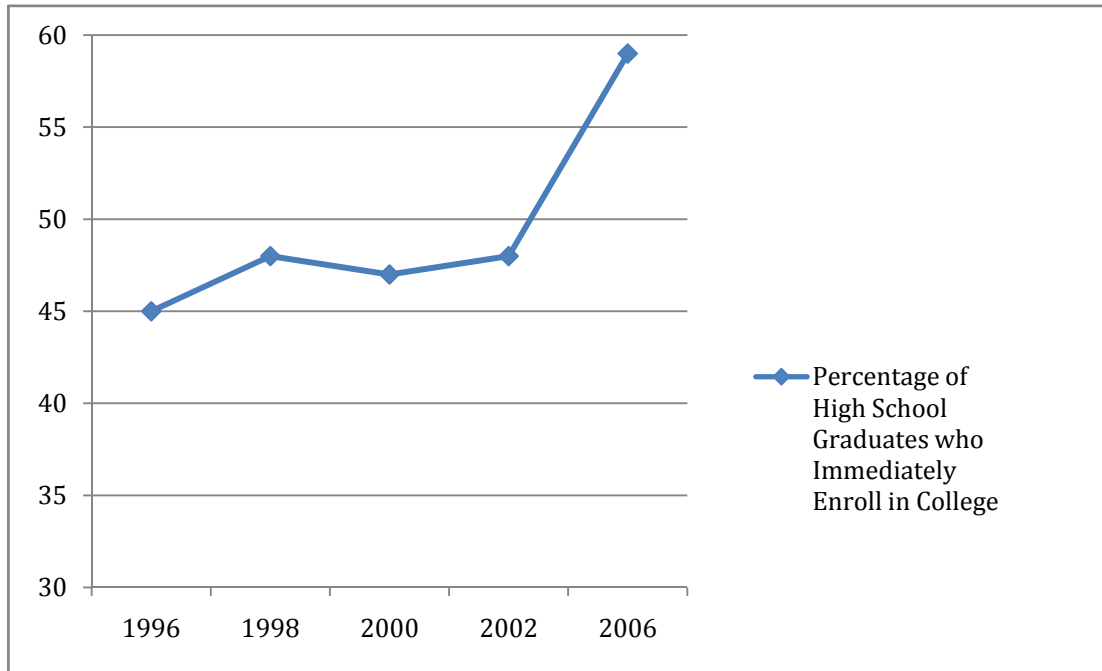
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

South Carolina



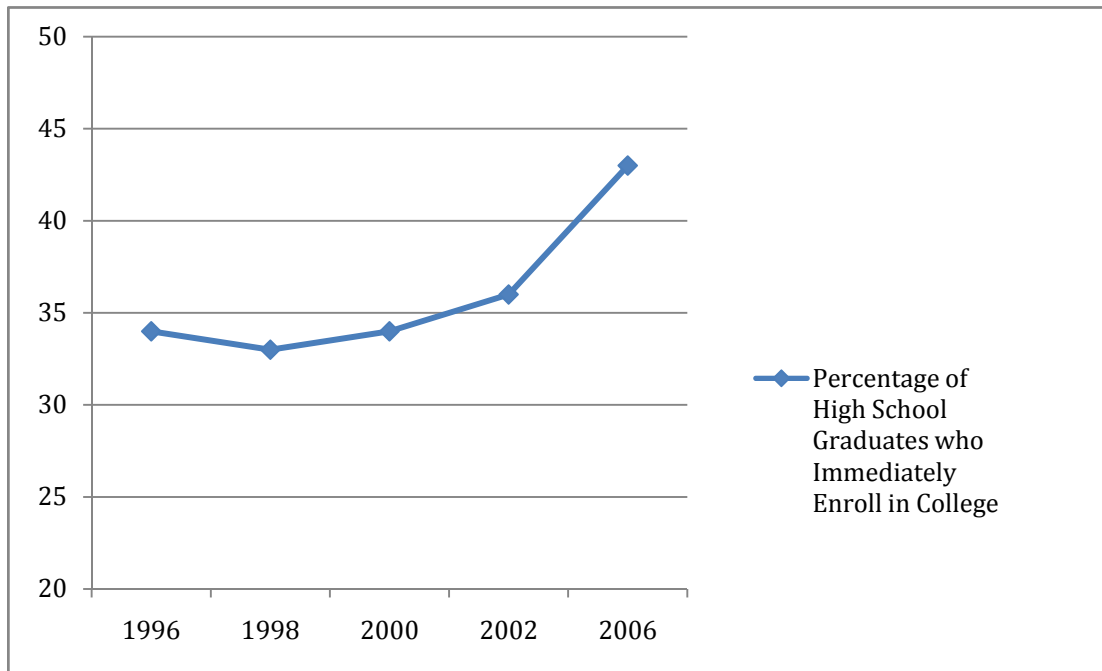
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South Dakota



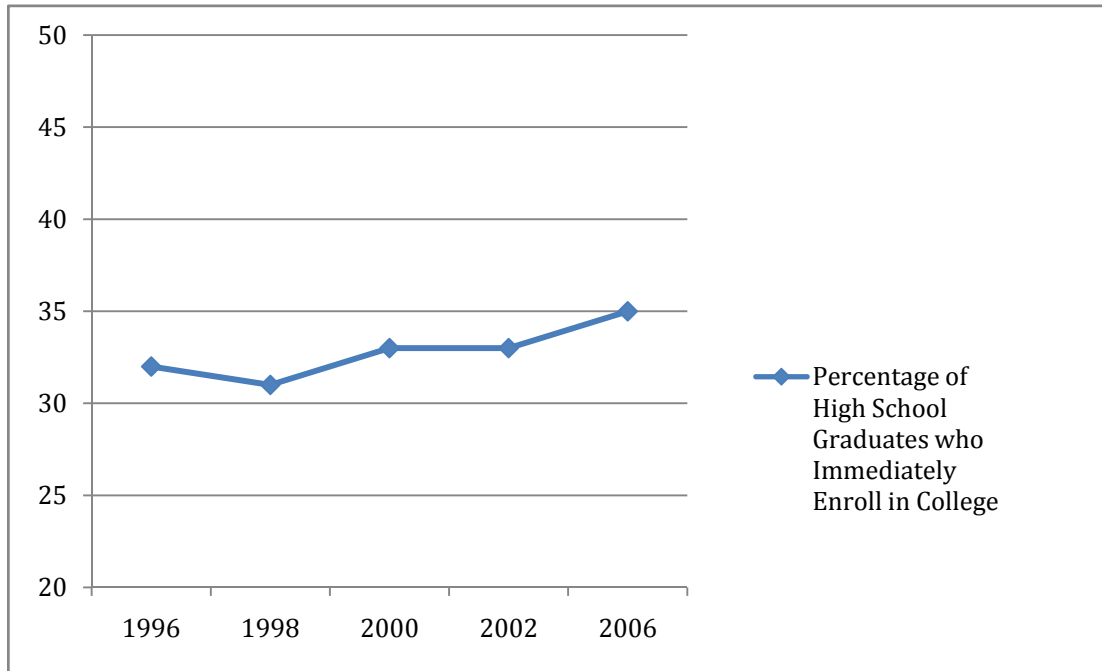
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Tennessee



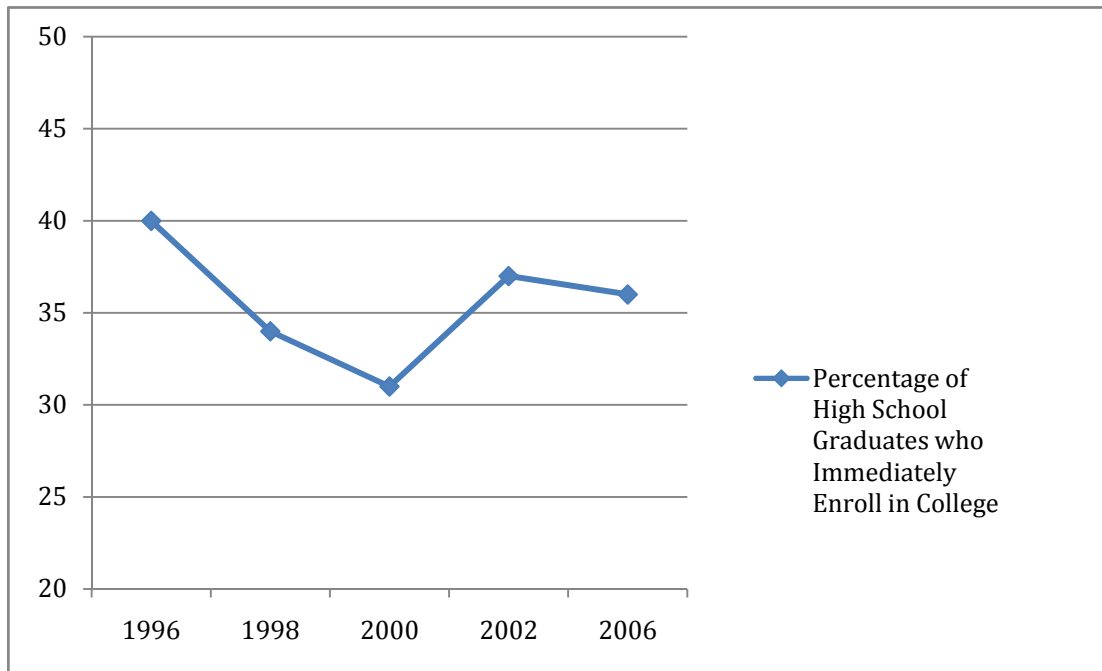
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Texas



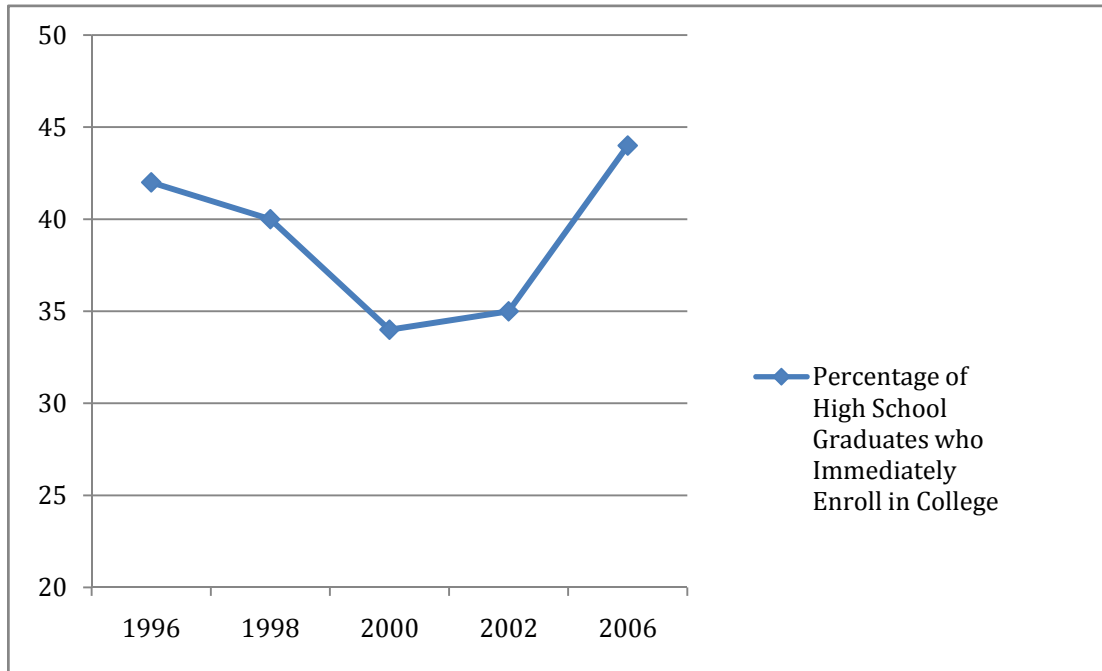
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Utah



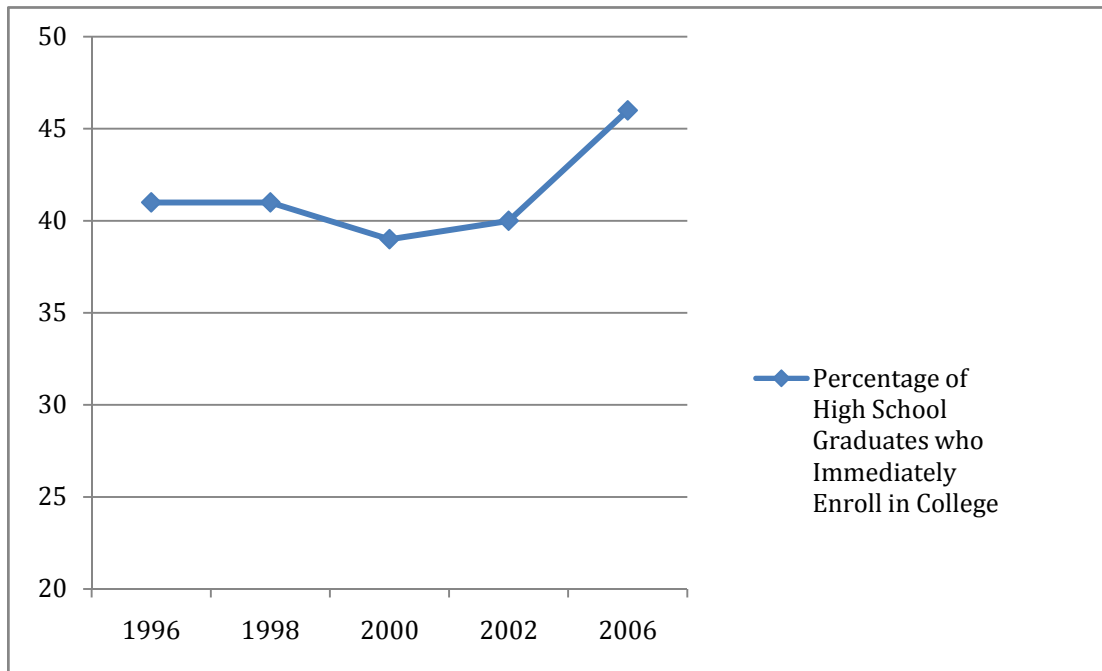
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Vermont



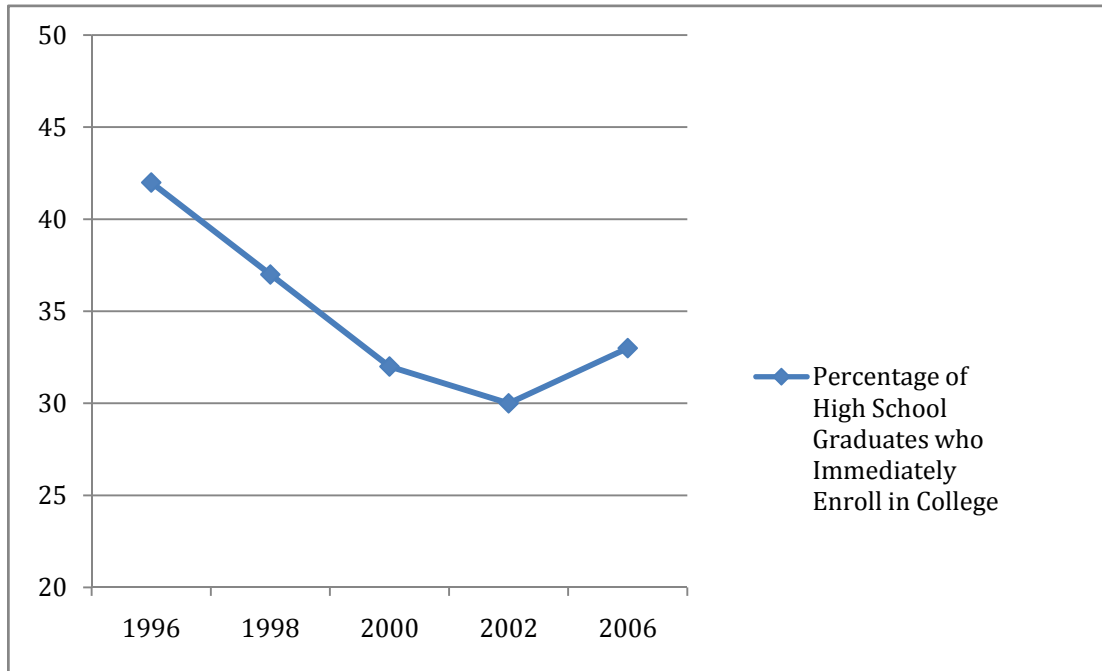
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Virginia



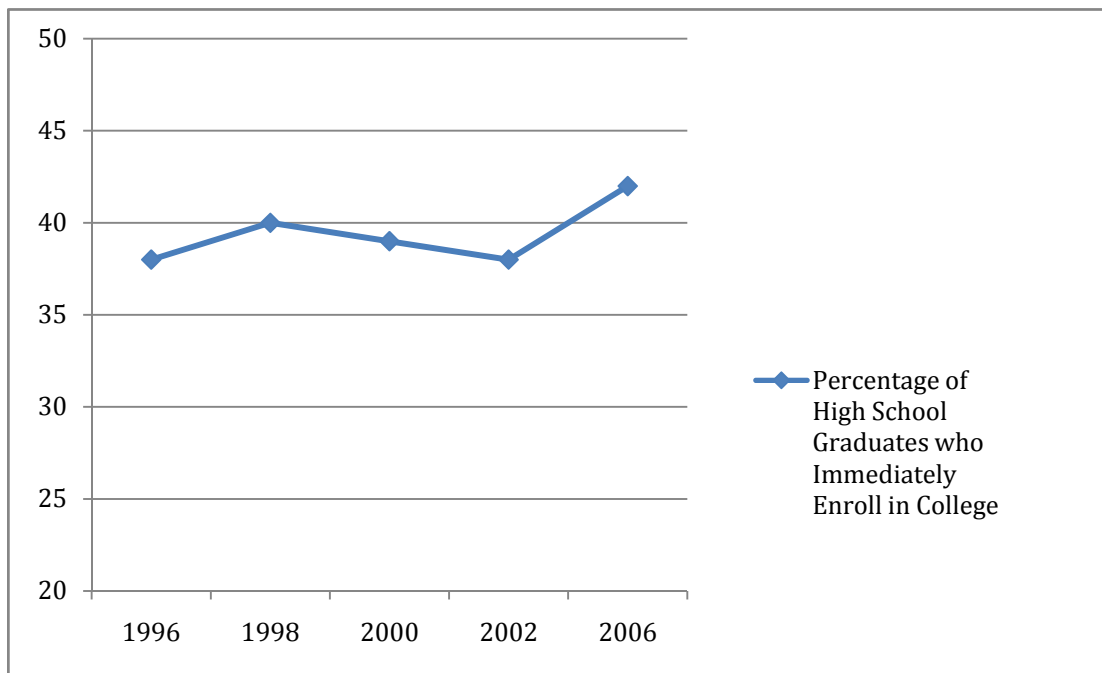
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Washington



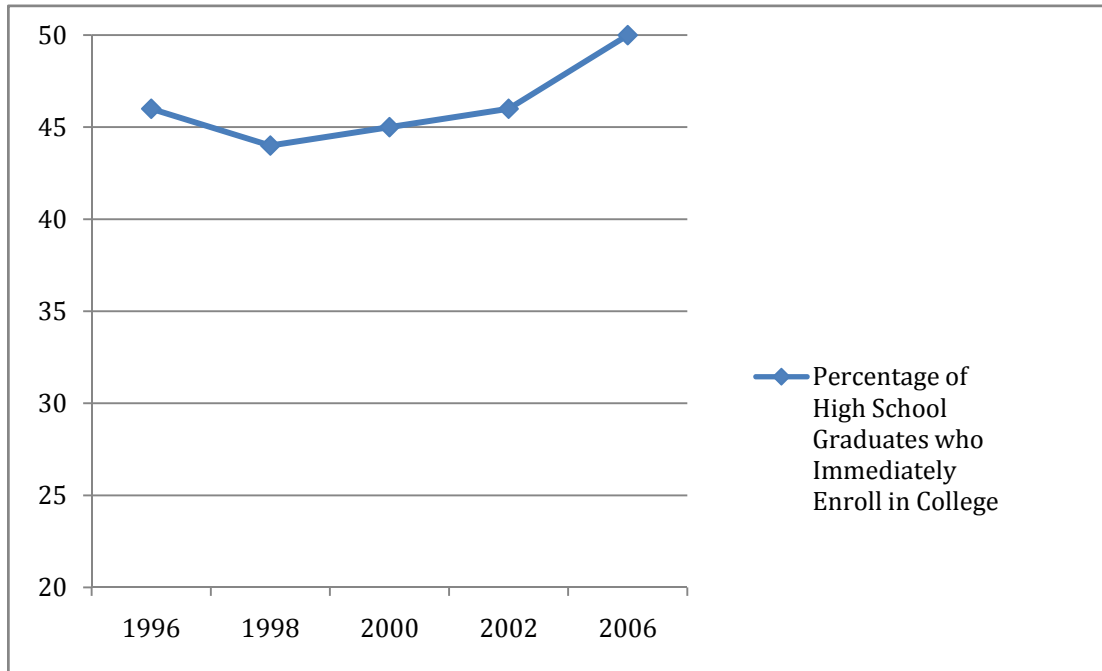
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West Virginia



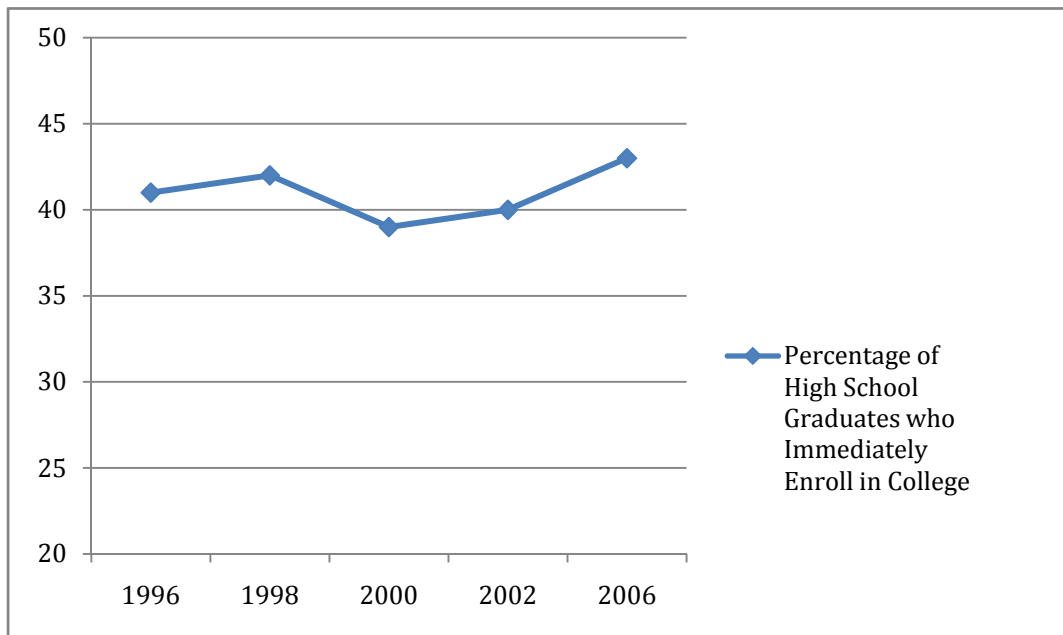
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Wisconsin



Source: Measuring Up 2000, 2002, 2004, 2006, 2008

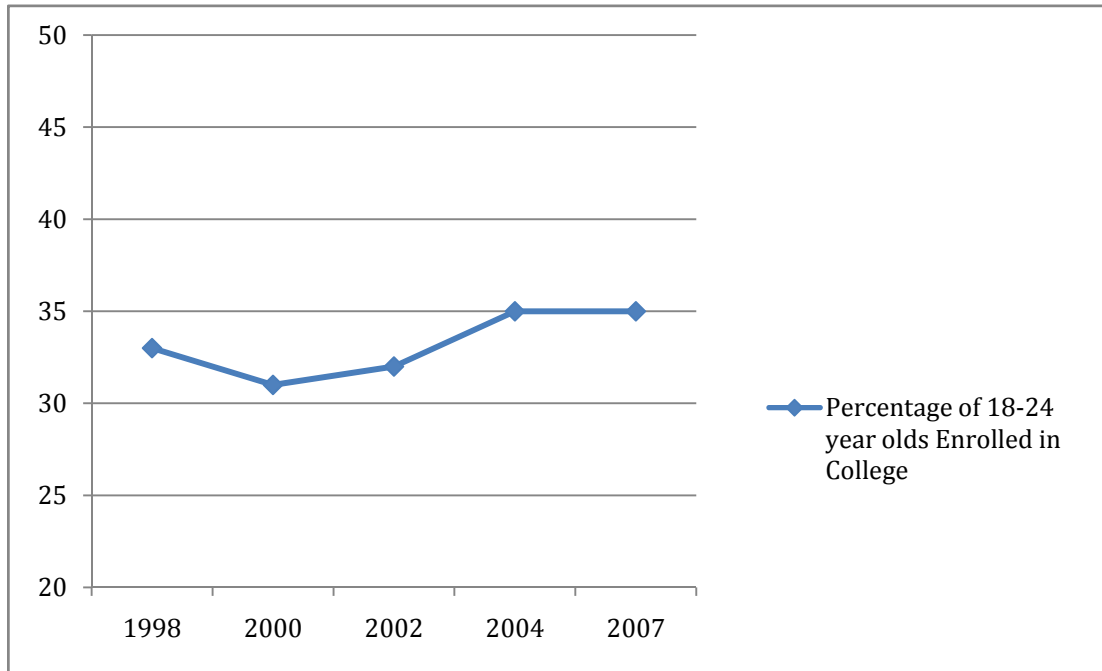
Wyoming



Source: Measuring Up 2000, 2002, 2004, 2006, 2008

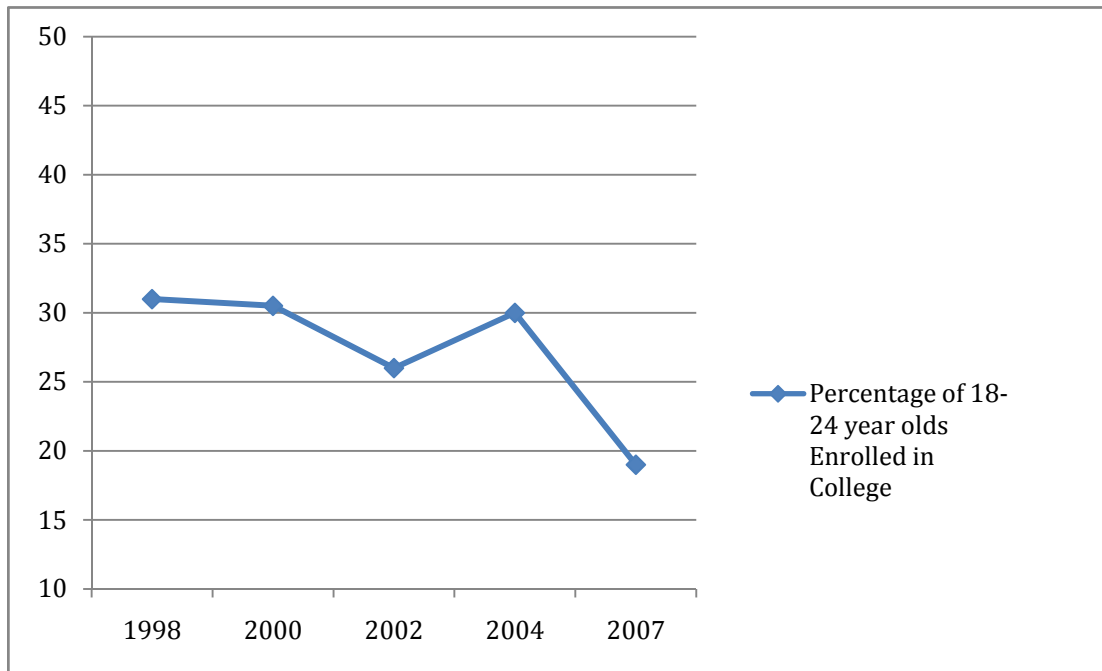
APPENDIX D
PERCENTAGE OF 18-24 YEAR OLDS ENROLLED IN COLLEGE BY
STATE

Alabama



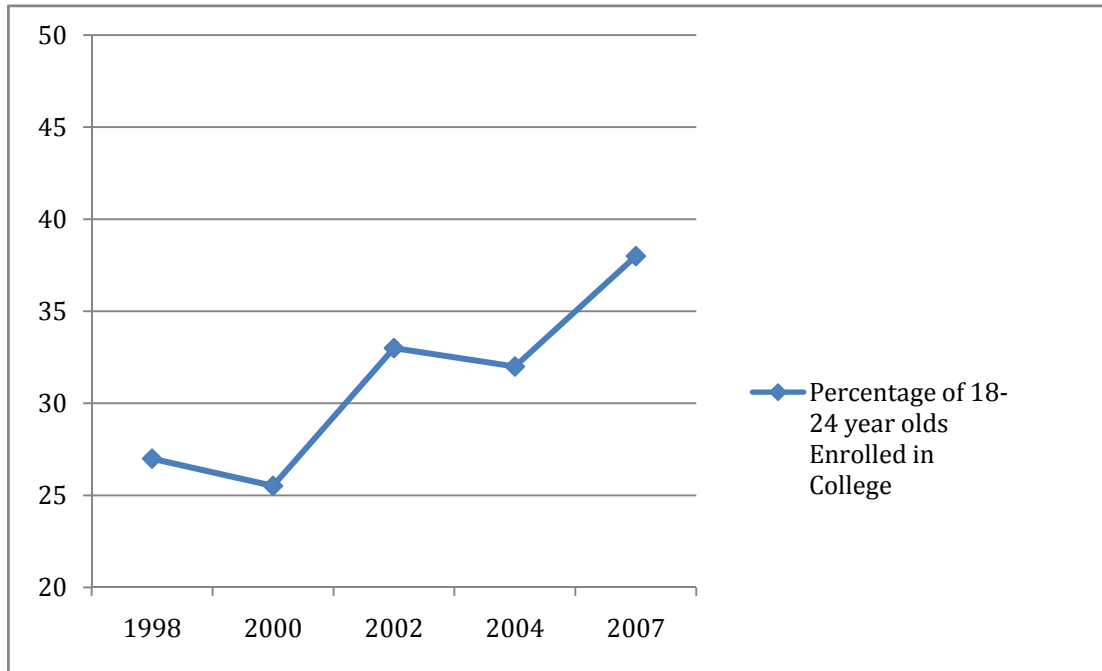
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Alaska



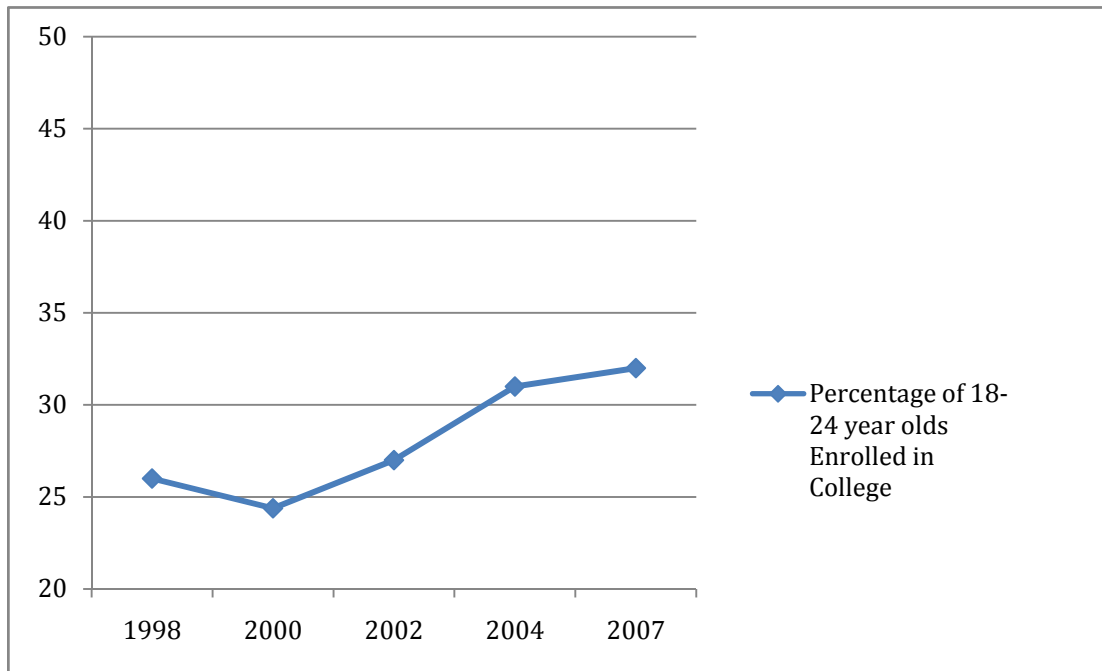
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Arizona



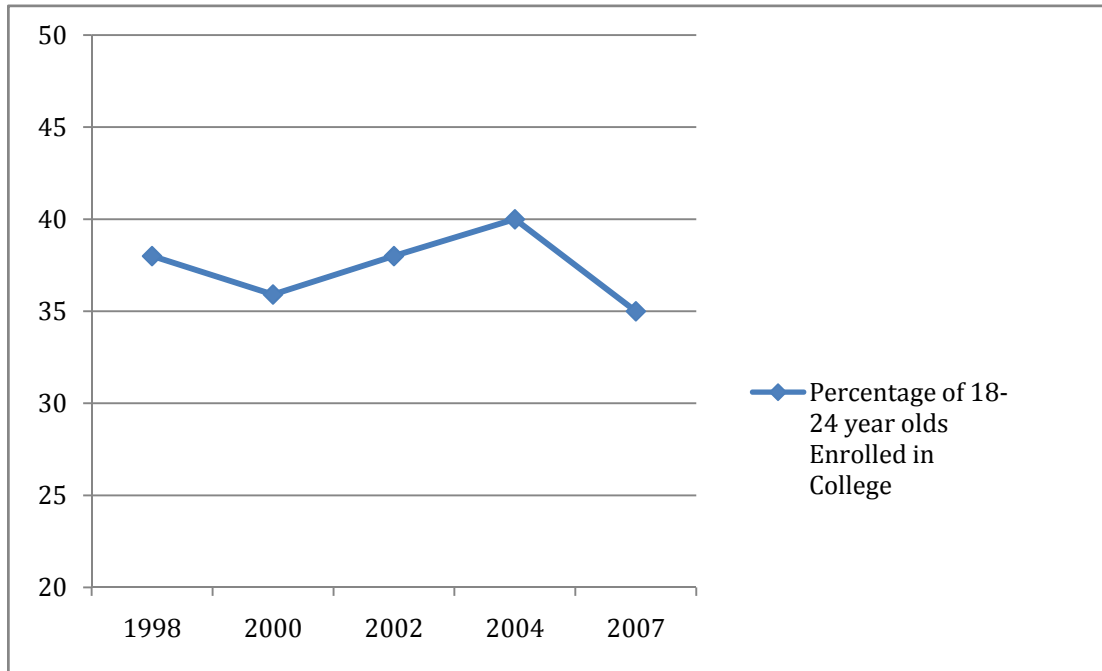
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Arkansas



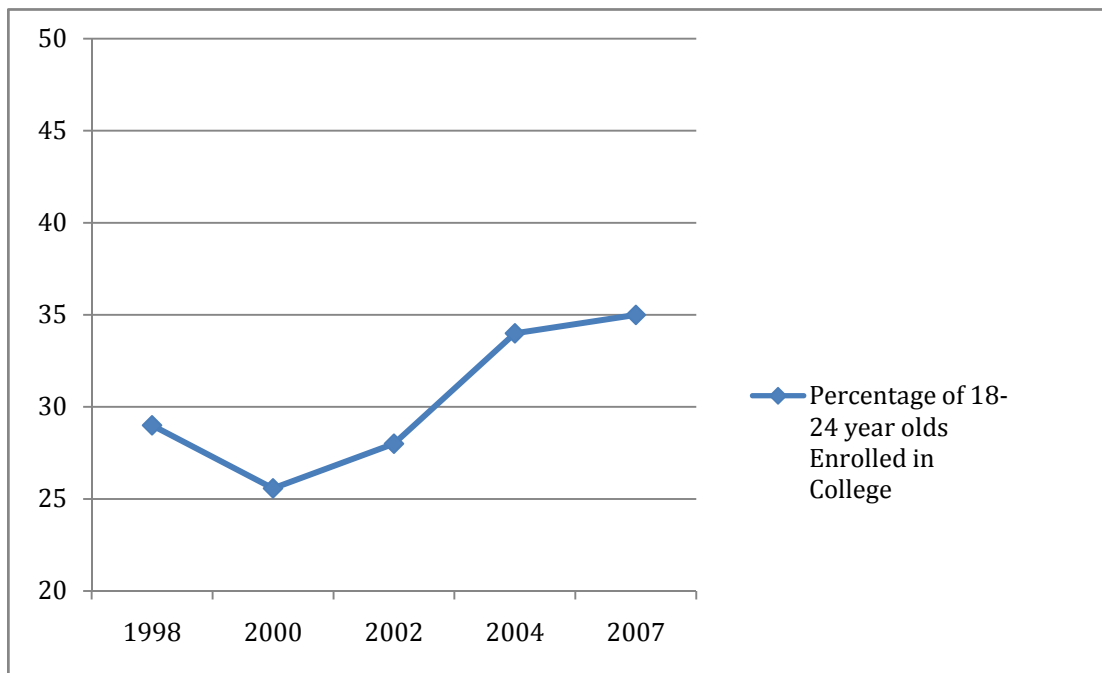
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

California



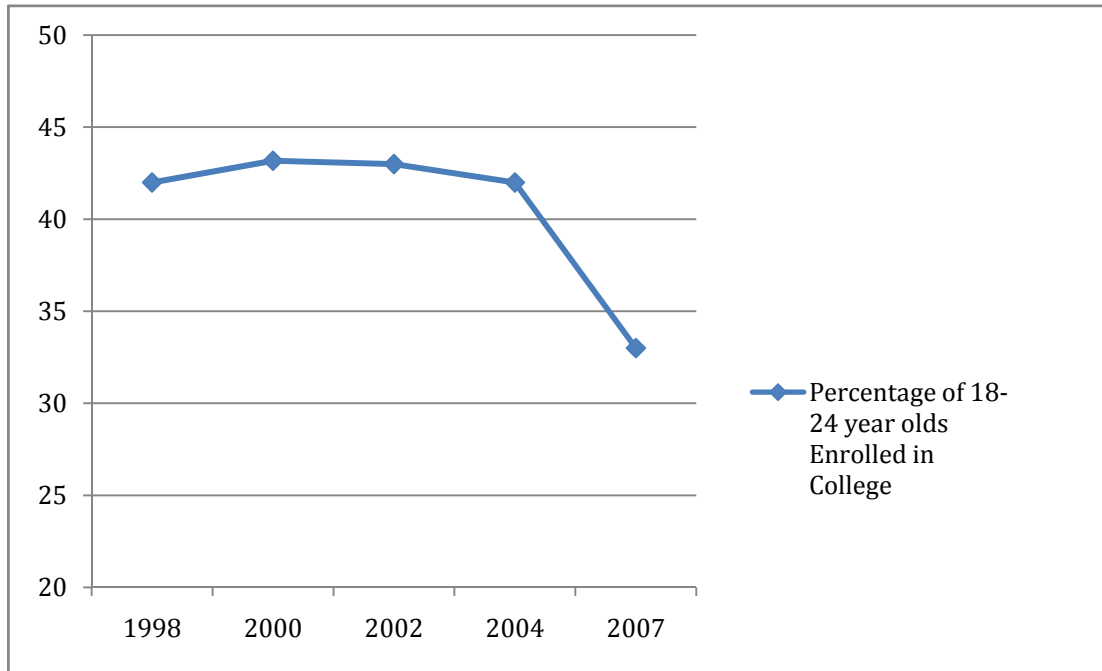
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Colorado



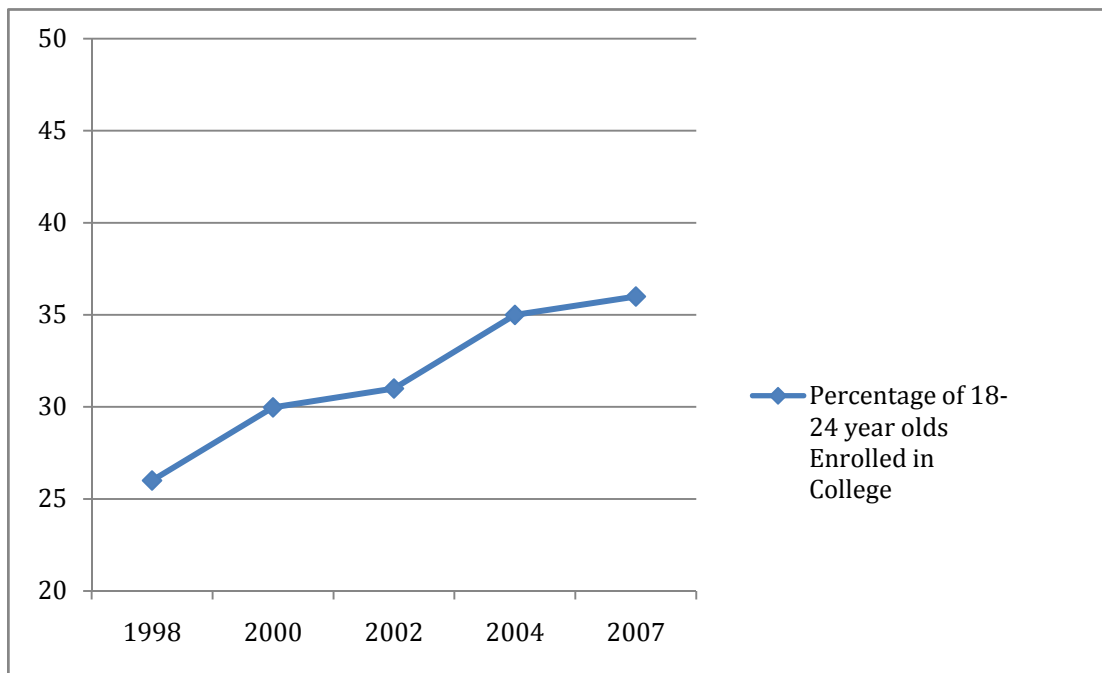
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Connecticut



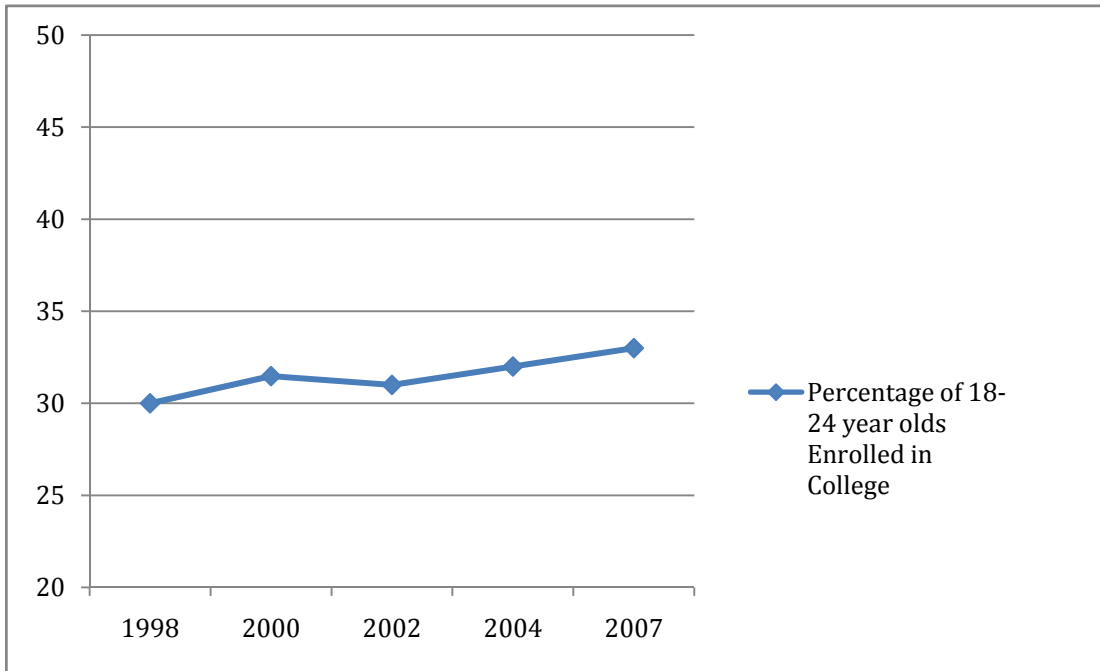
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Delaware



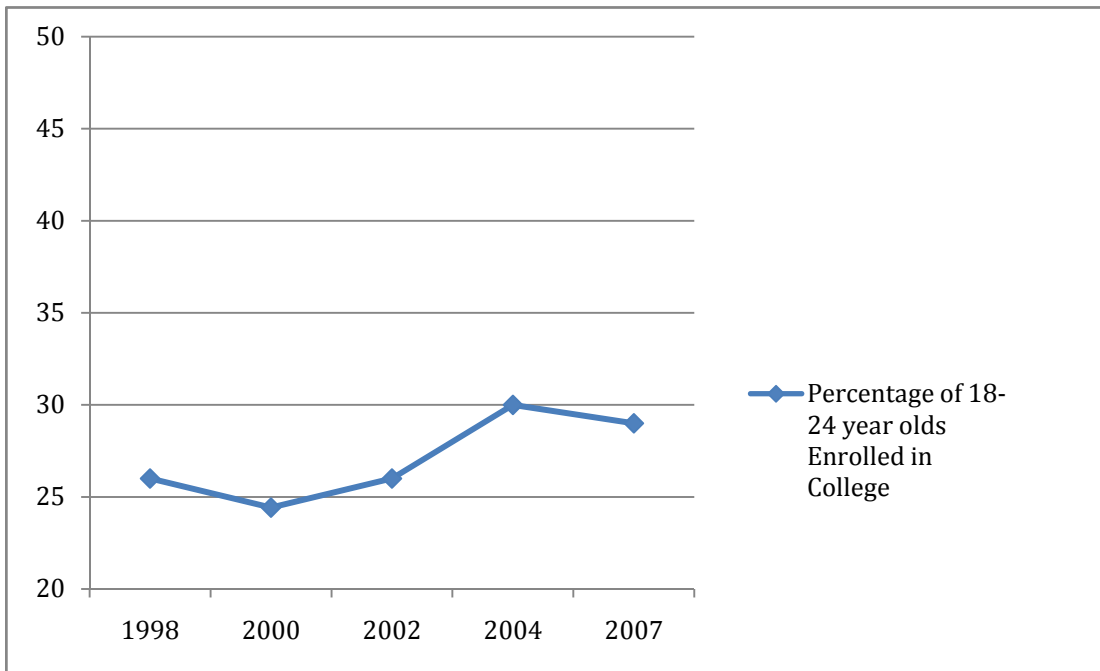
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Florida



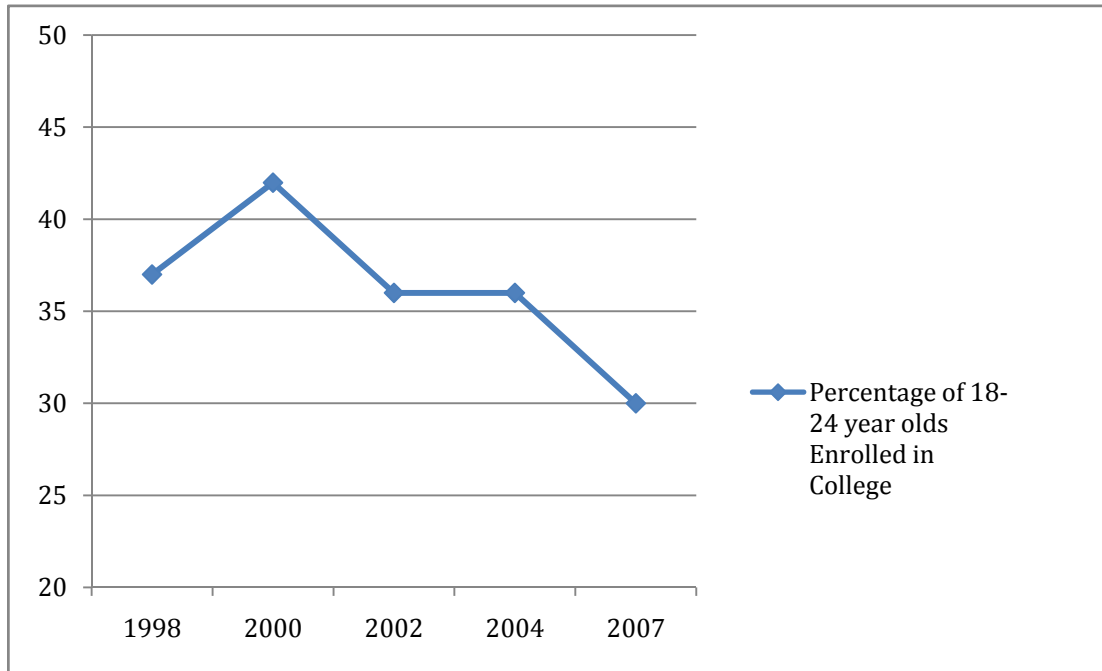
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Georgia



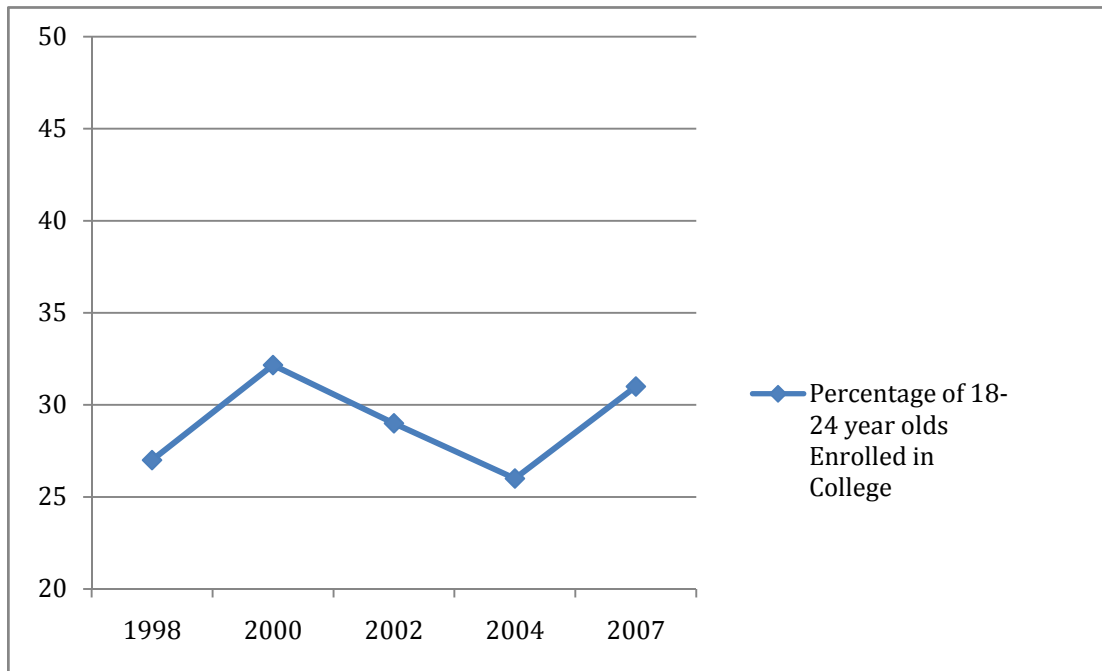
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Hawaii



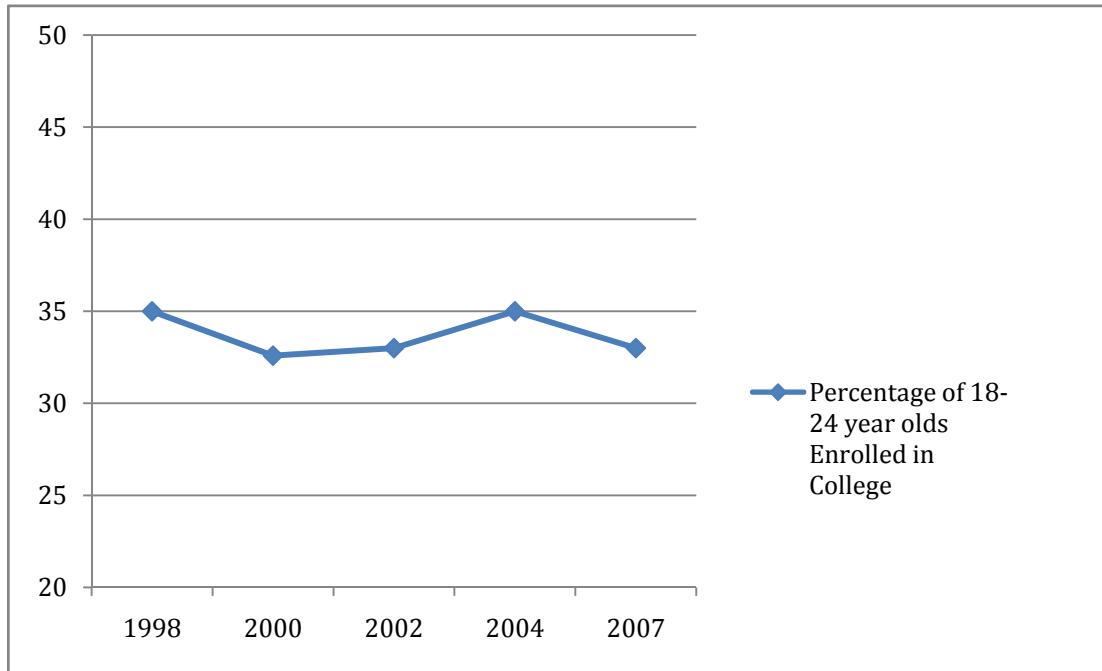
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Idaho



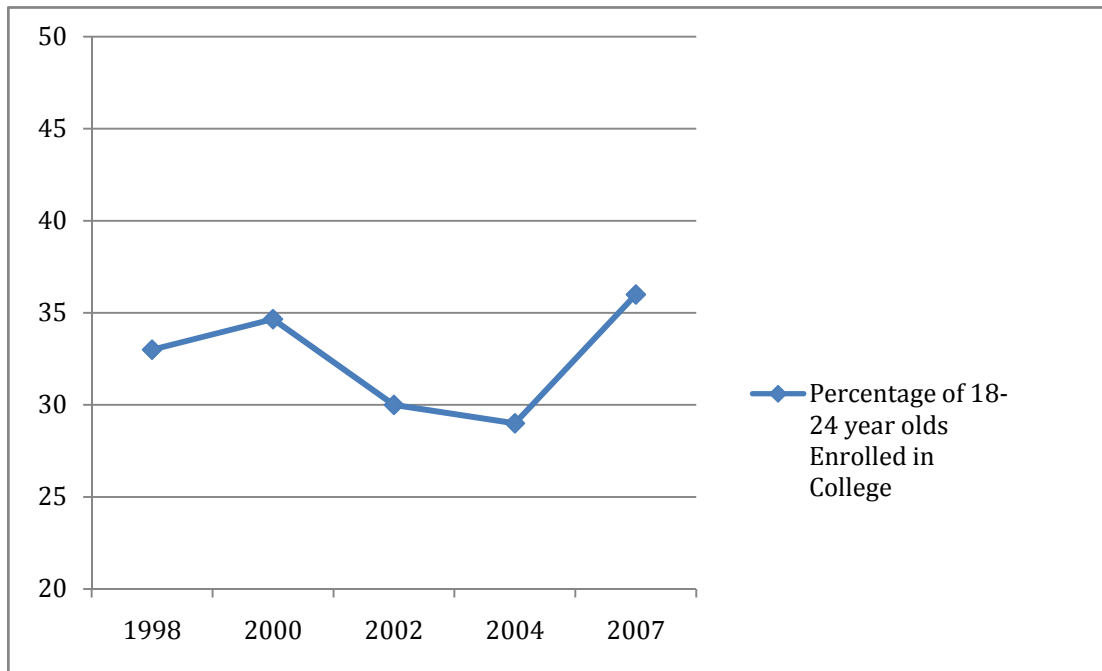
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Illinois



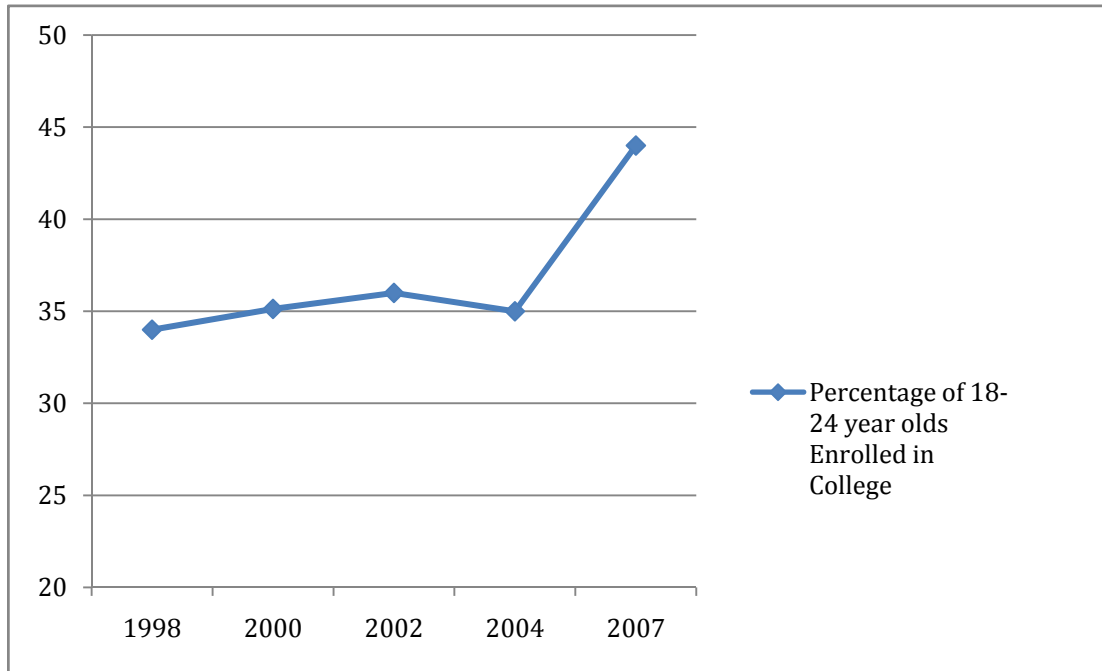
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Indiana



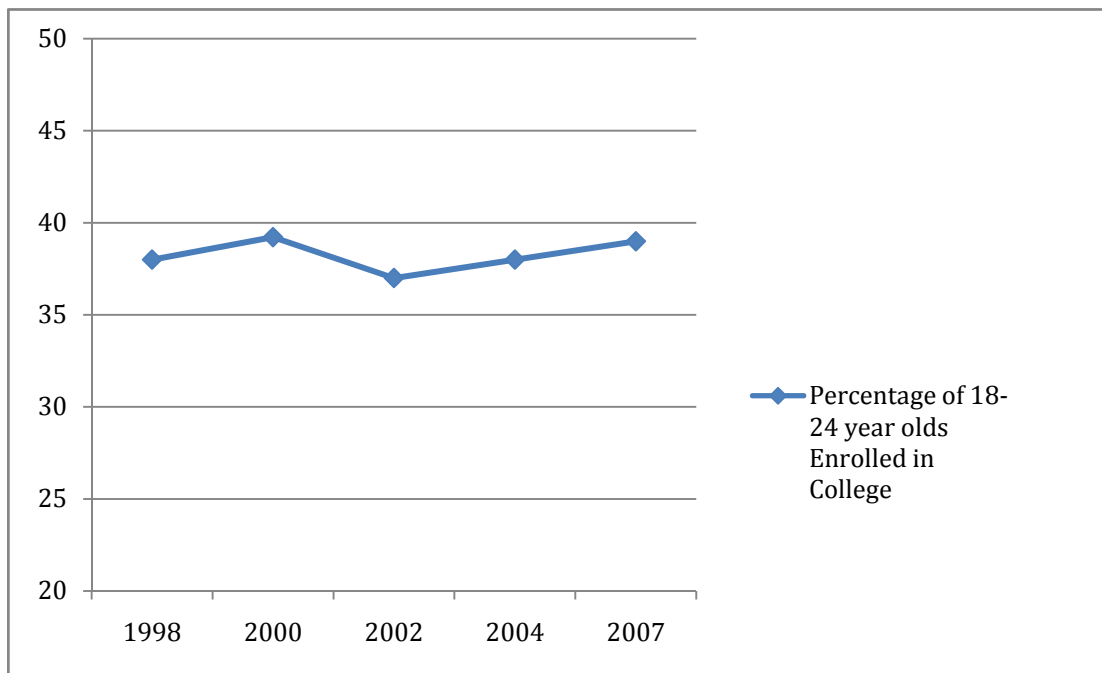
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Iowa



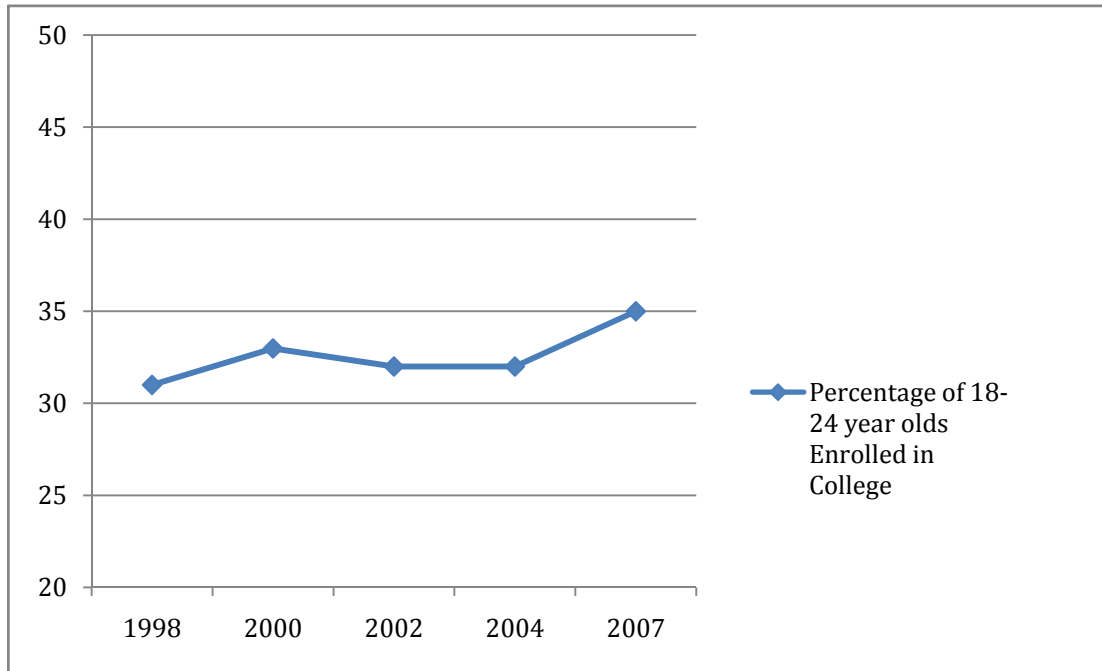
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Kansas



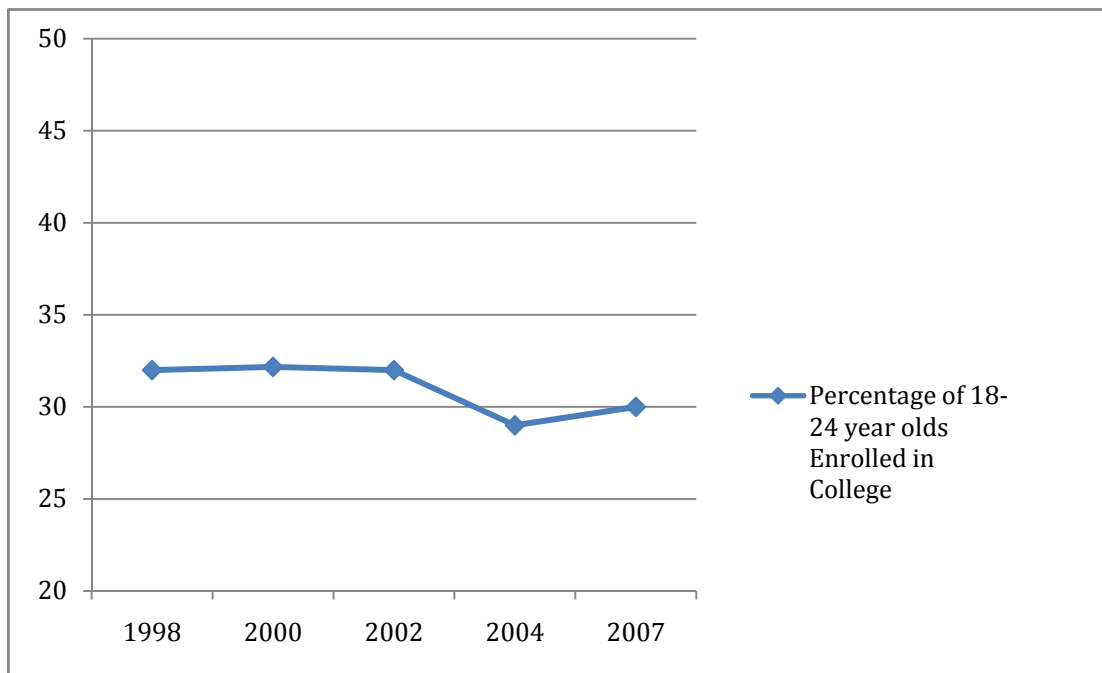
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Kentucky



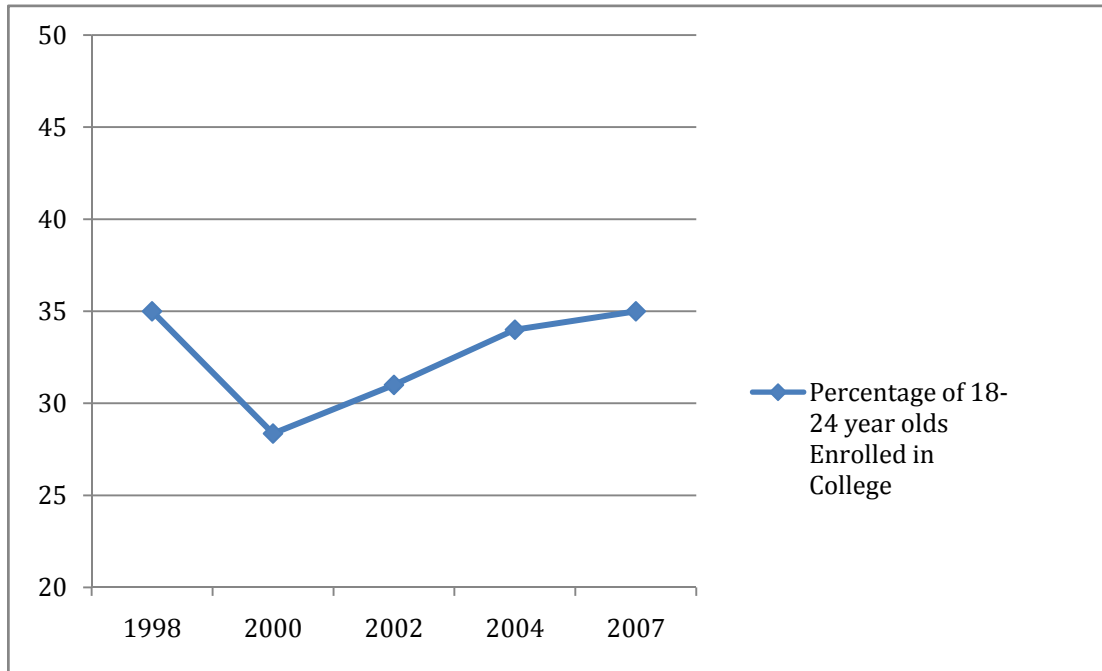
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Louisiana



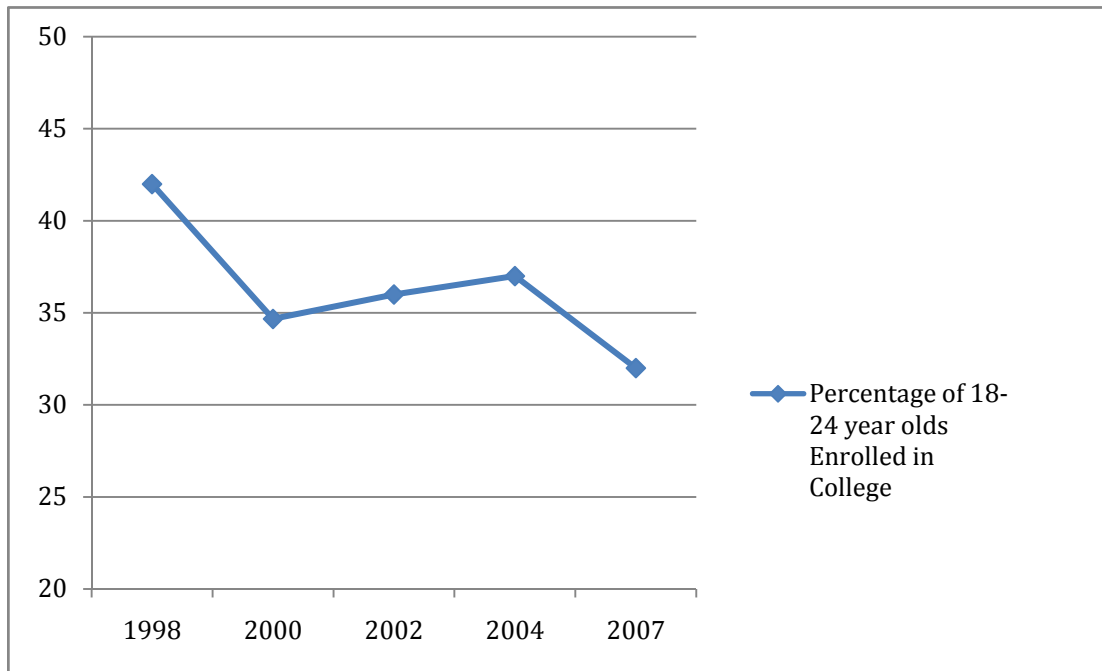
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Maine



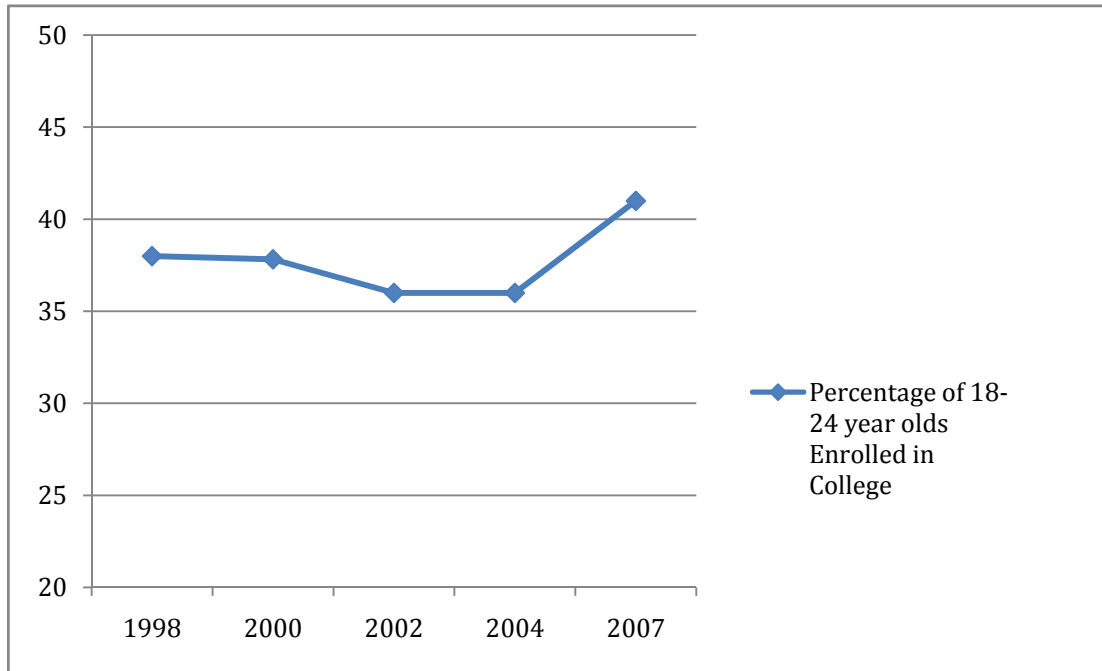
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Maryland



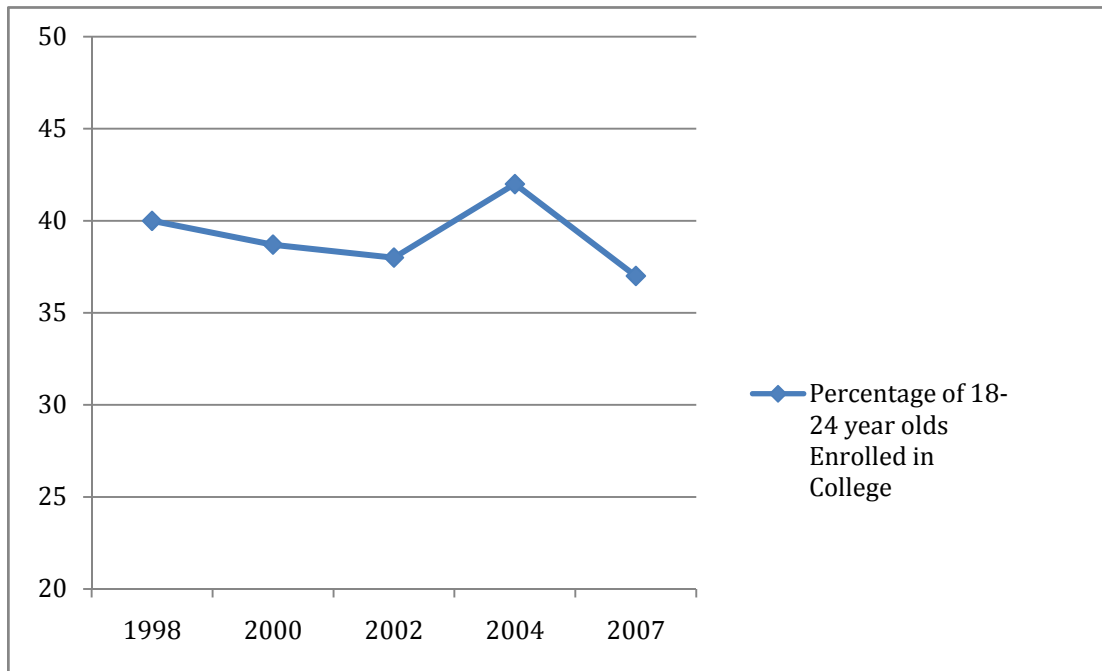
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Massachusetts



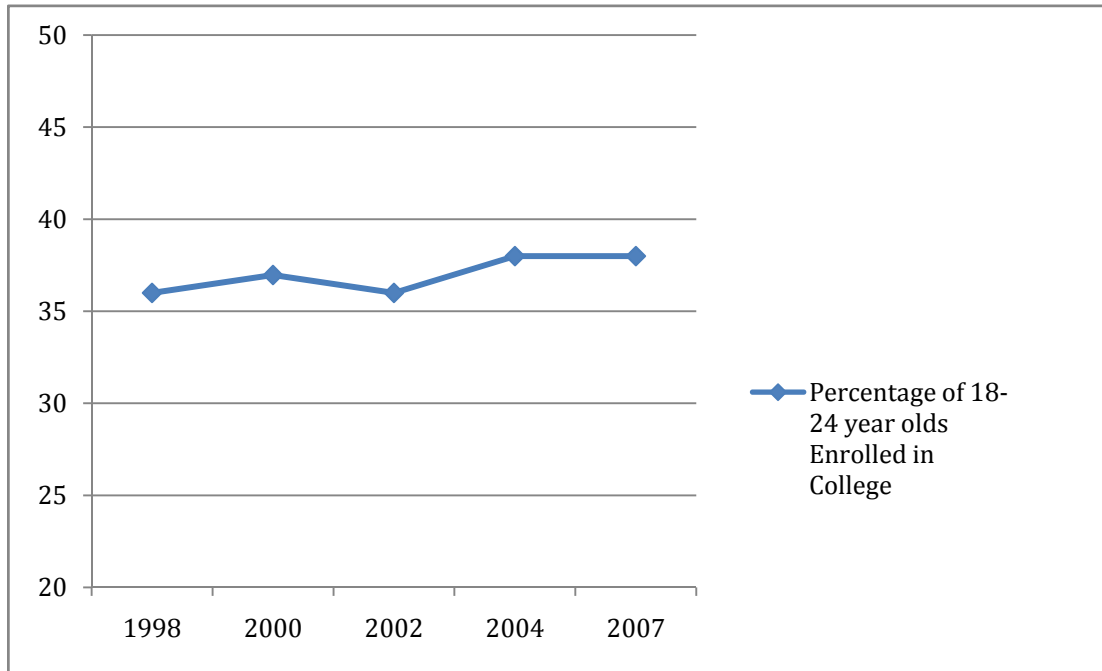
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Michigan



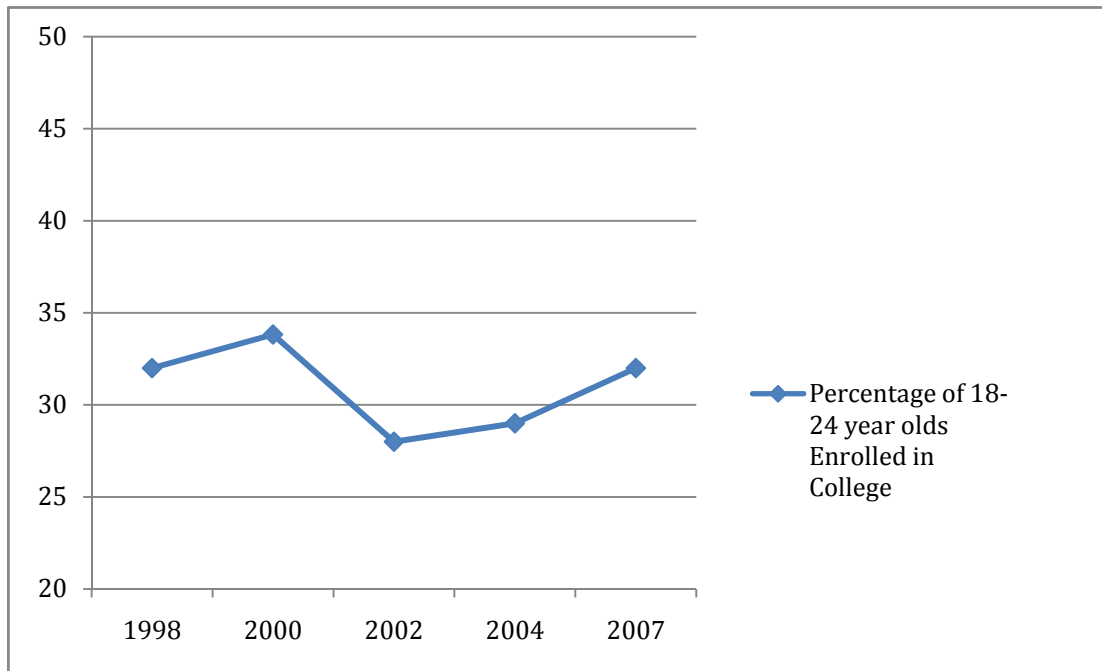
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Minnesota



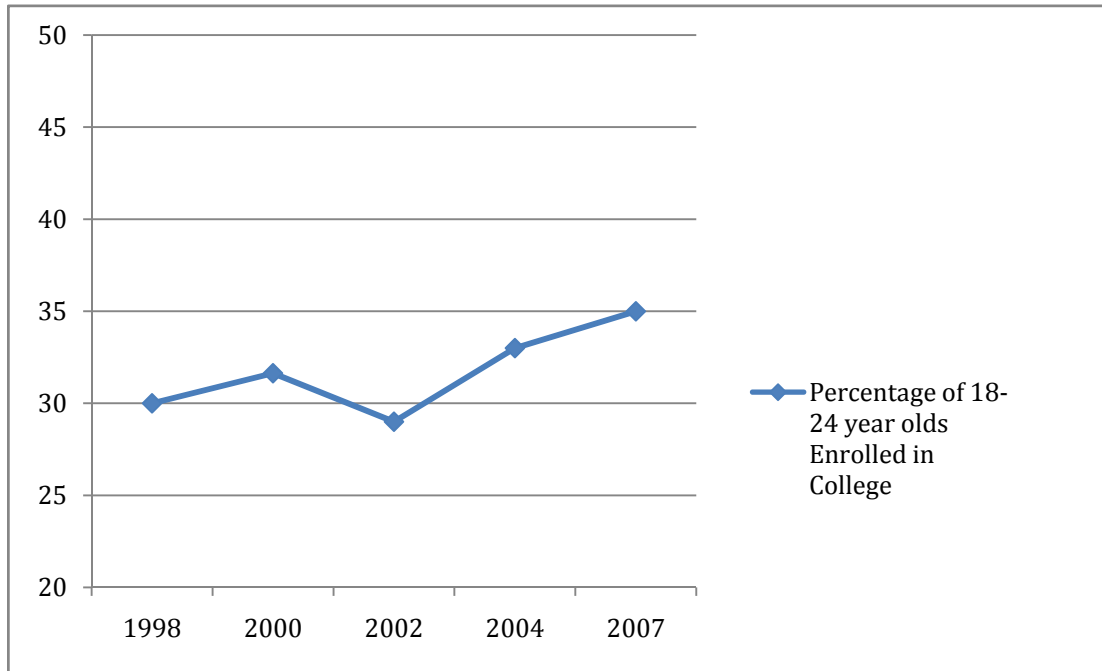
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Mississippi



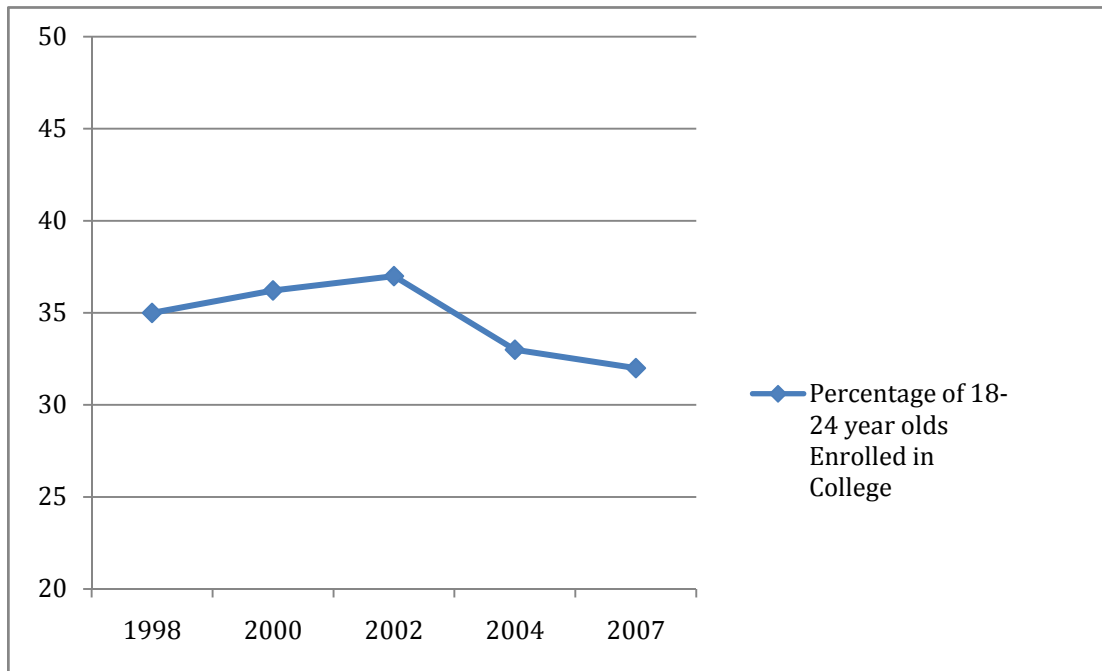
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Missouri



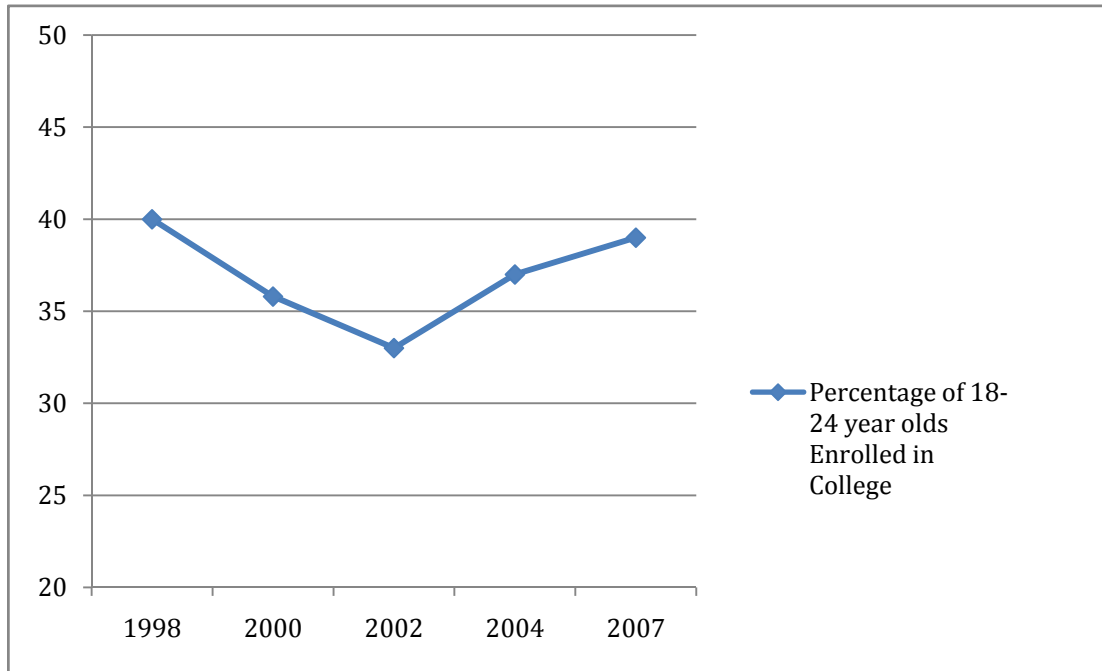
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Montana



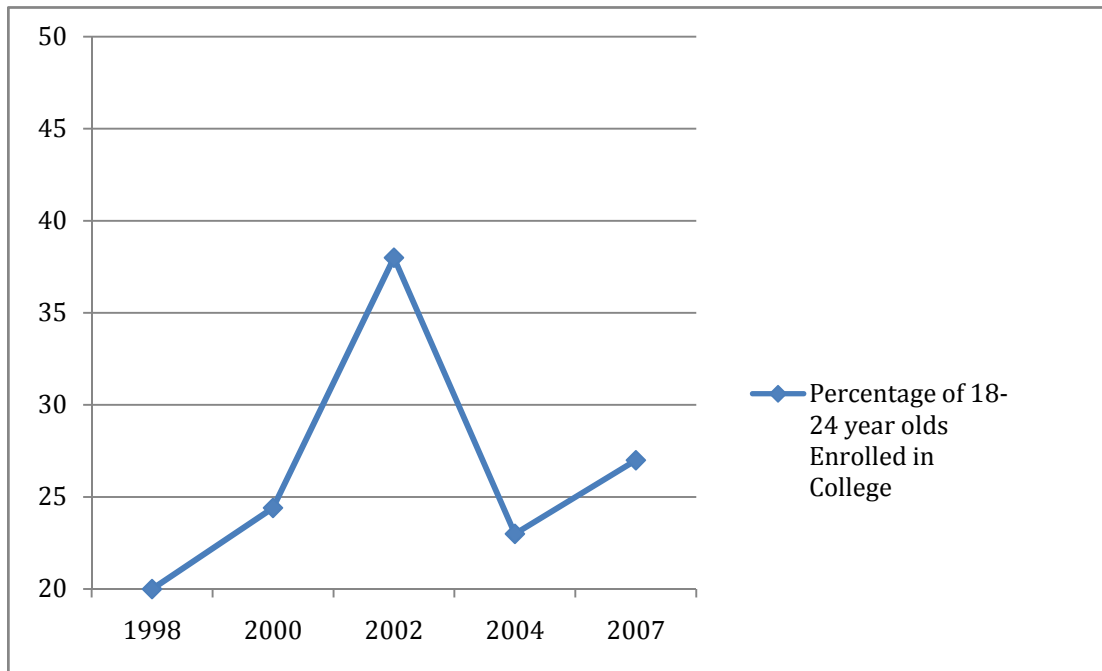
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Nebraska



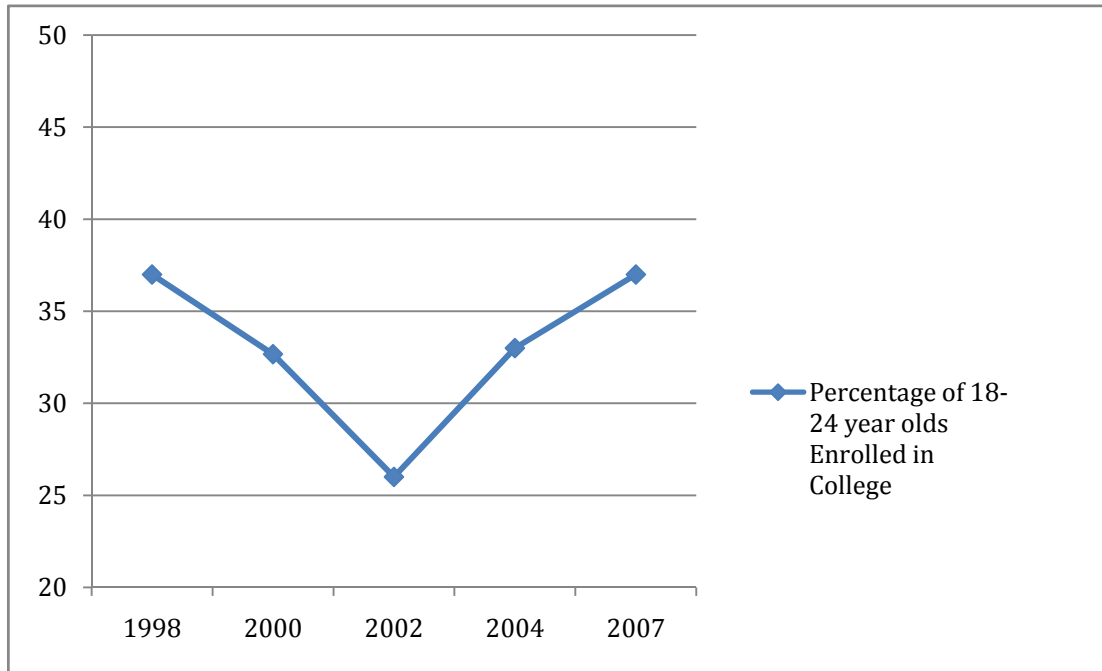
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Nevada



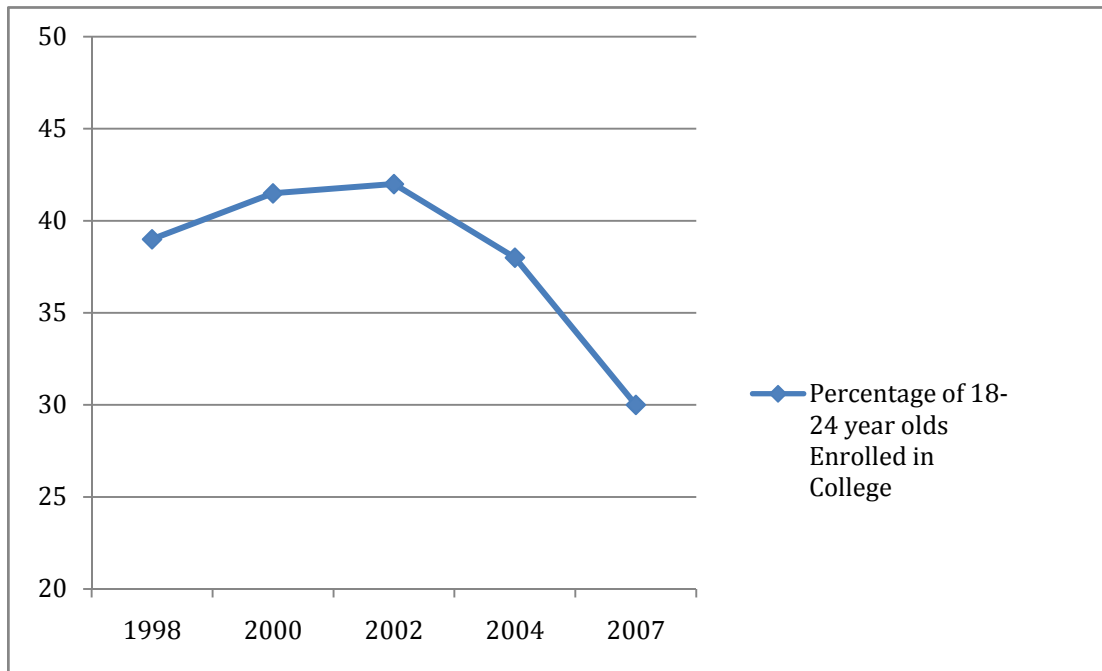
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New Hampshire



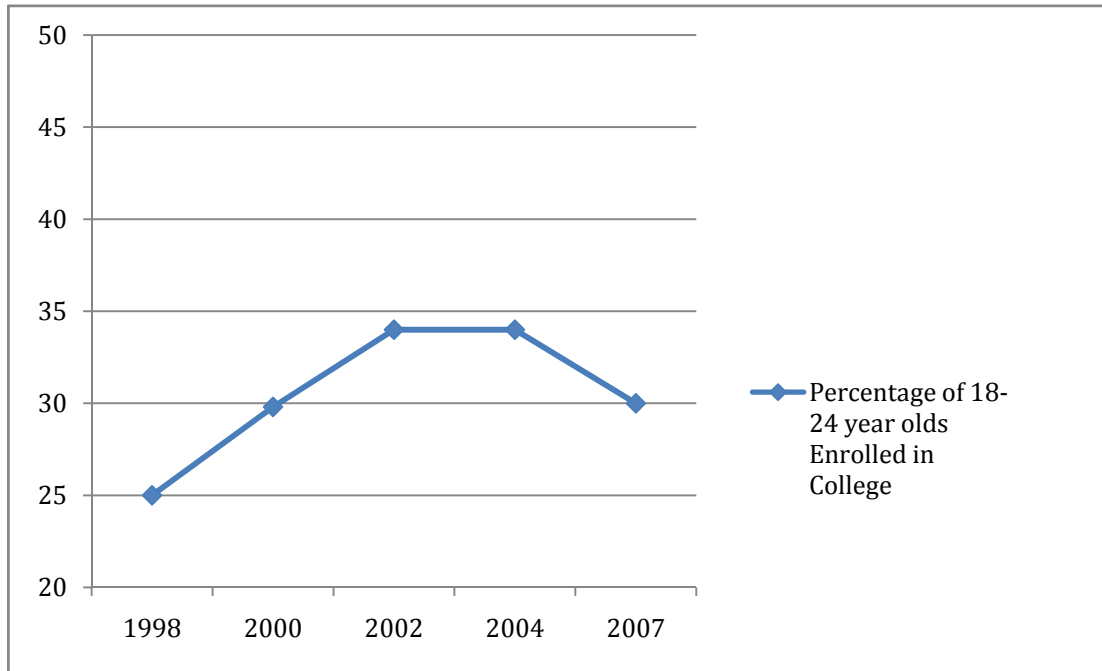
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New Jersey



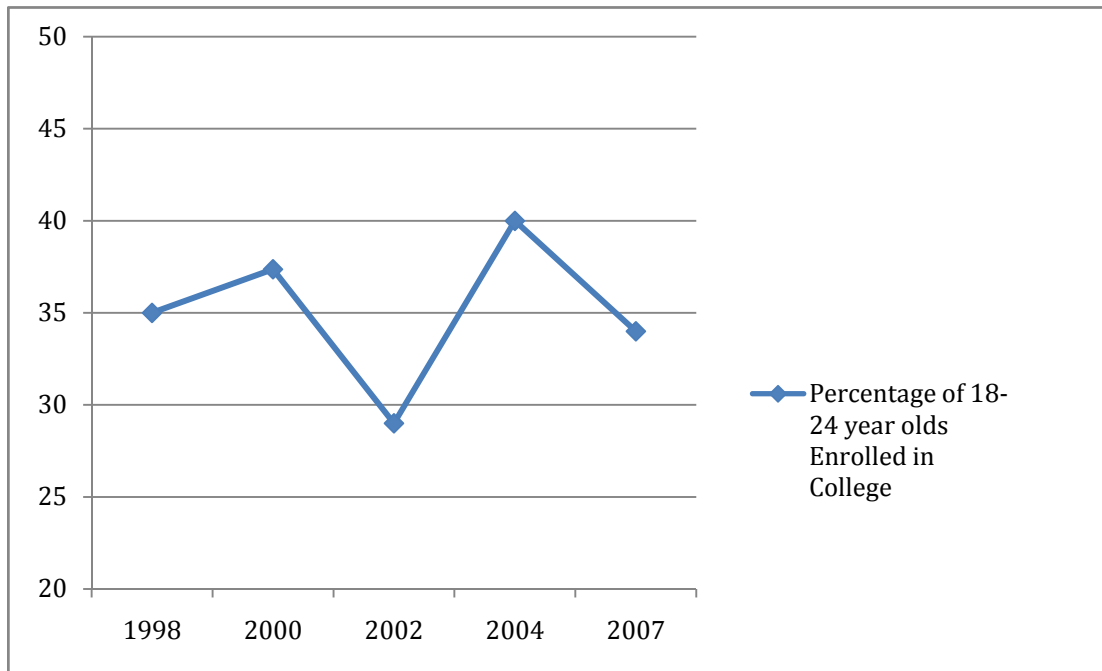
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New Mexico



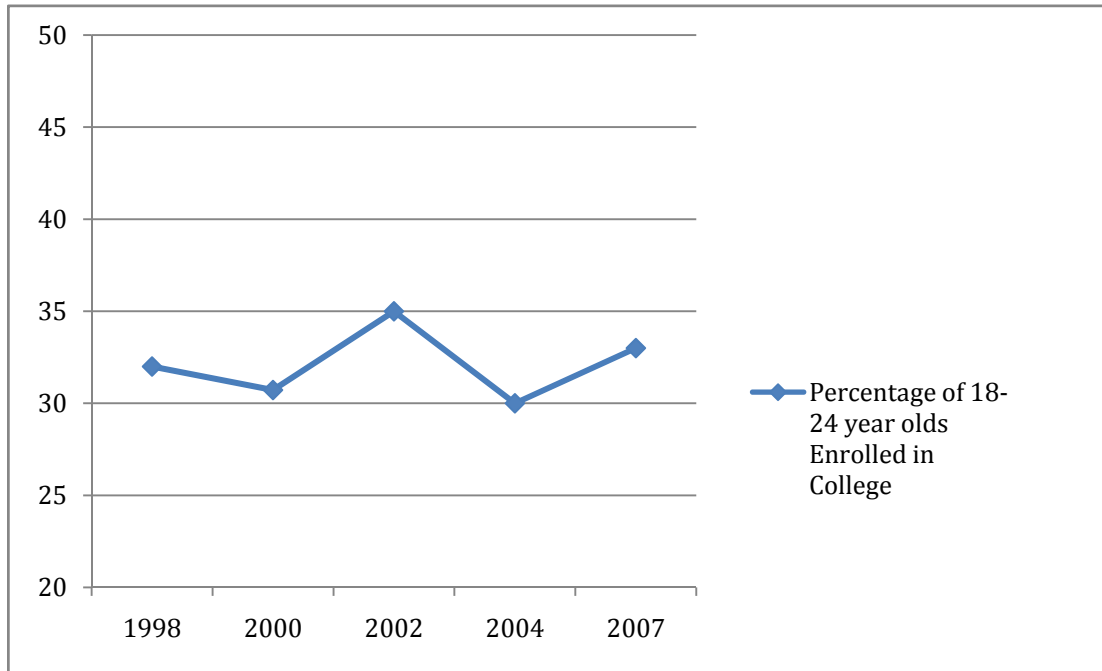
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New York



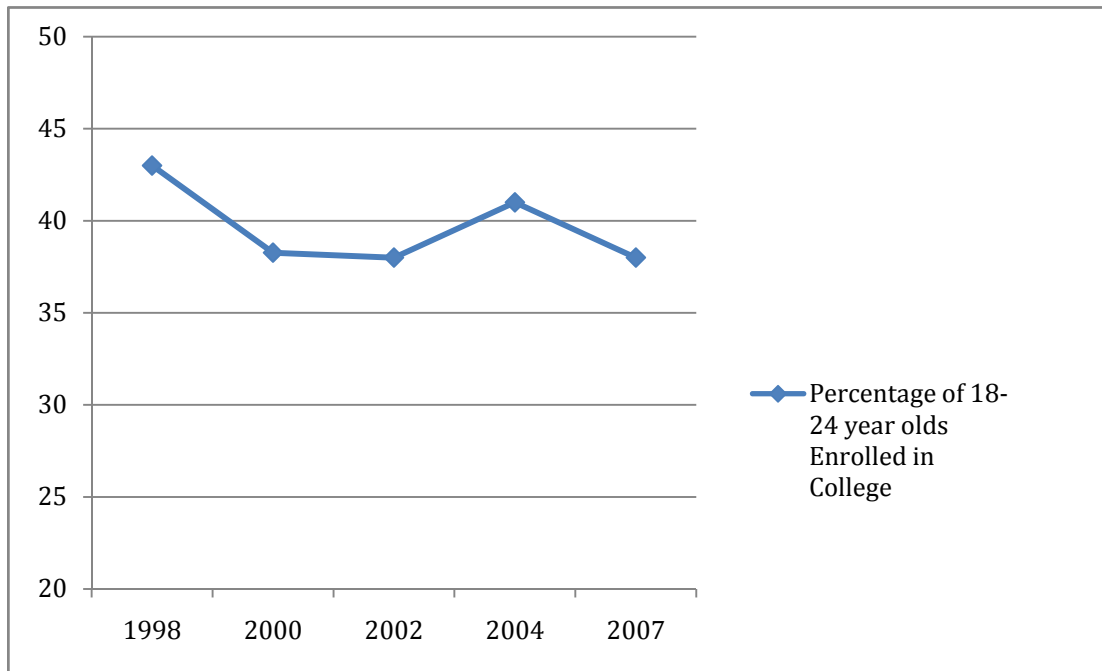
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

North Carolina



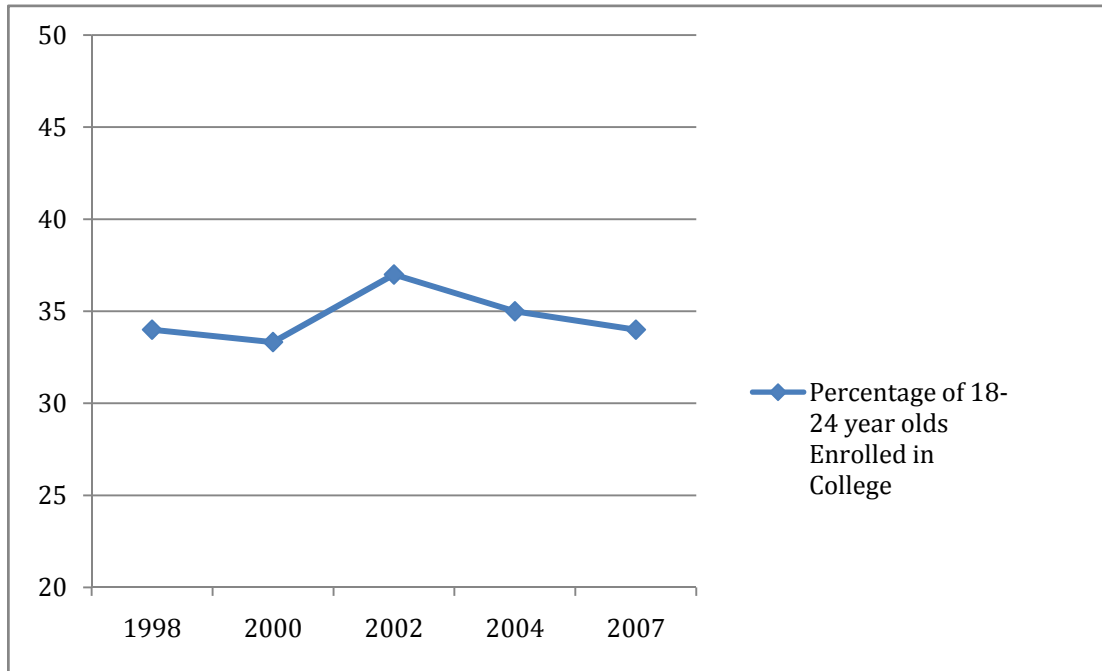
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

North Dakota



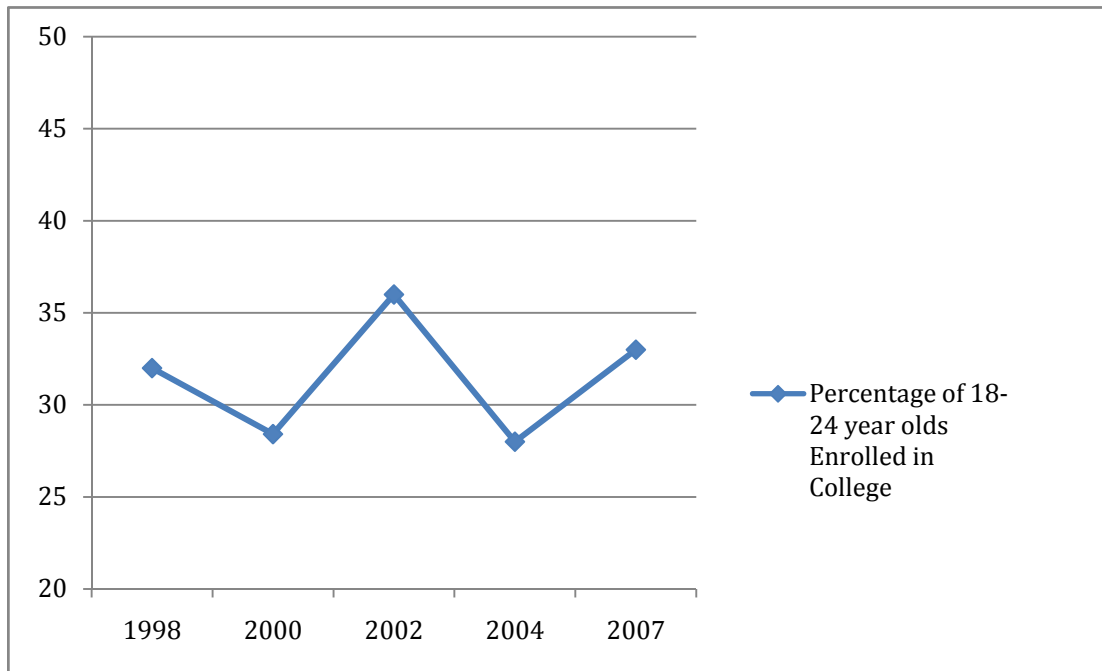
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Ohio



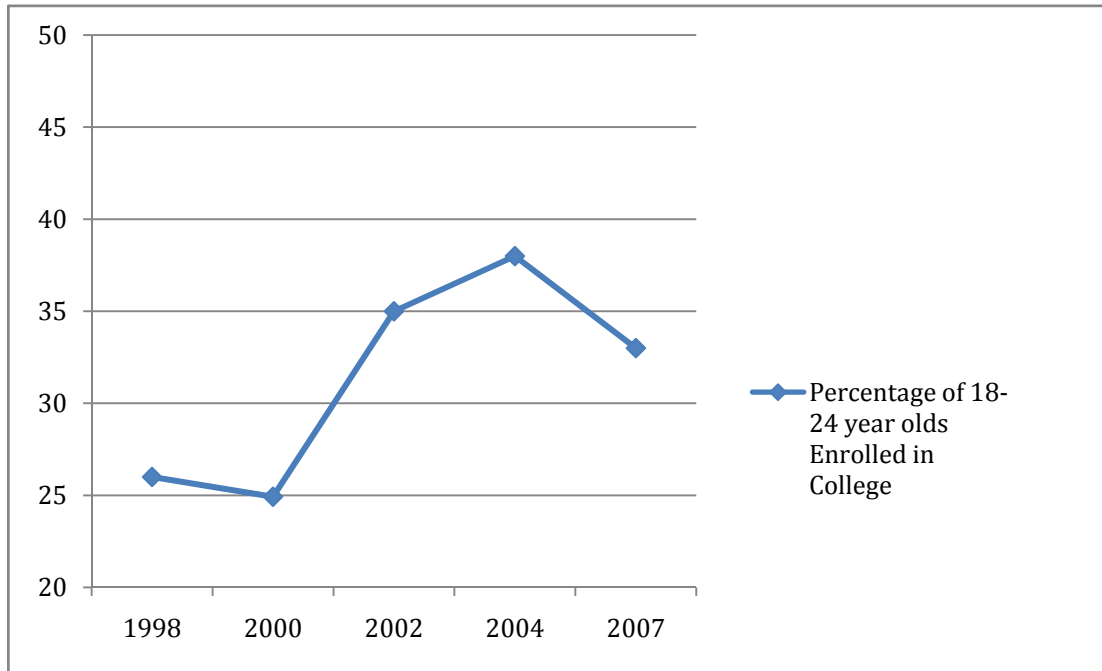
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Oklahoma



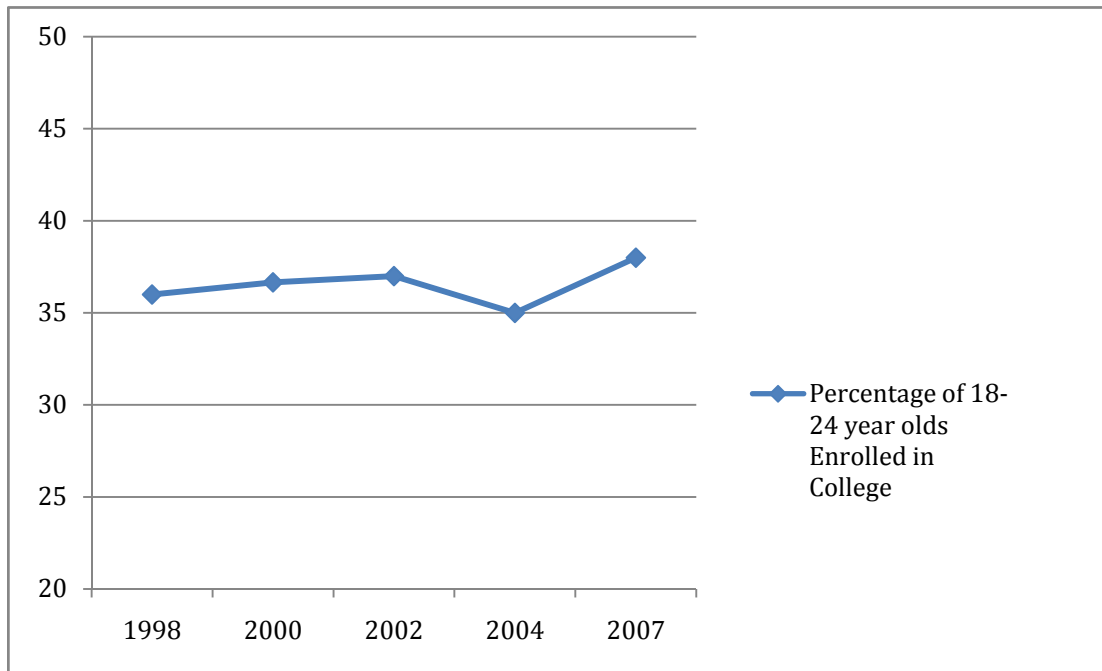
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Oregon



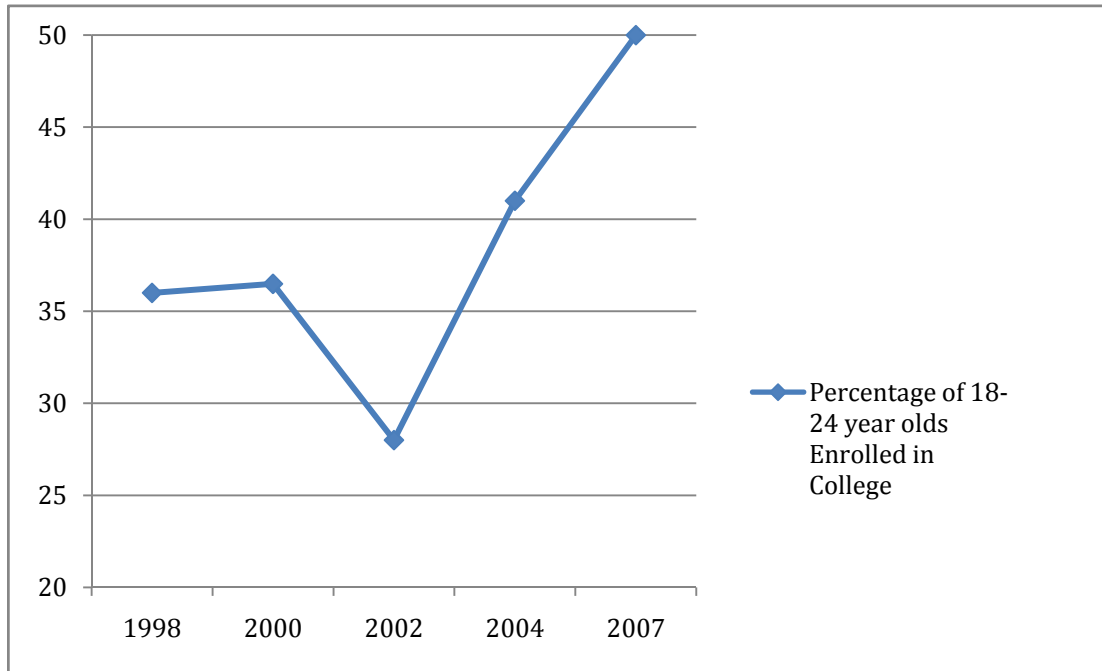
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Pennsylvania



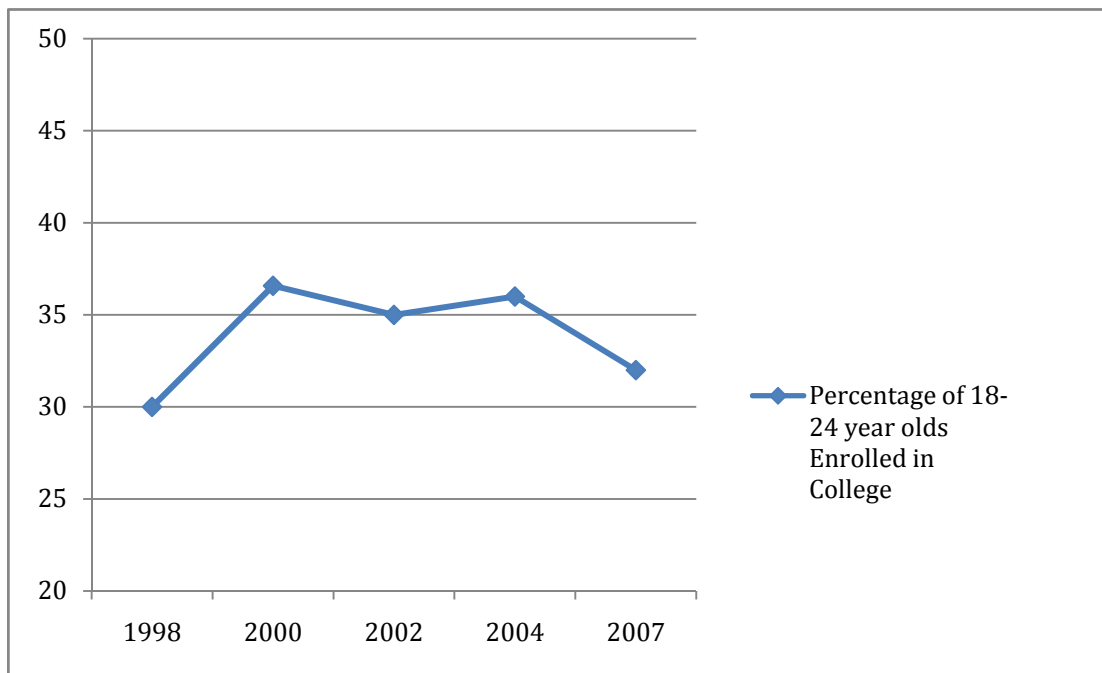
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Rhode Island



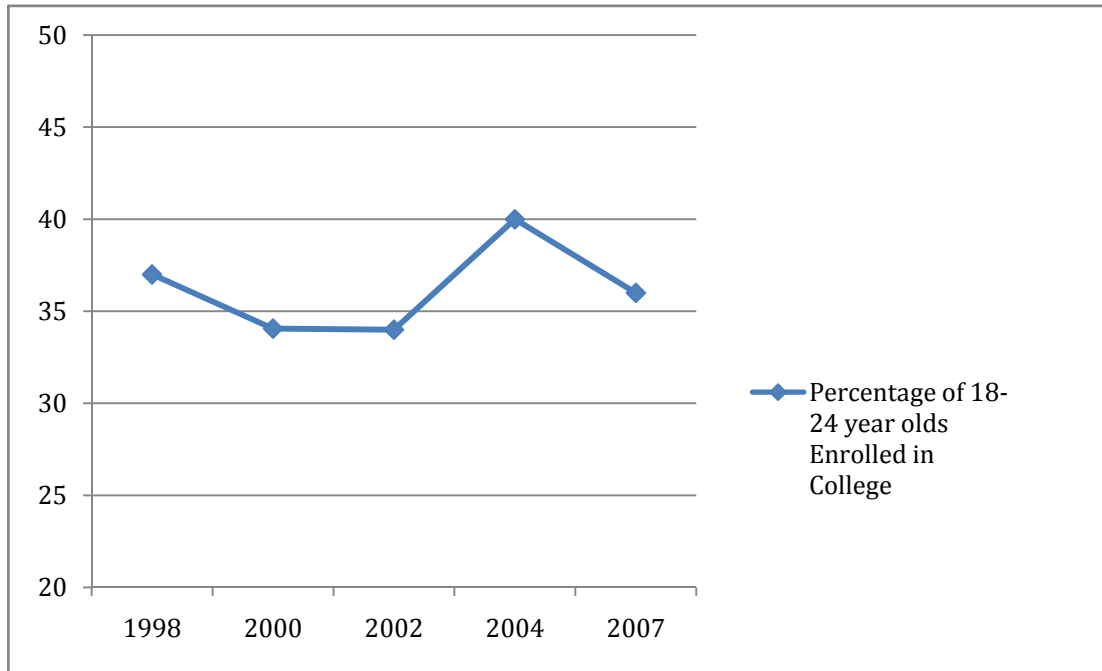
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

South Carolina



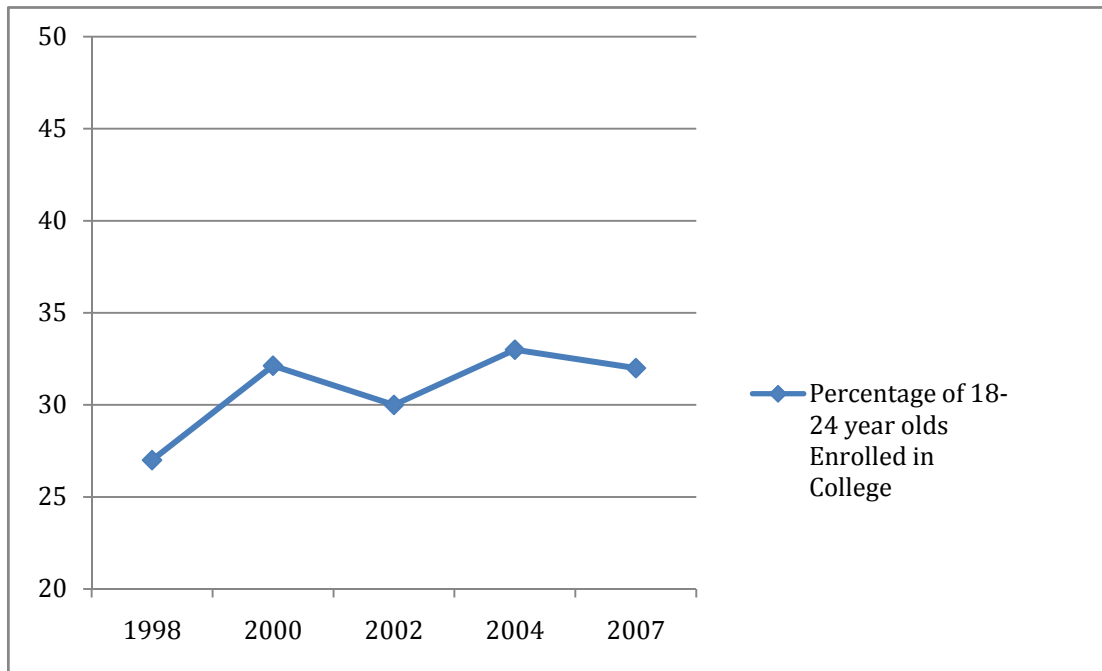
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

South Dakota



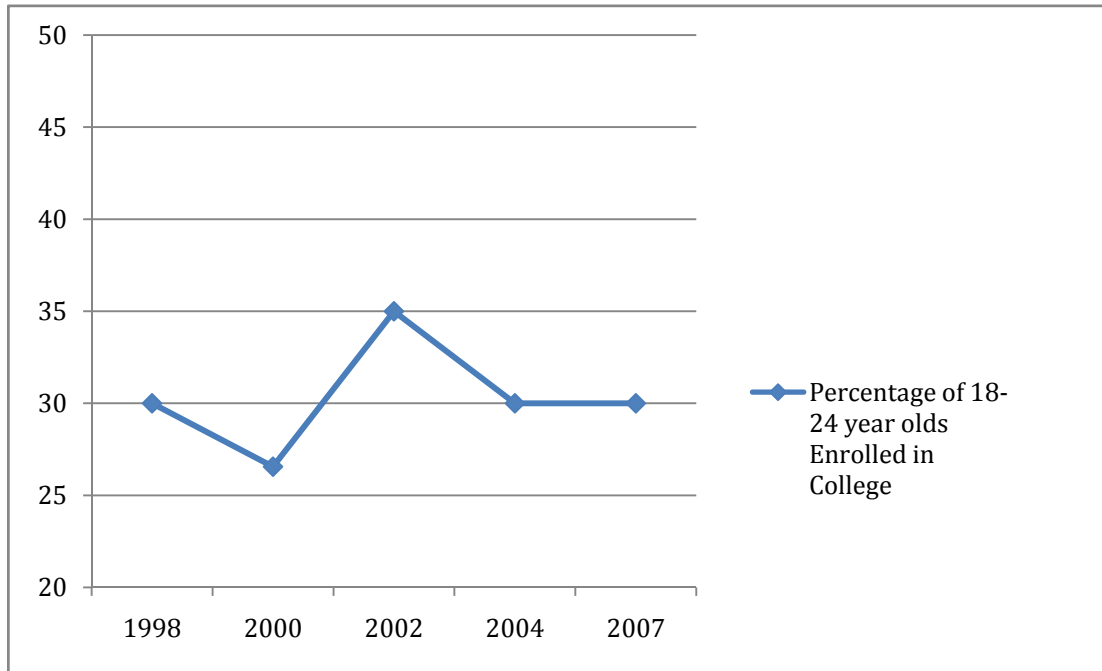
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Tennessee



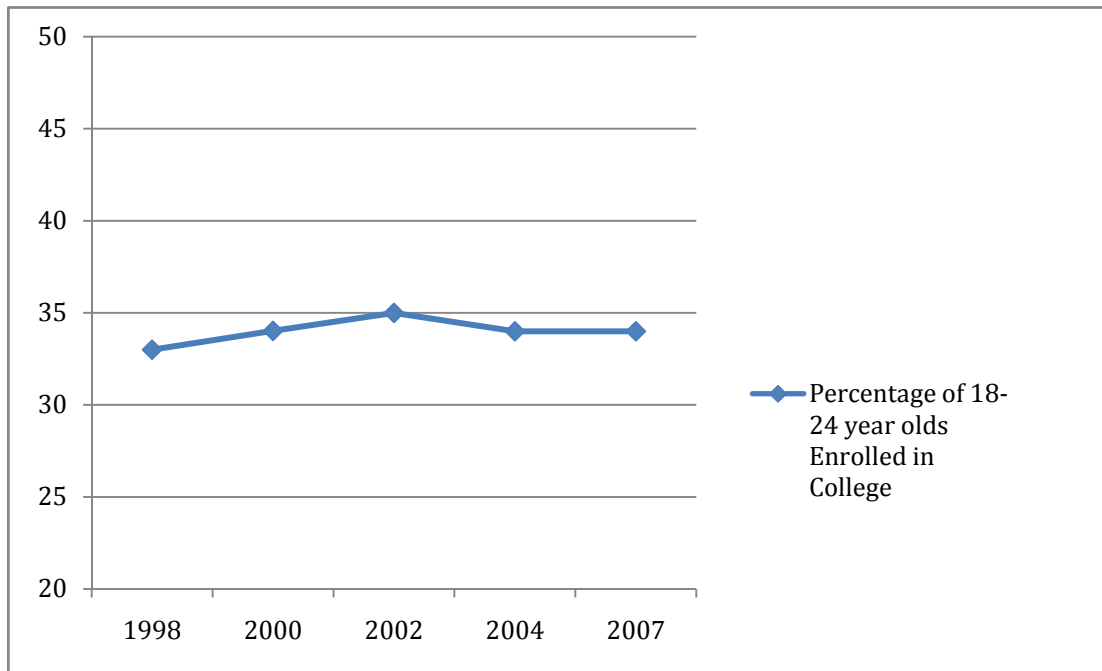
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Texas



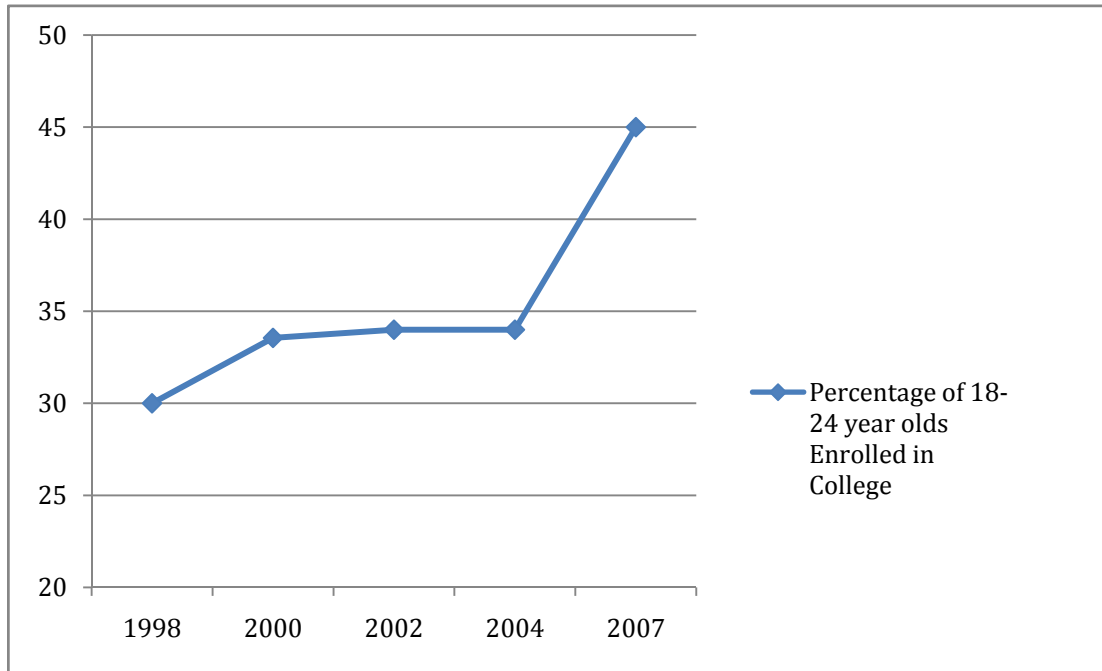
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Utah



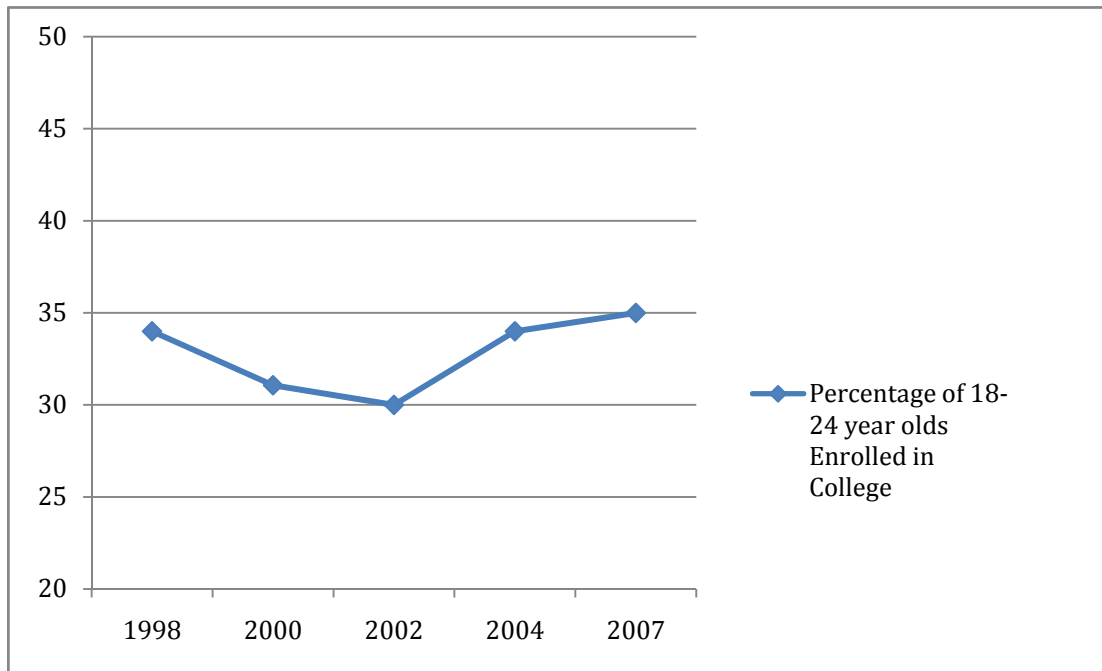
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Vermont



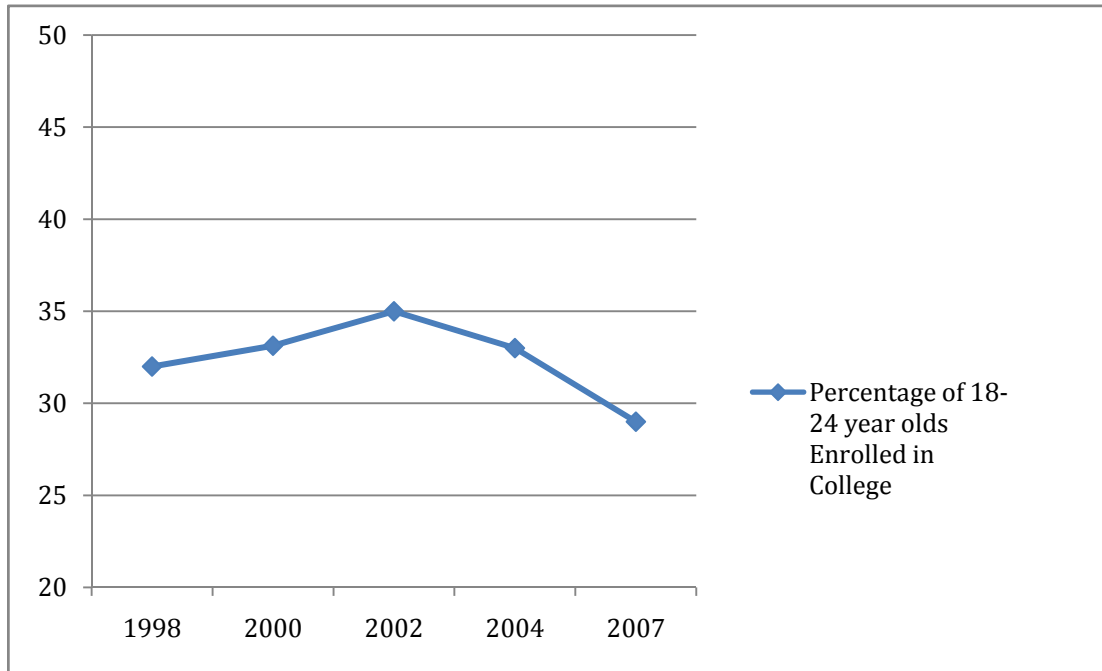
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Virginia



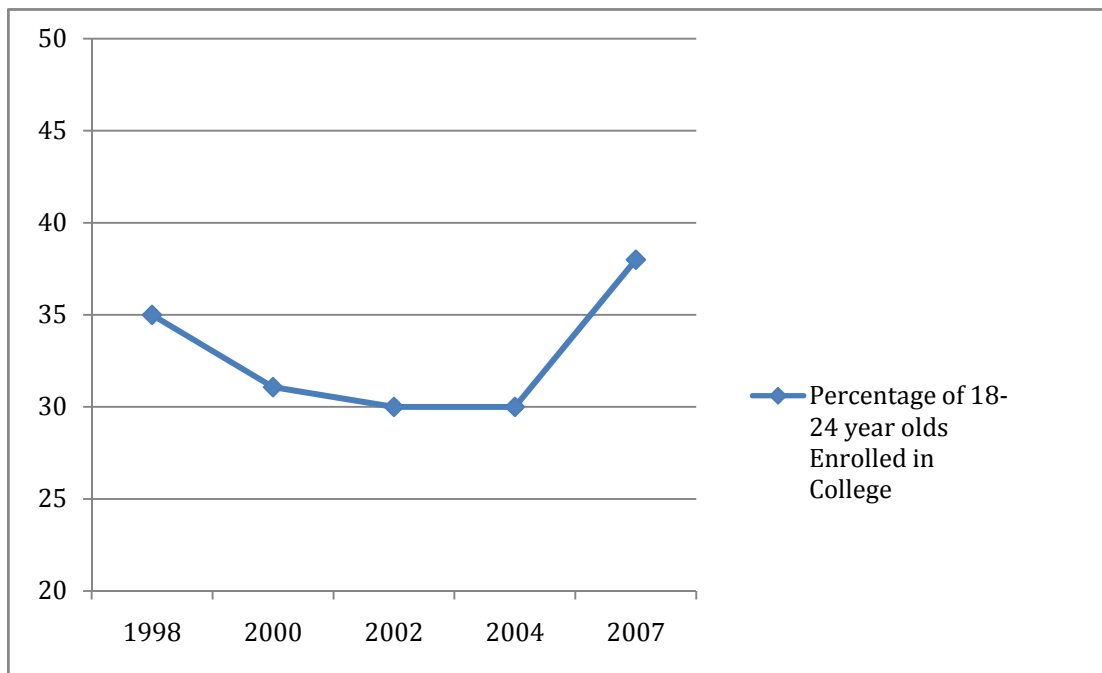
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Washington



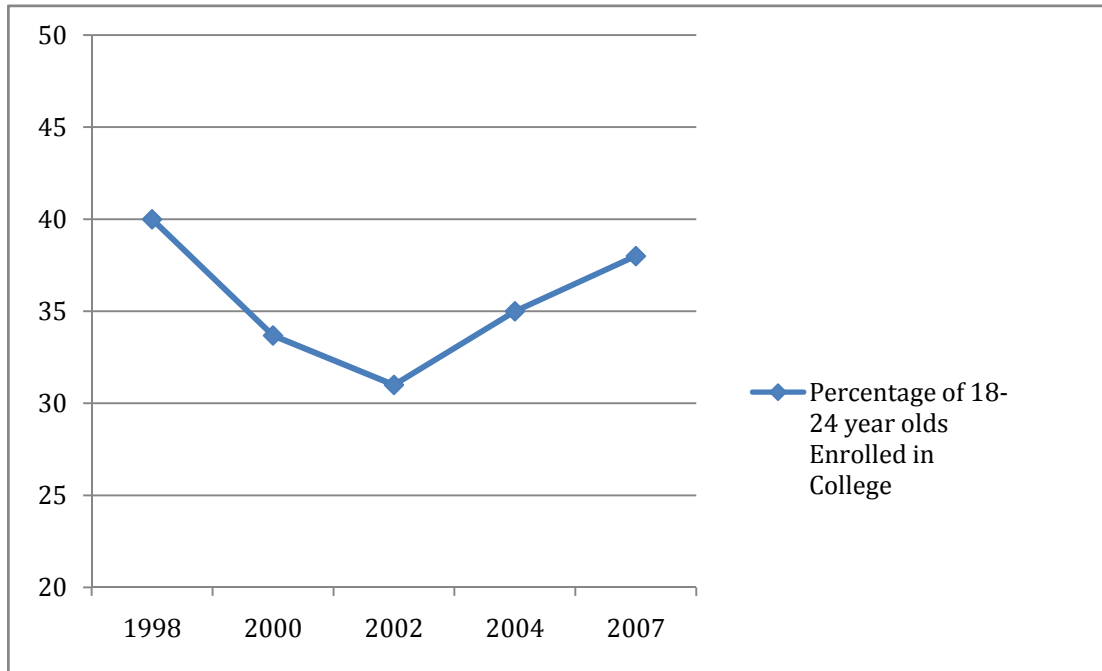
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

West Virginia



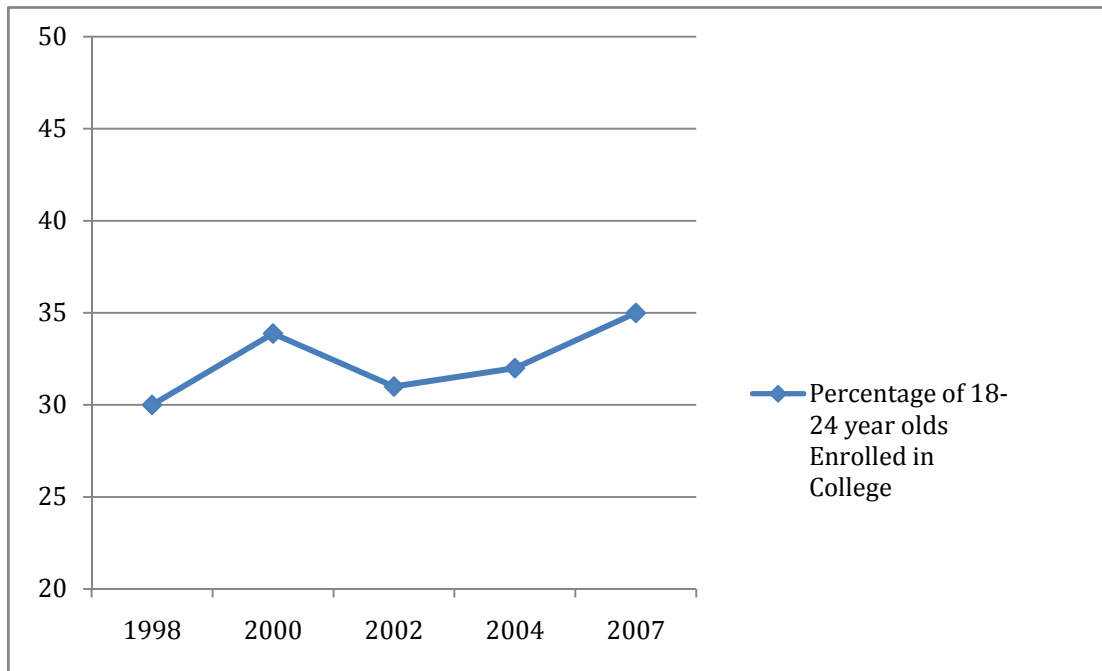
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Wisconsin



Source: Measuring Up 2000, 2002, 2004, 2006, 2008

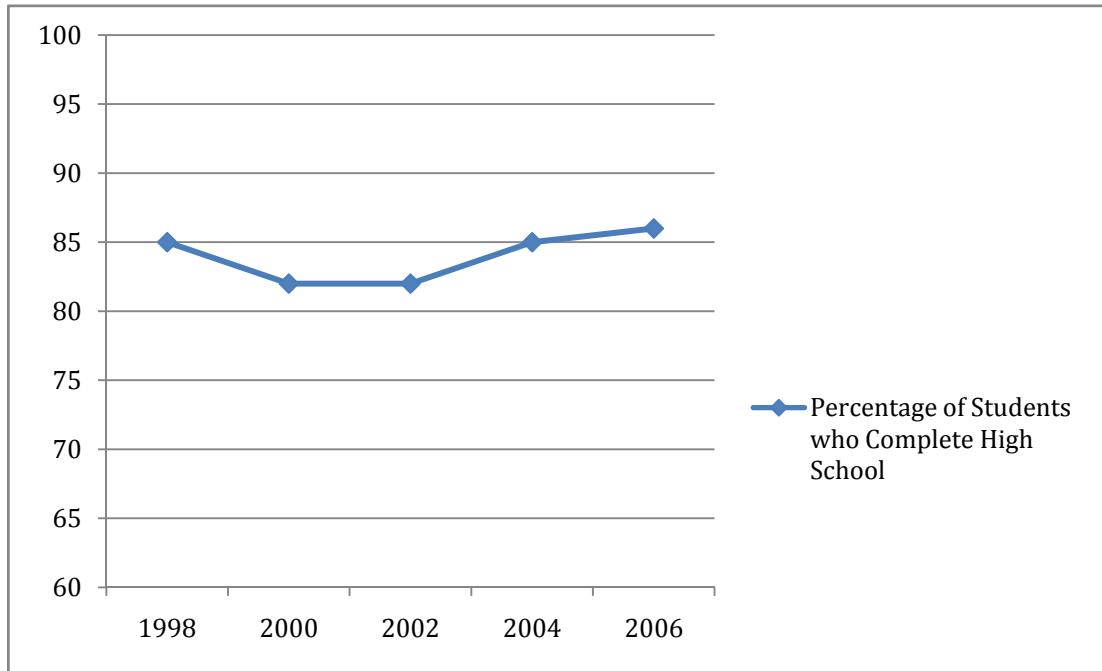
Wyoming



Source: Measuring Up 2000, 2002, 2004, 2006, 2008

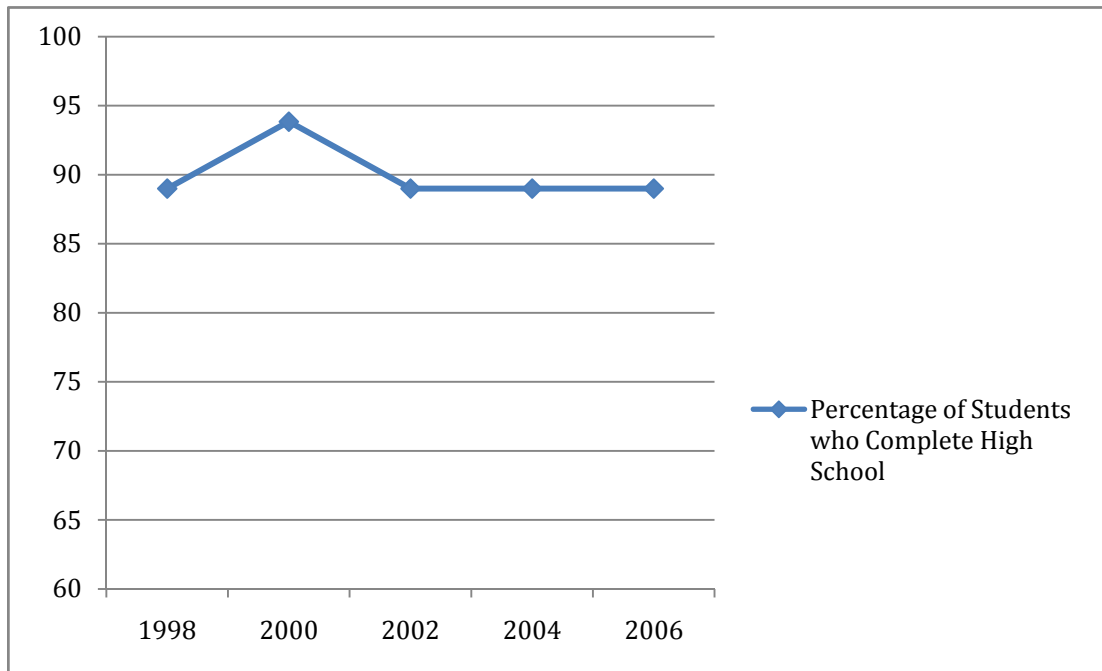
APPENDIX E
PERCENTAGE OF STUDENTS WHO COMPLETE HIGH SCHOOL BY
STATE

Alabama



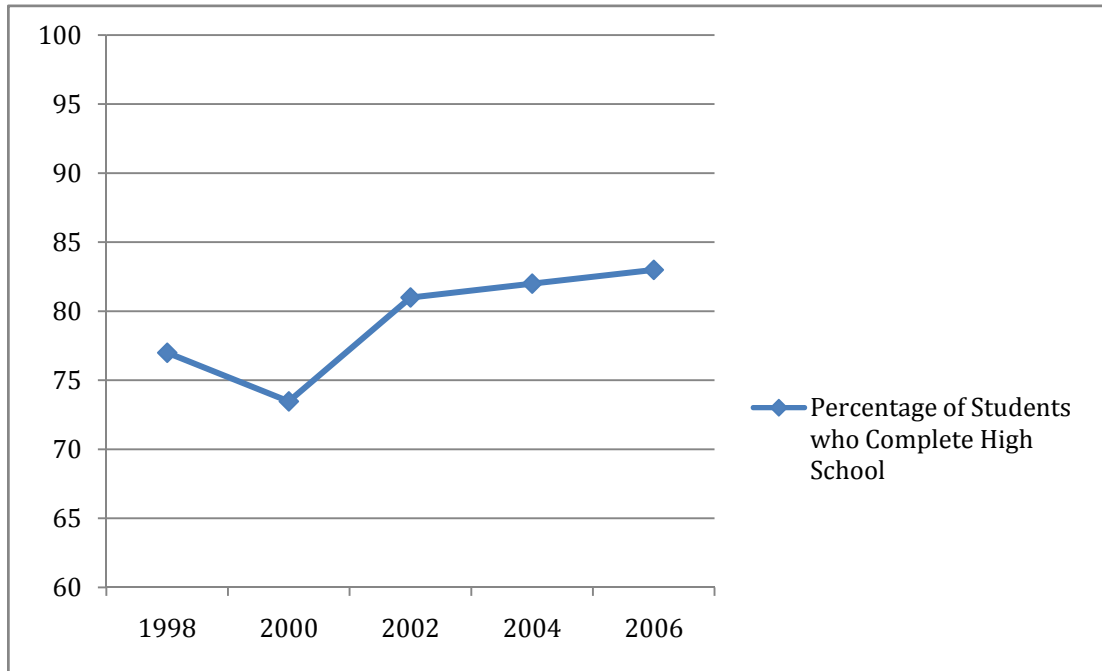
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Alaska



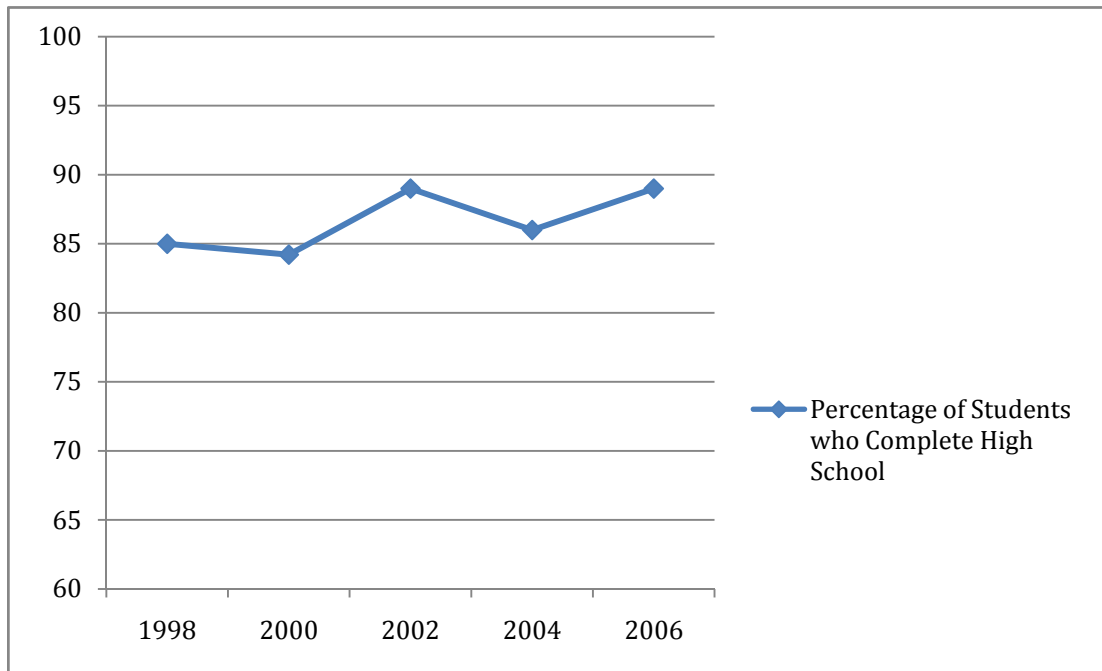
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Arizona



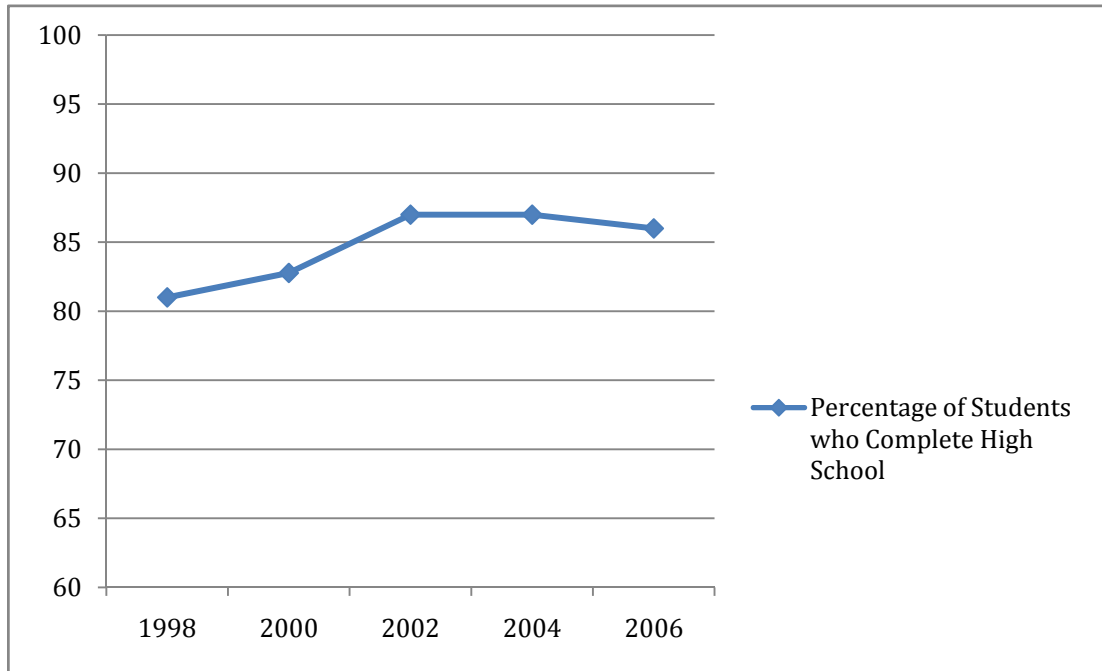
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Arkansas



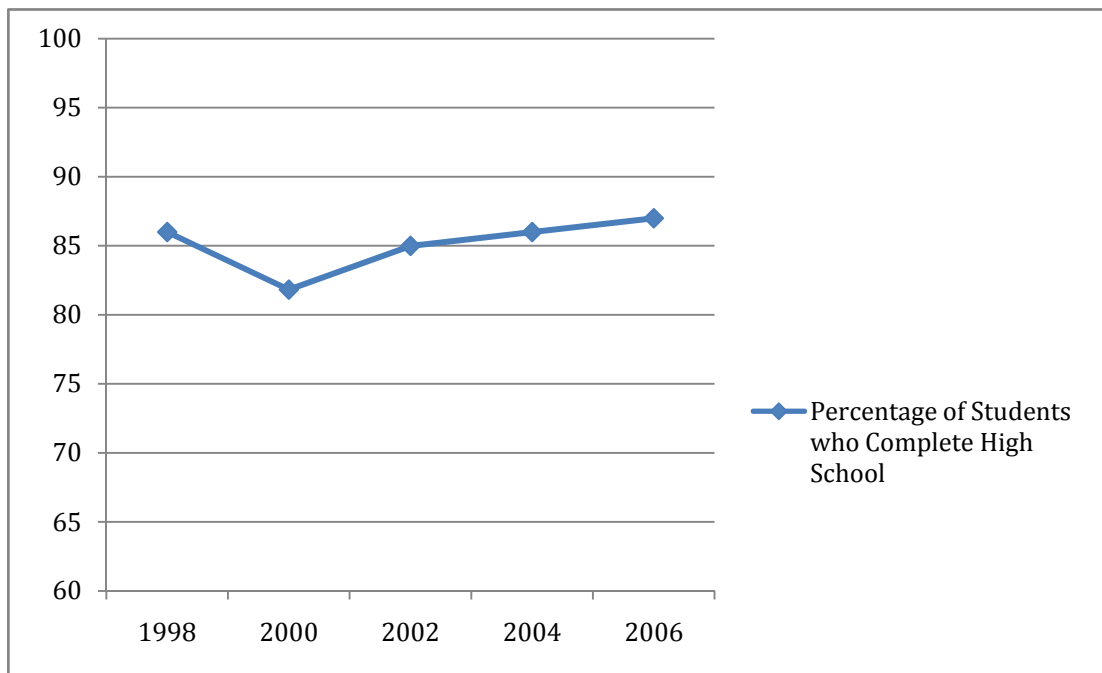
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

California



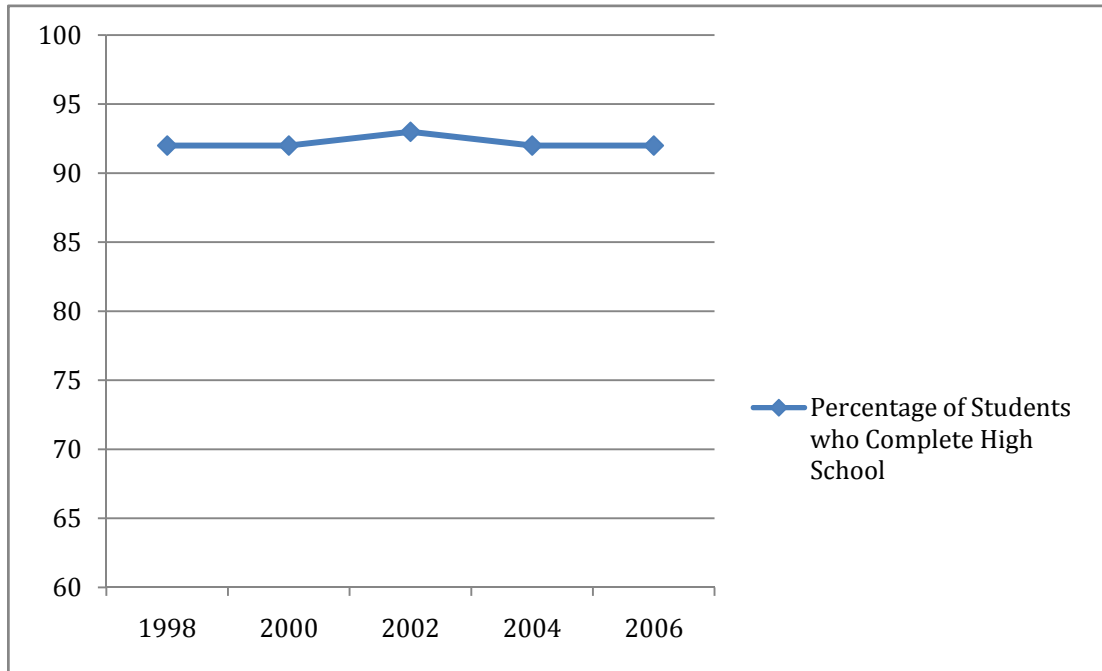
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Colorado



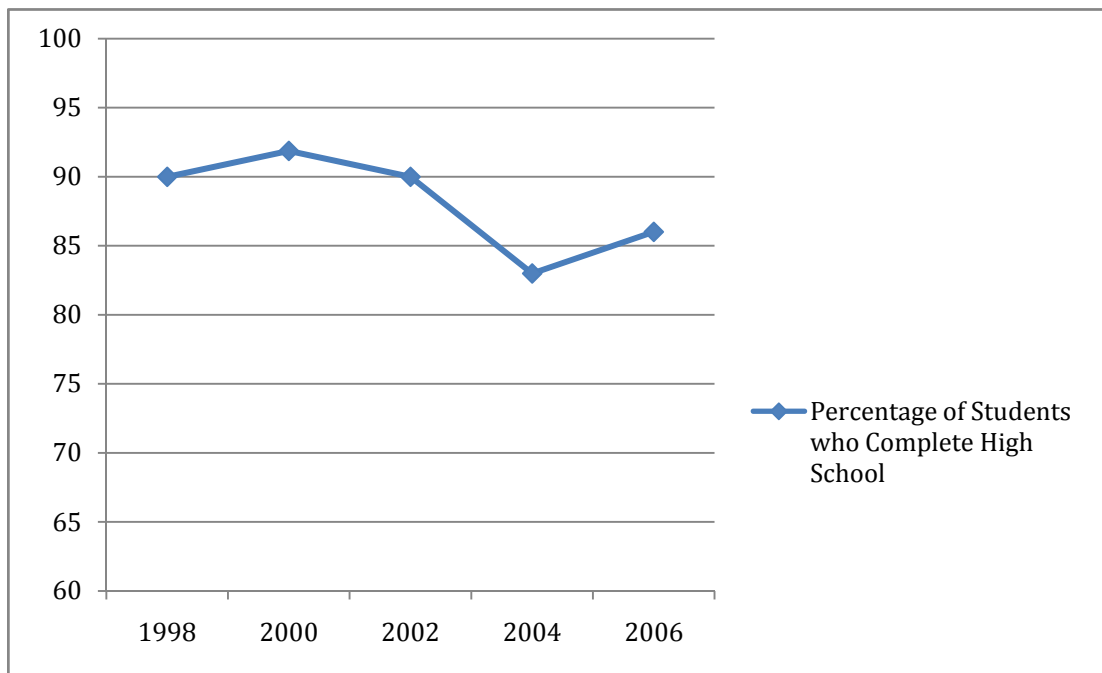
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Connecticut



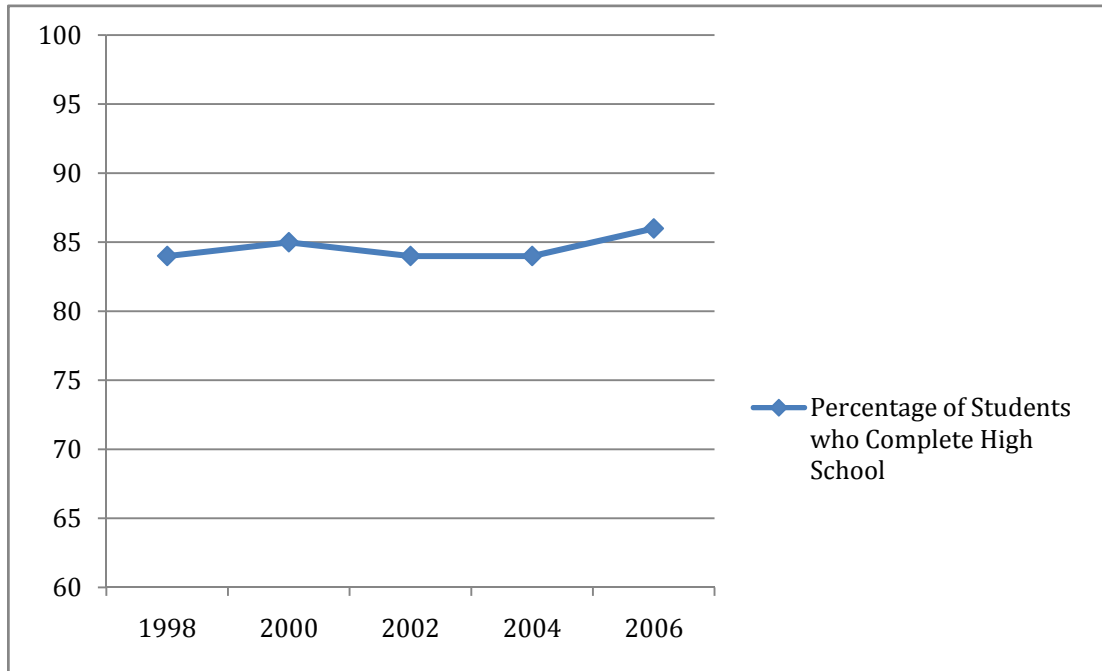
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Delaware



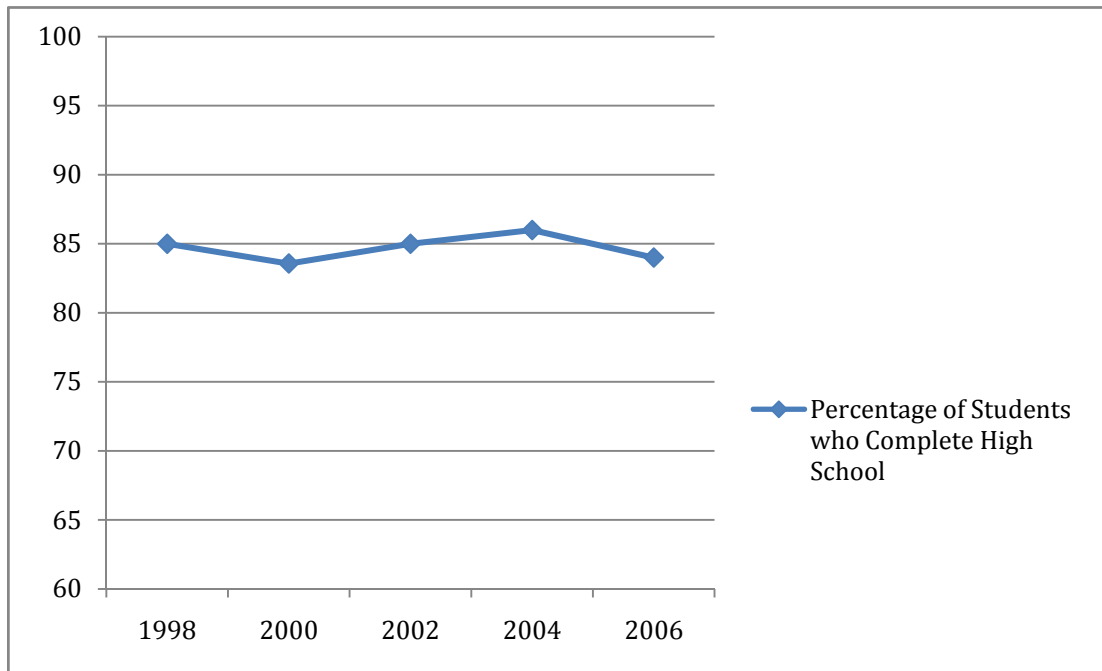
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Florida



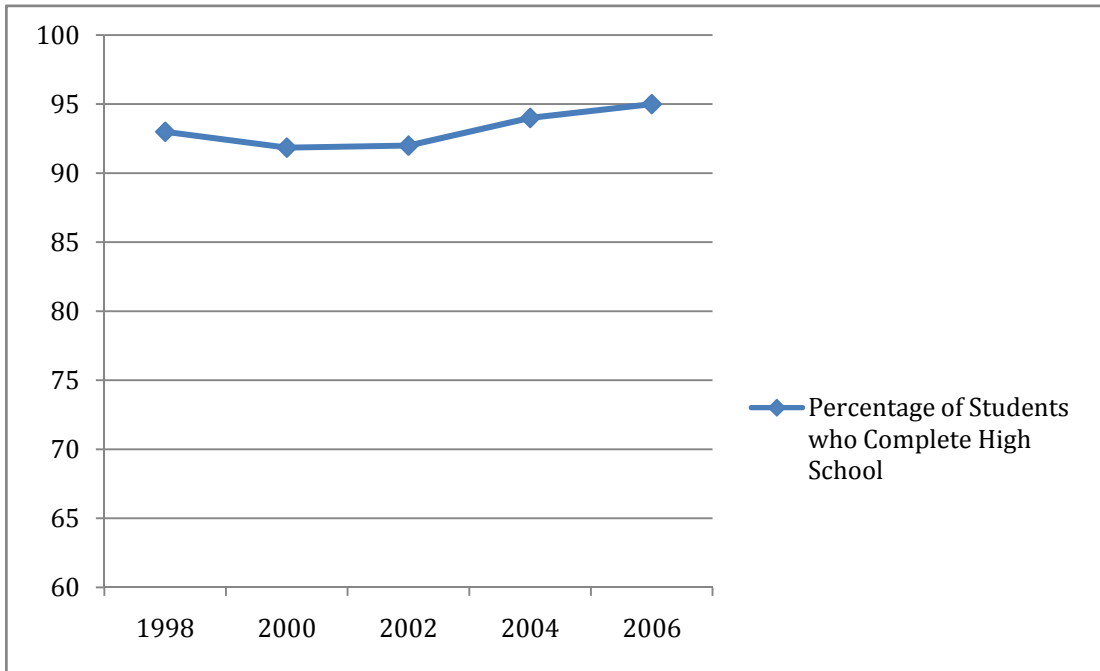
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Georgia



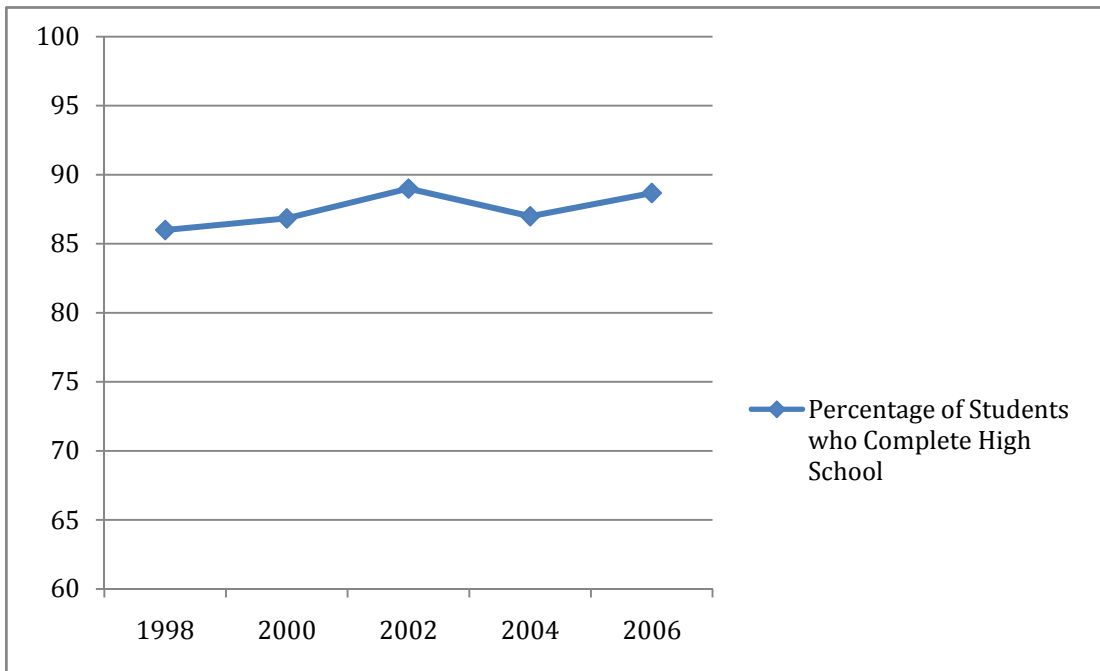
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Hawaii



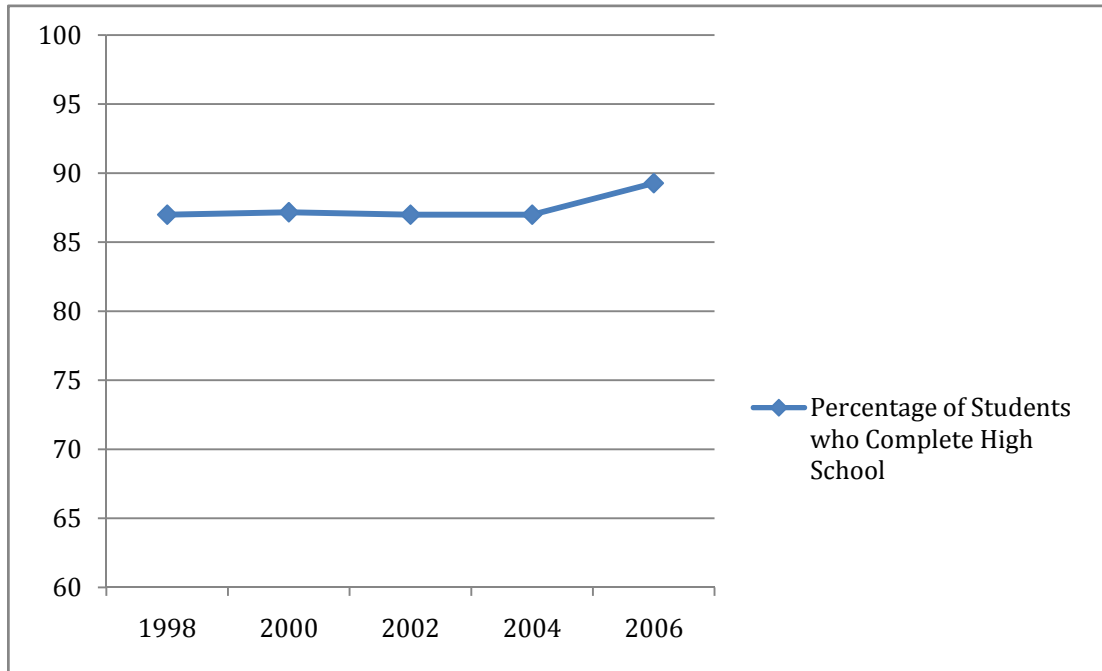
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Idaho



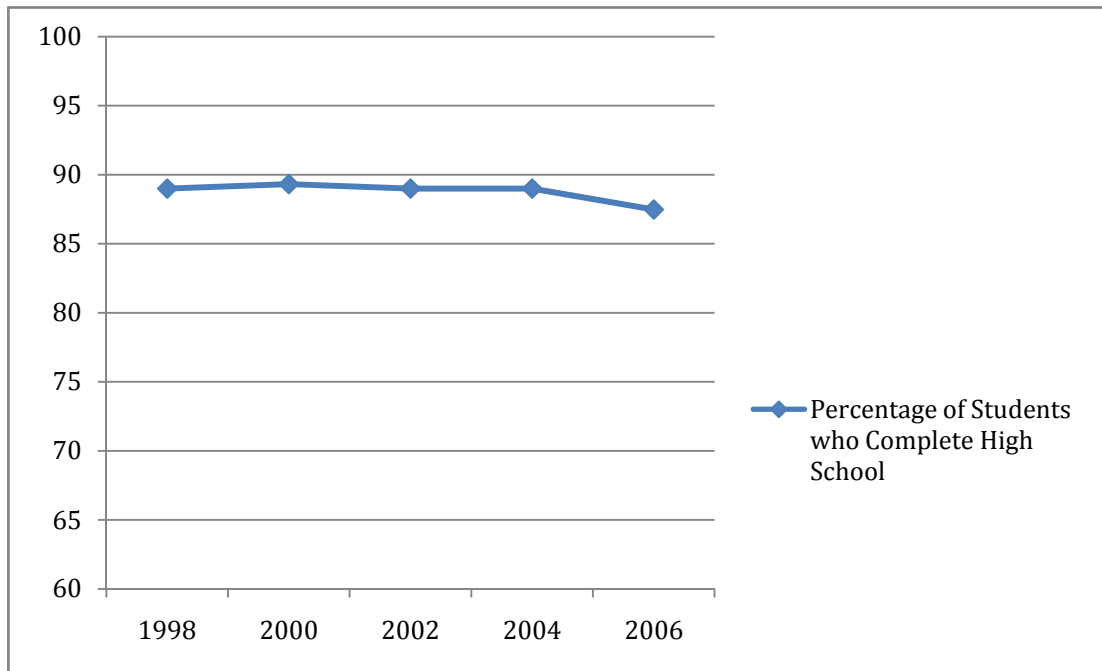
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Illinois



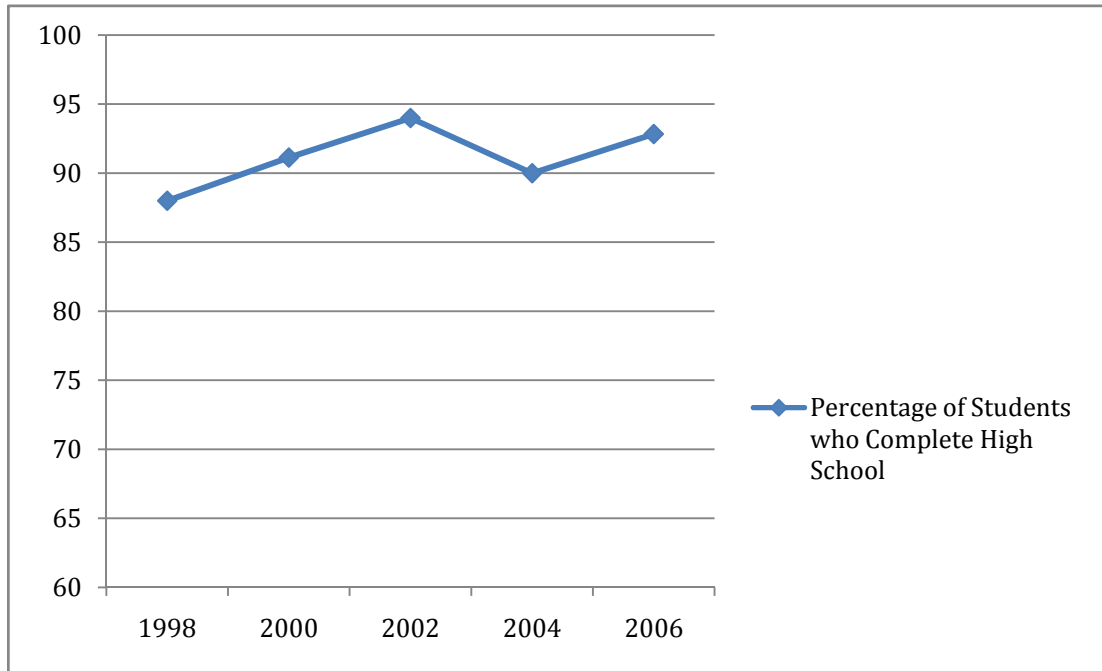
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Indiana



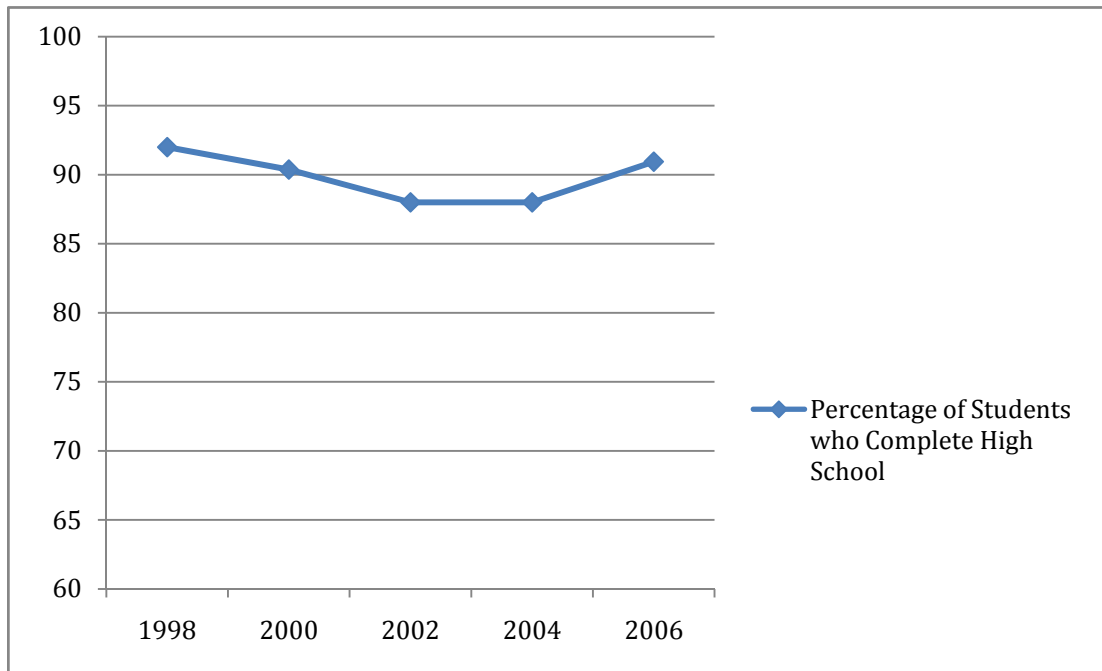
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Iowa



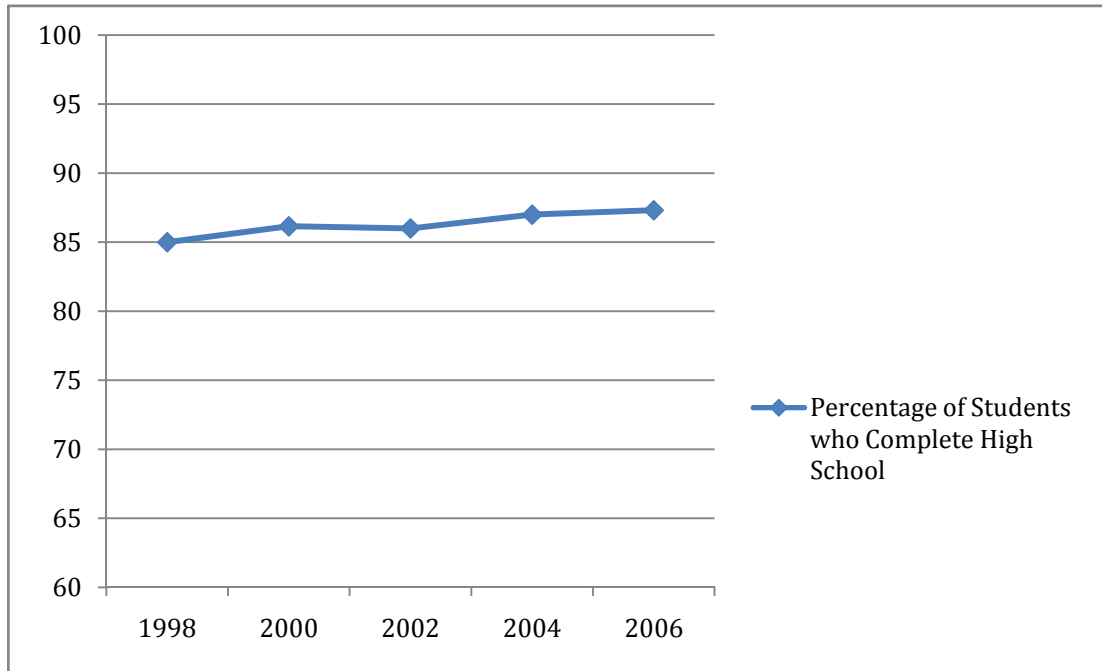
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Kansas



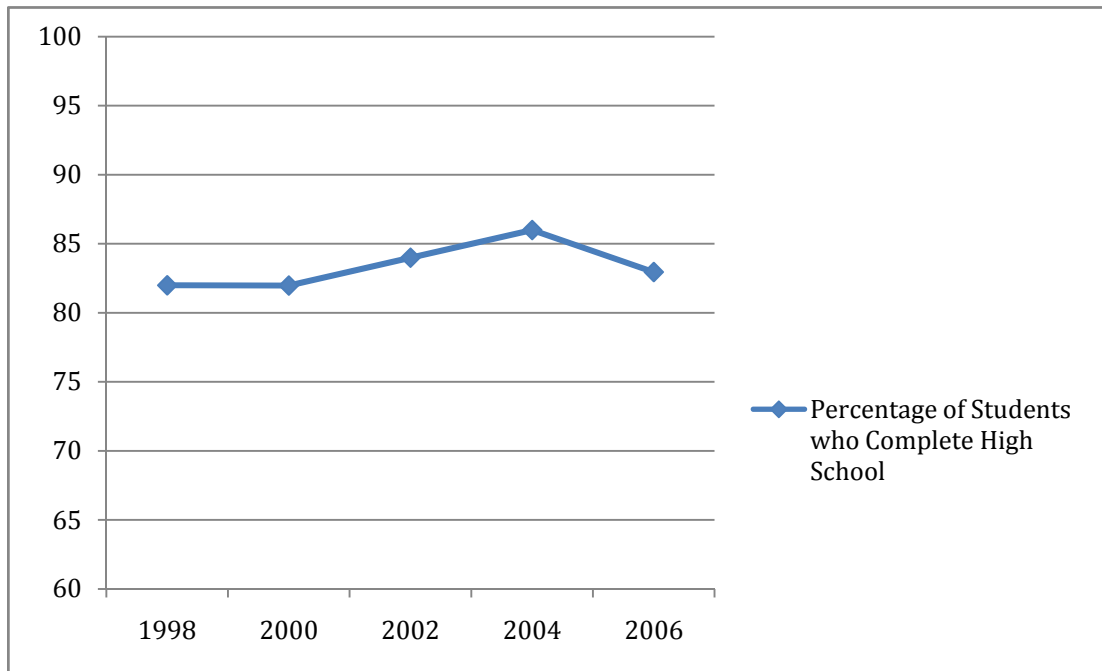
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Kentucky



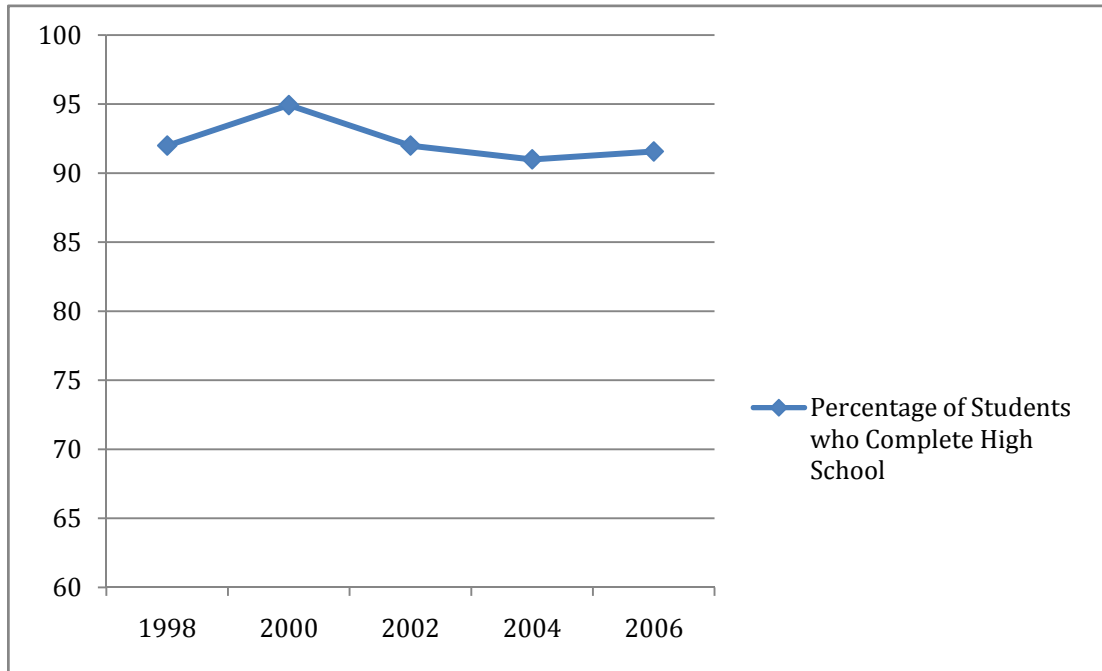
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Louisiana



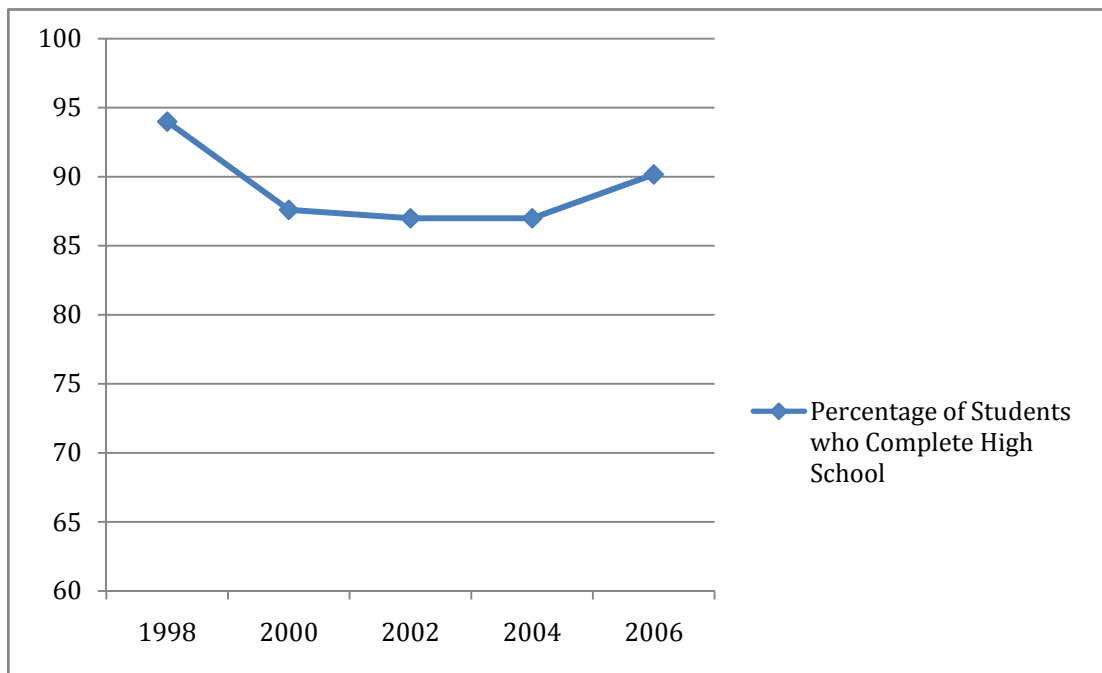
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Maine



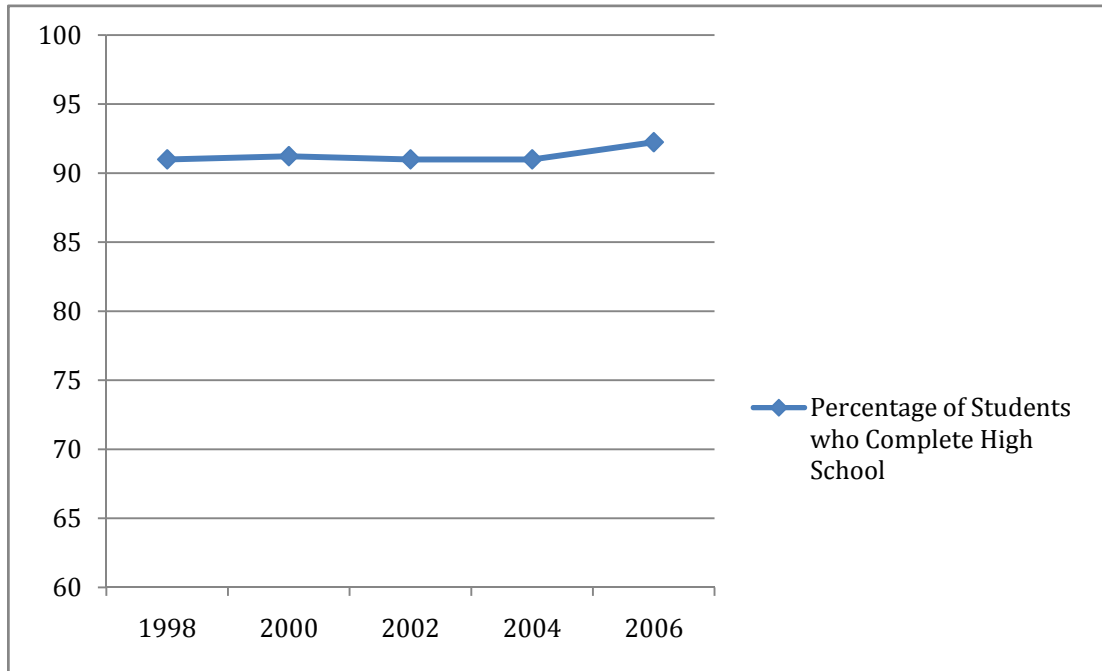
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Maryland



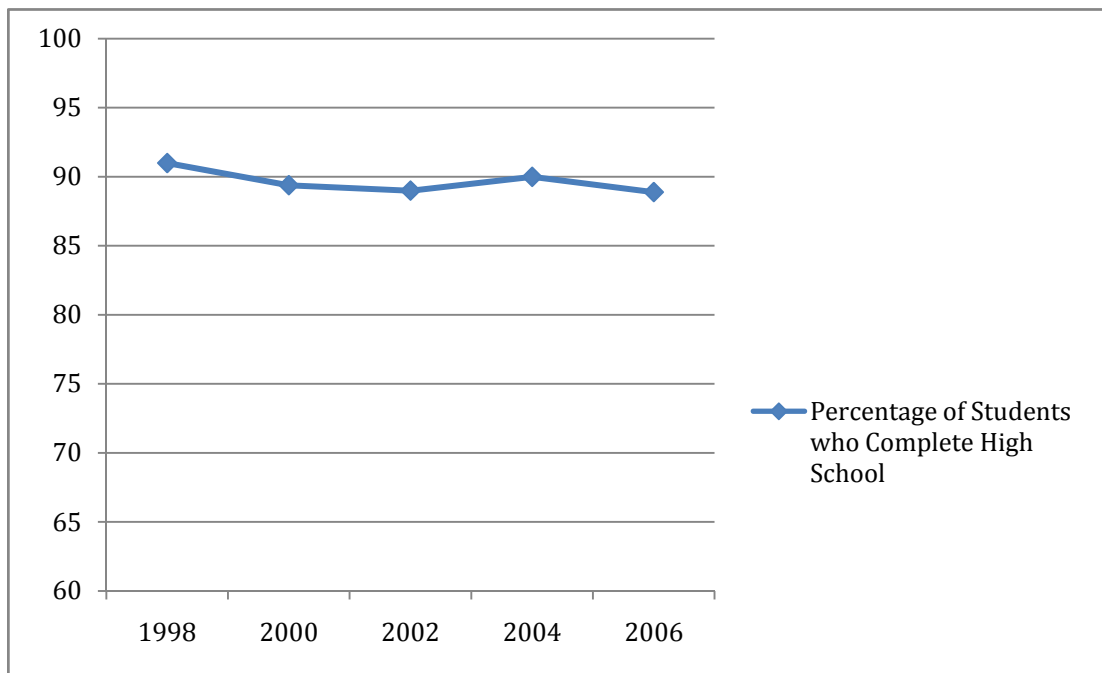
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Massachusetts



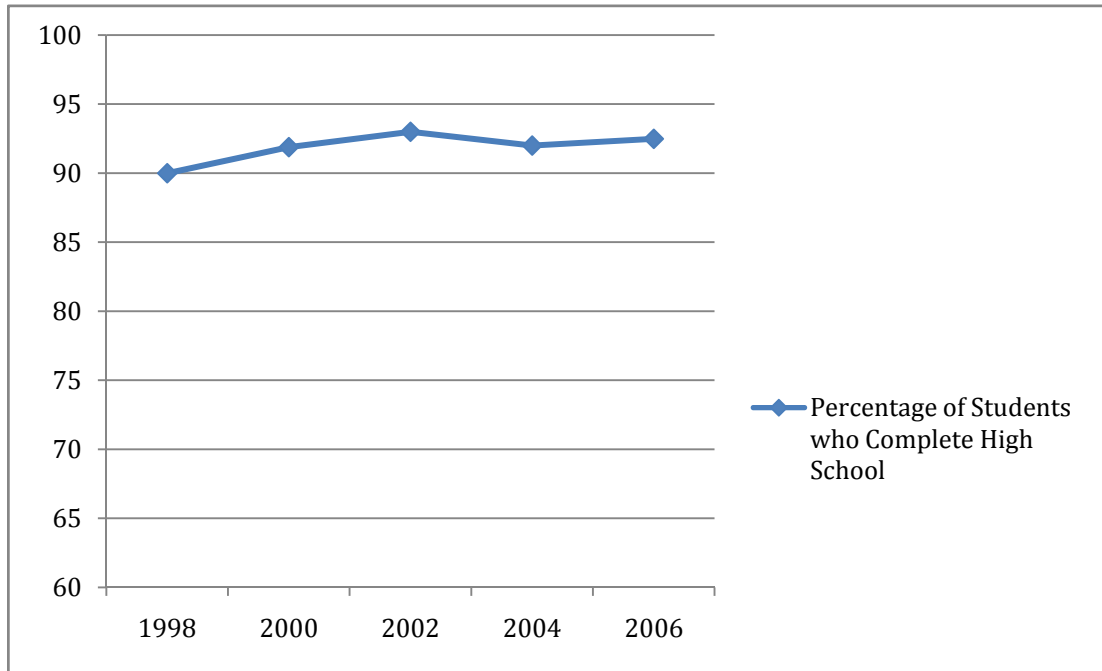
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Michigan



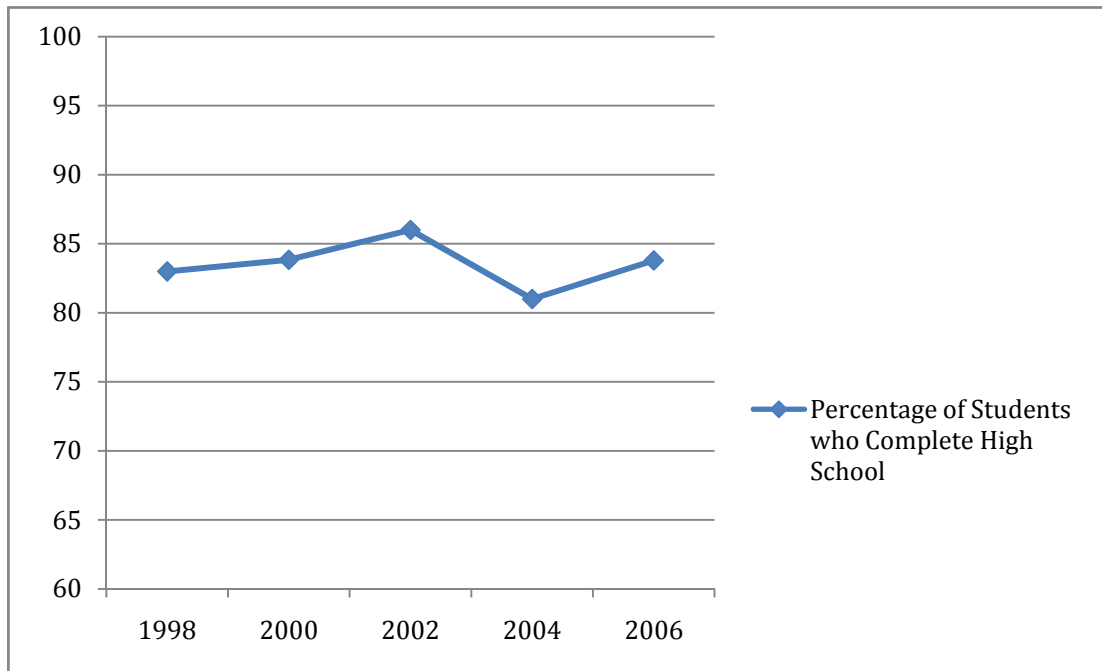
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Minnesota



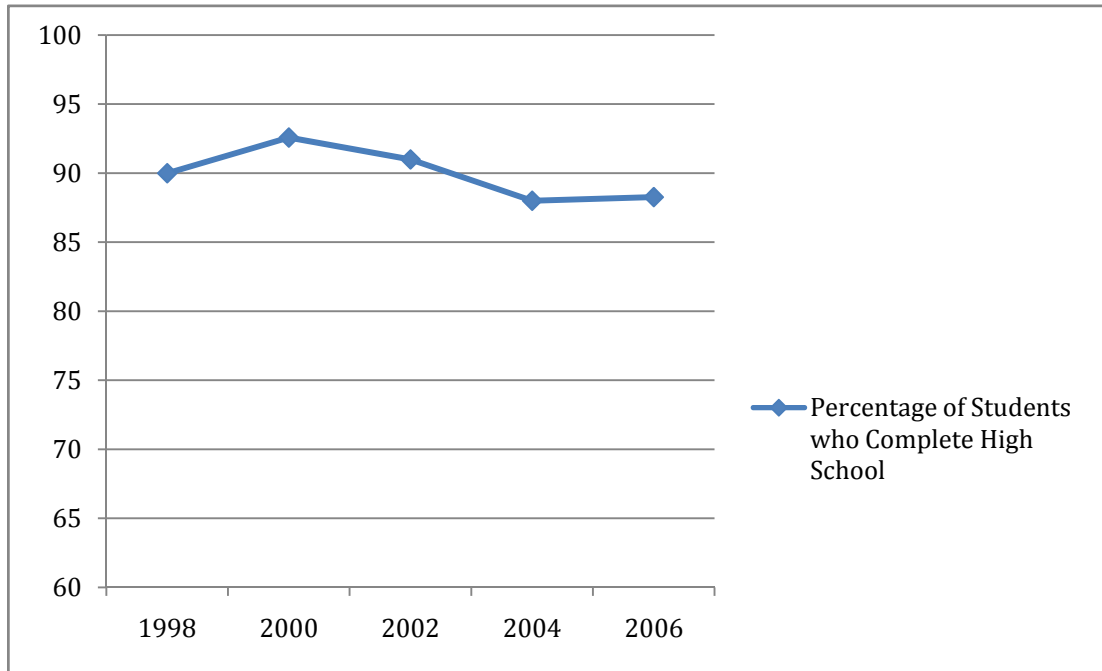
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Mississippi



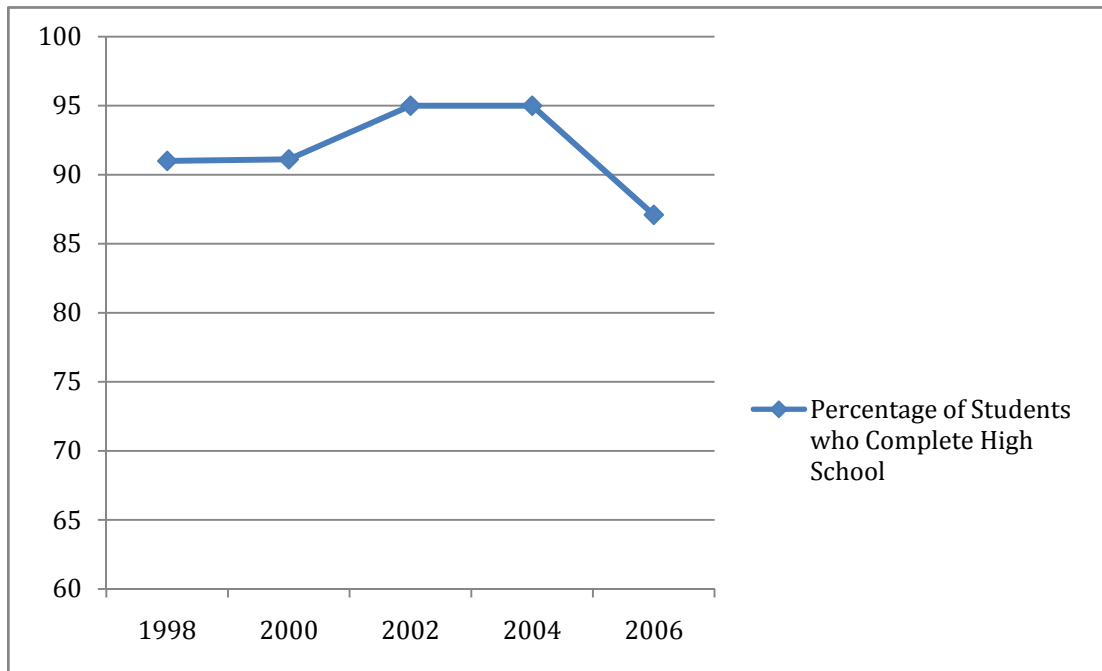
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Missouri



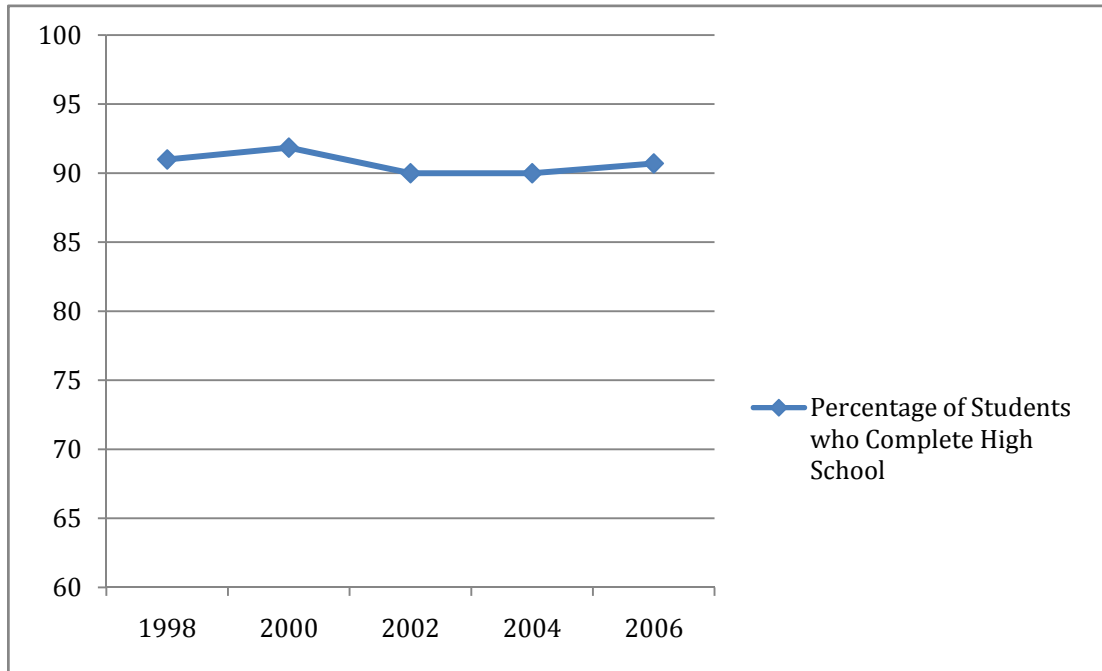
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Montana



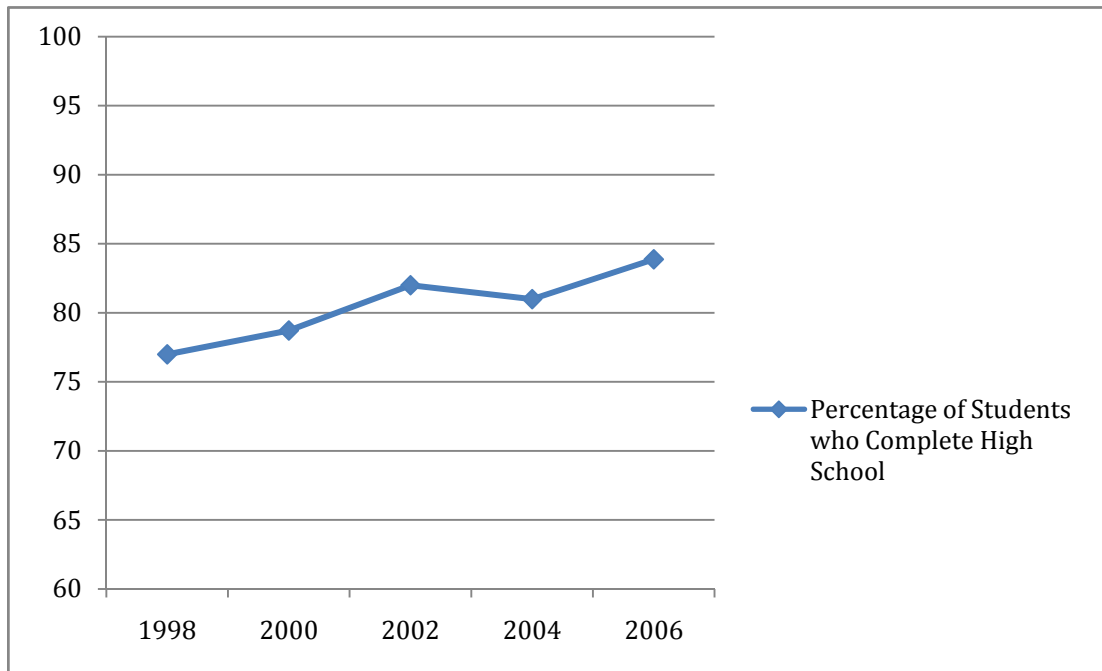
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Nebraska



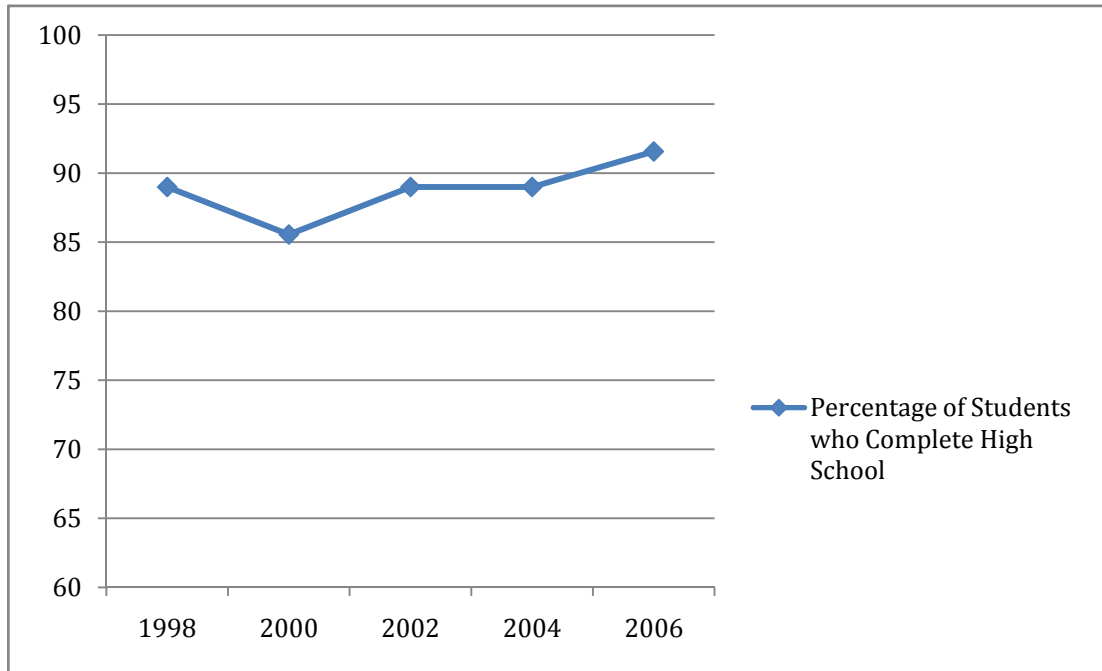
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Nevada



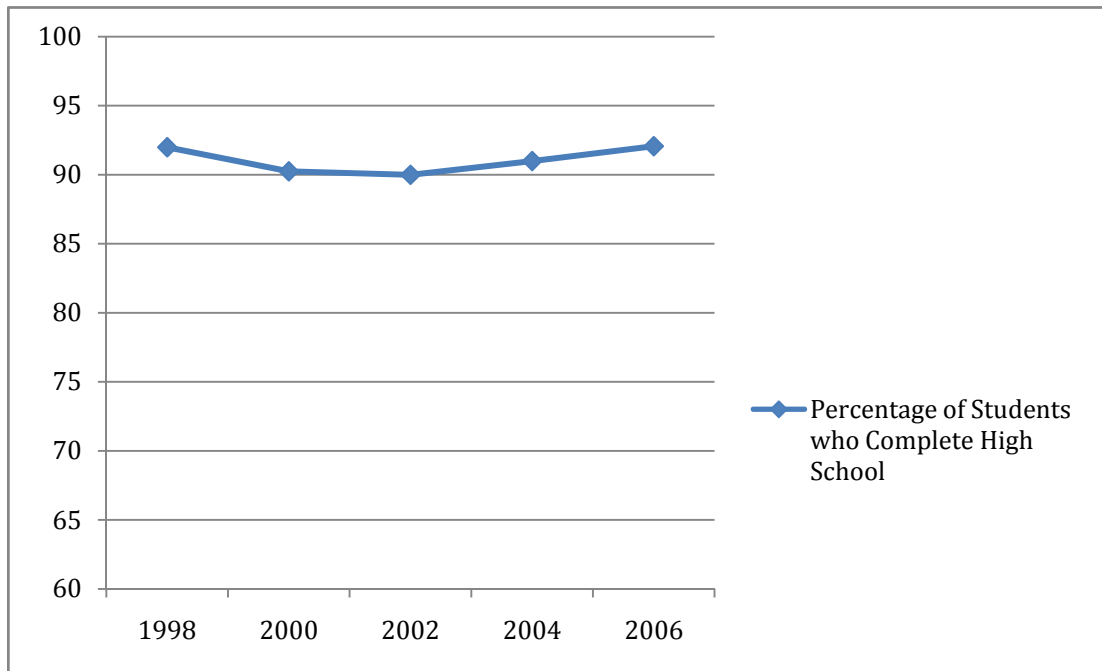
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New Hampshire



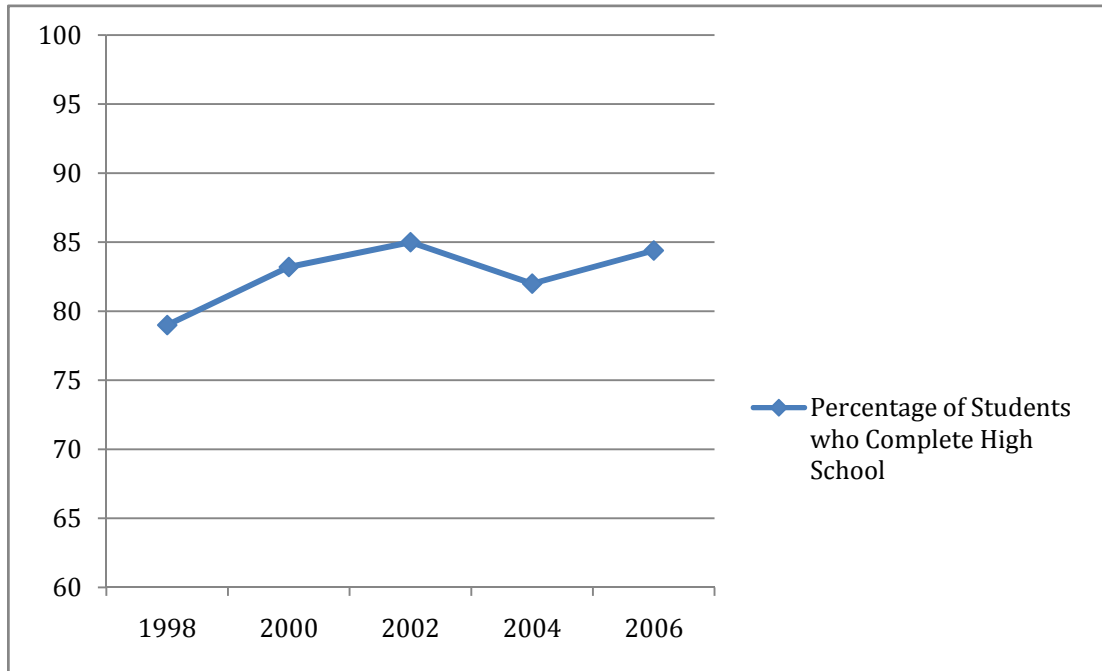
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New Jersey



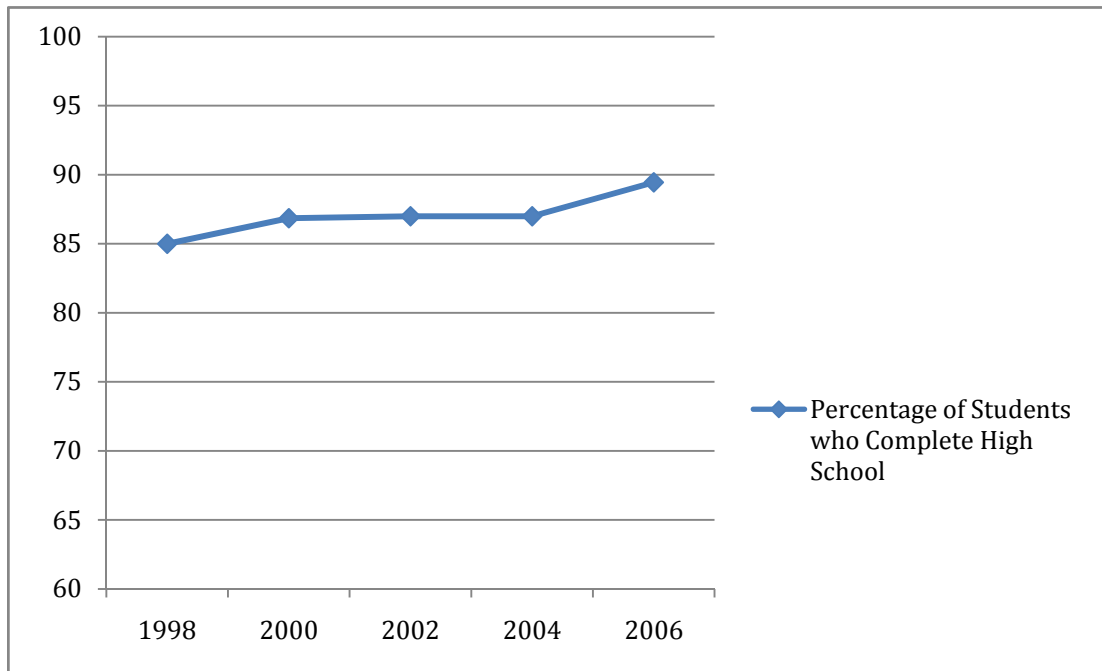
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New Mexico



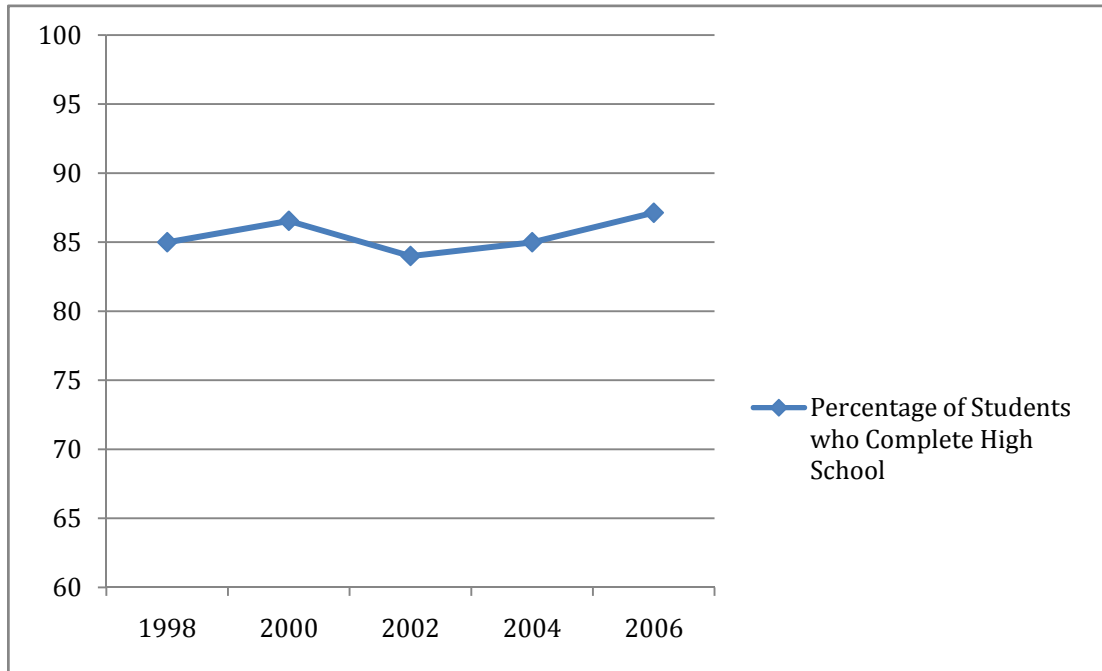
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New York



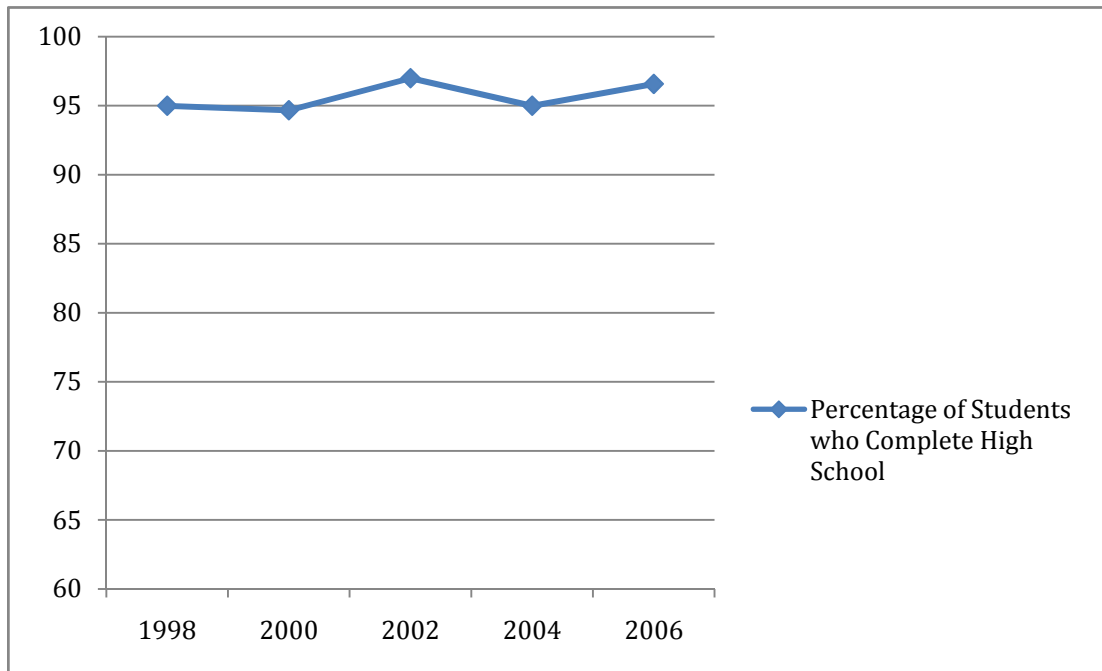
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

North Carolina



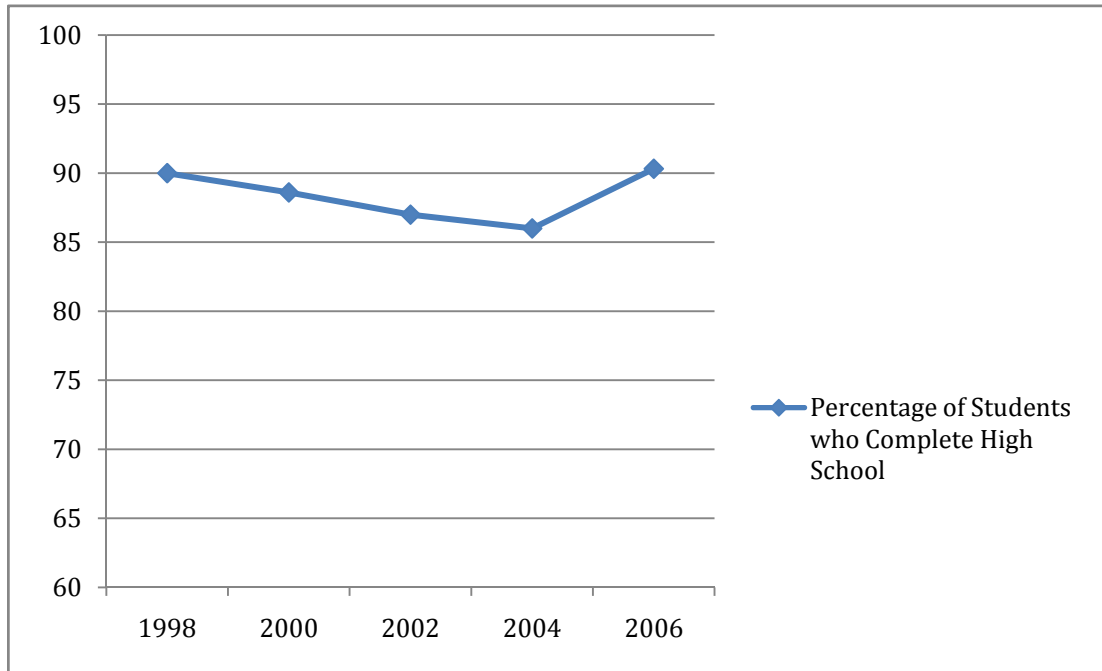
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North Dakota



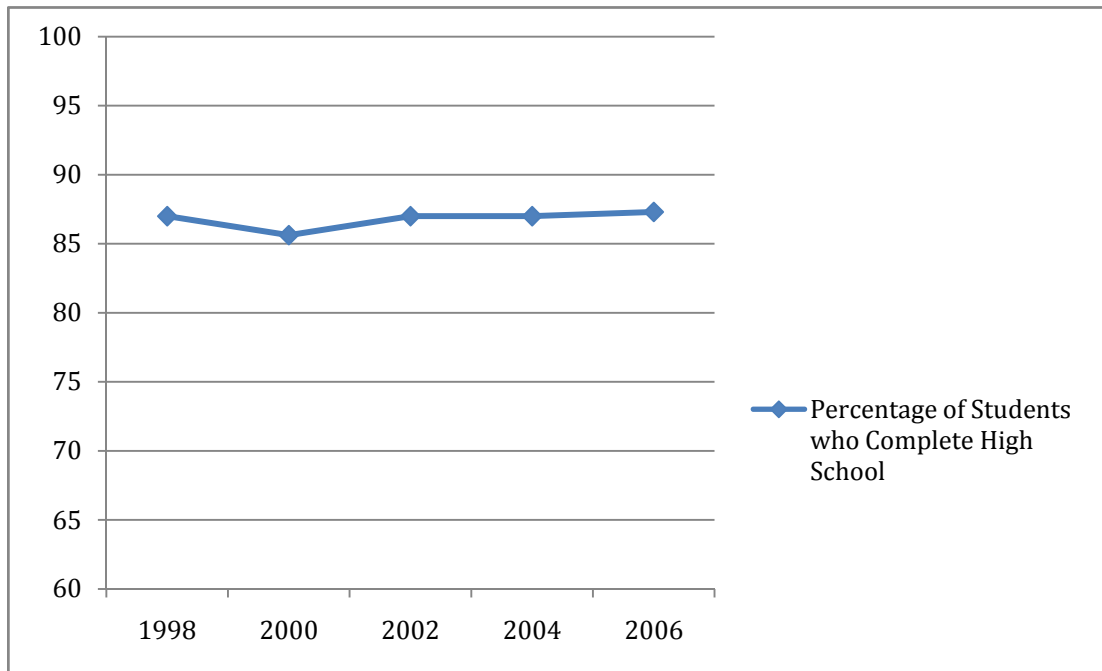
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Ohio



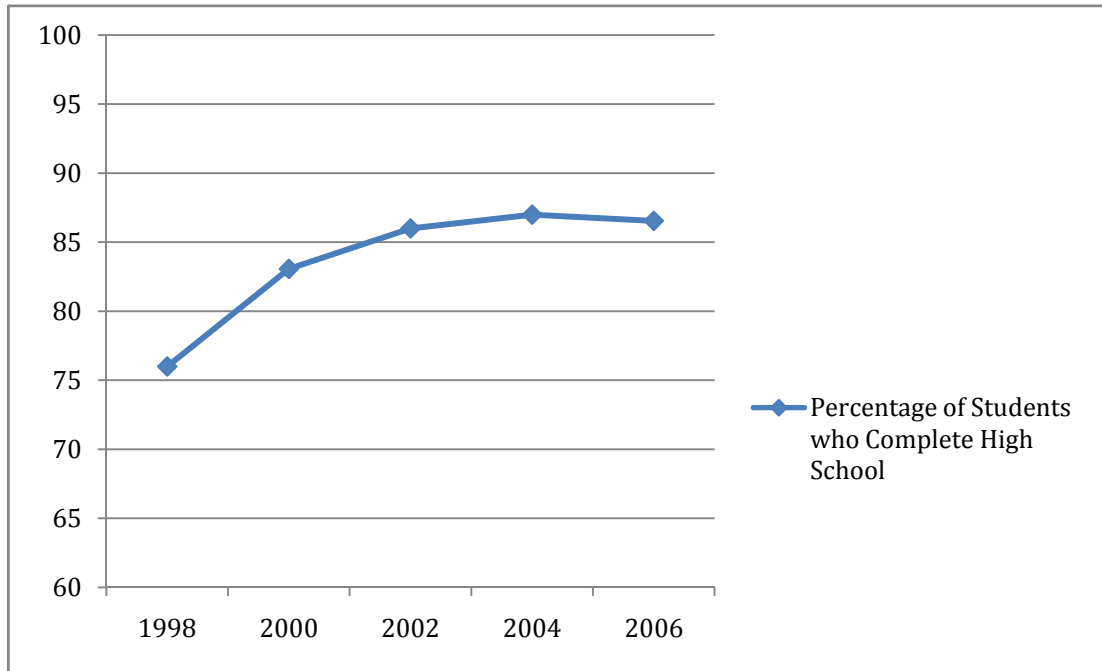
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Oklahoma



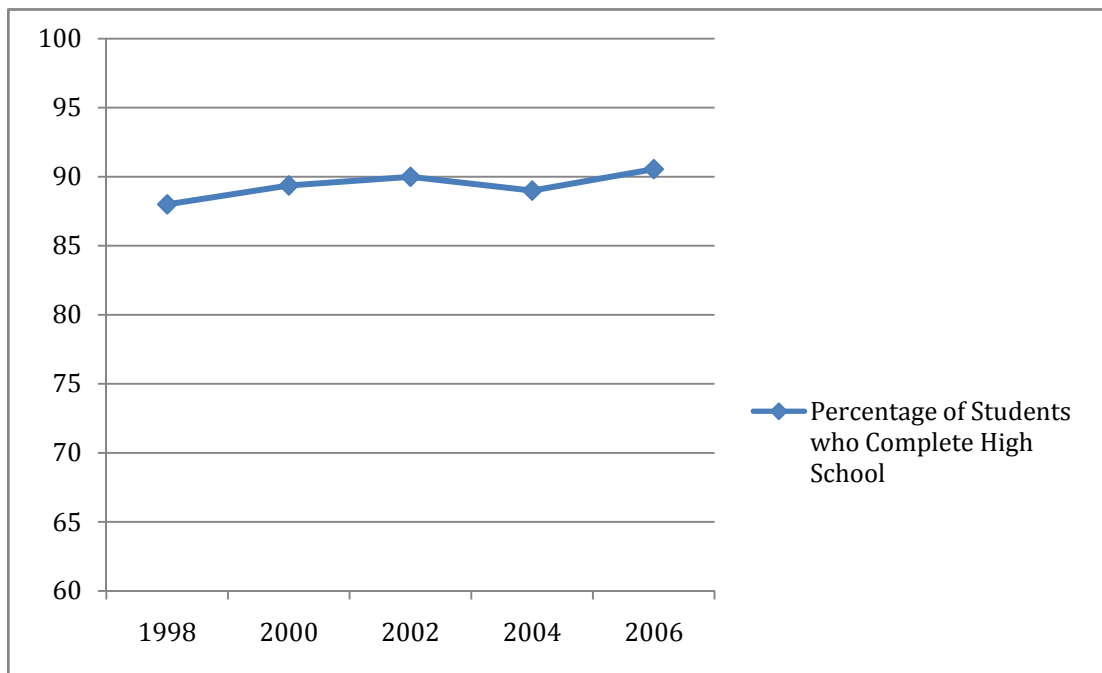
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Oregon



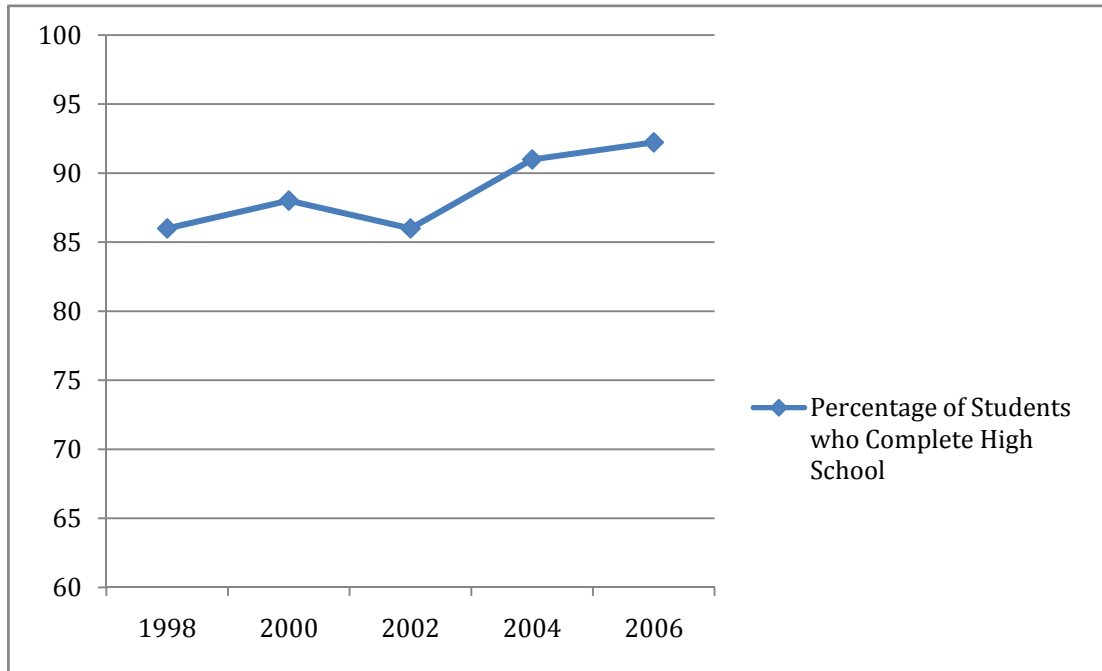
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Pennsylvania



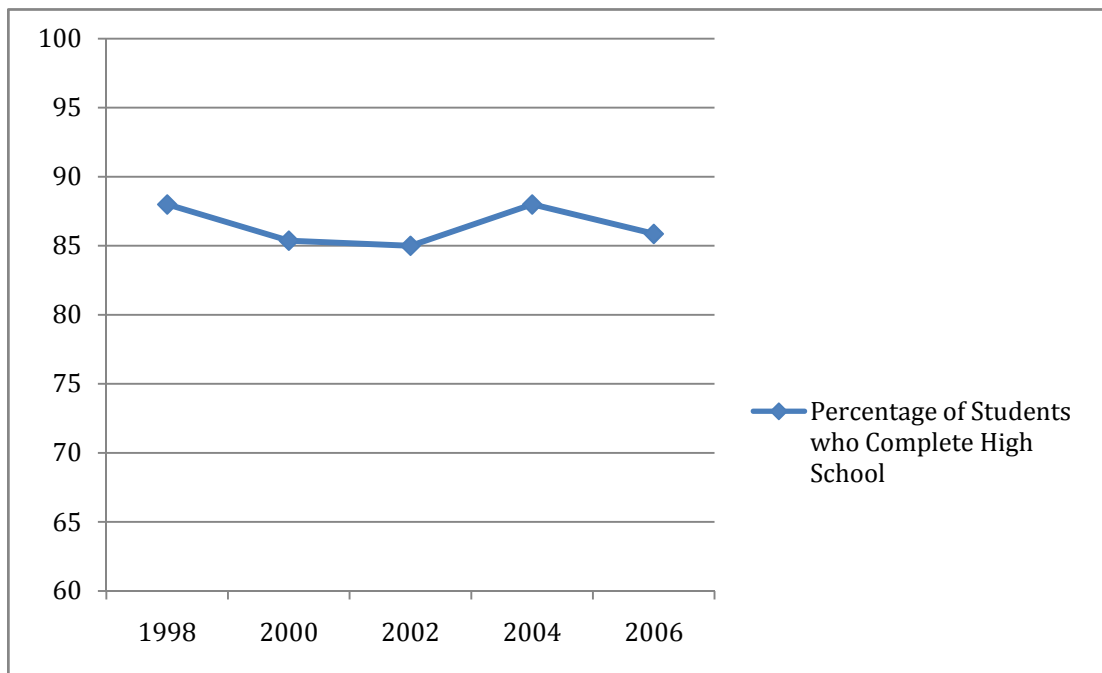
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Rhode Island



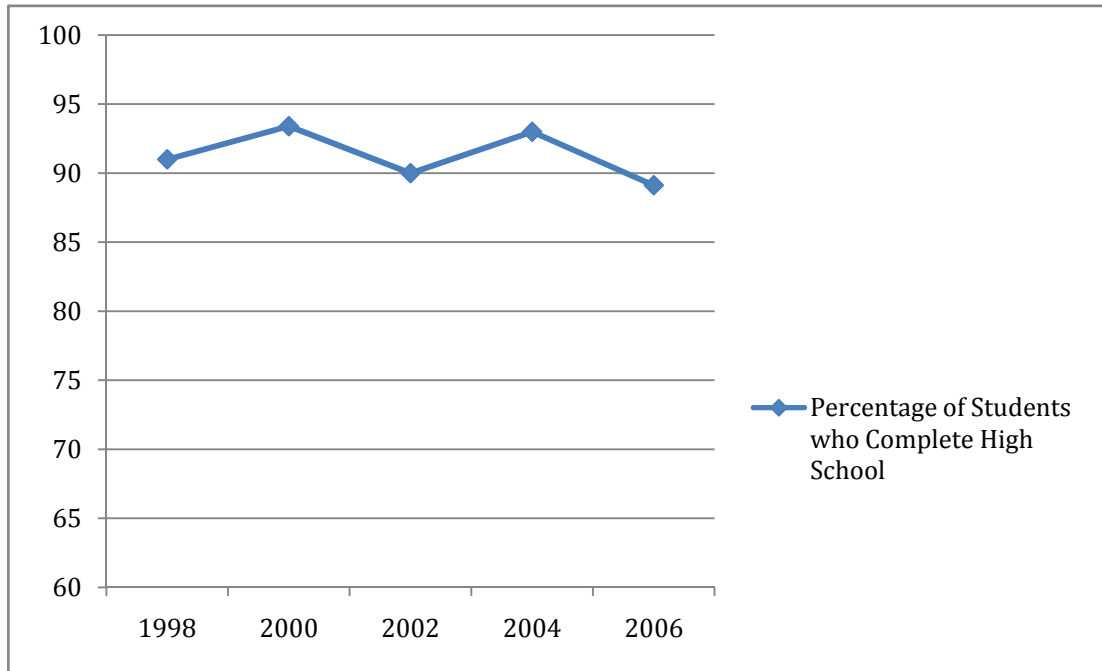
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

South Carolina



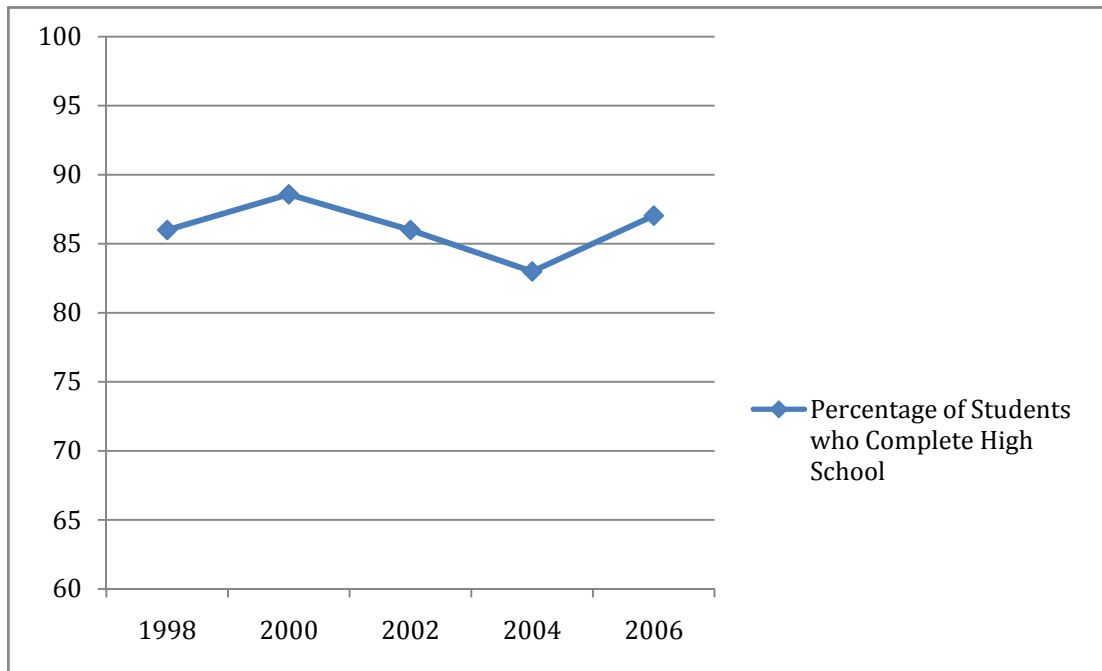
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

South Dakota



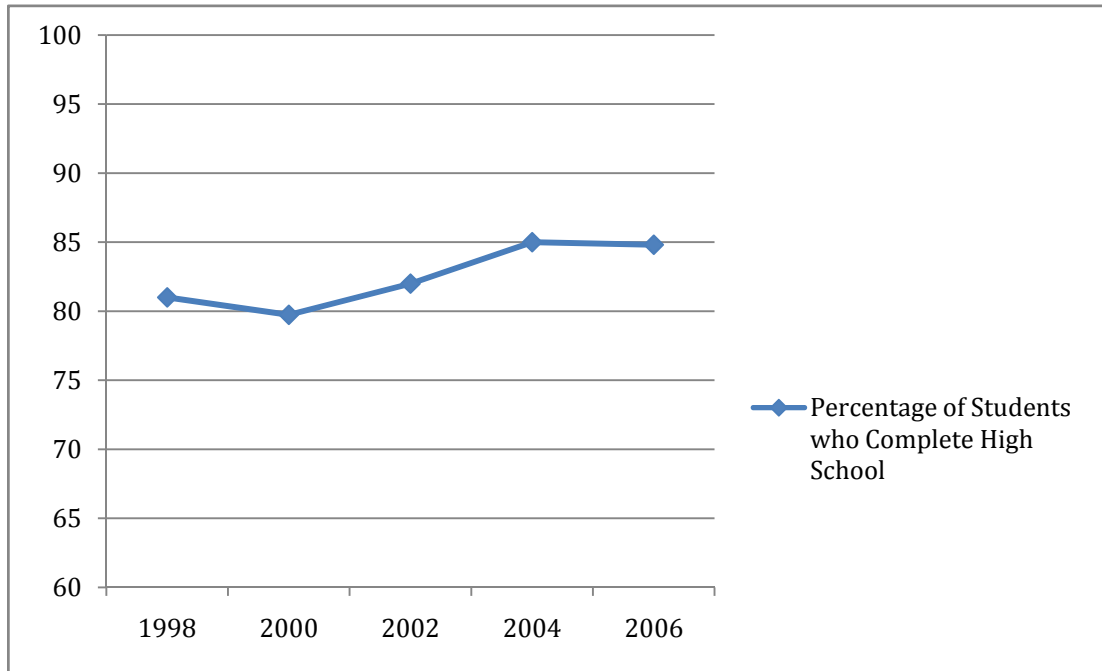
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Tennessee



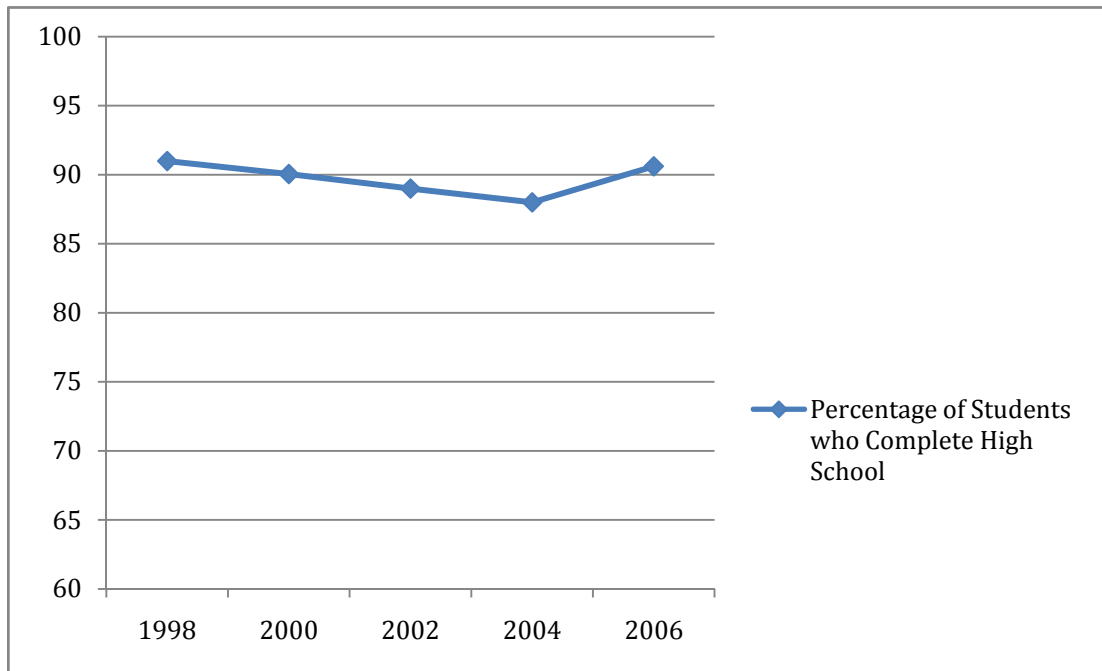
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Texas



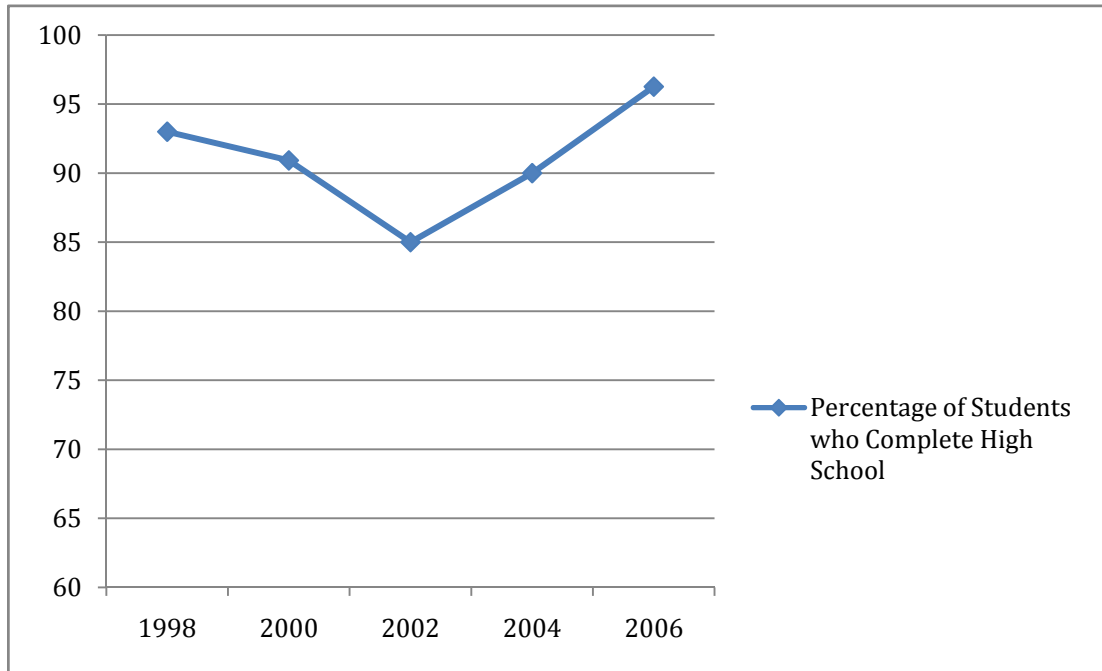
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Utah



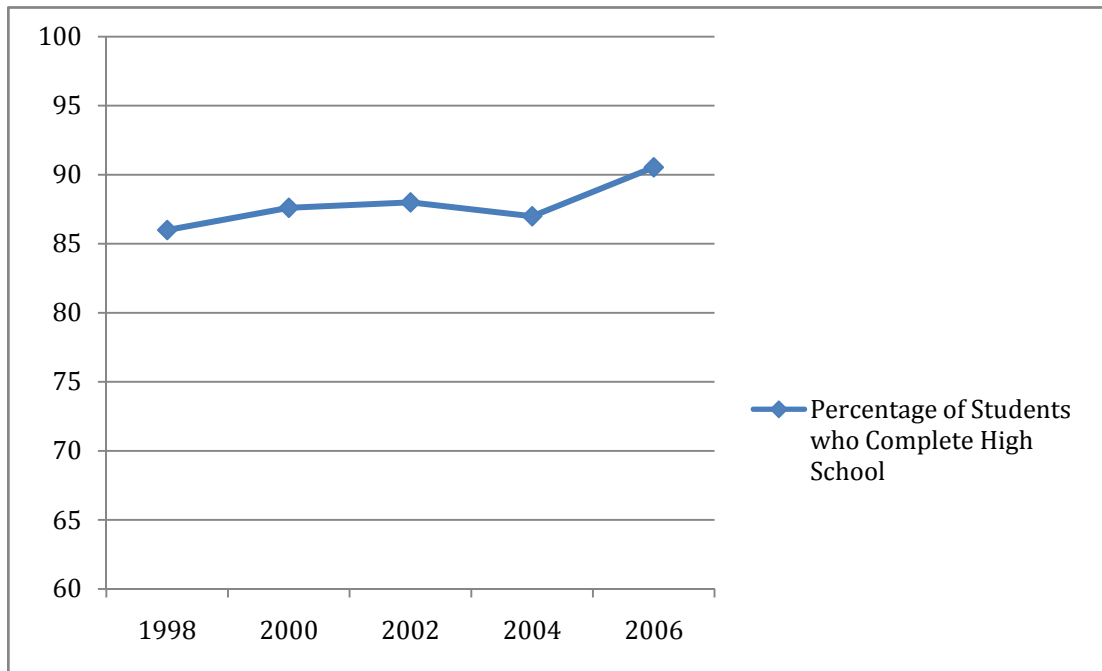
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Vermont



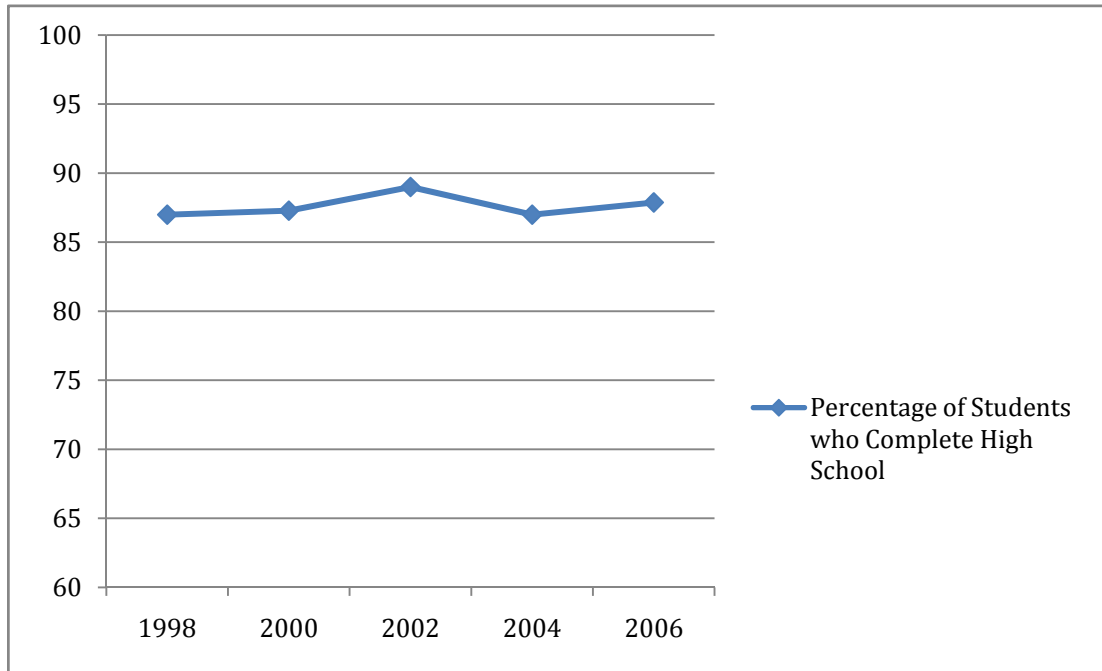
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Virginia



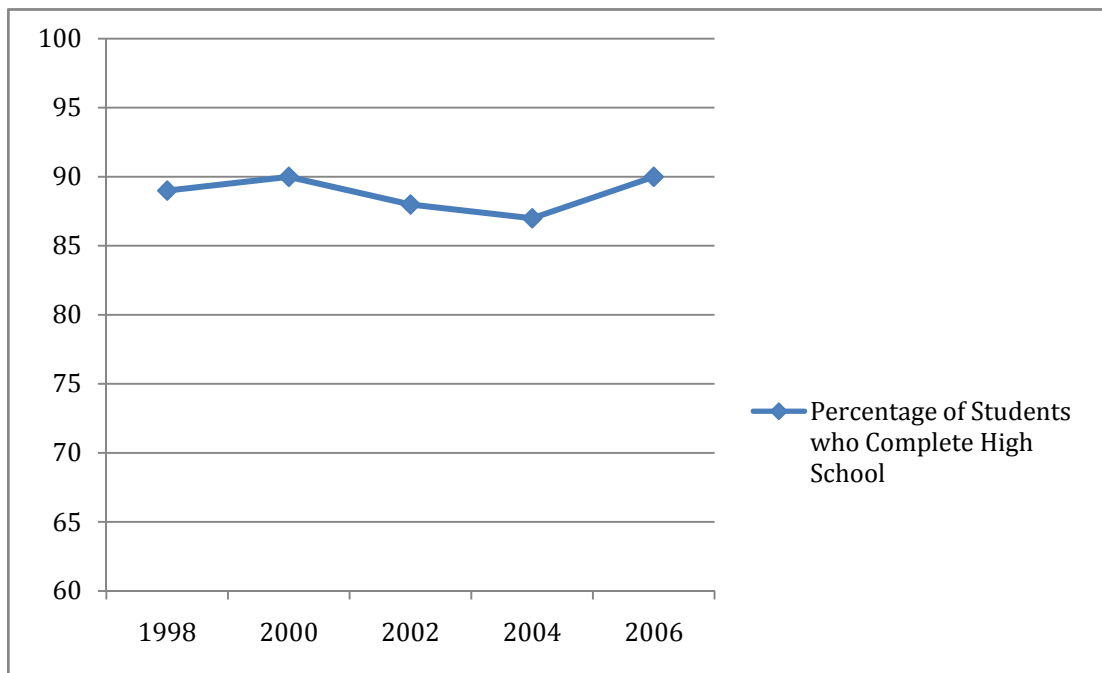
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Washington



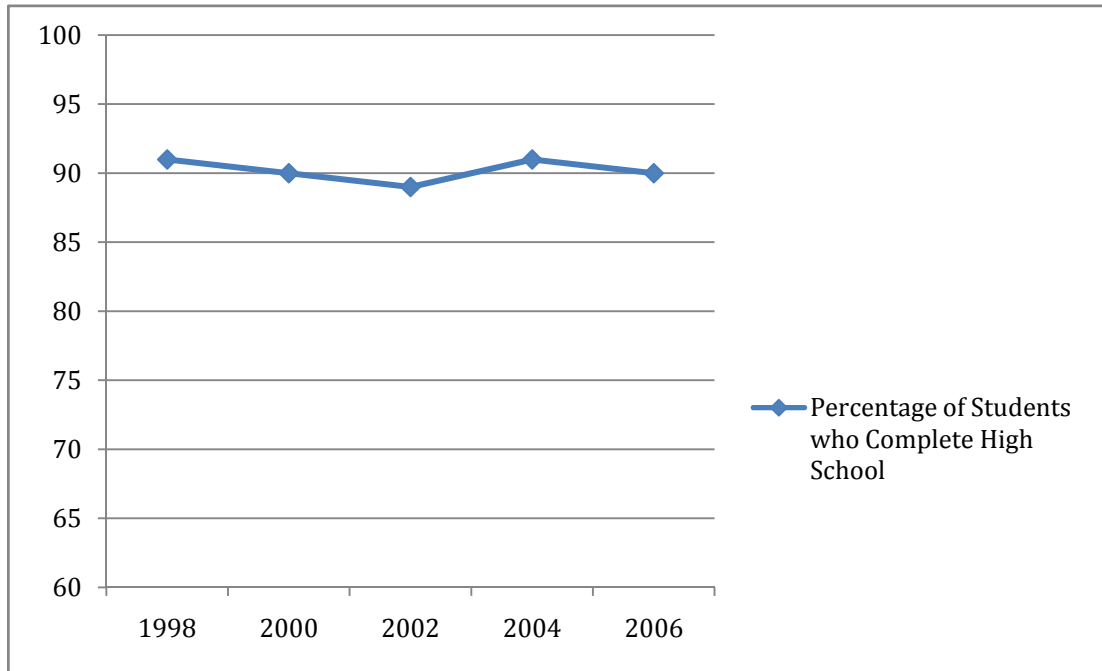
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

West Virginia



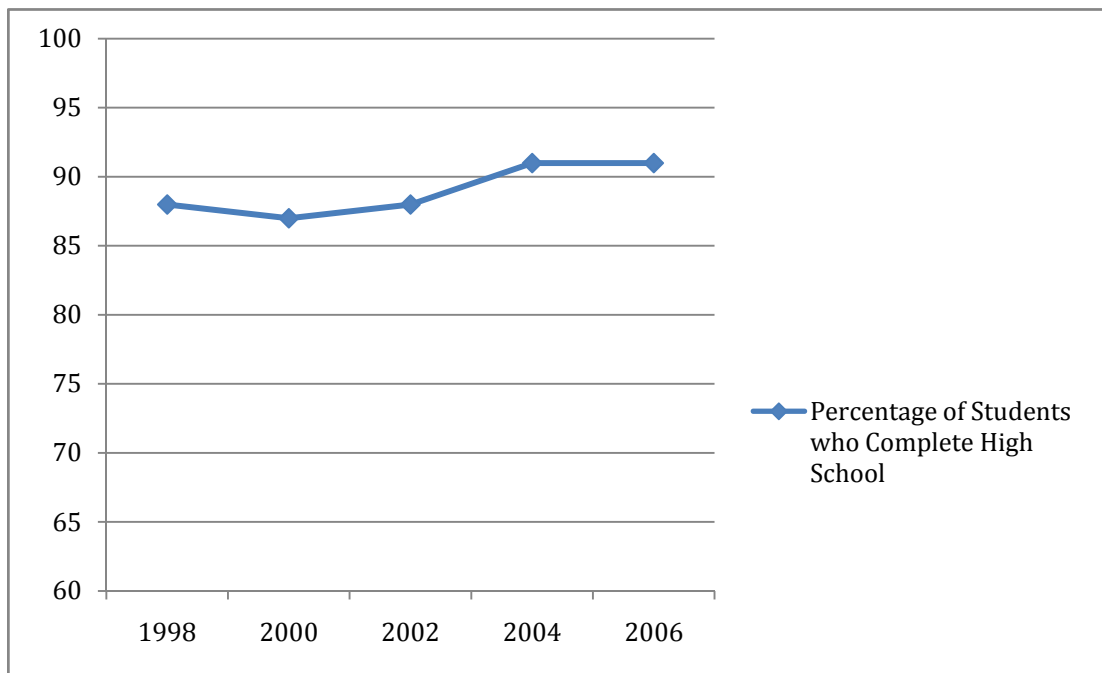
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Wisconsin



Source: Measuring Up 2000, 2002, 2004, 2006, 2008

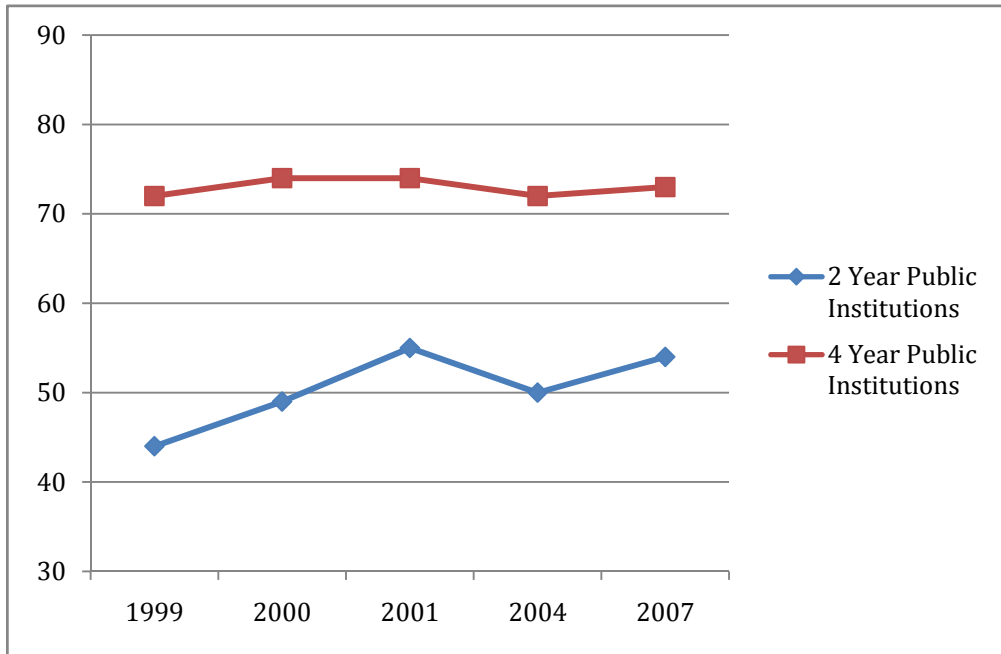
Wyoming



Source: Measuring Up 2000, 2002, 2004, 2006, 2008

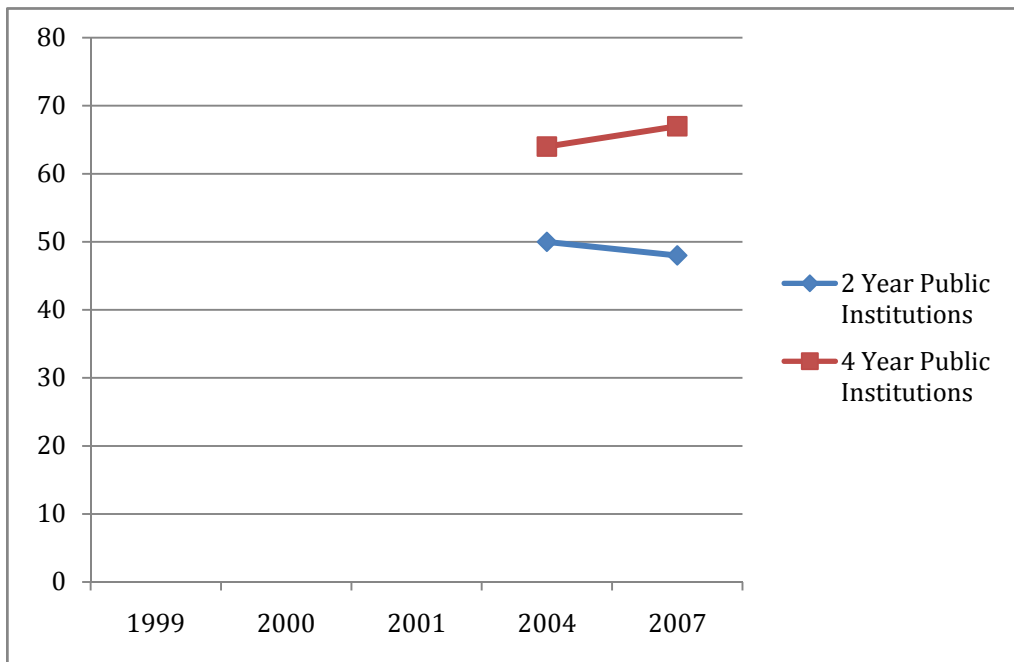
APPENDIX F
COLLEGE FRESHMAN RETENTION RATES BY STATE

Alabama



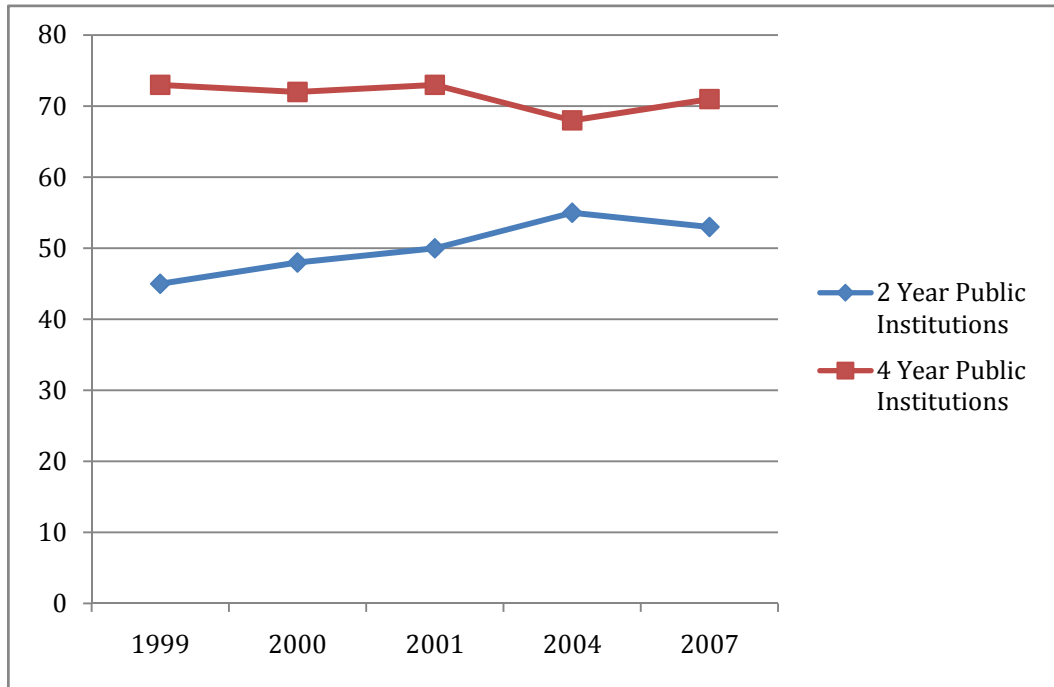
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Alaska



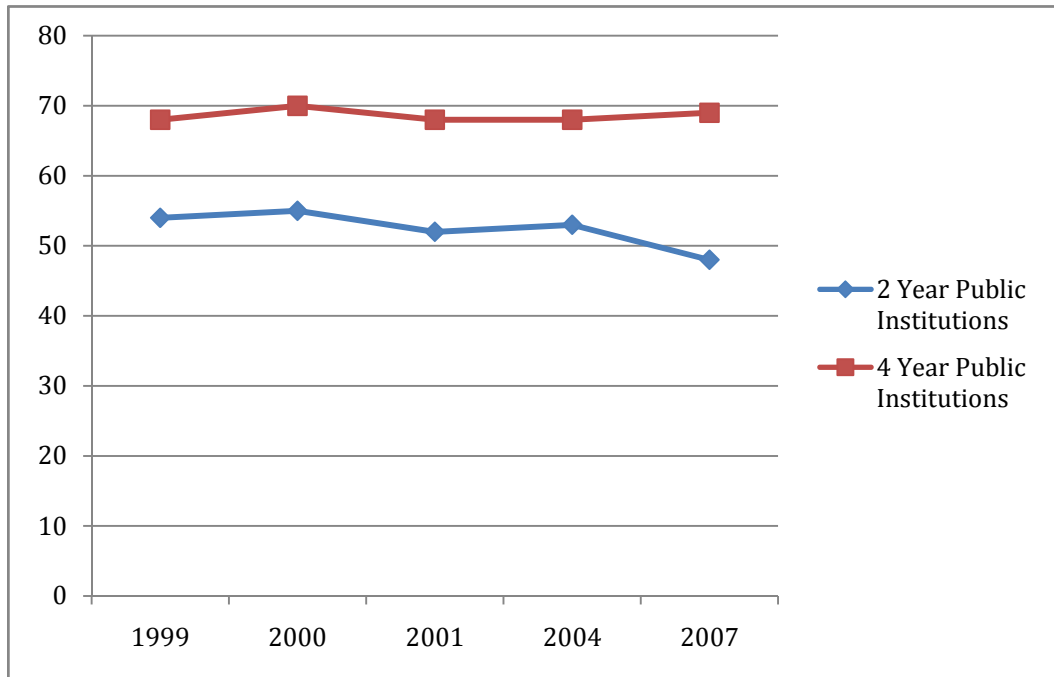
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Arizona



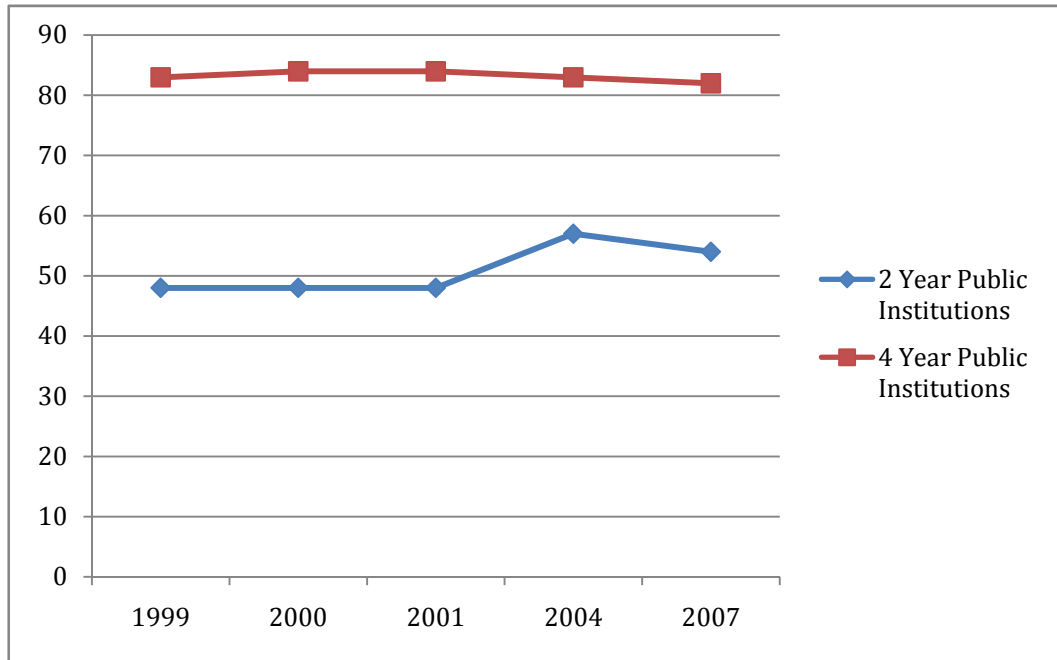
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Arkansas



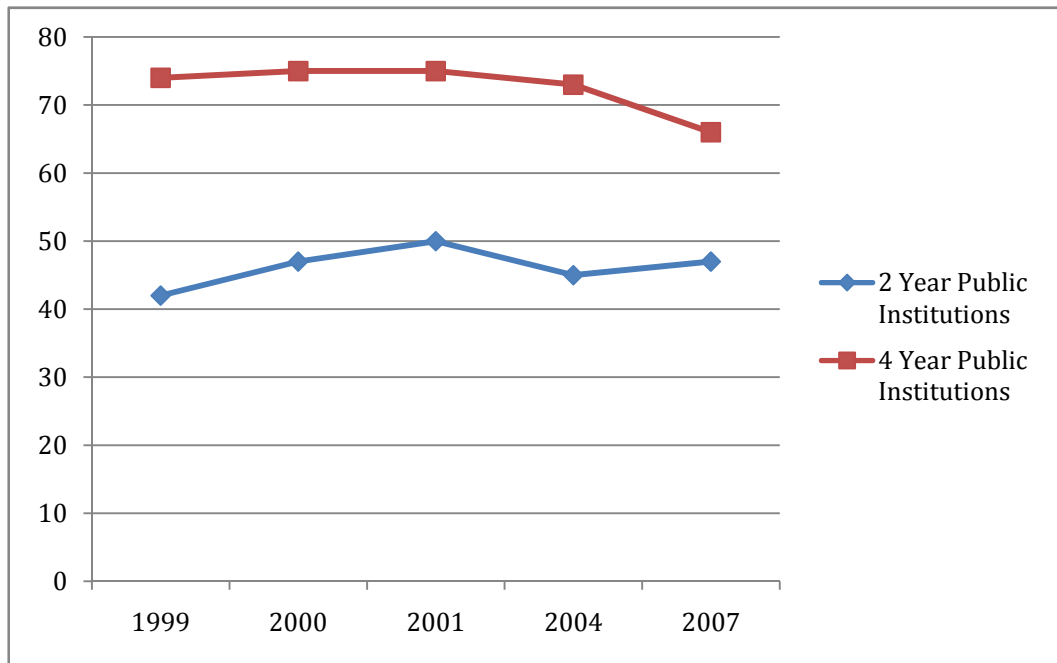
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

California



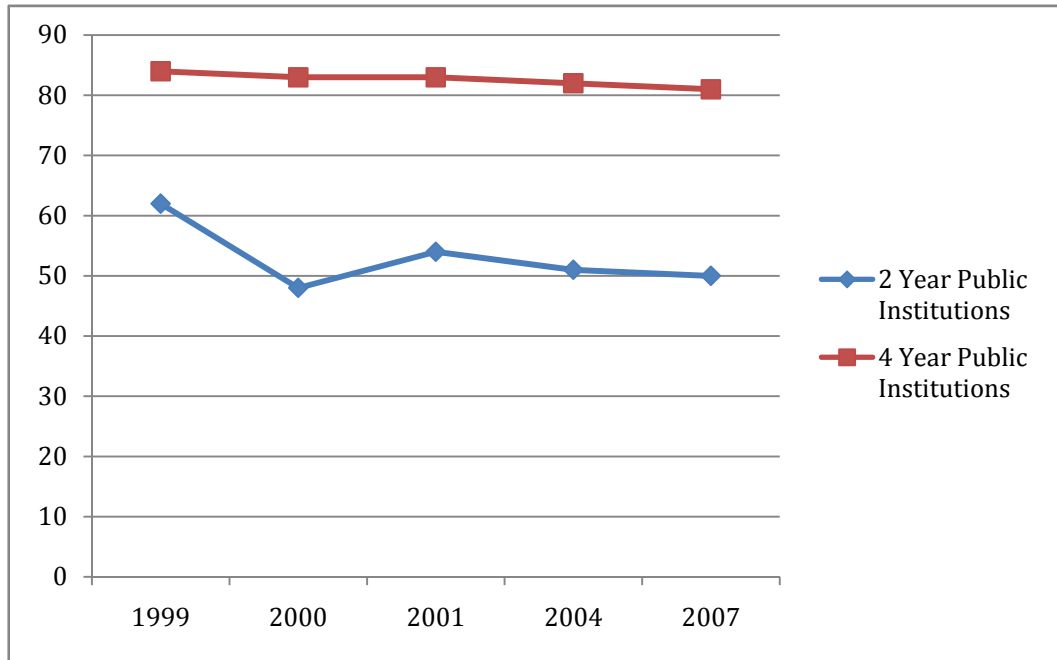
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Colorado



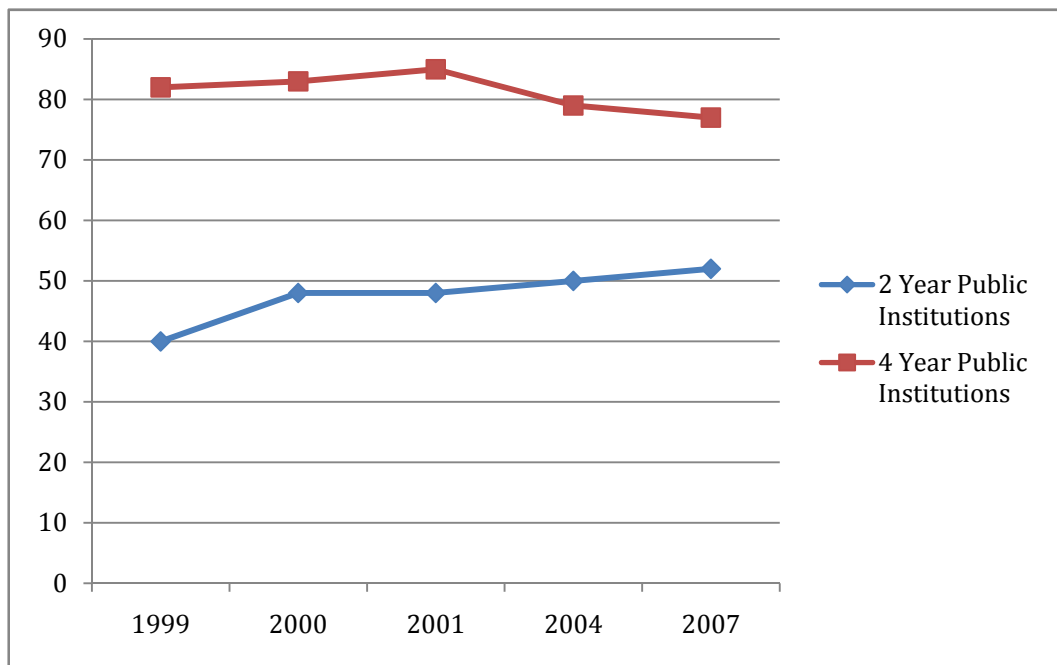
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Connecticut



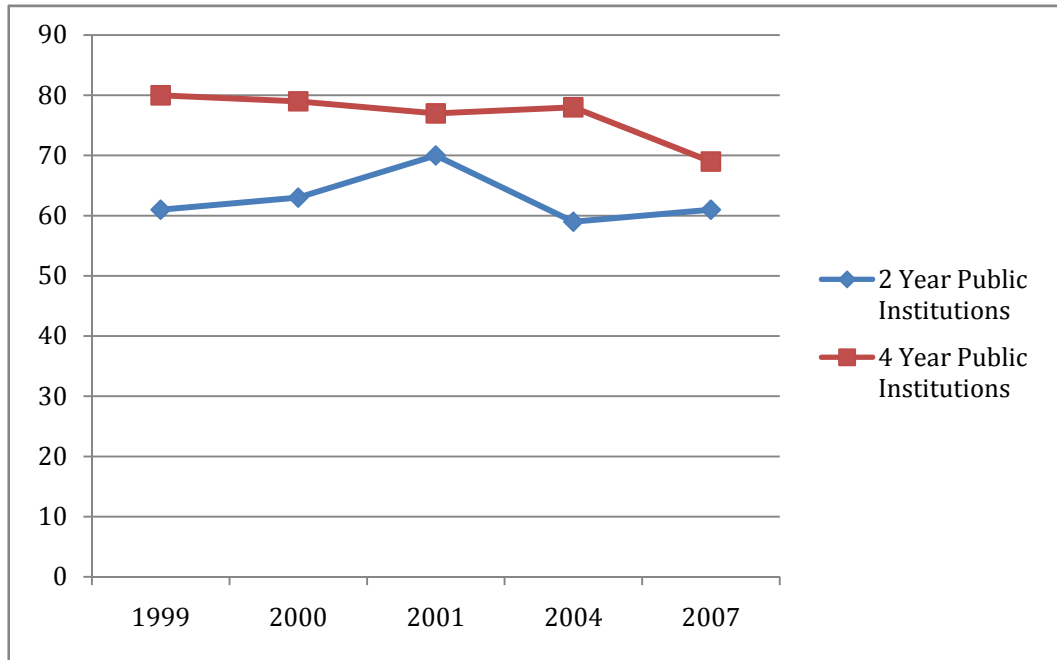
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Delaware



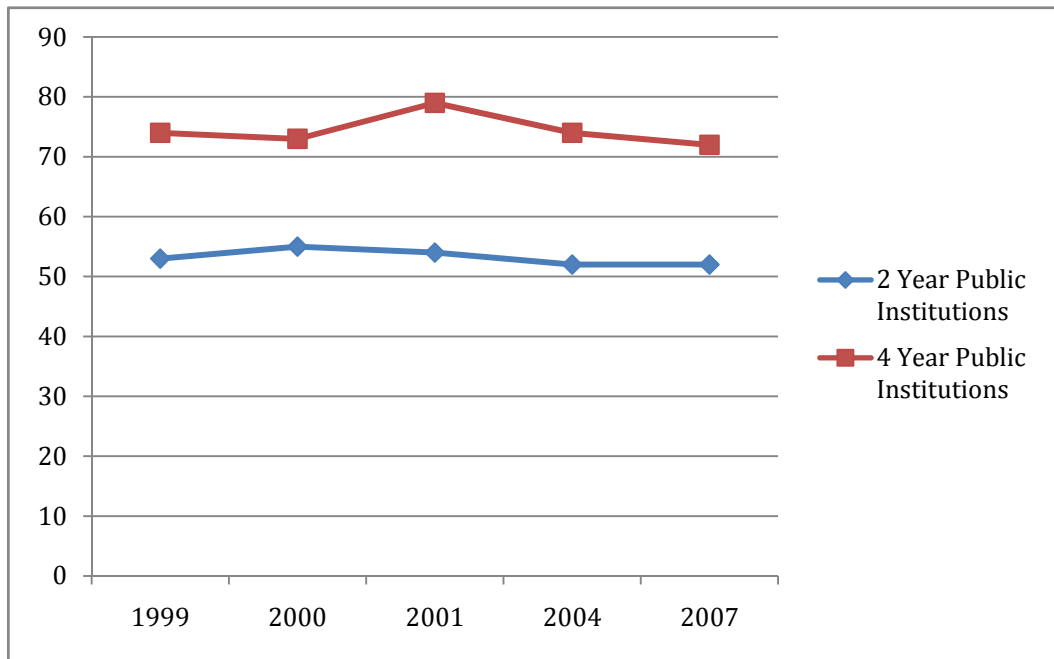
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Florida



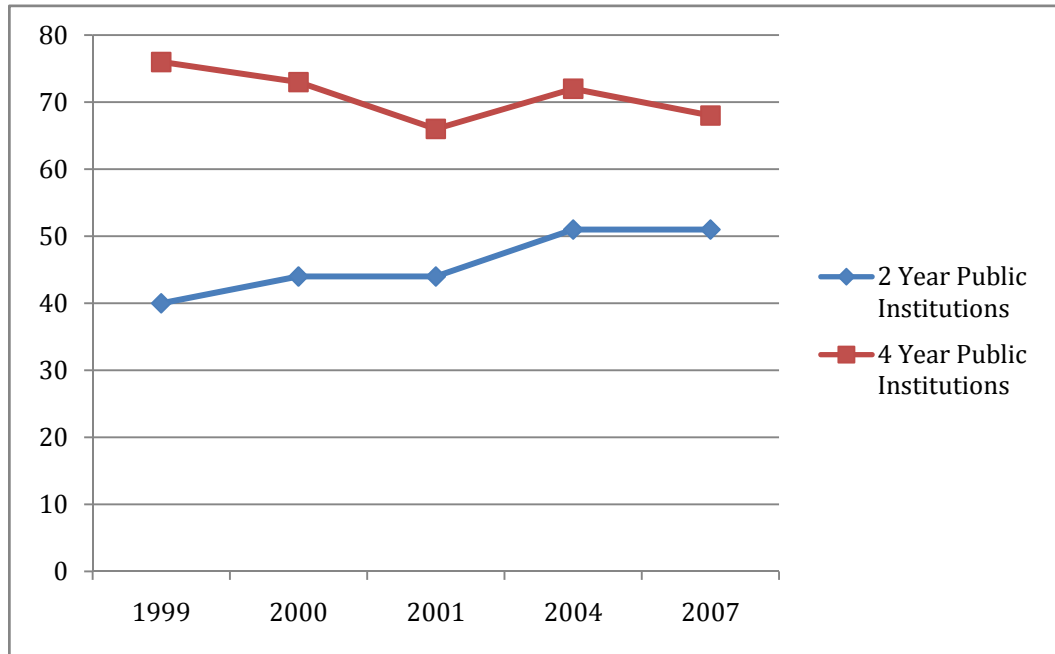
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Georgia



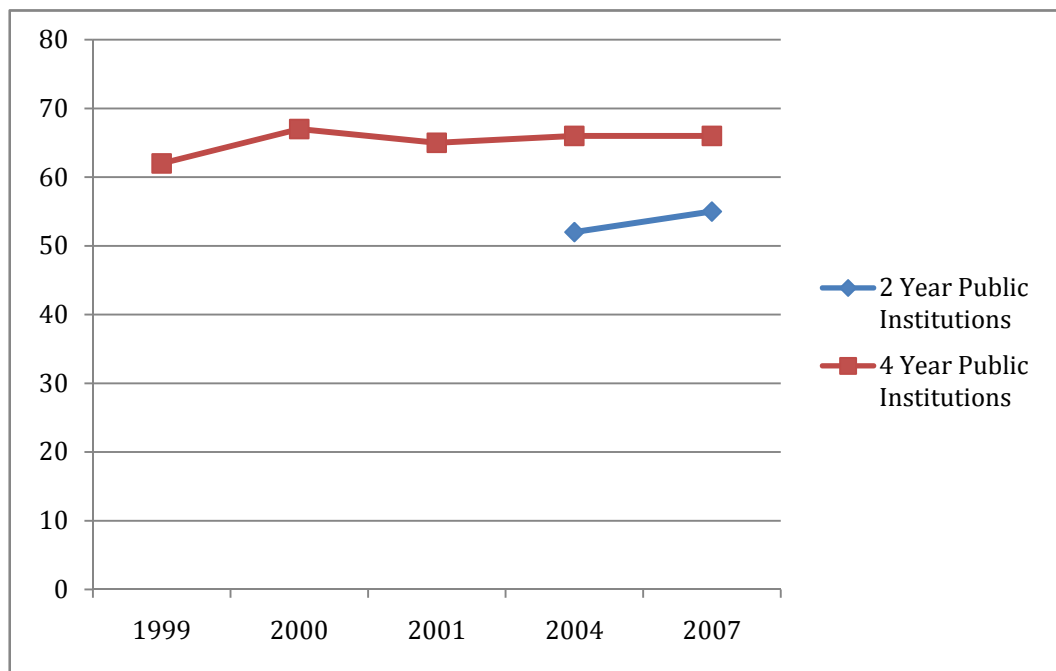
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Hawaii



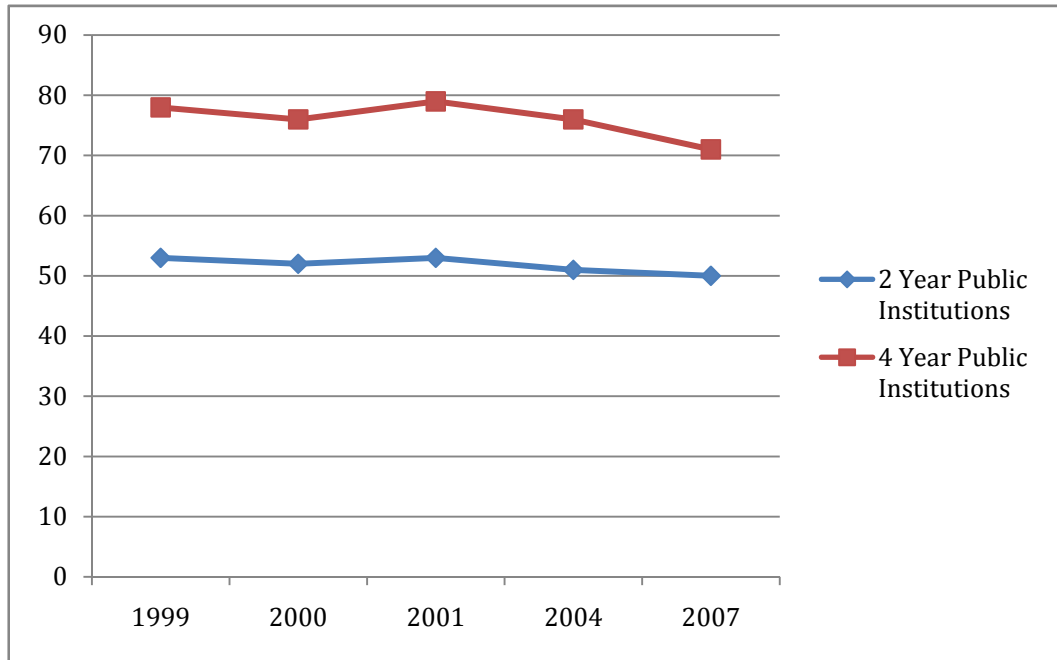
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Idaho



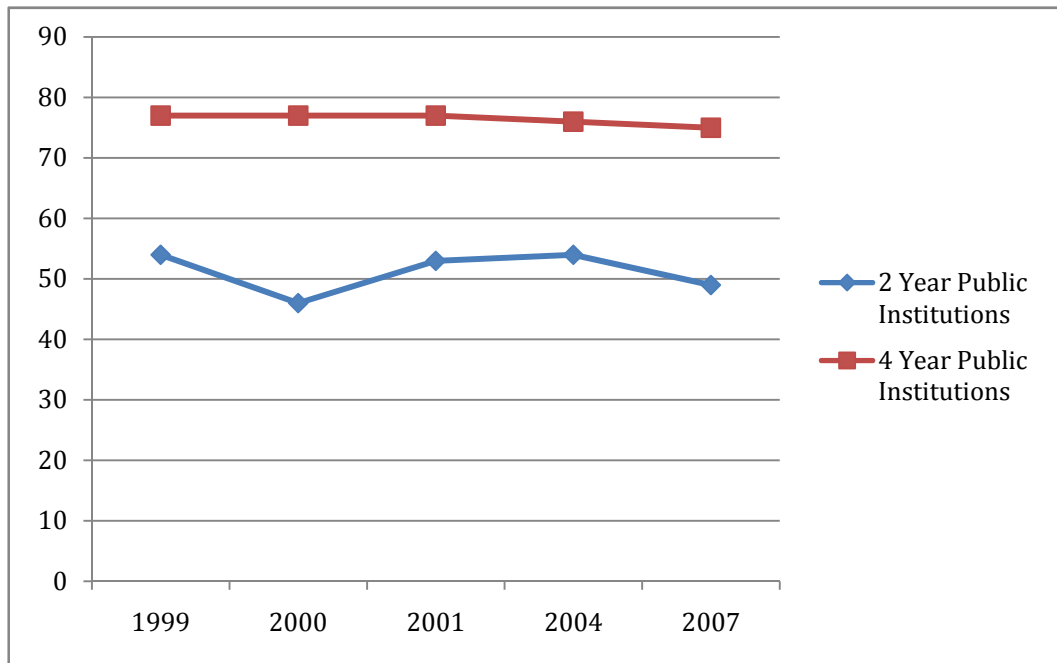
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Illinois



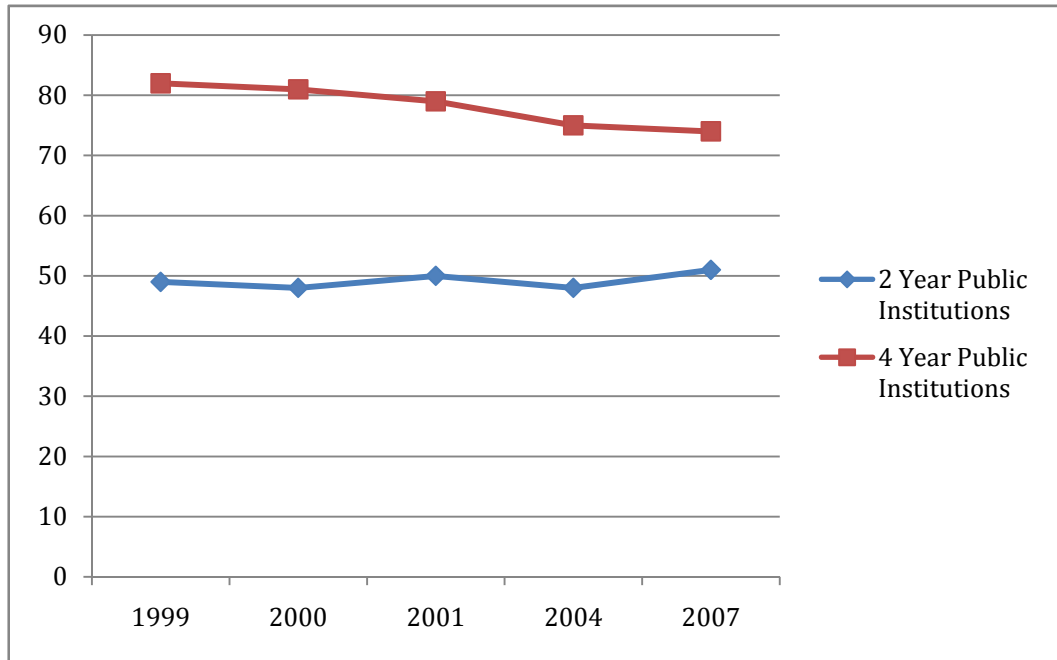
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Indiana



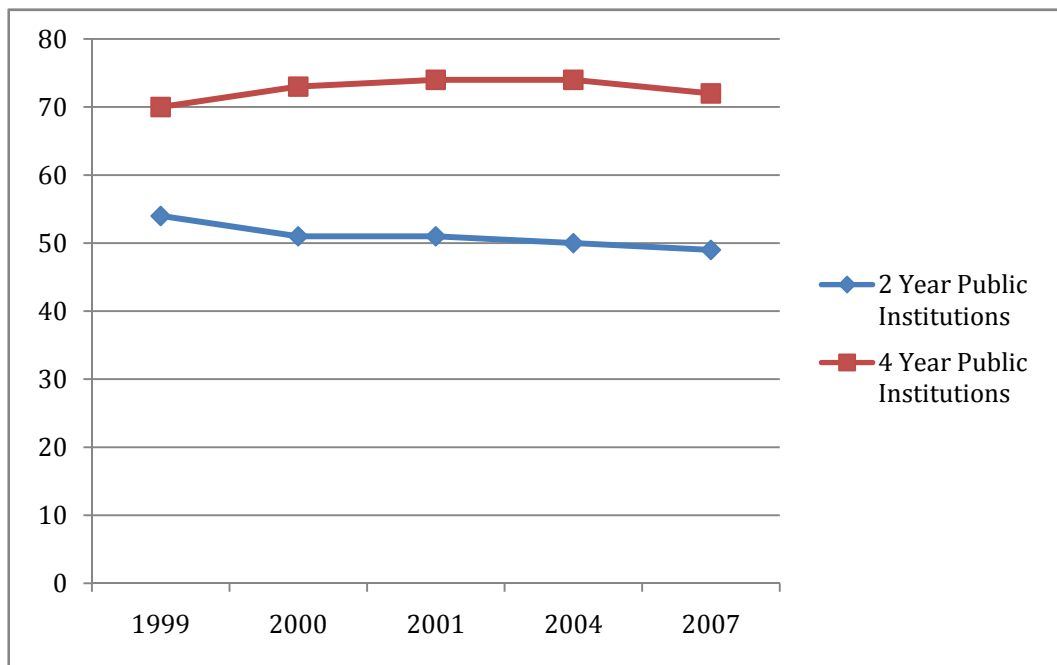
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Iowa



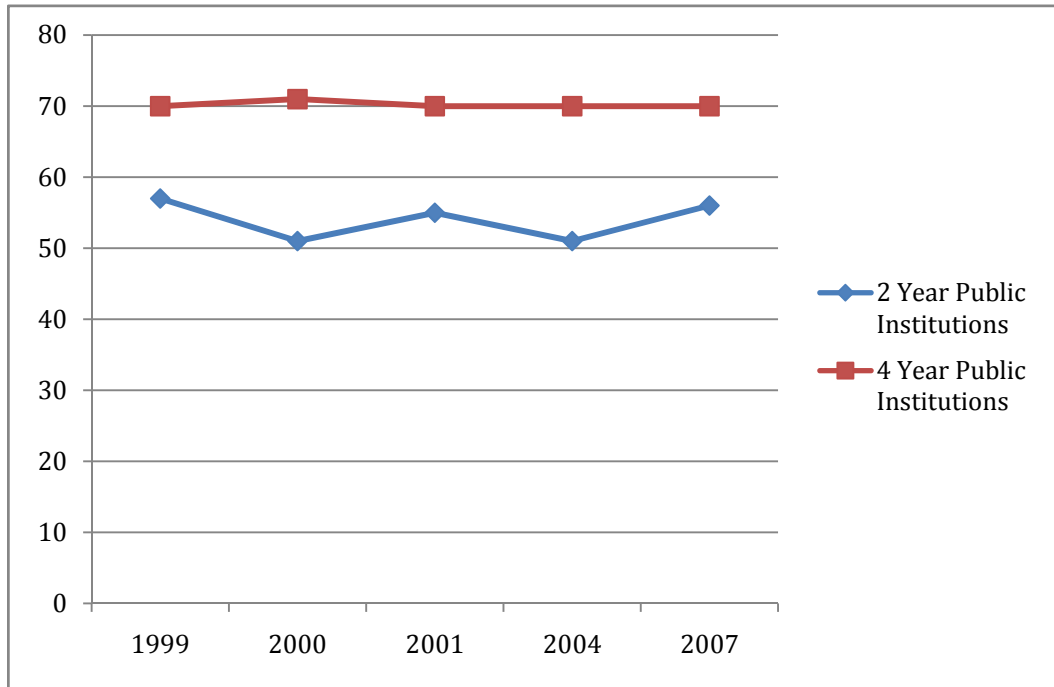
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Kansas



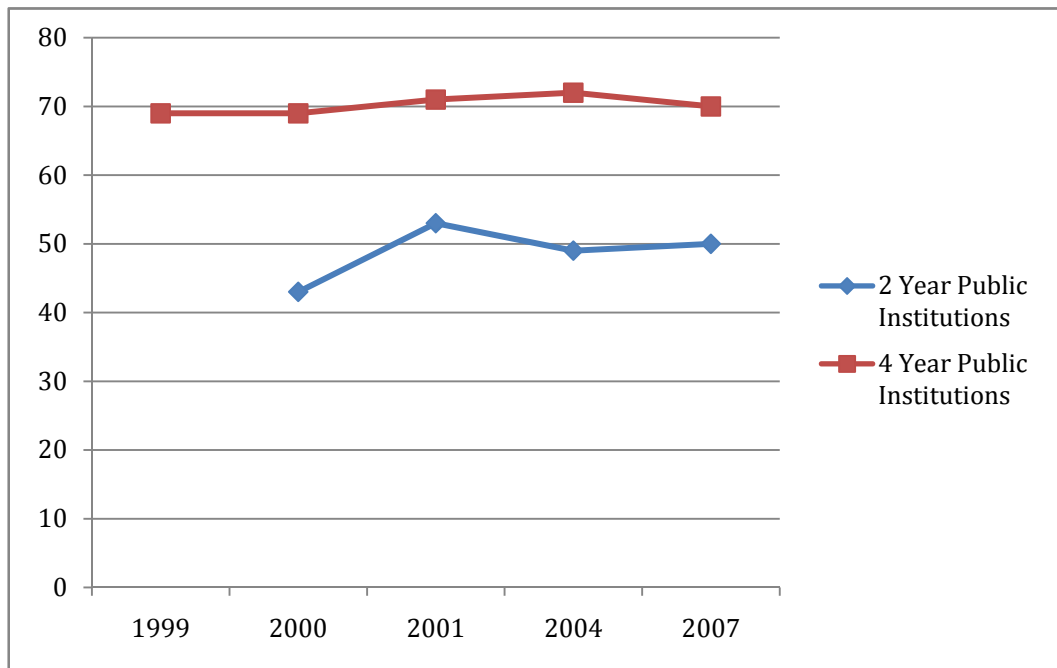
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Kentucky



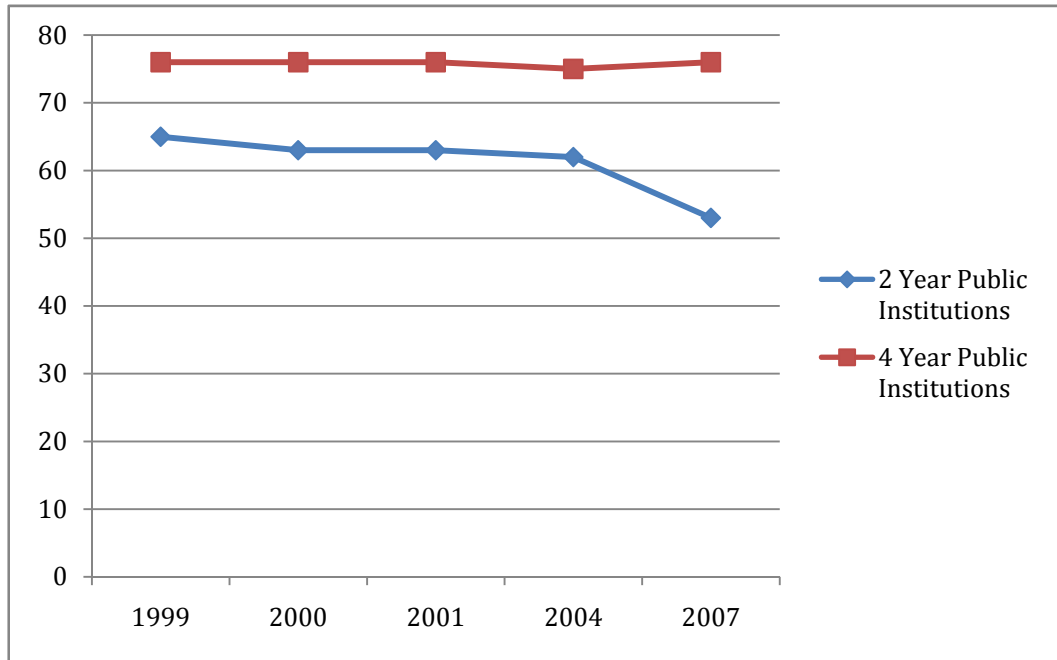
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Louisiana



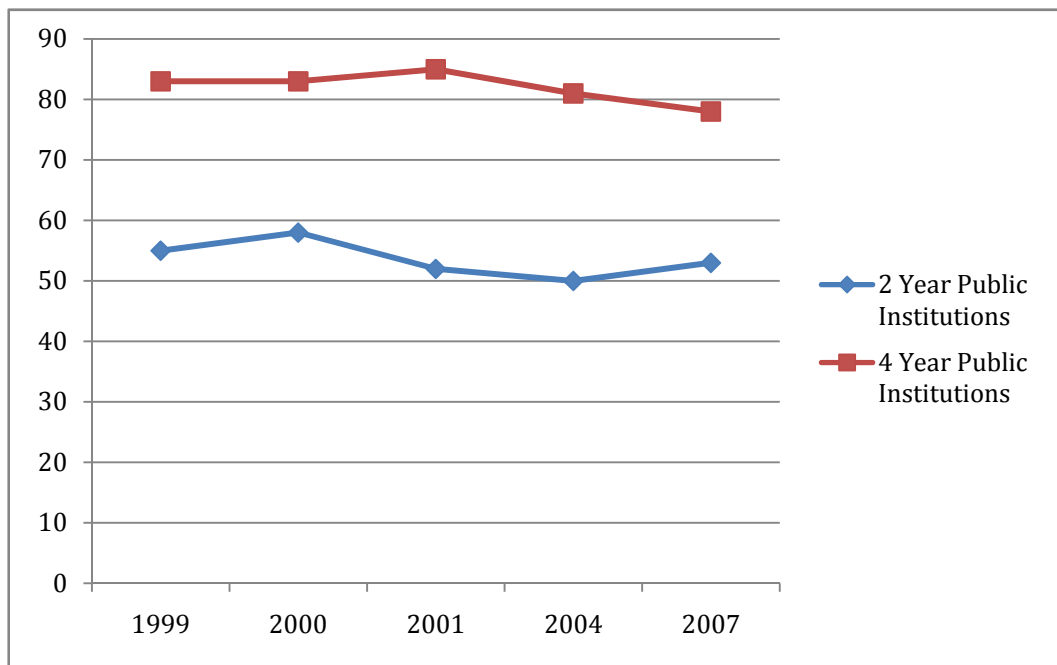
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Maine



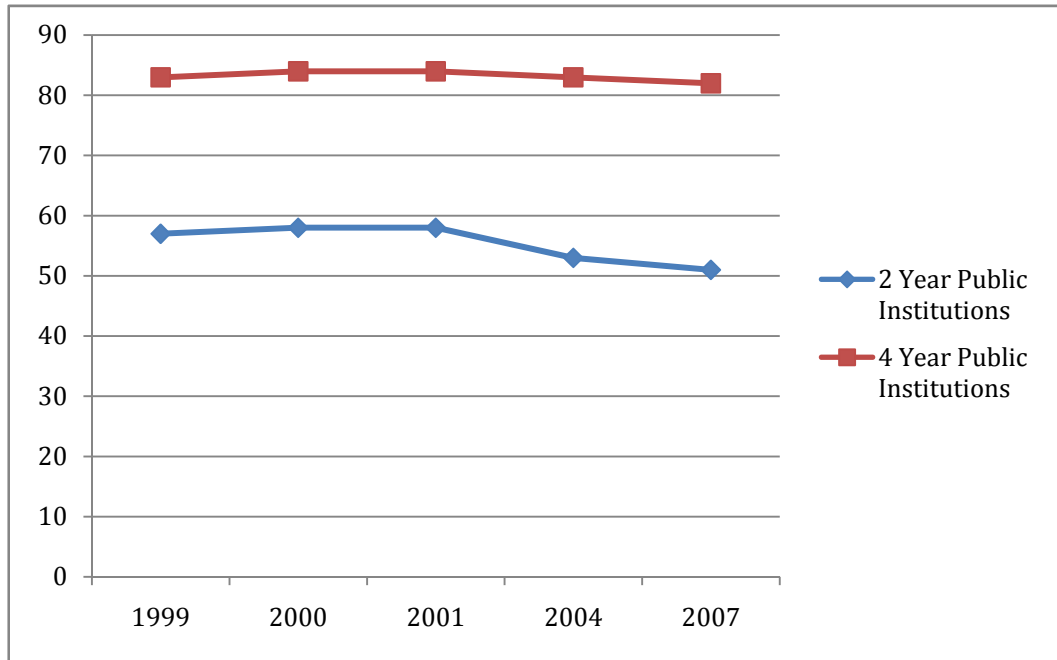
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Maryland



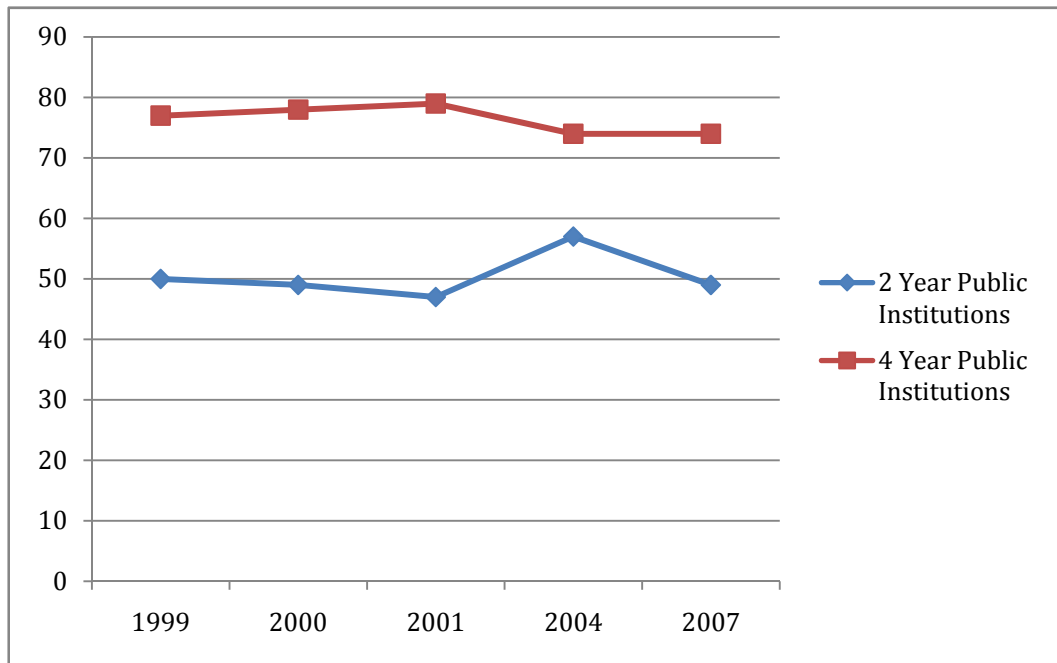
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Massachusetts



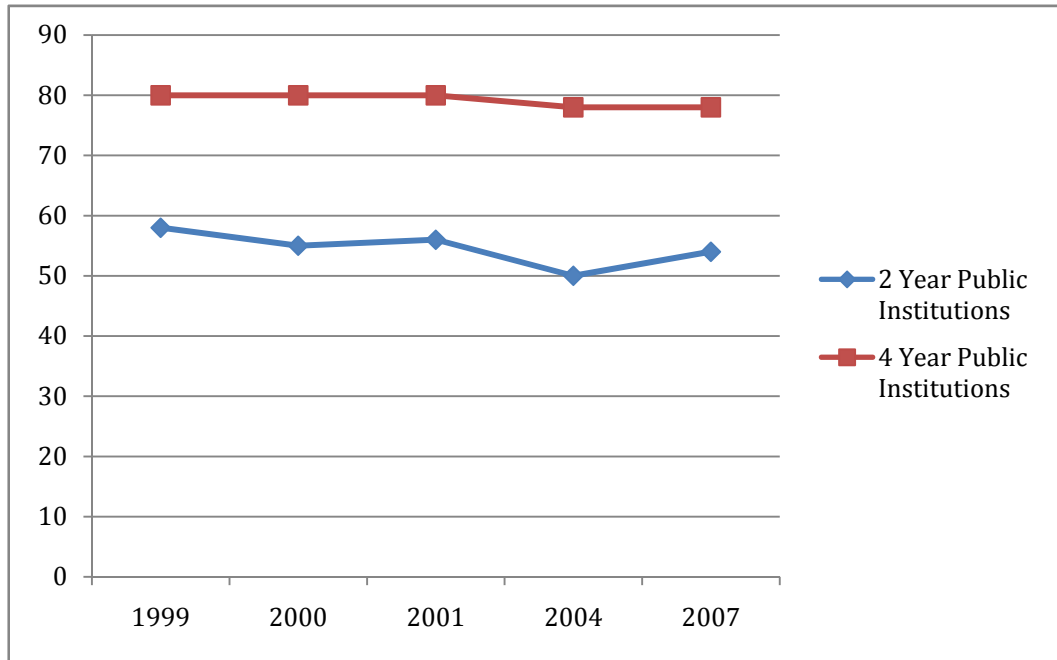
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Michigan



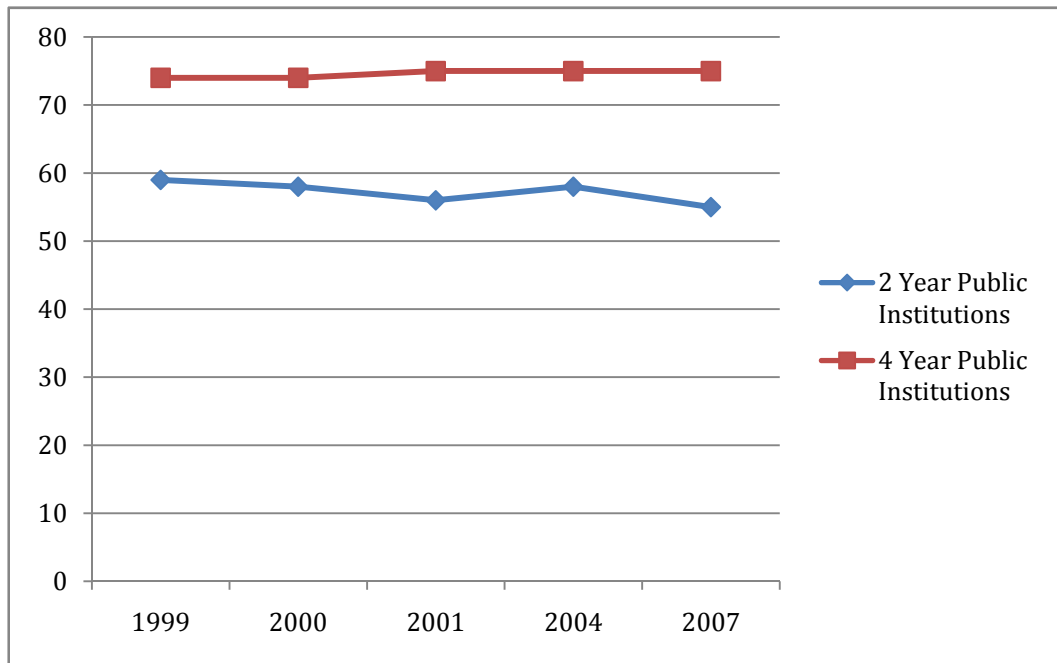
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Minnesota



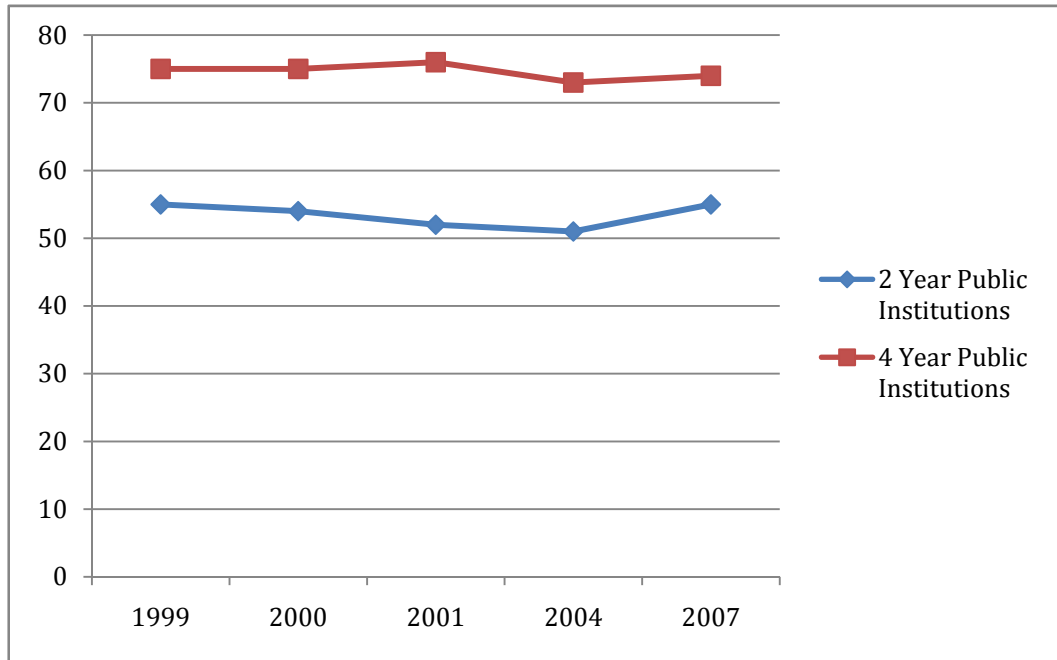
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Mississippi



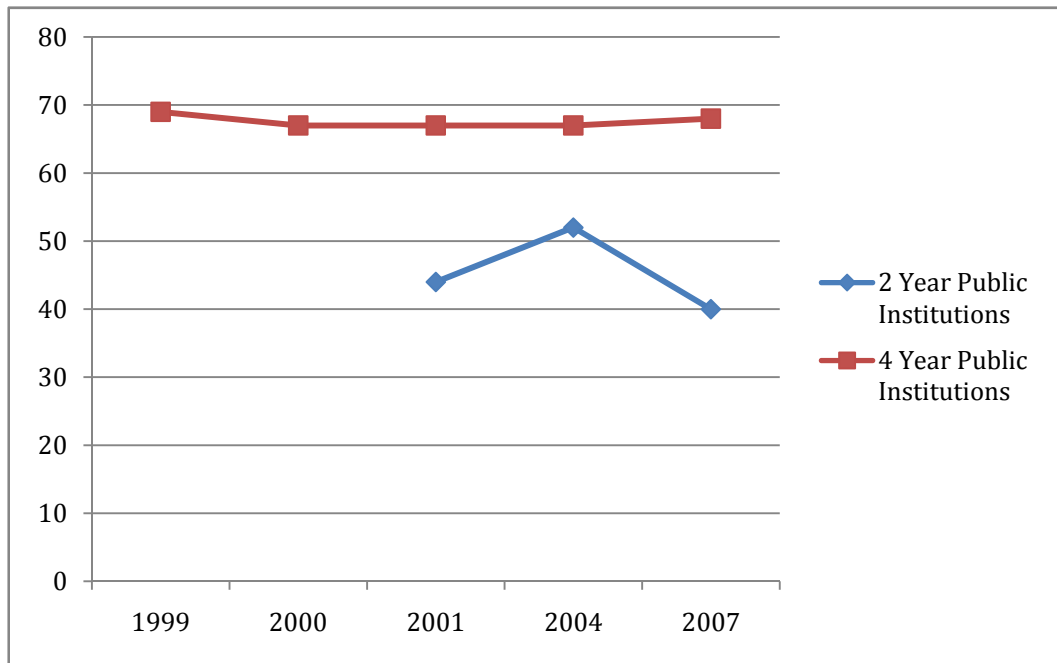
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Missouri



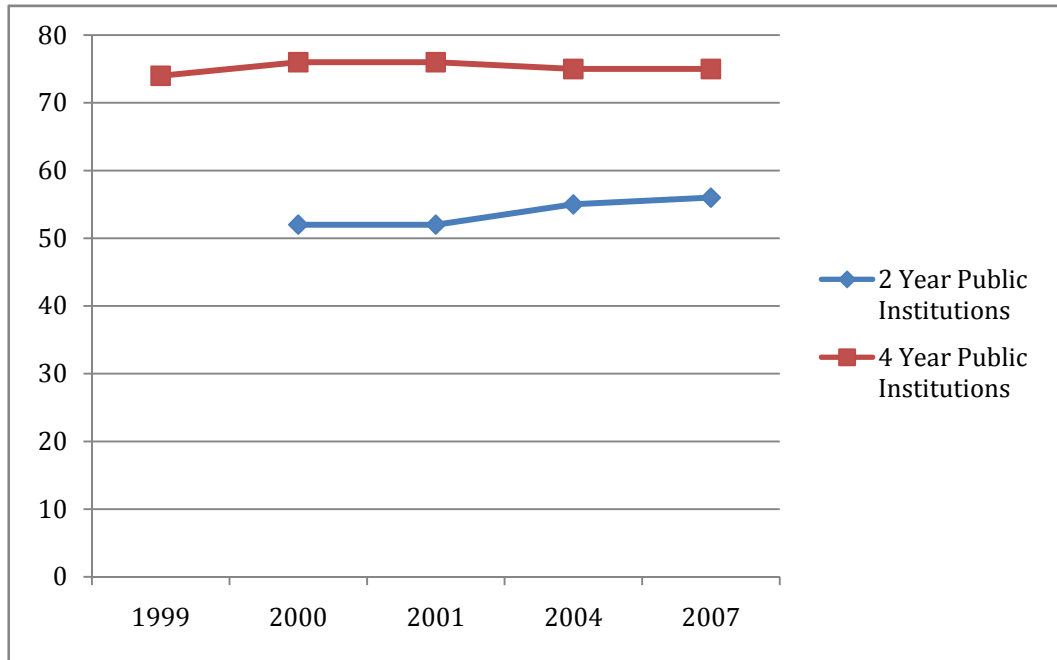
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Montana



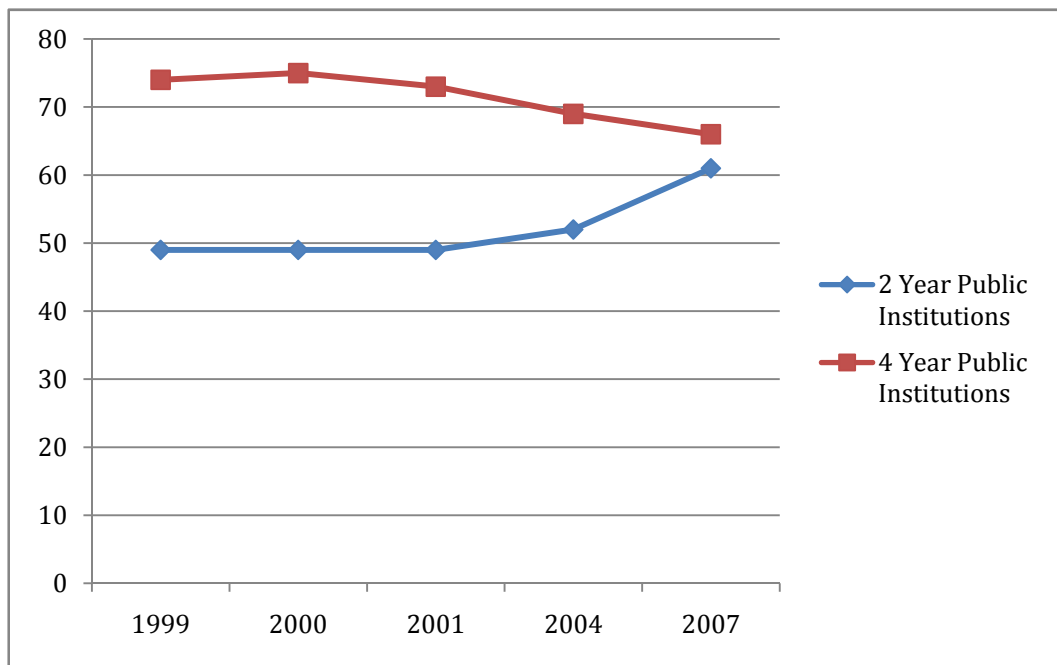
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Nebraska



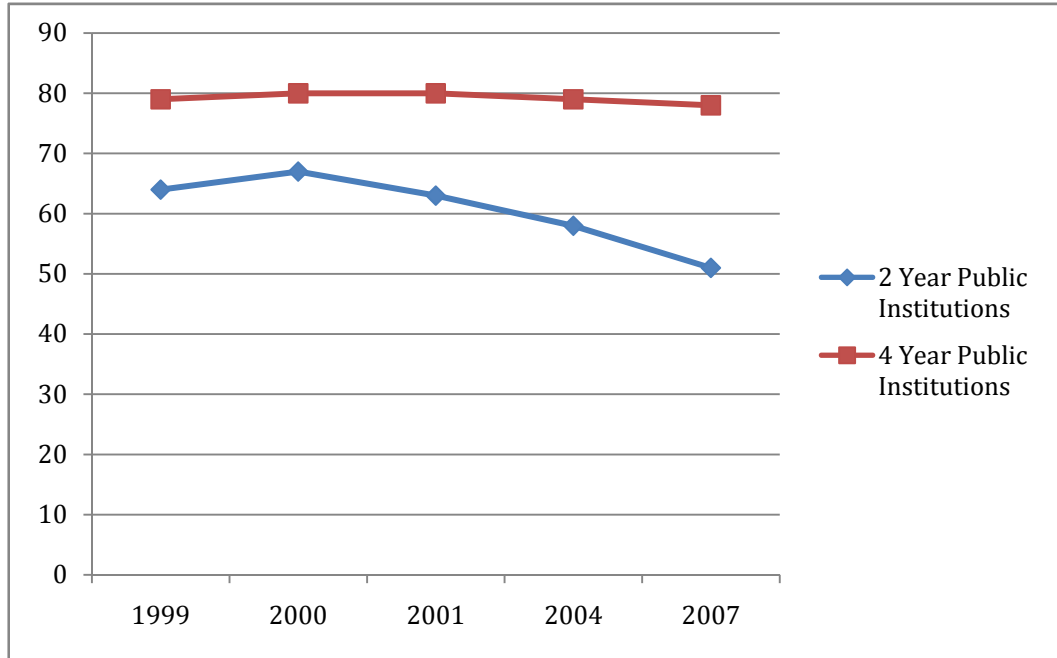
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Nevada



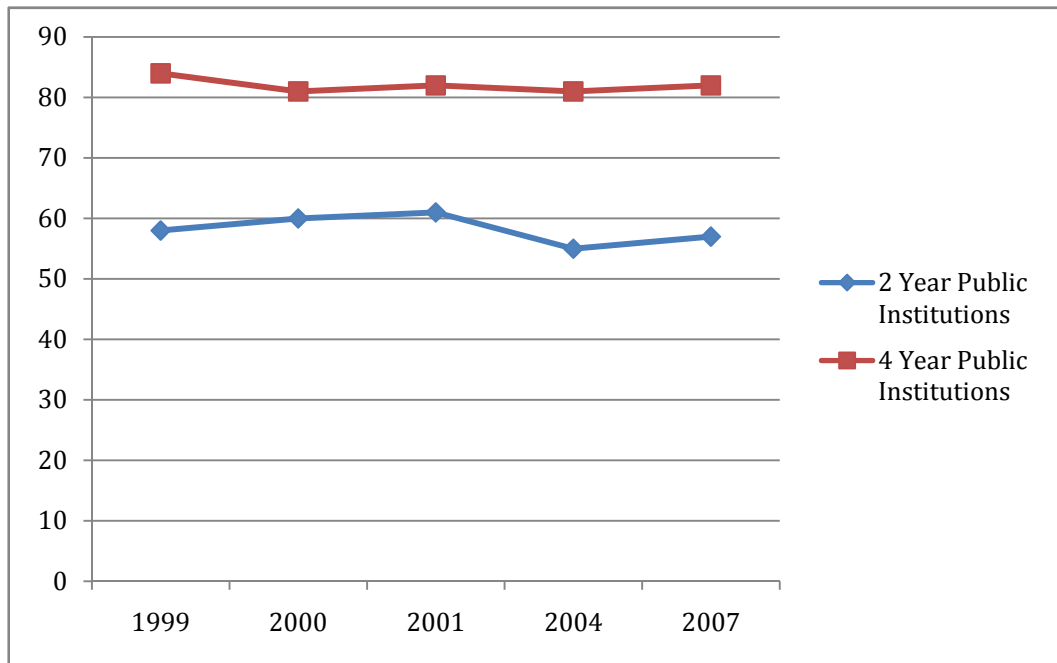
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New Hampshire



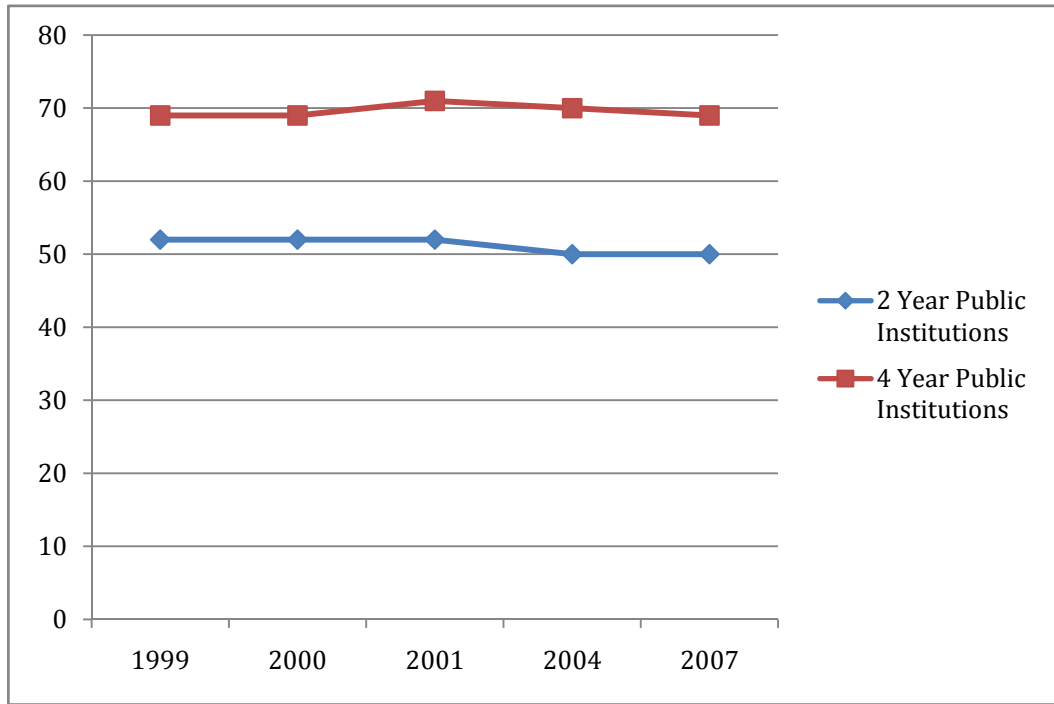
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New Jersey



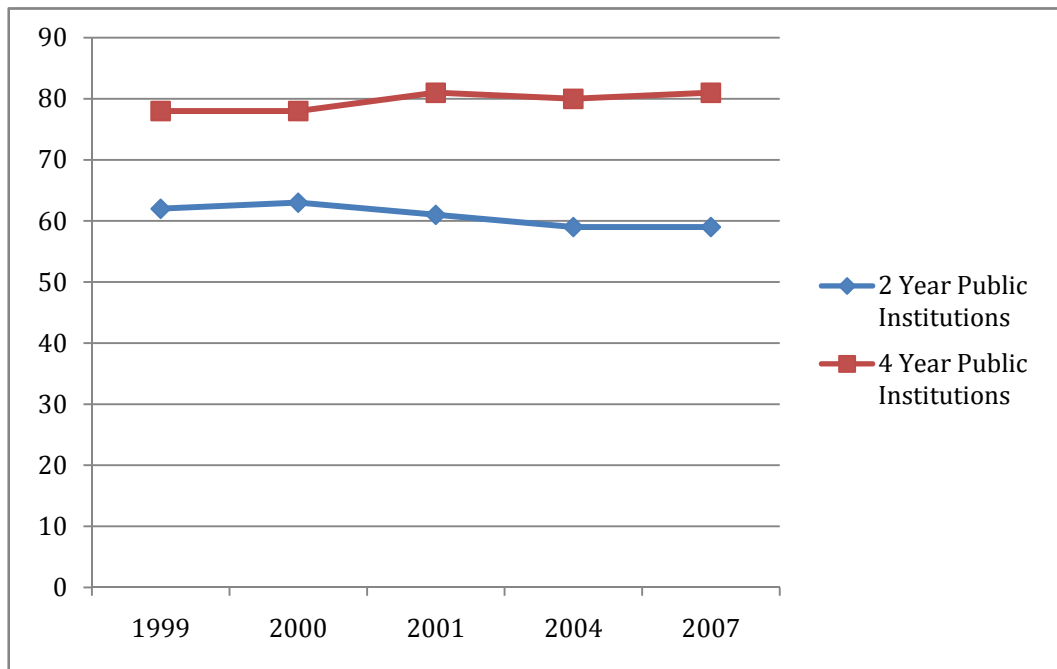
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New Mexico



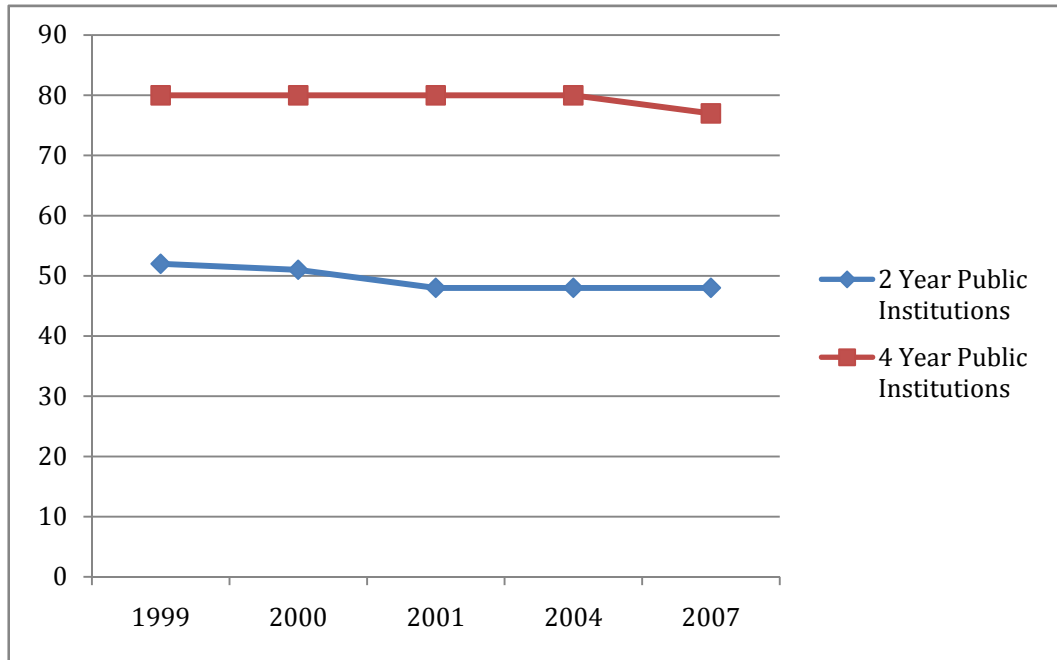
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New York



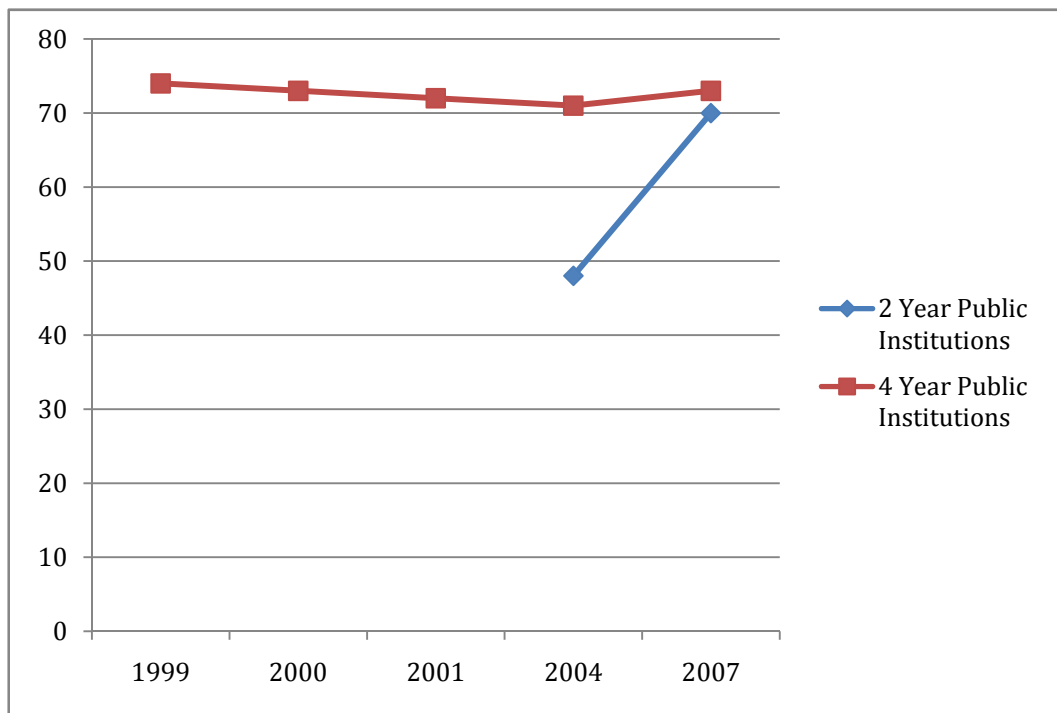
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North Carolina



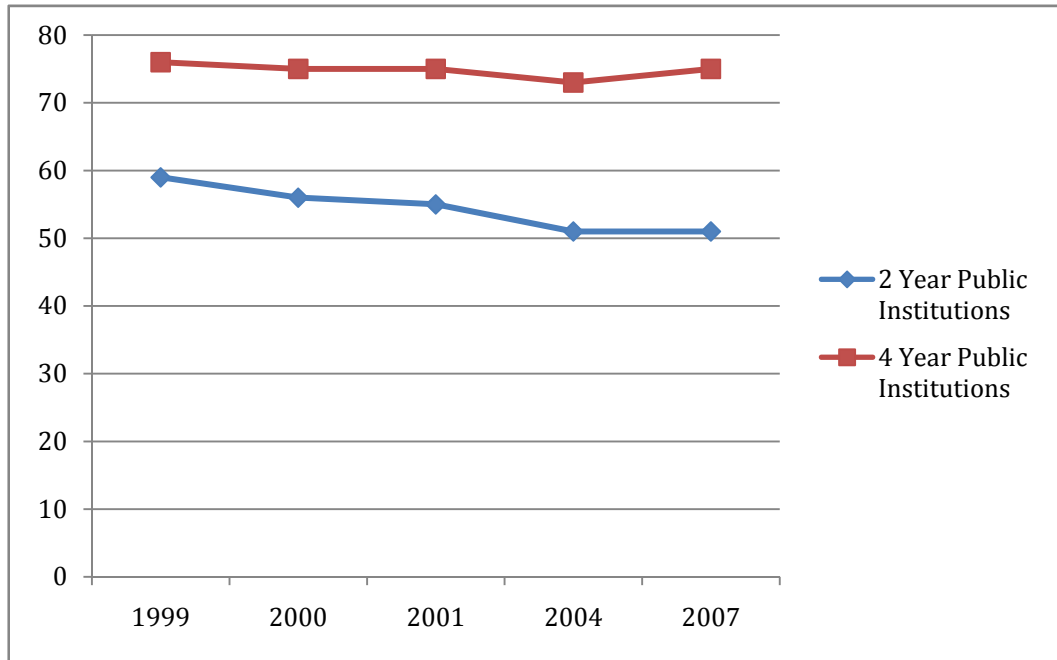
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North Dakota



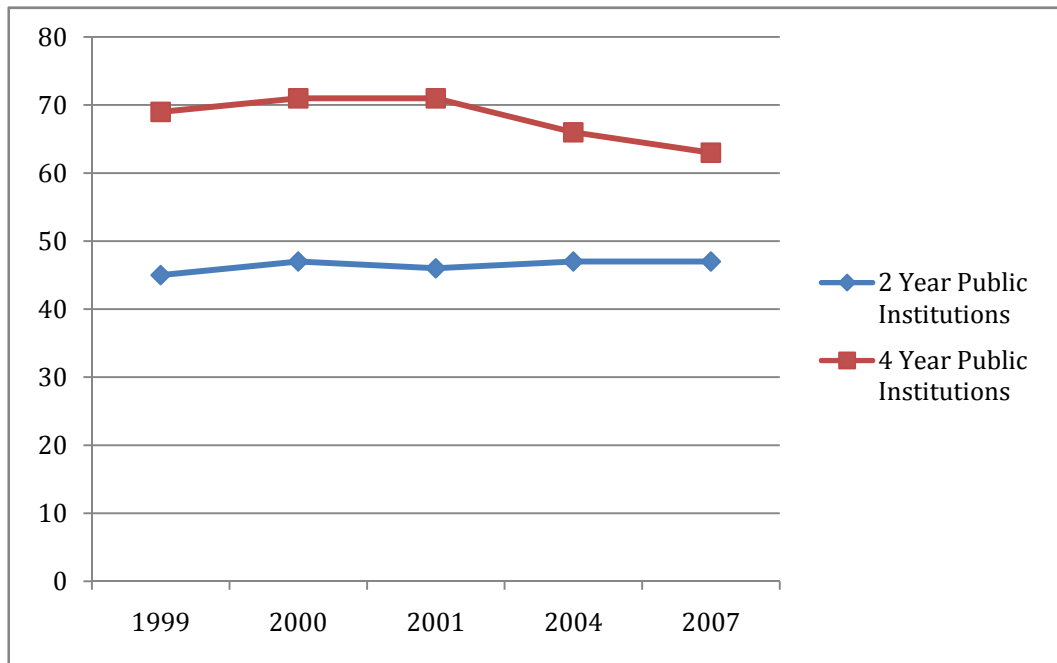
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Ohio



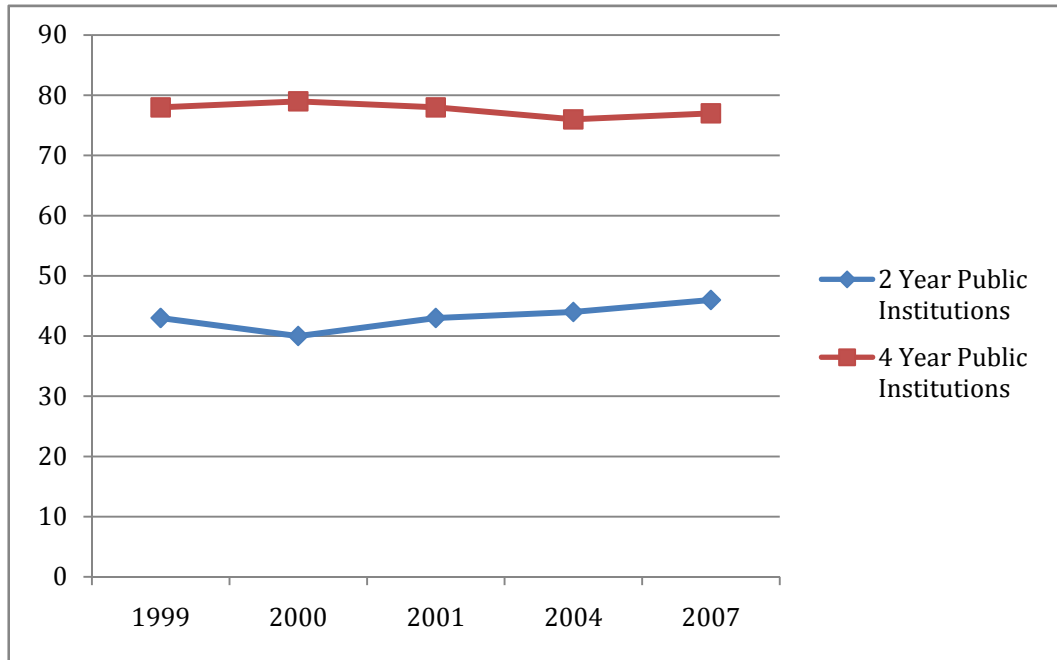
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Oklahoma



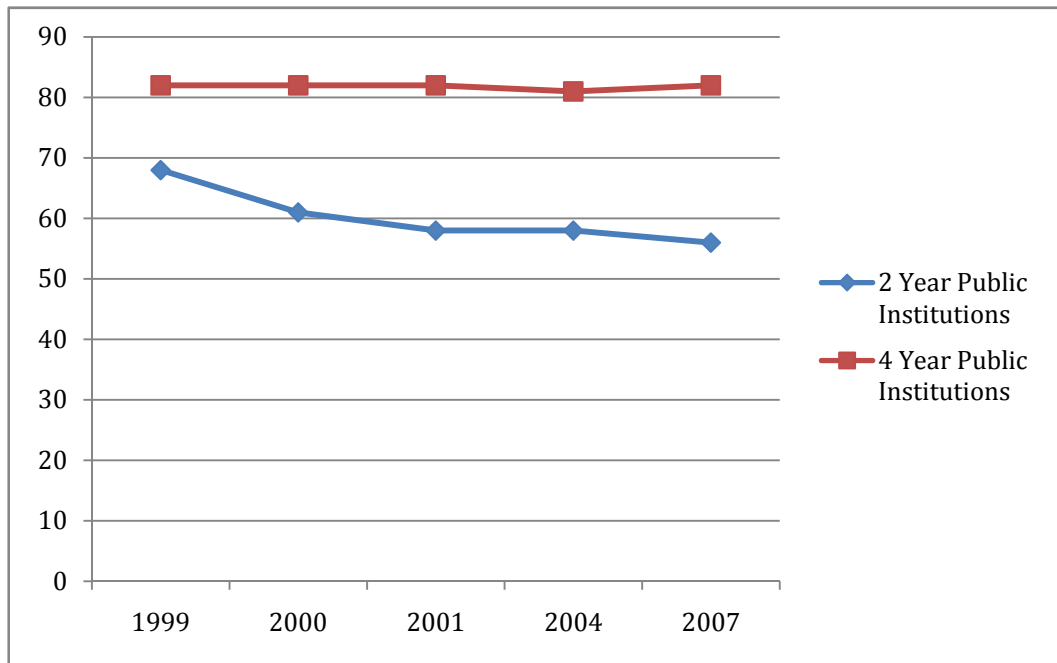
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Oregon



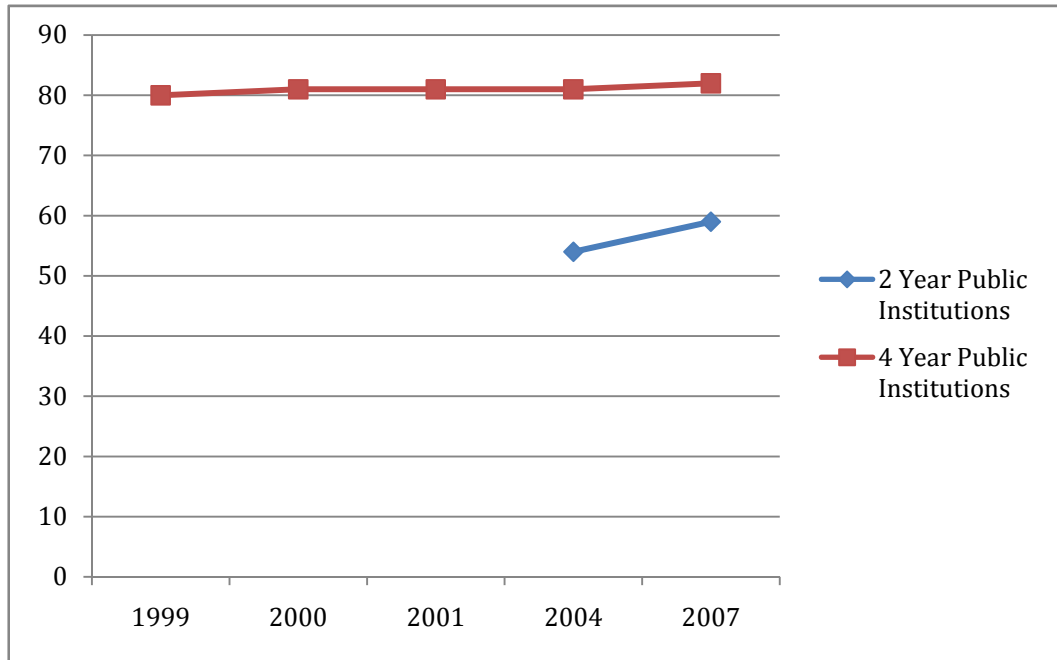
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Pennsylvania



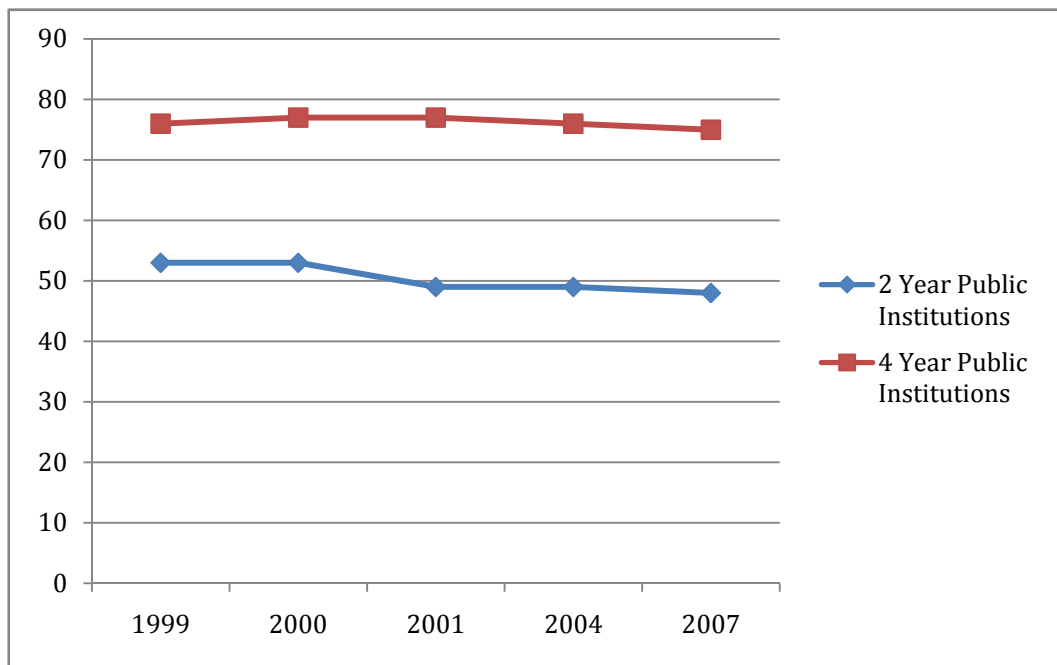
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Rhode Island



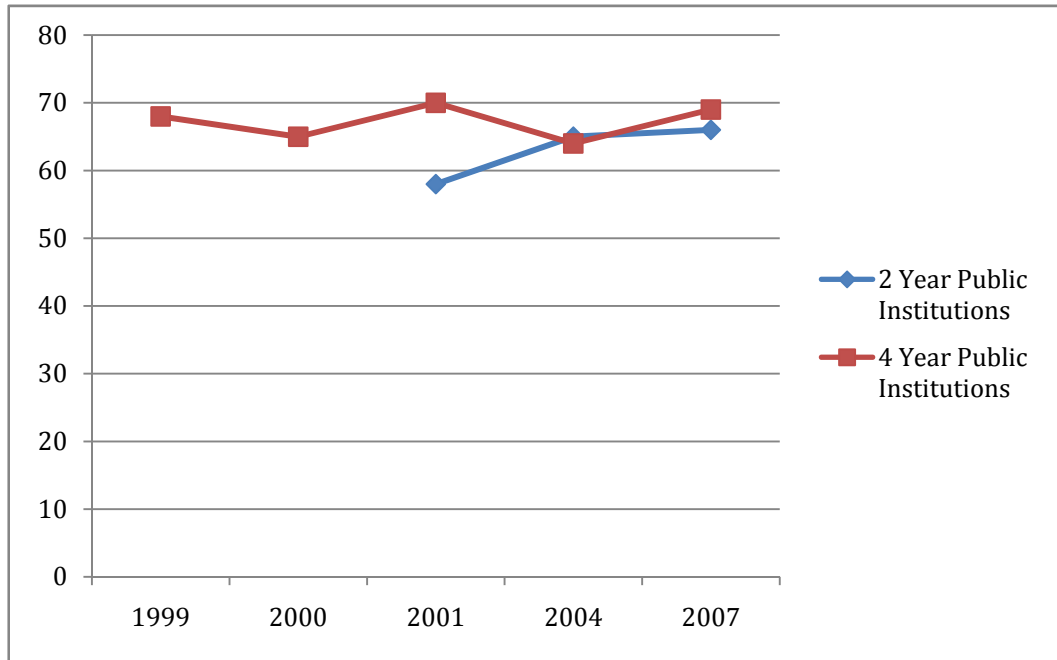
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South Carolina



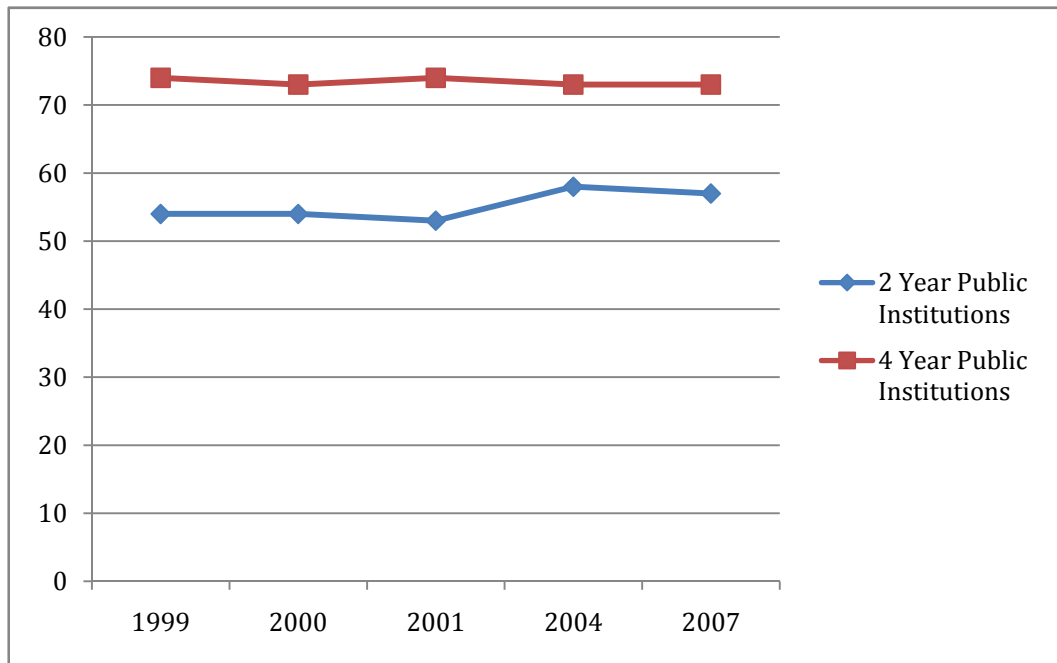
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South Dakota



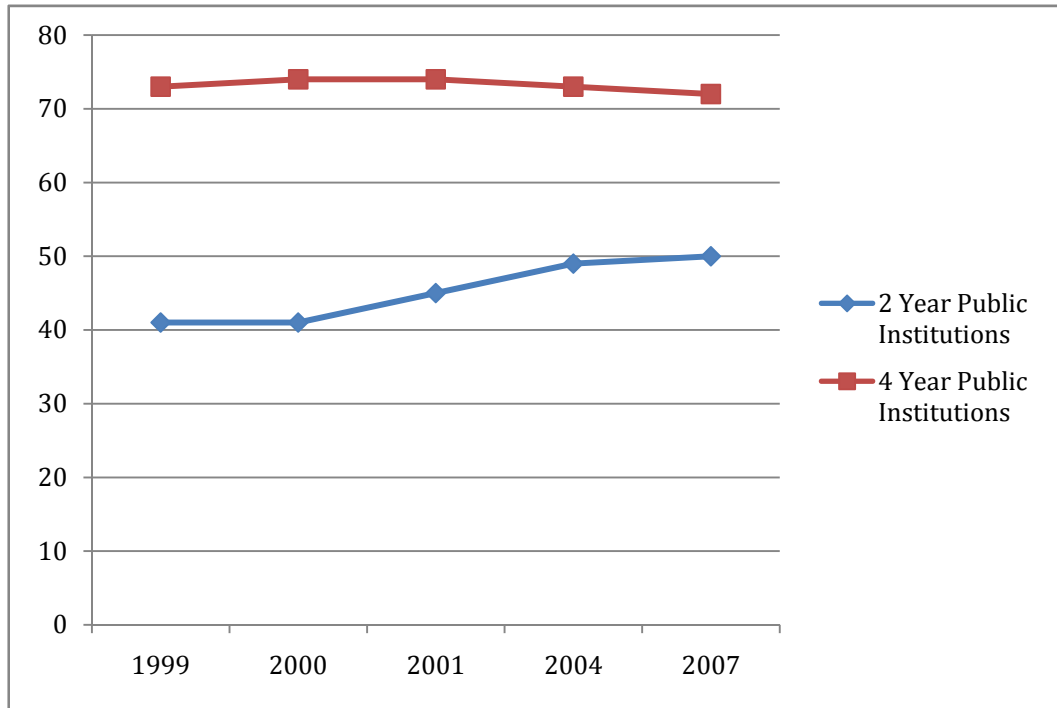
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Tennessee



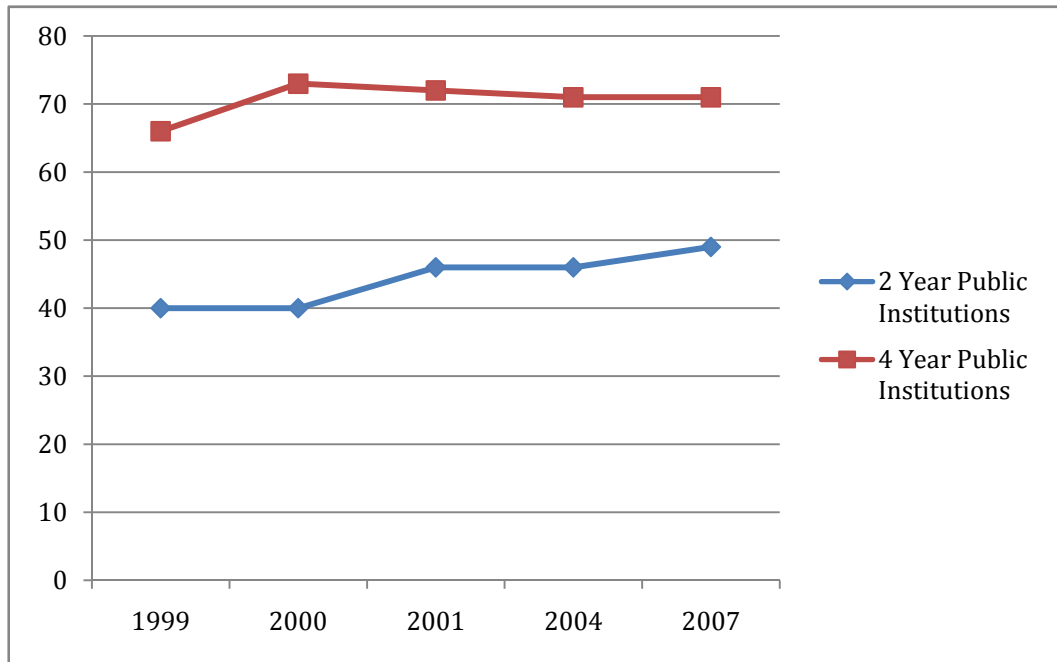
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Texas



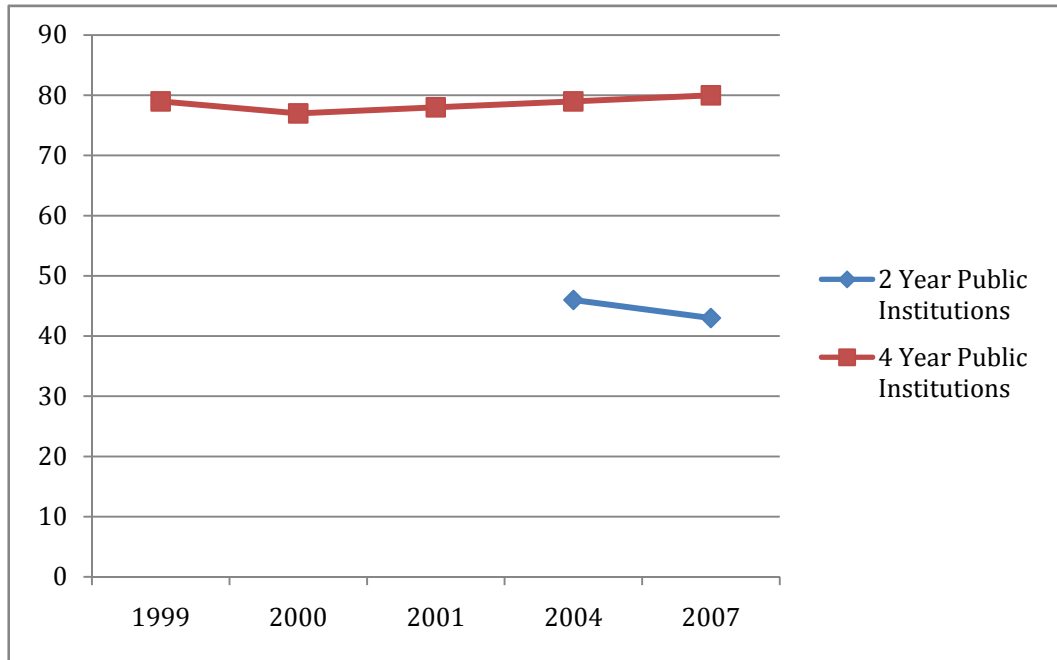
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Utah



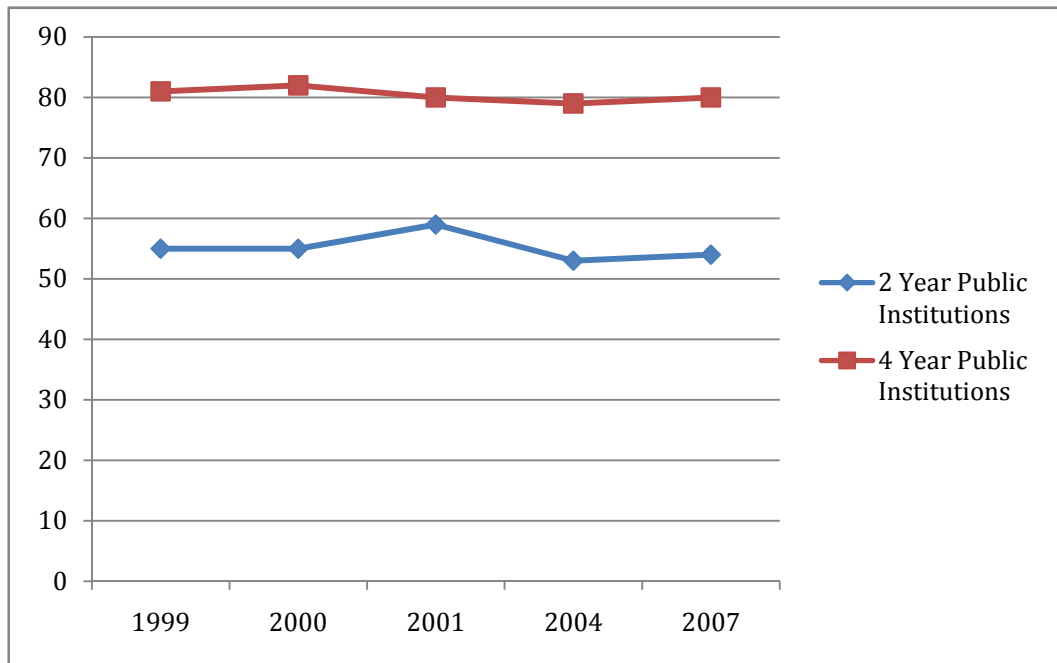
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Vermont



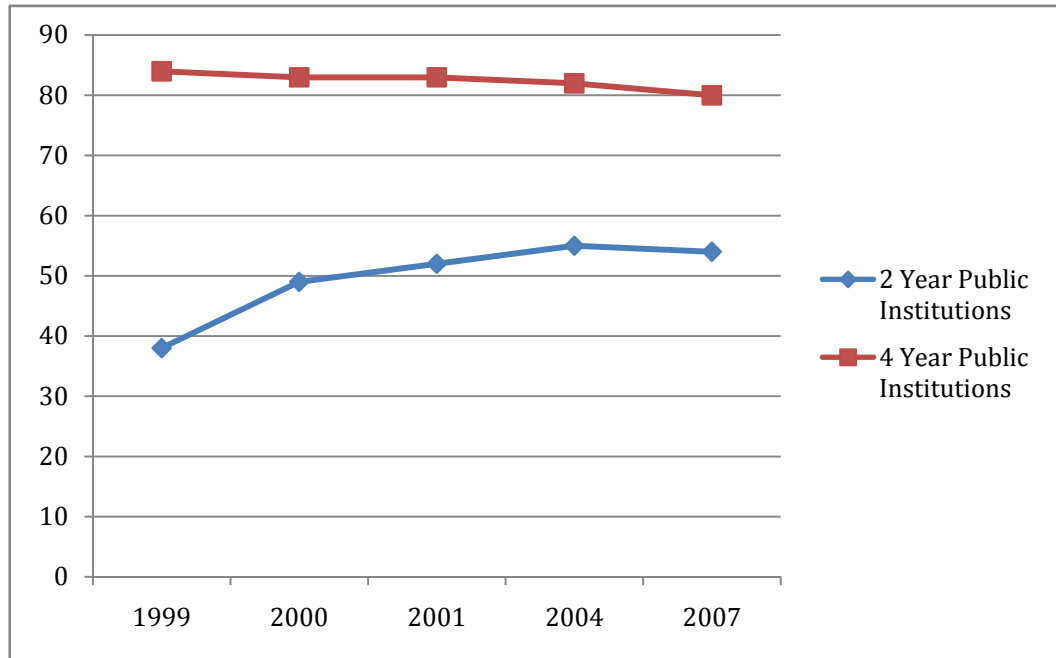
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Virginia



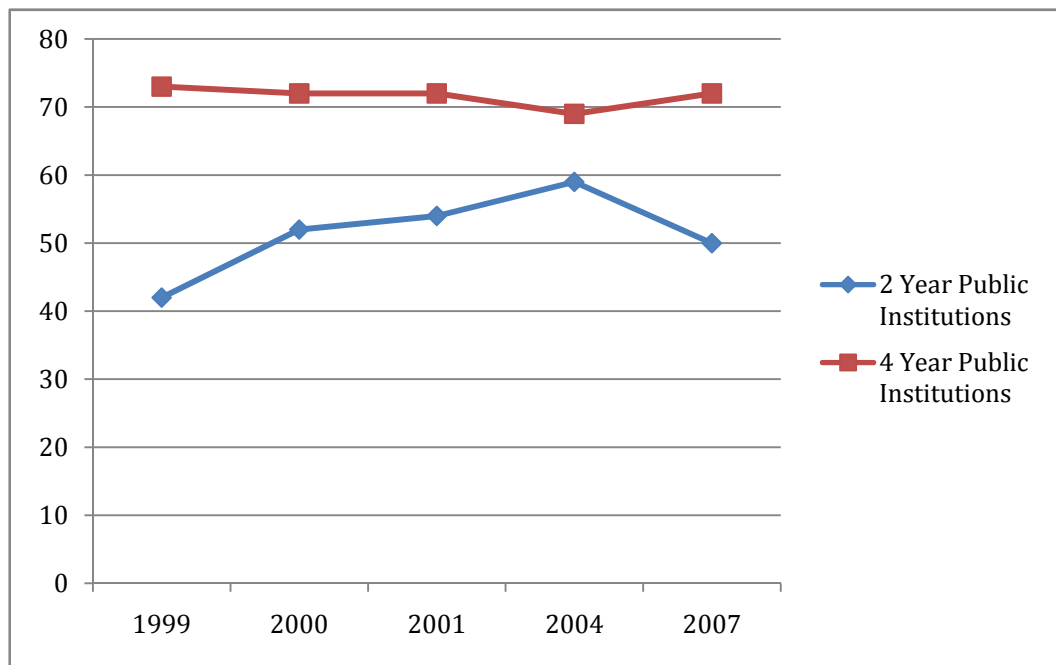
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Washington



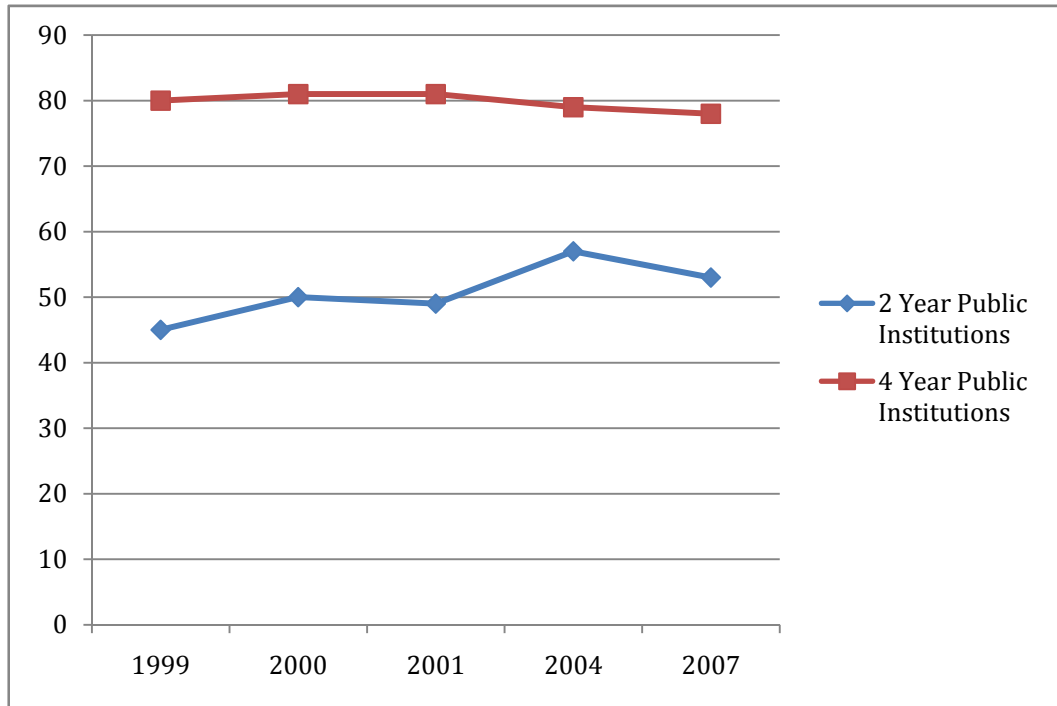
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West Virginia



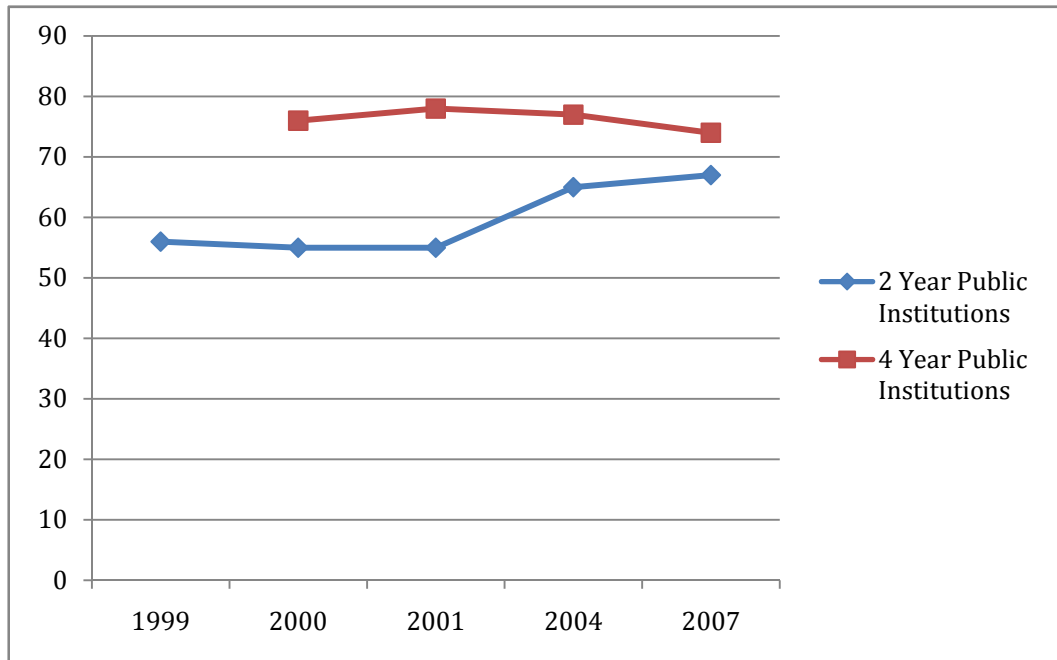
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Wisconsin



Source: Measuring Up 2000, 2002, 2004, 2006, 2008

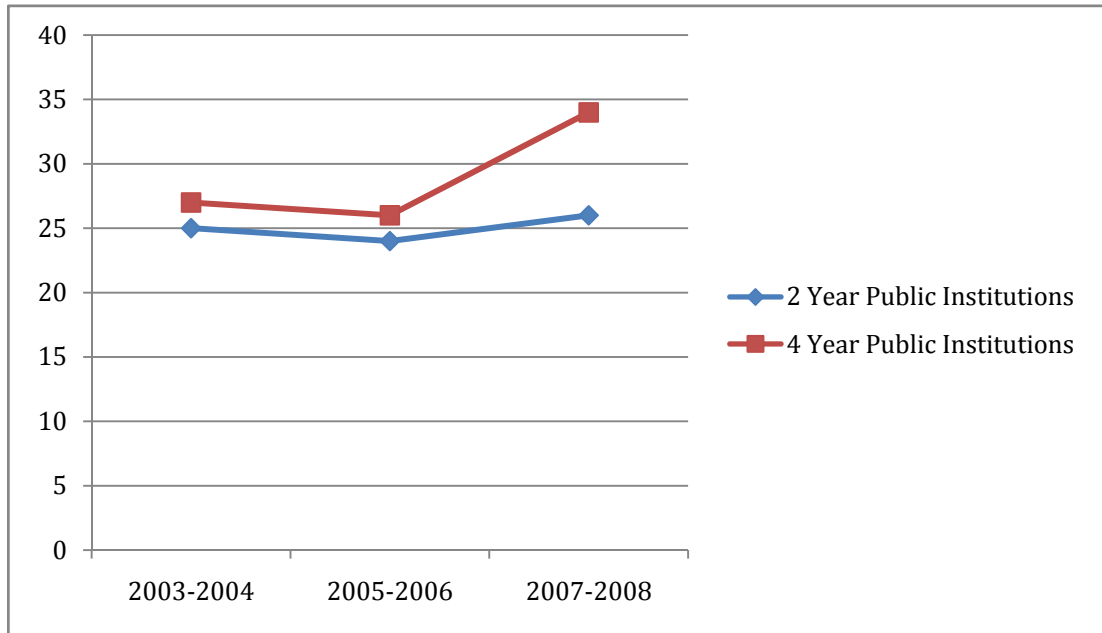
Wyoming



Source: Measuring Up 2000, 2002, 2004, 2006, 2008

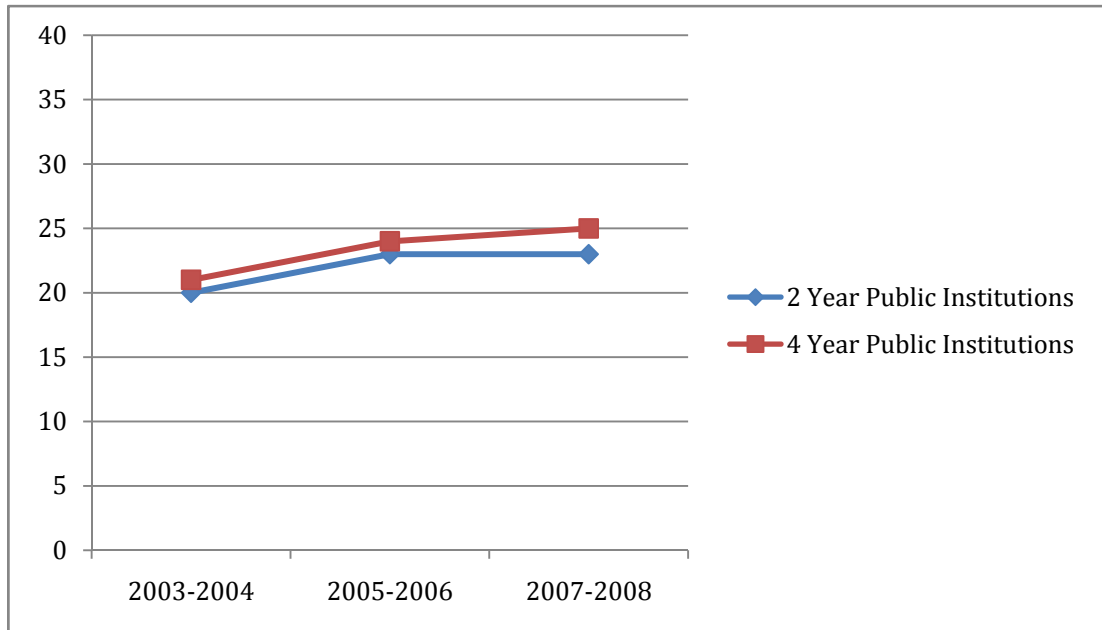
APPENDIX G
PERCENTAGE OF FAMILY INCOME NEEDED TO PAY FOR
COLLEGE BY STATE

Alabama



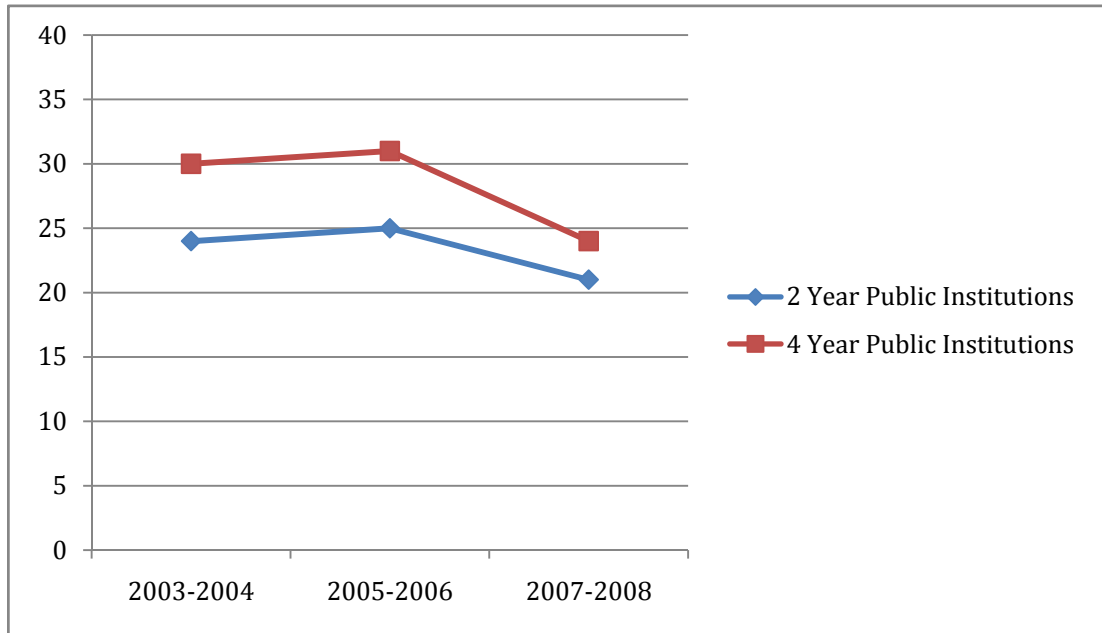
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Alaska



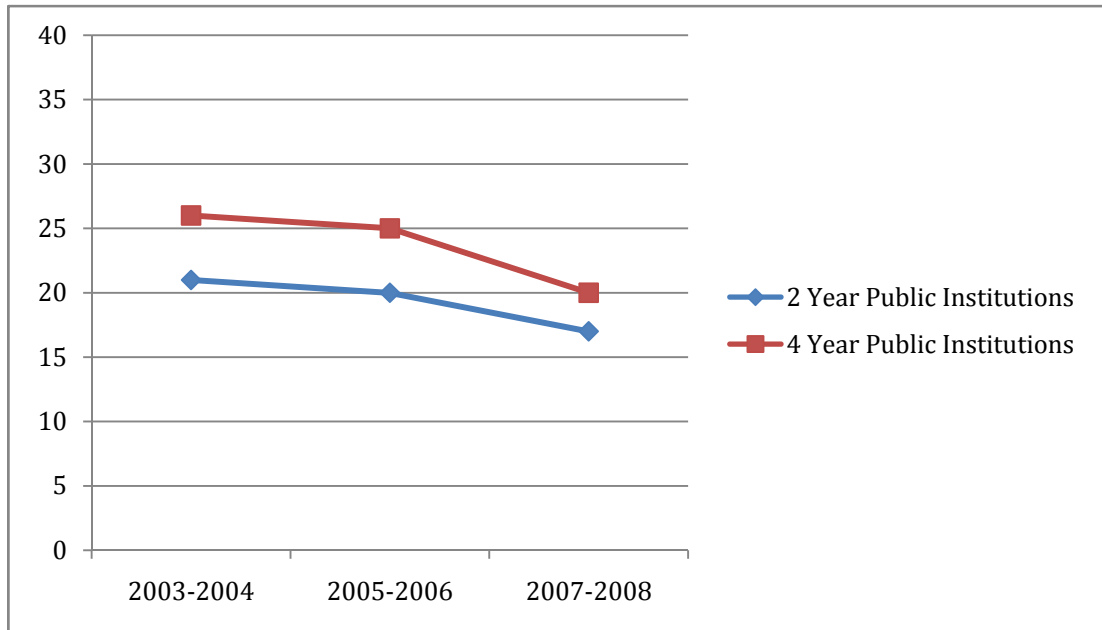
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Arizona



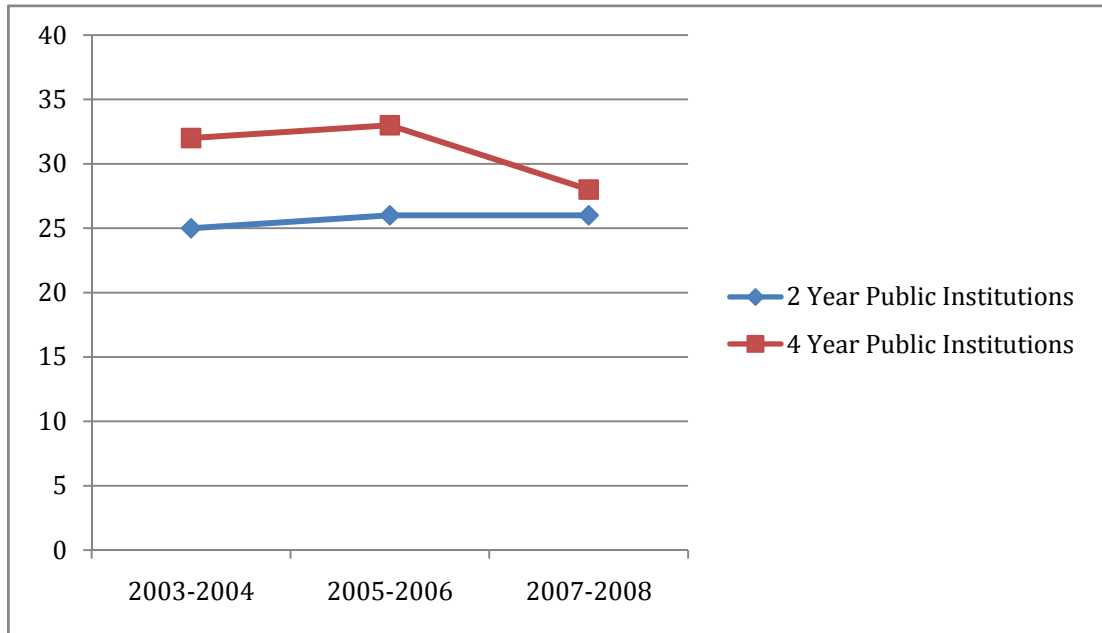
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Arkansas



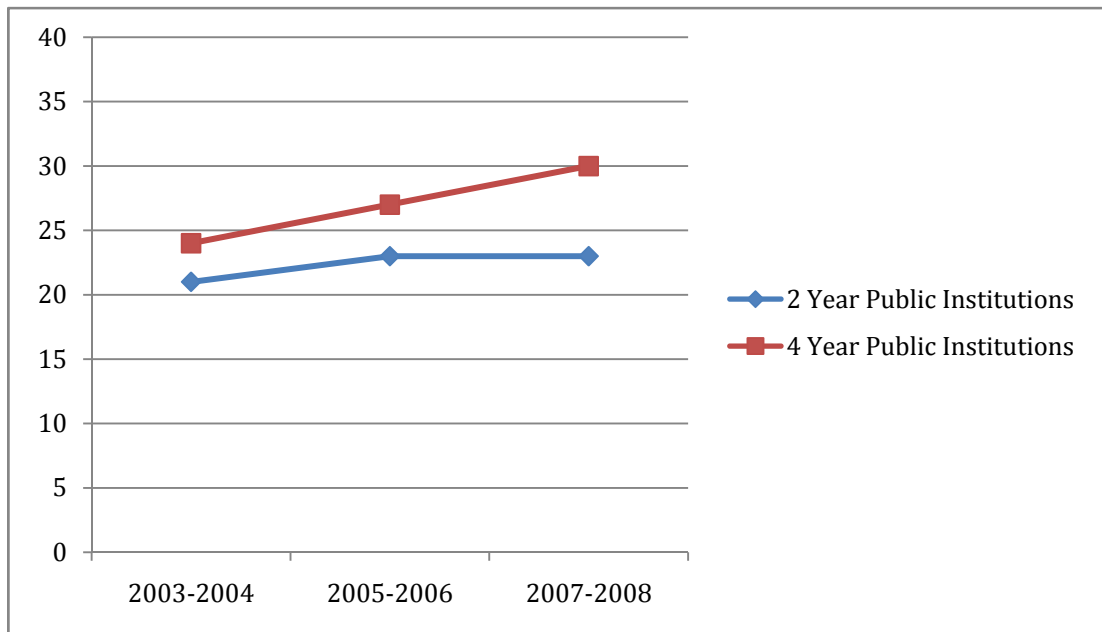
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California



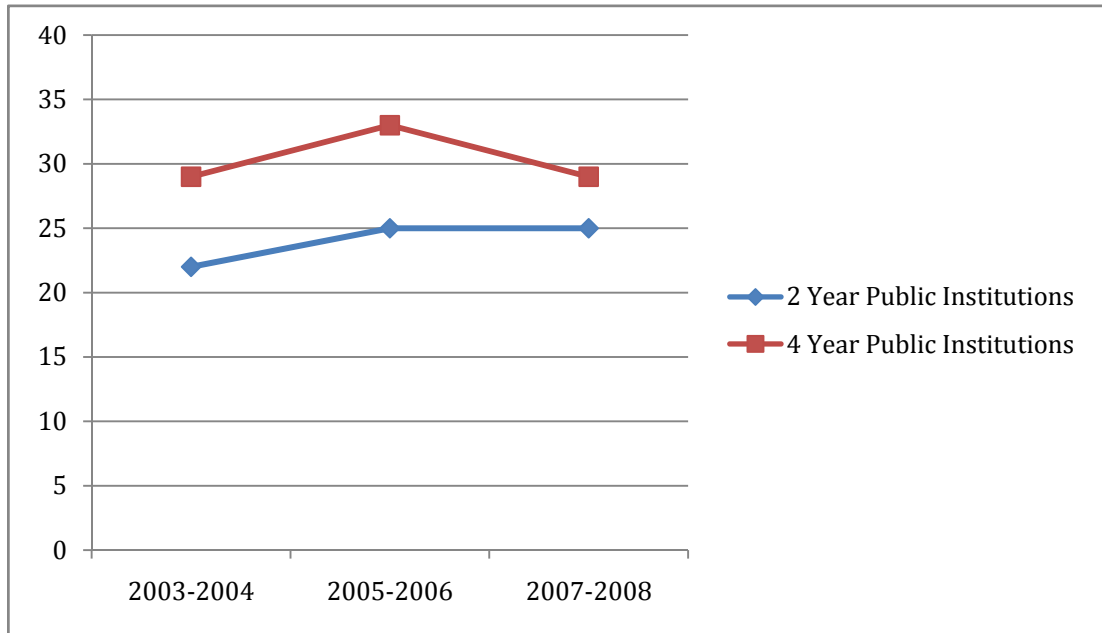
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Colorado



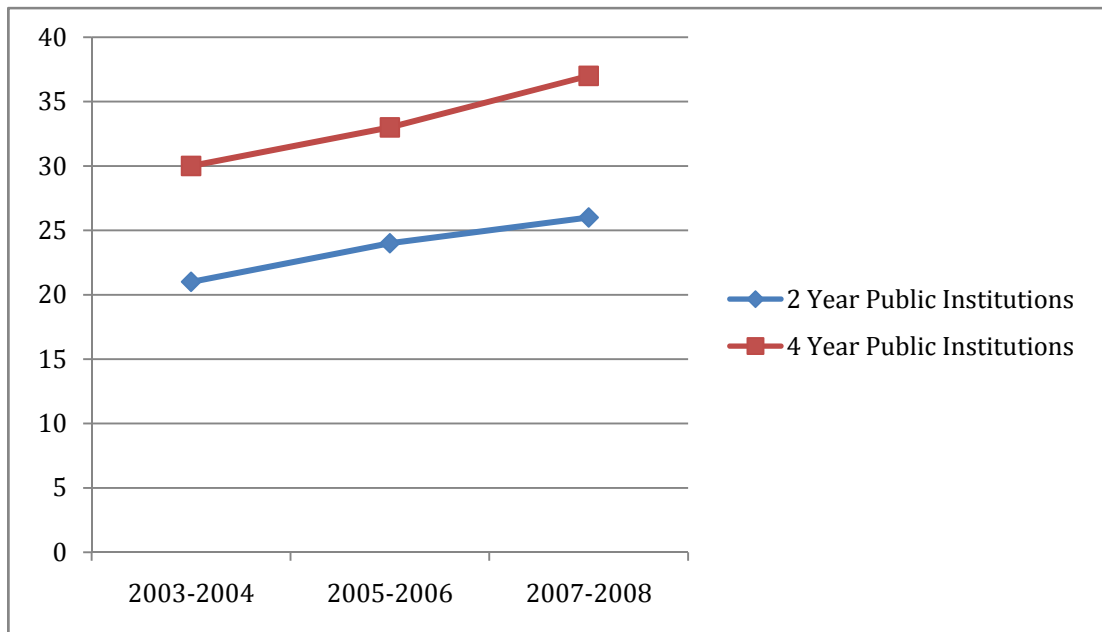
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Connecticut



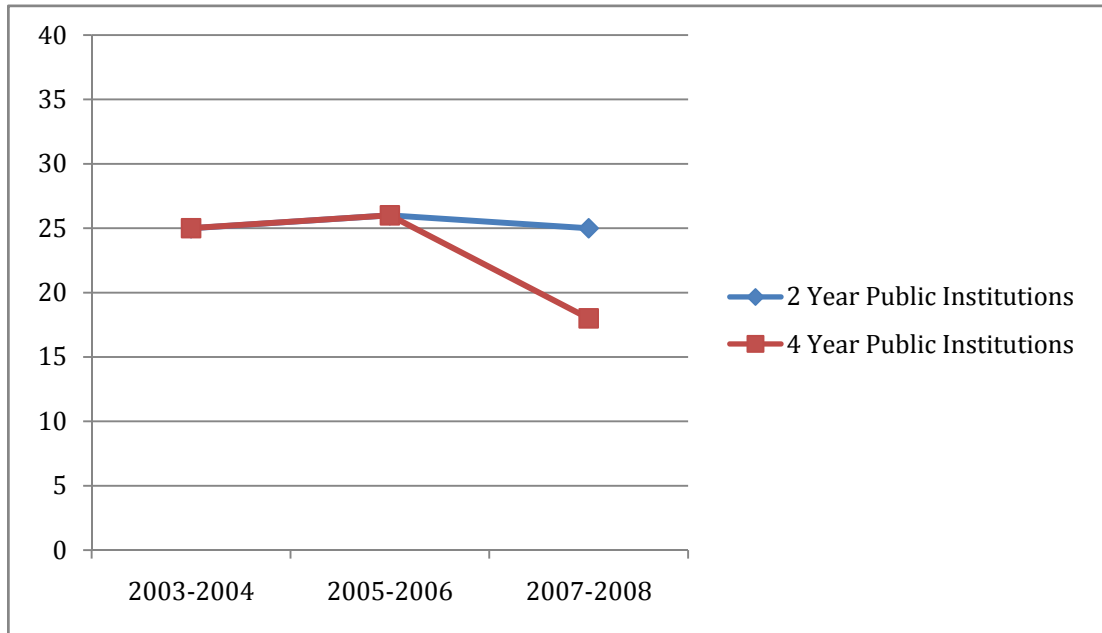
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Delaware



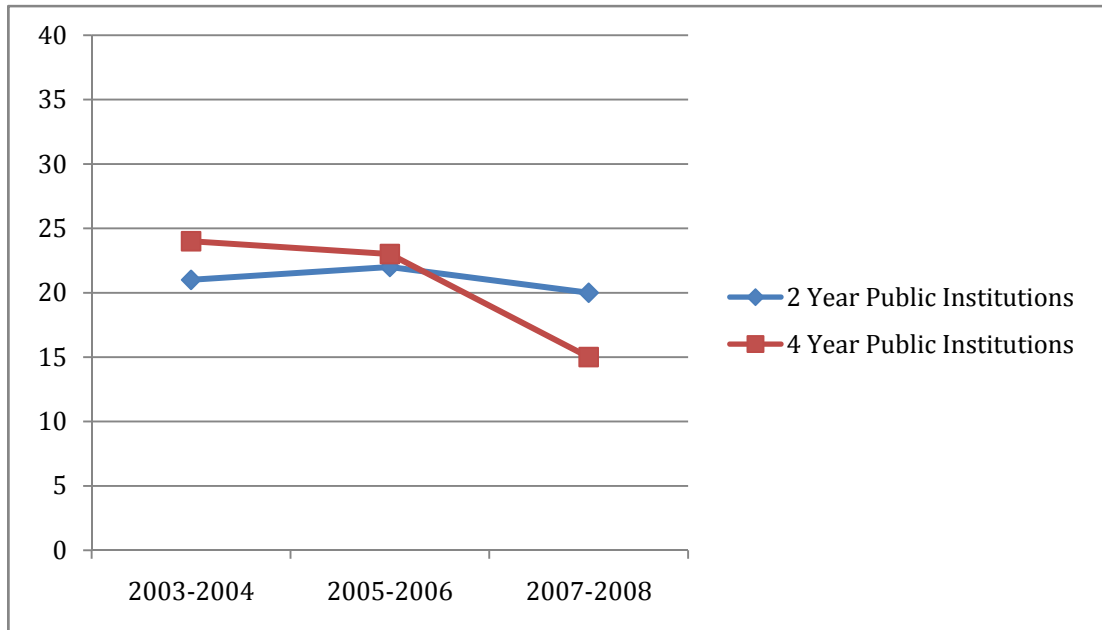
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Florida



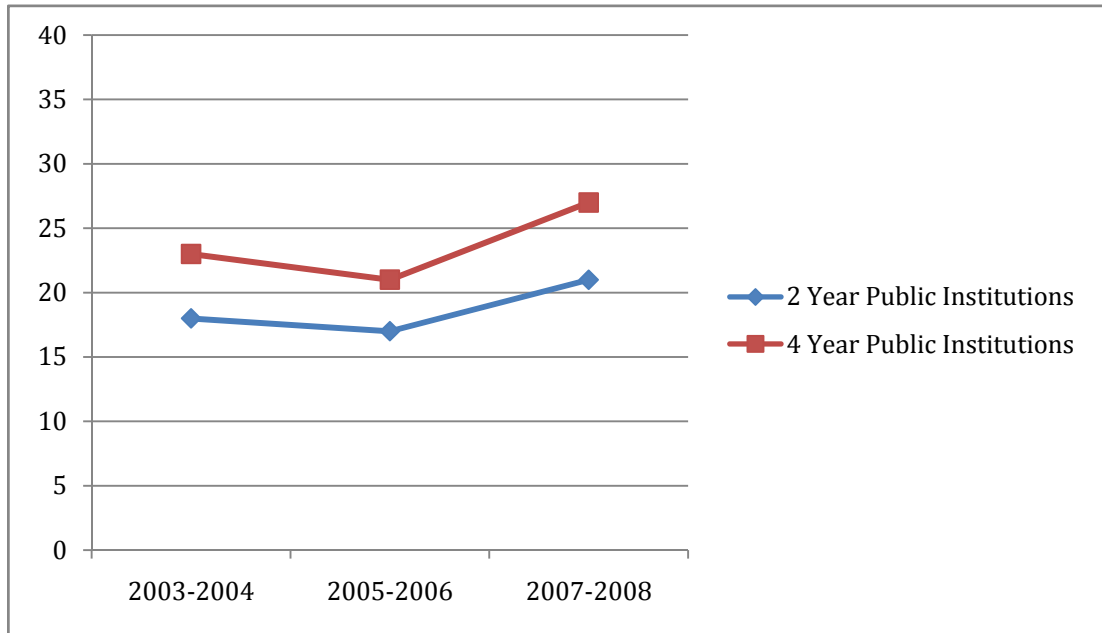
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Georgia



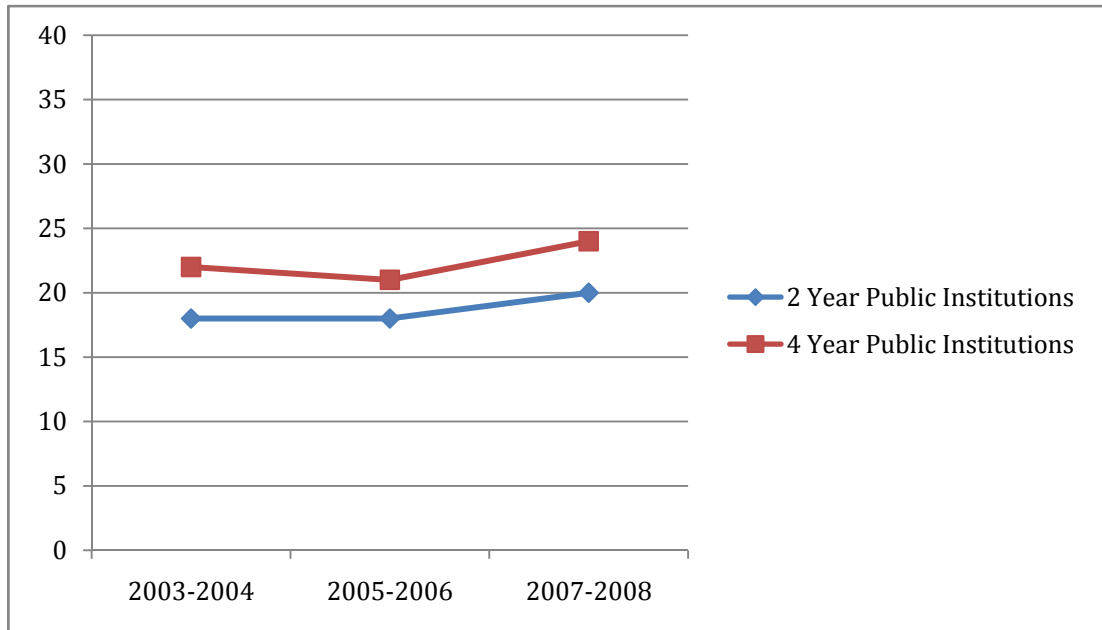
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Hawaii



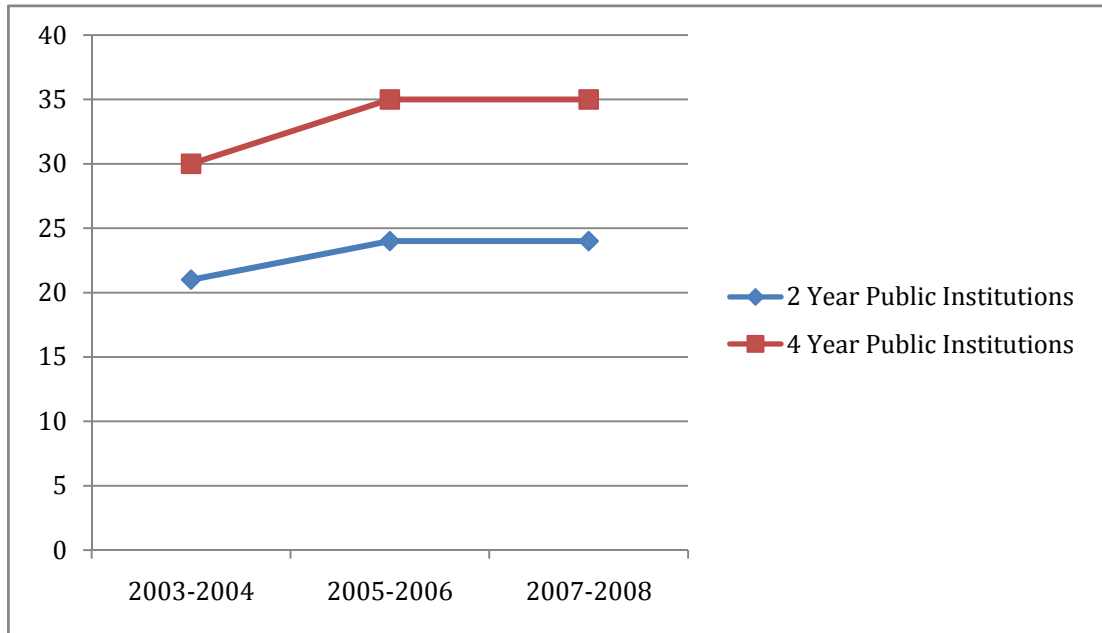
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Idaho



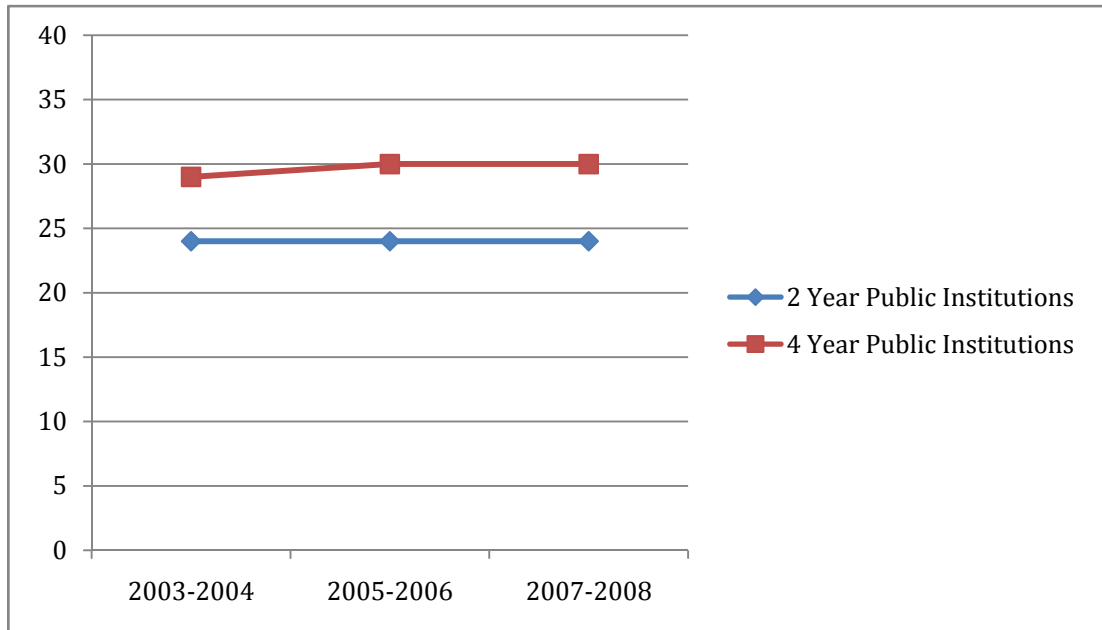
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Illinois



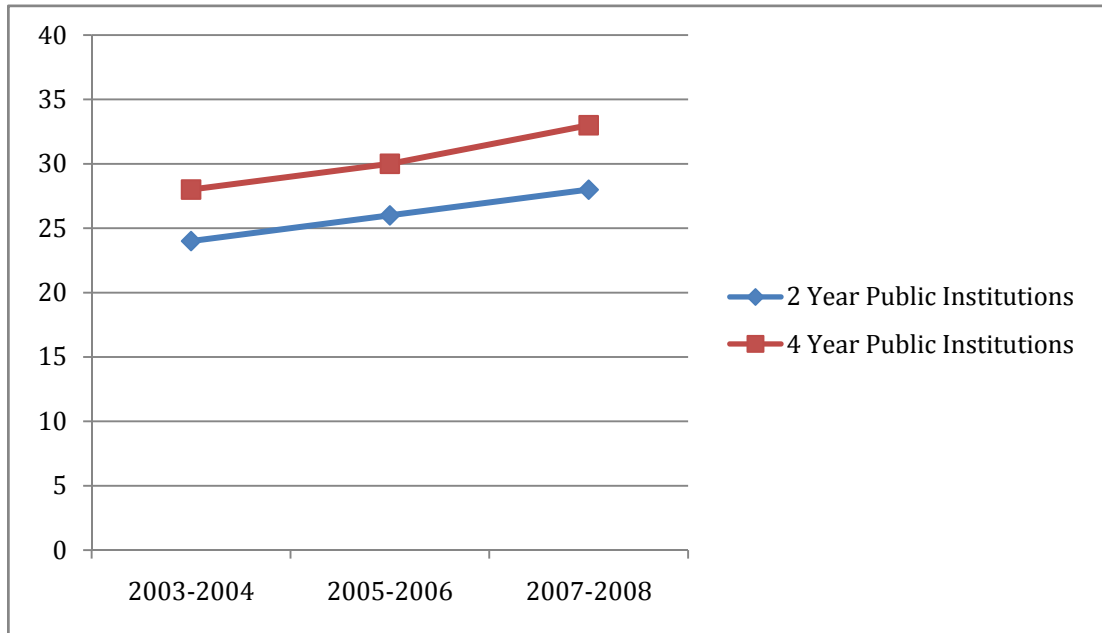
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Indiana



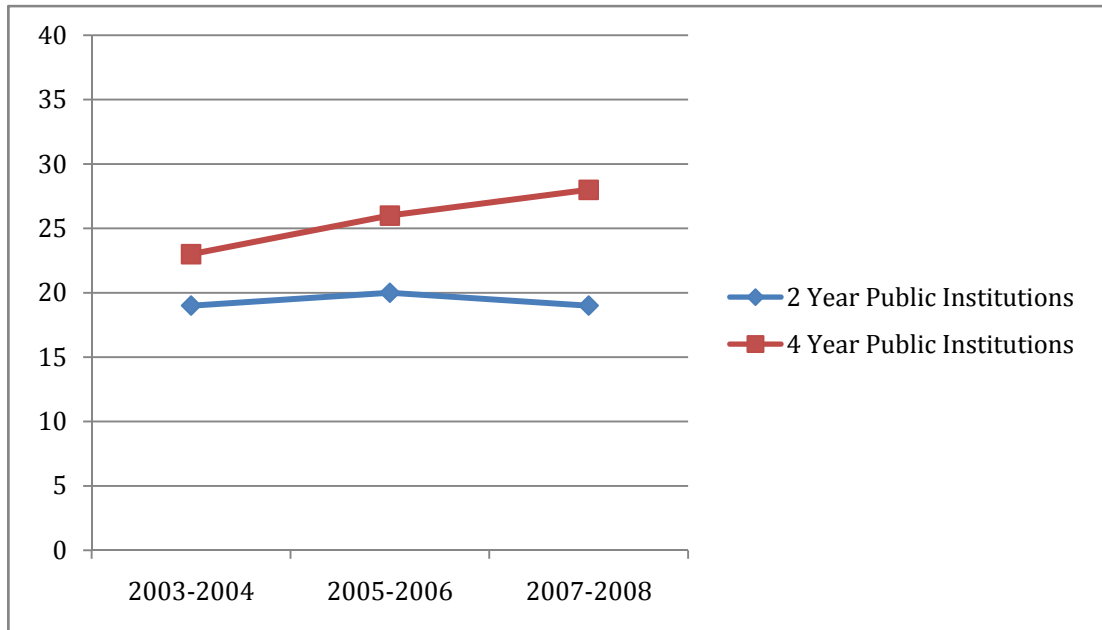
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Iowa



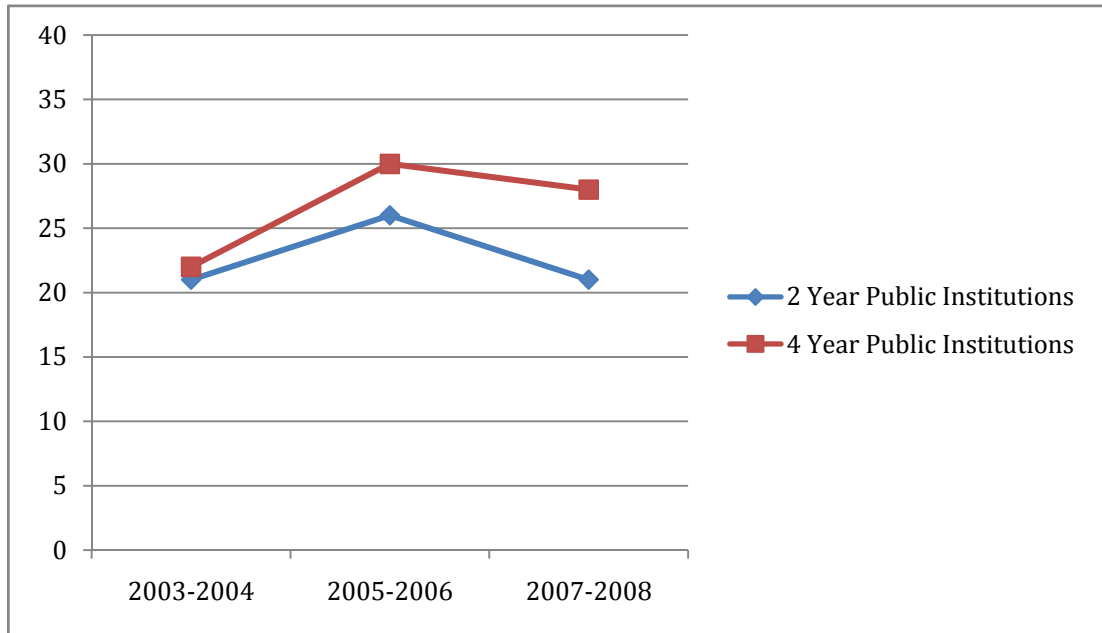
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Kansas



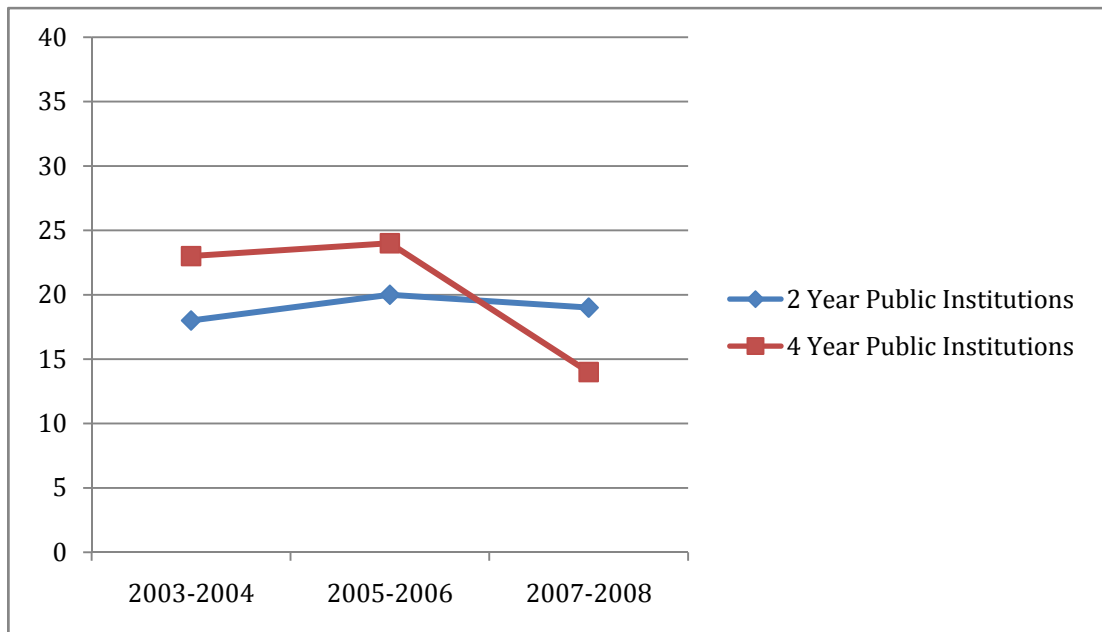
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Kentucky



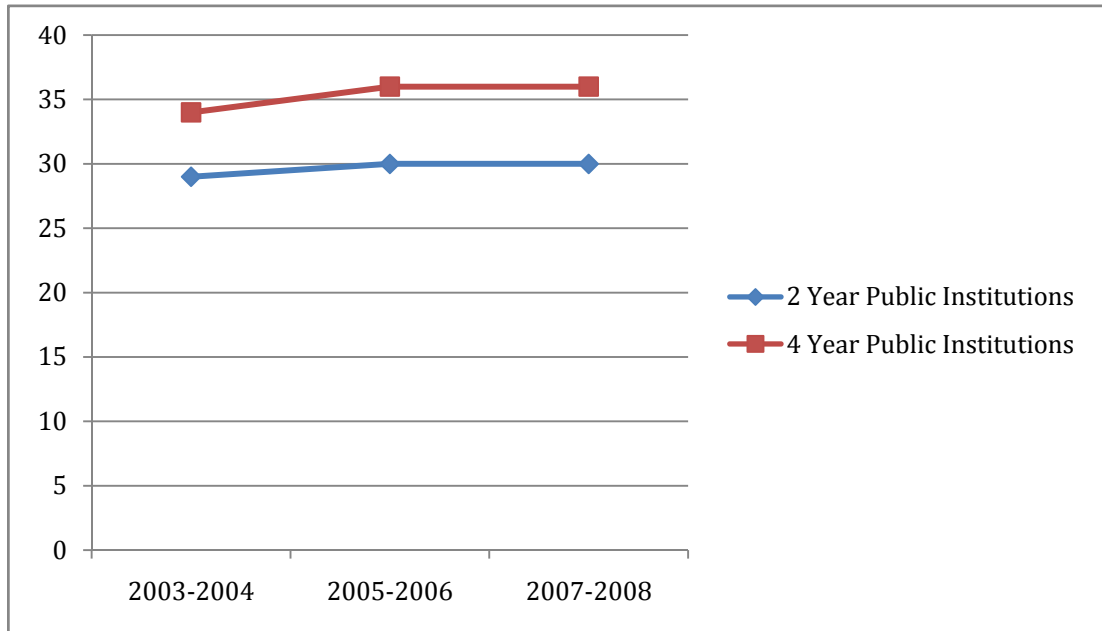
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Louisiana



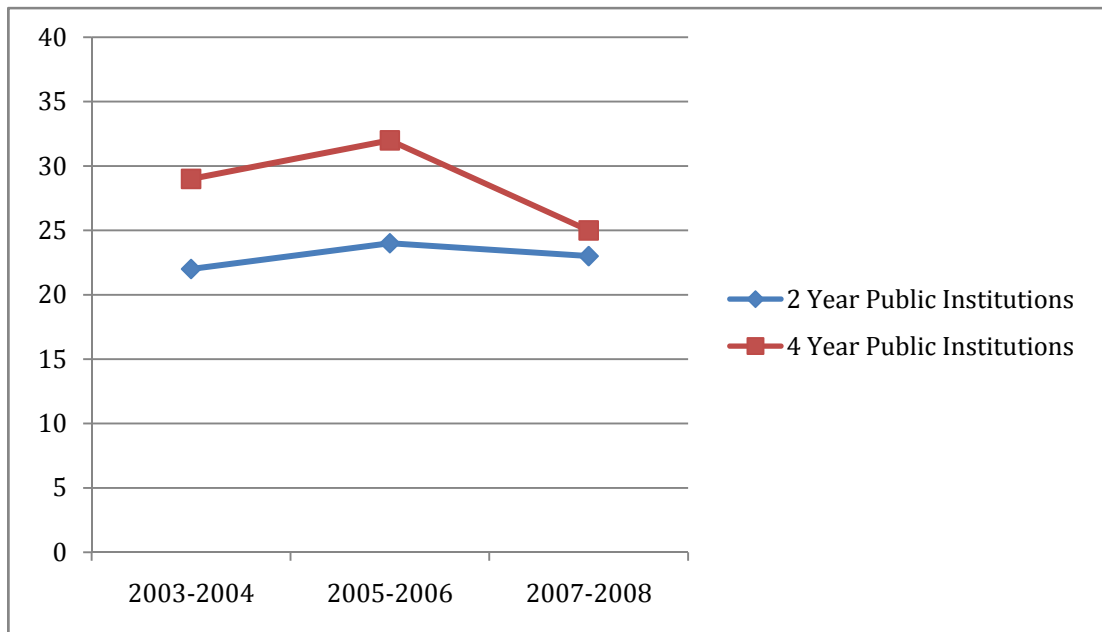
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Maine



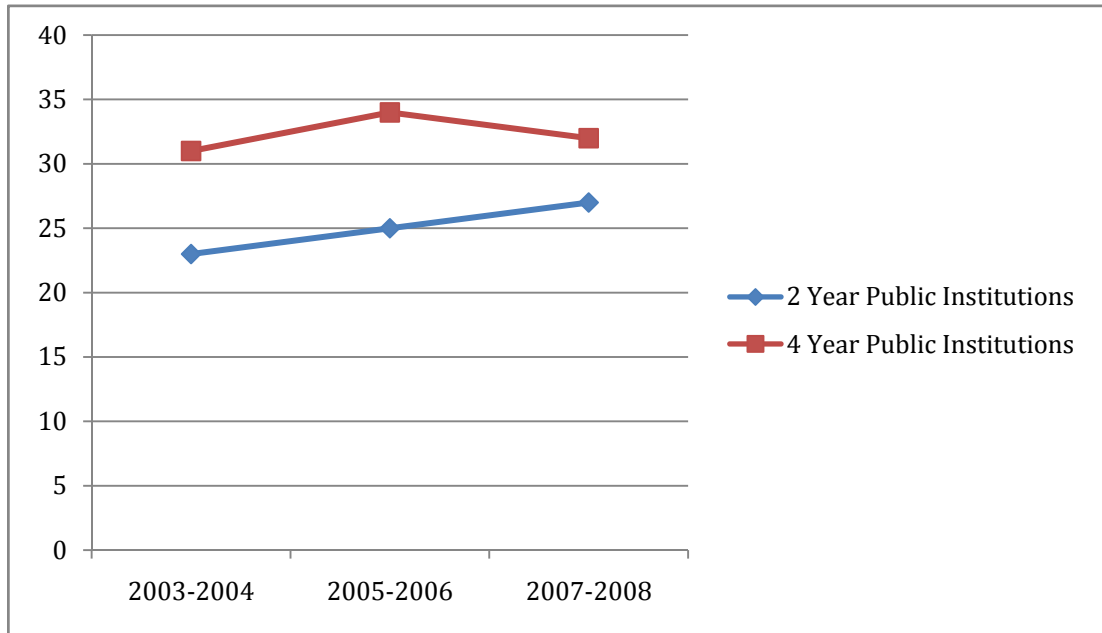
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Maryland



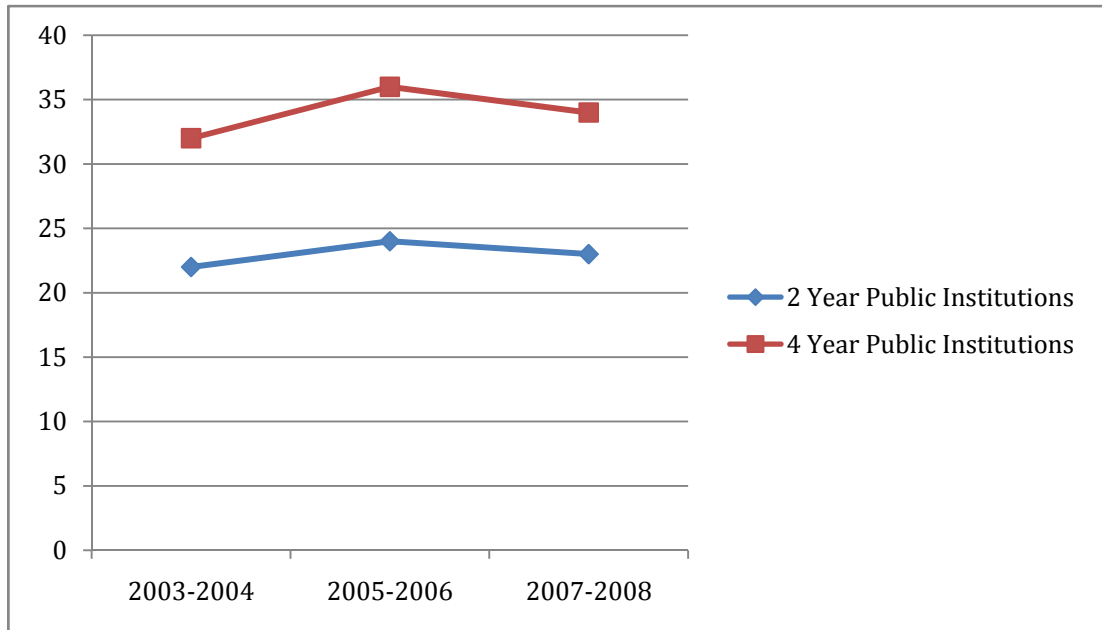
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Massachusetts



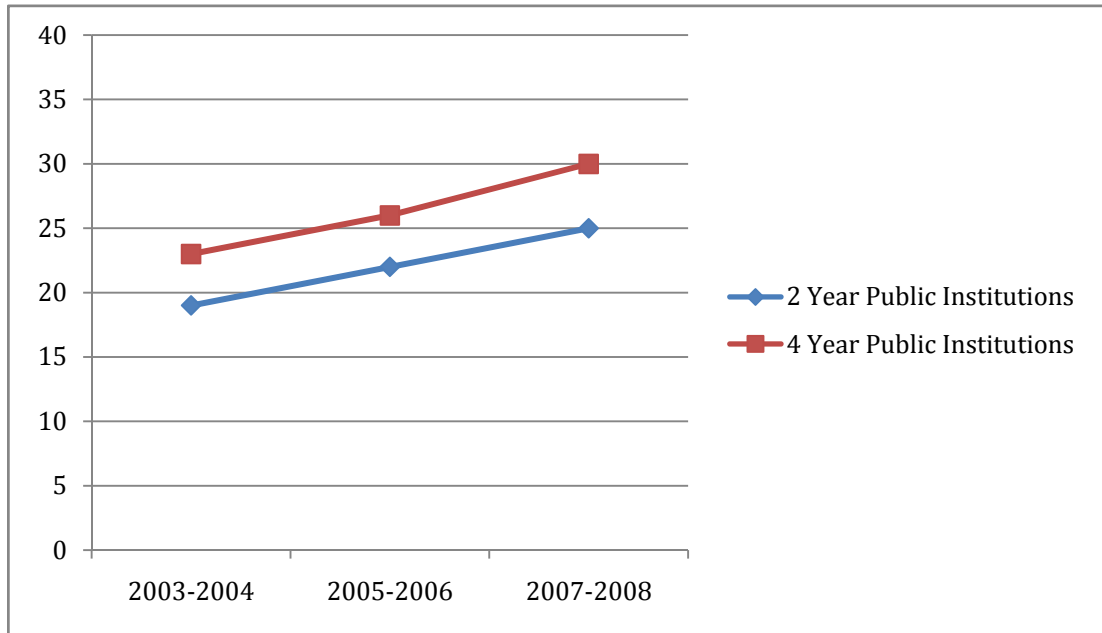
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Michigan



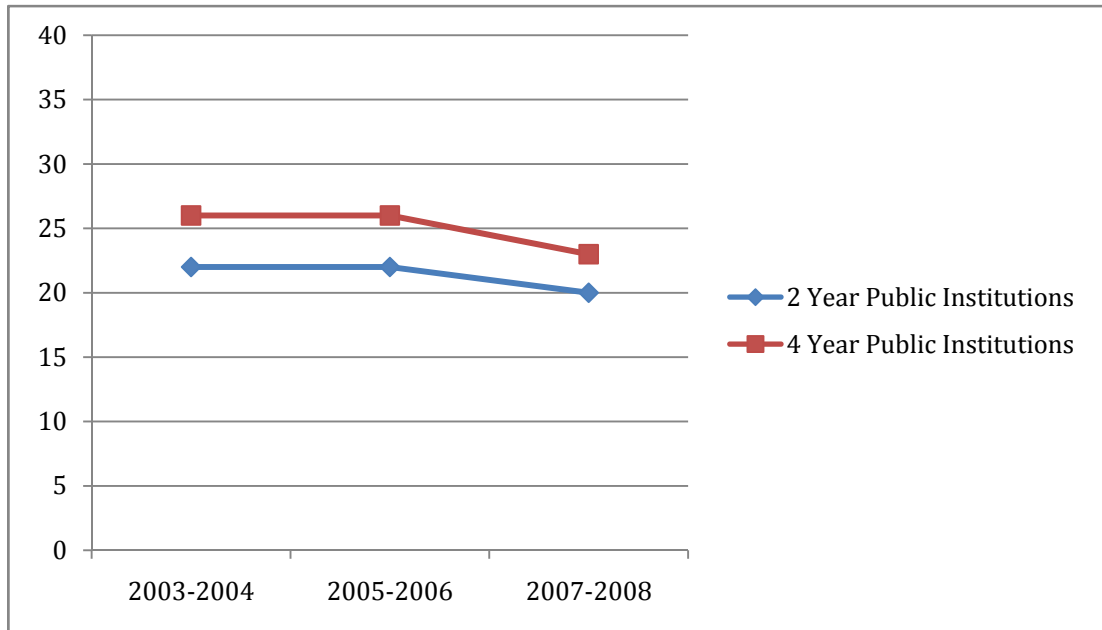
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Minnesota



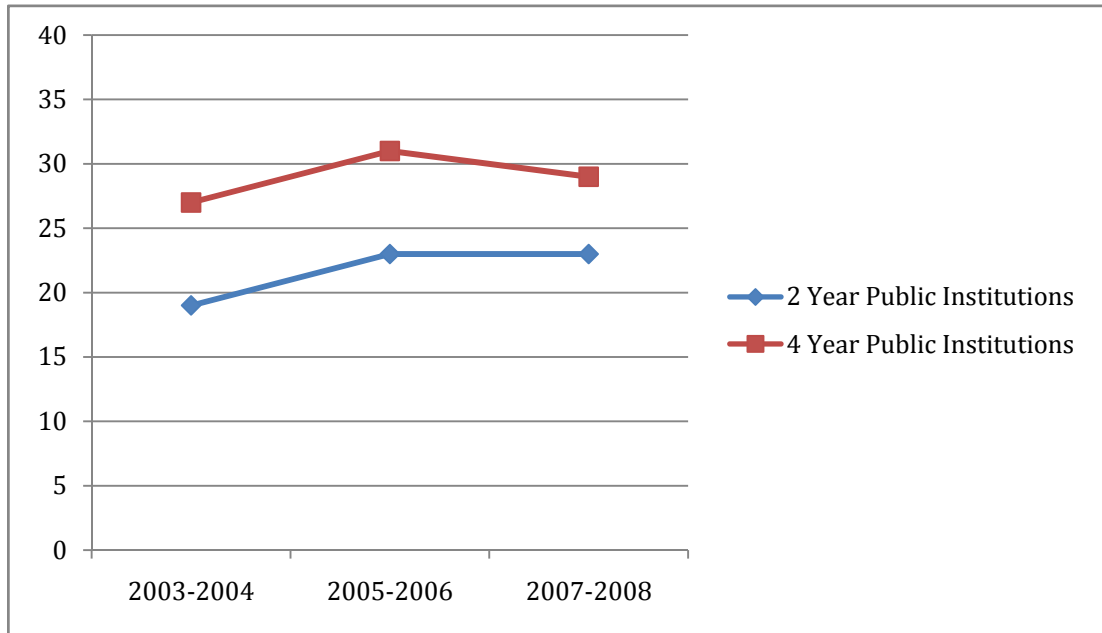
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Mississippi



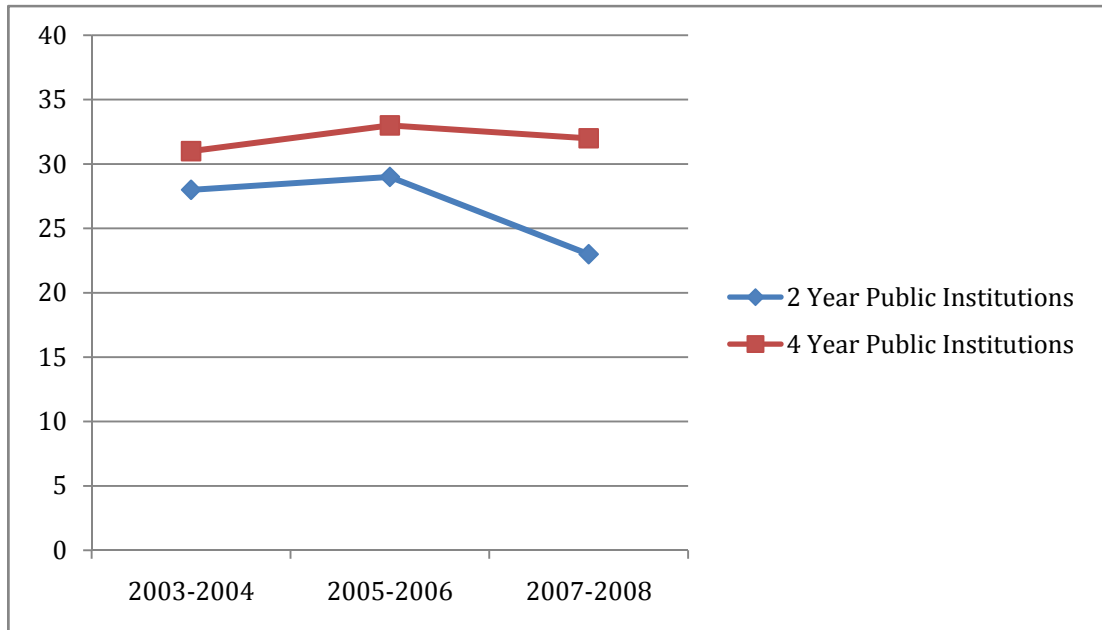
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Missouri



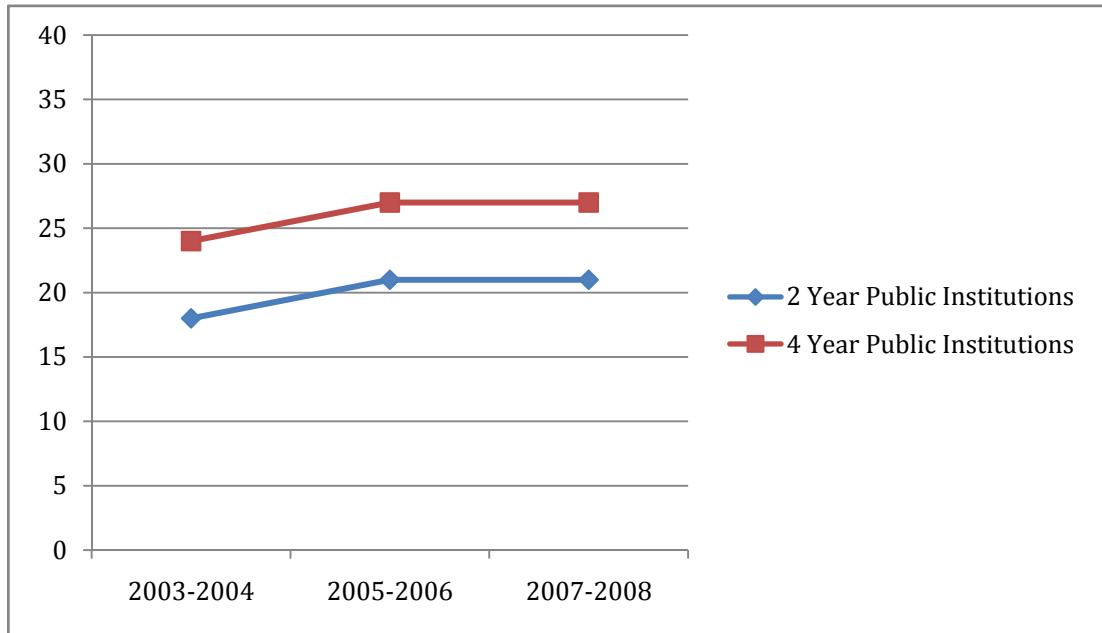
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Montana



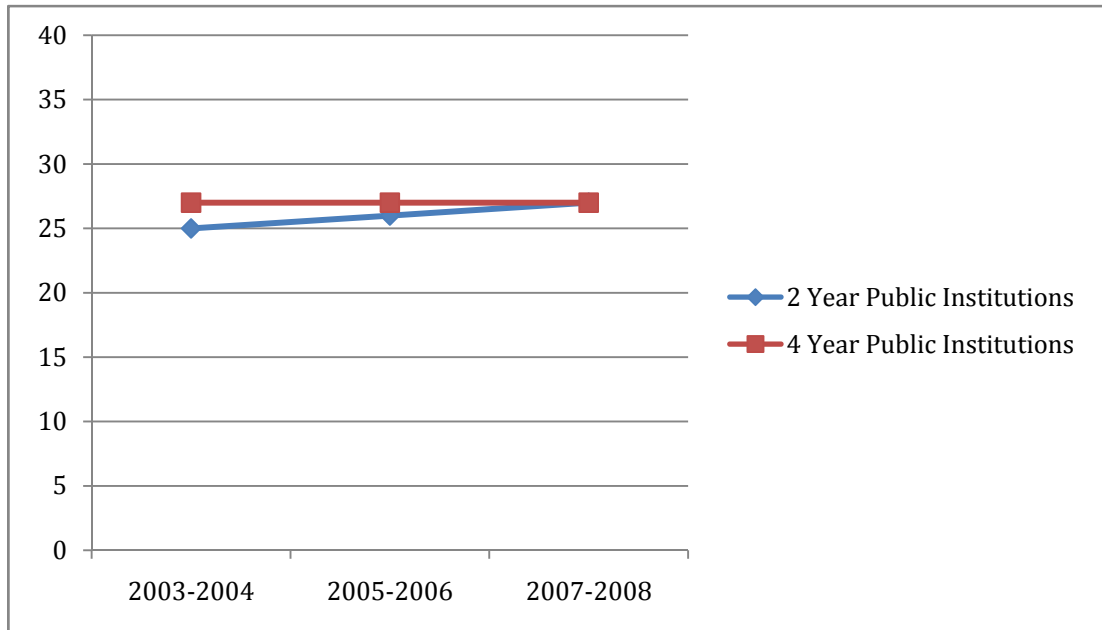
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Nebraska



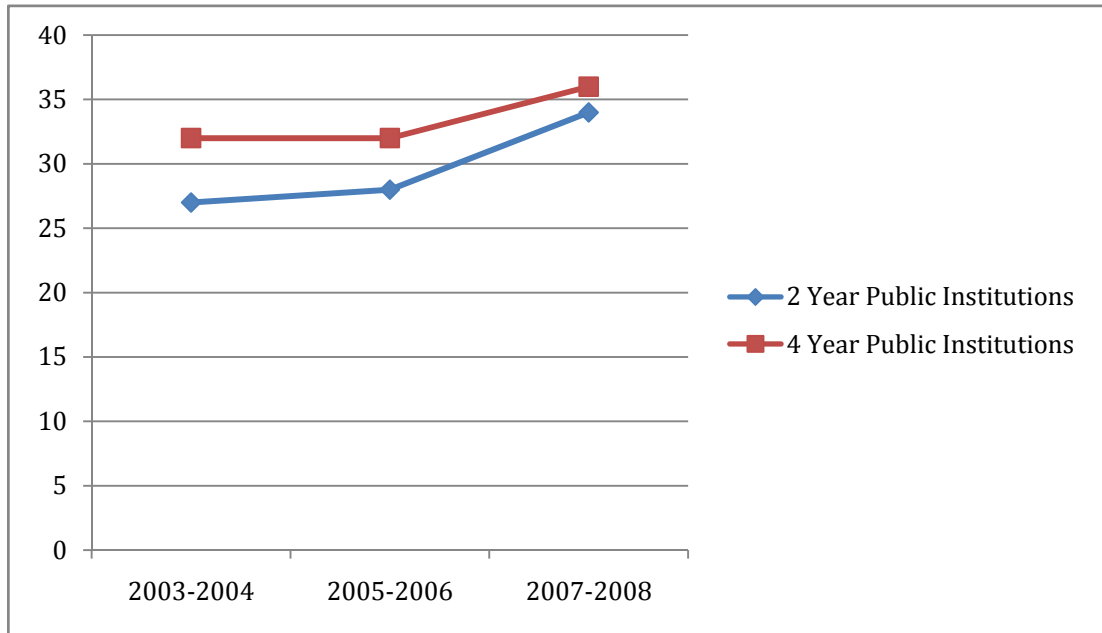
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Nevada



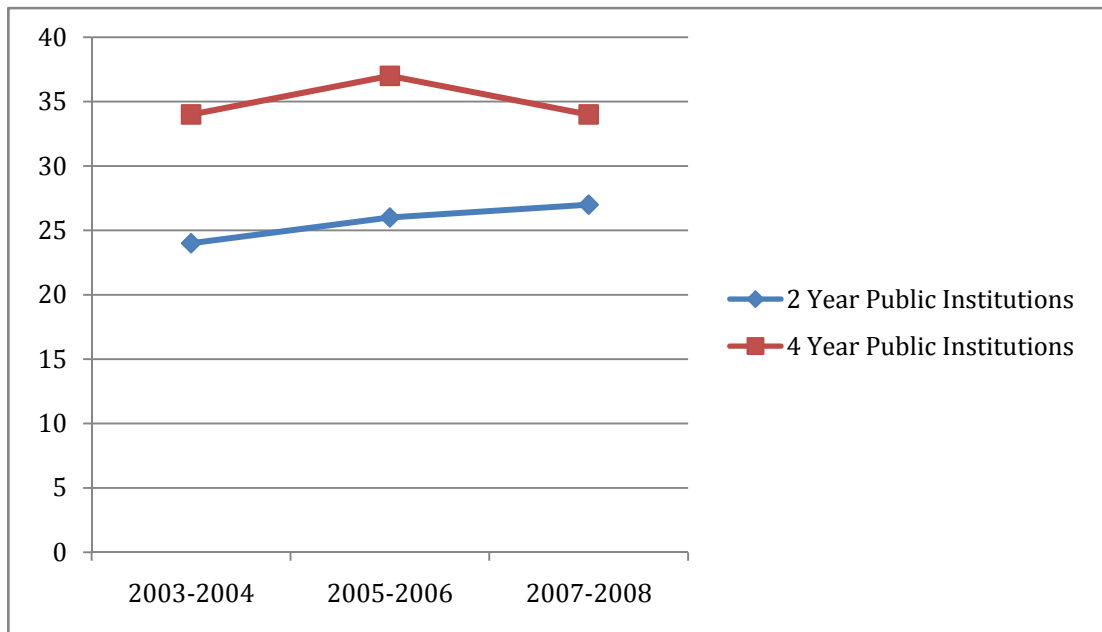
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

New Hampshire



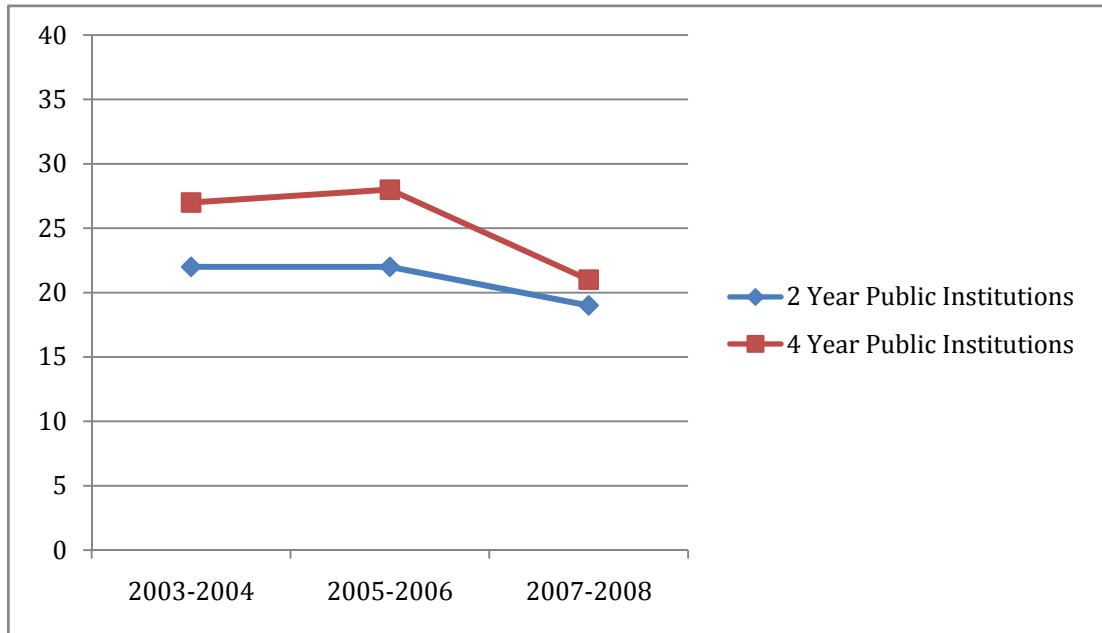
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New Jersey



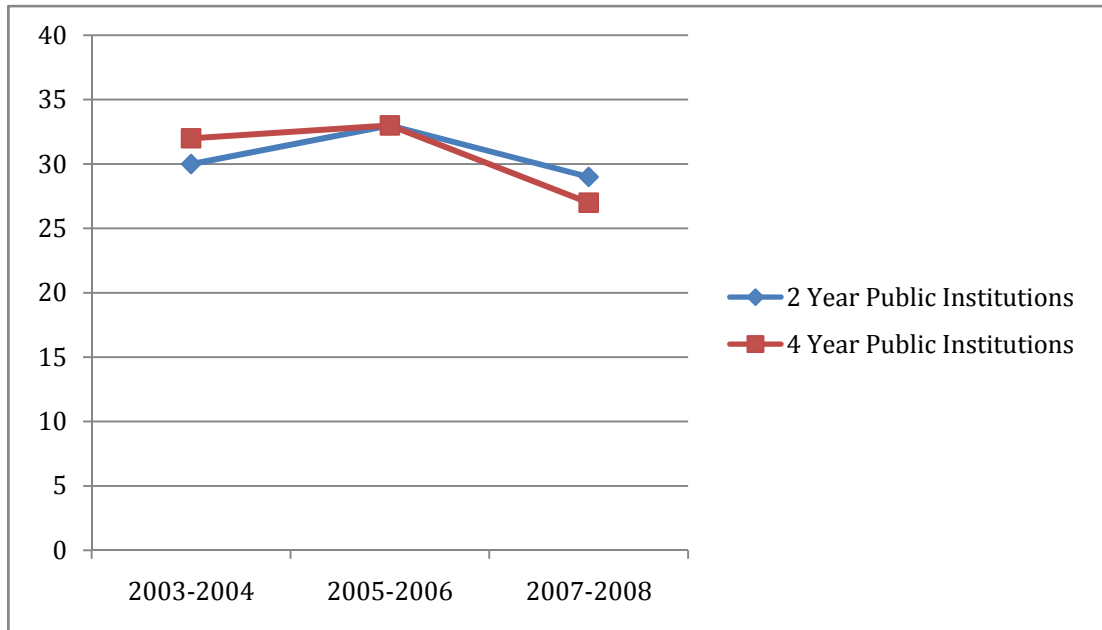
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New Mexico



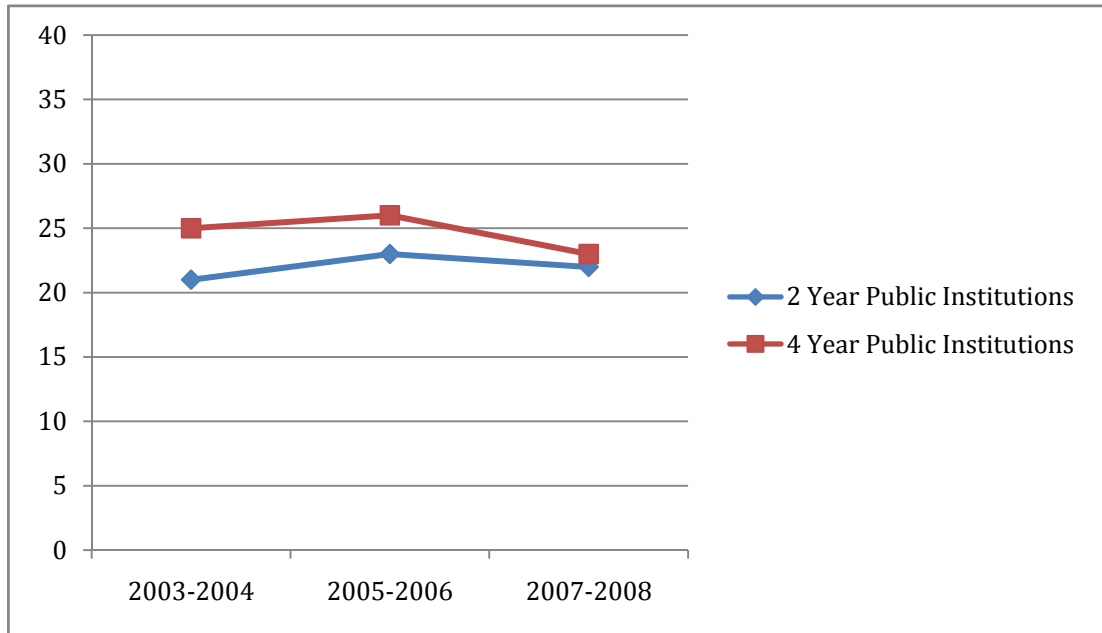
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New York



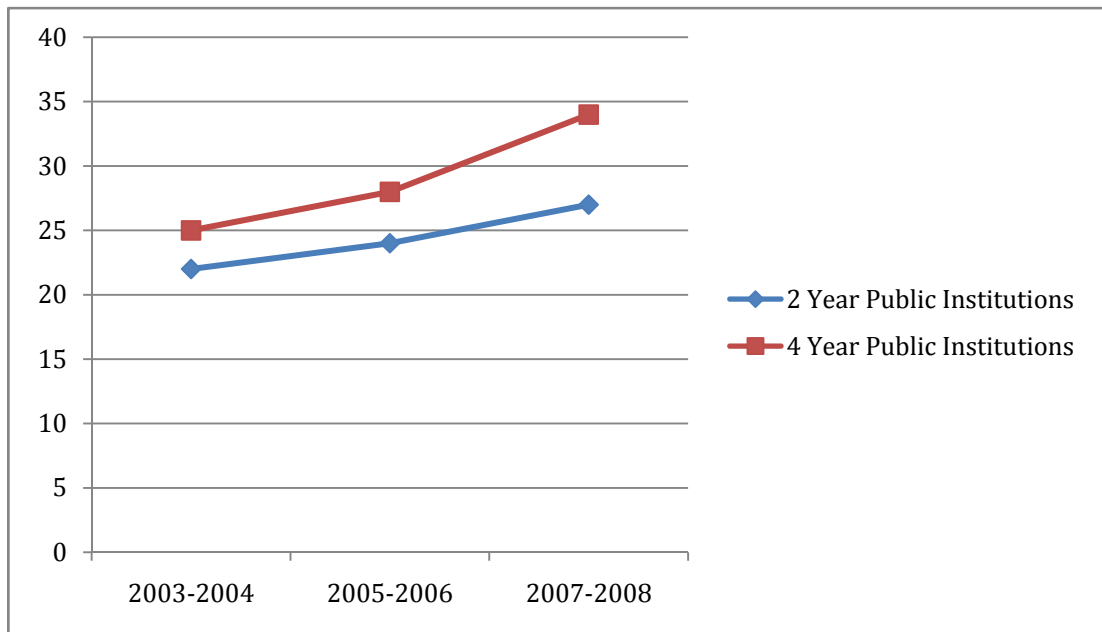
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

North Carolina



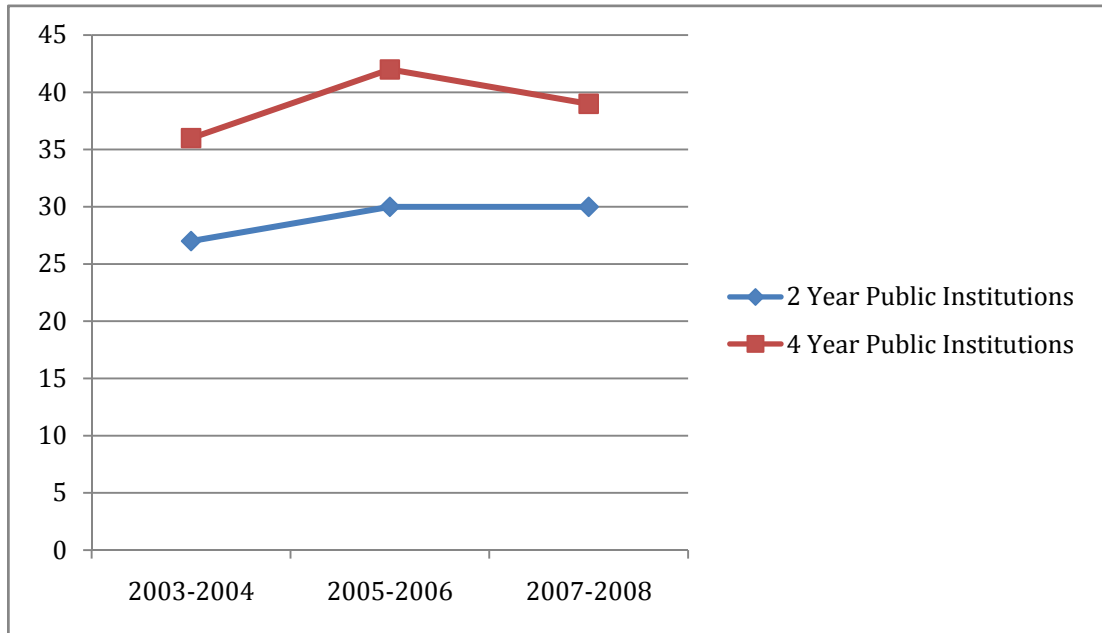
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North Dakota



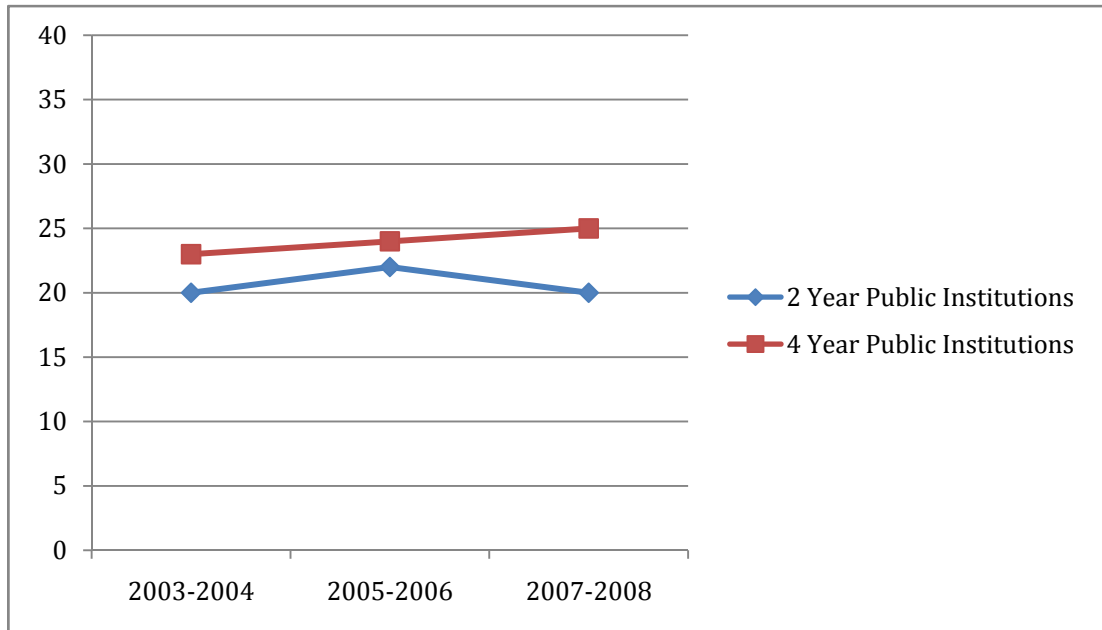
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Ohio



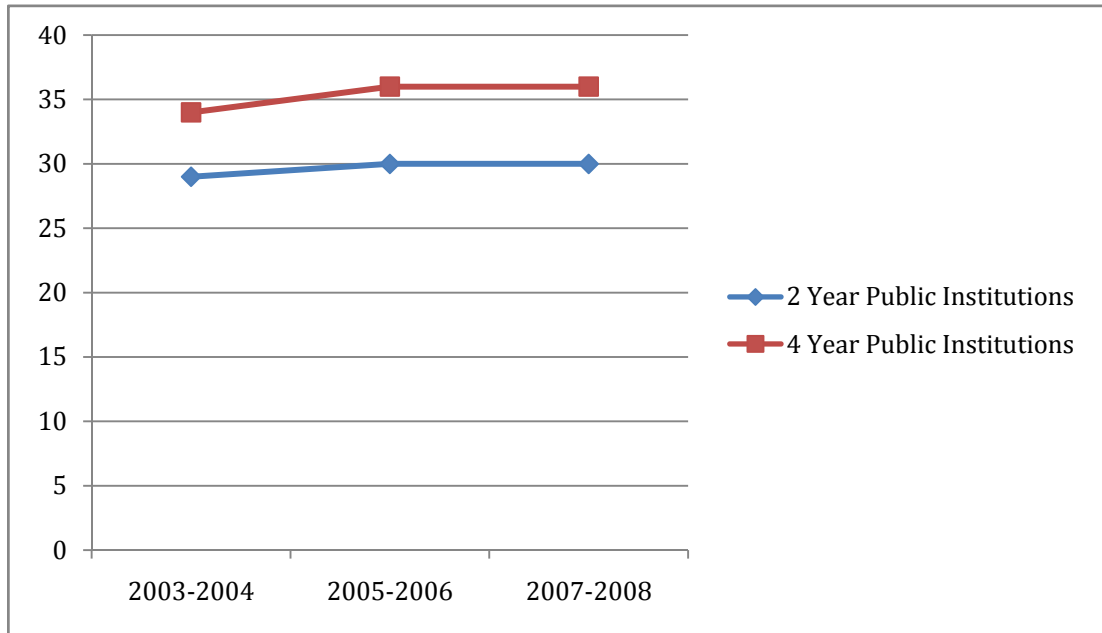
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Oklahoma



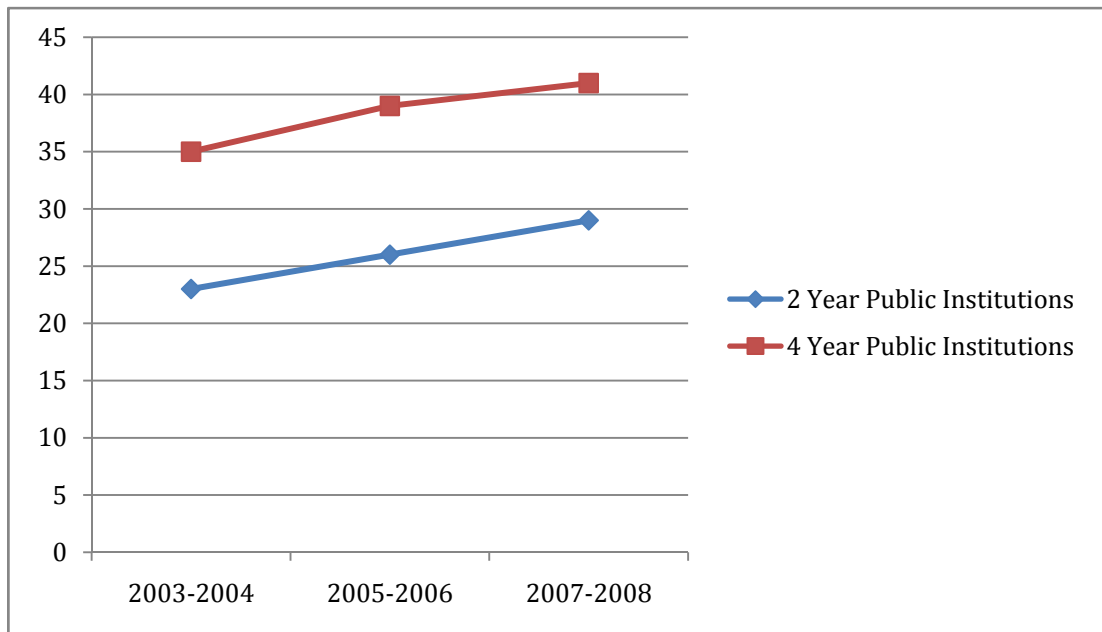
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Oregon



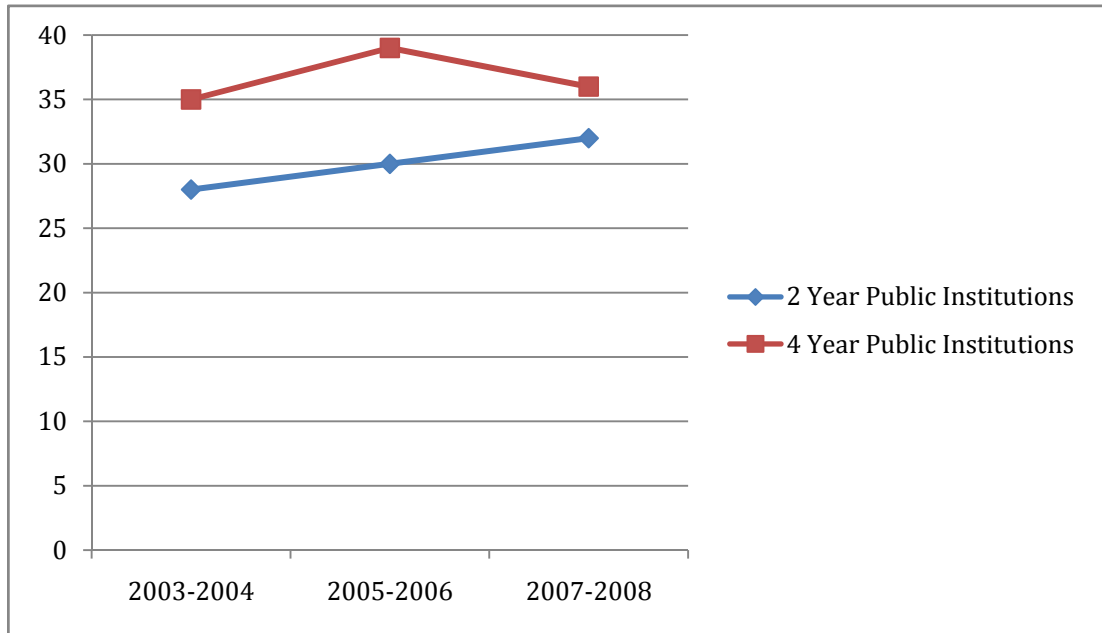
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Pennsylvania



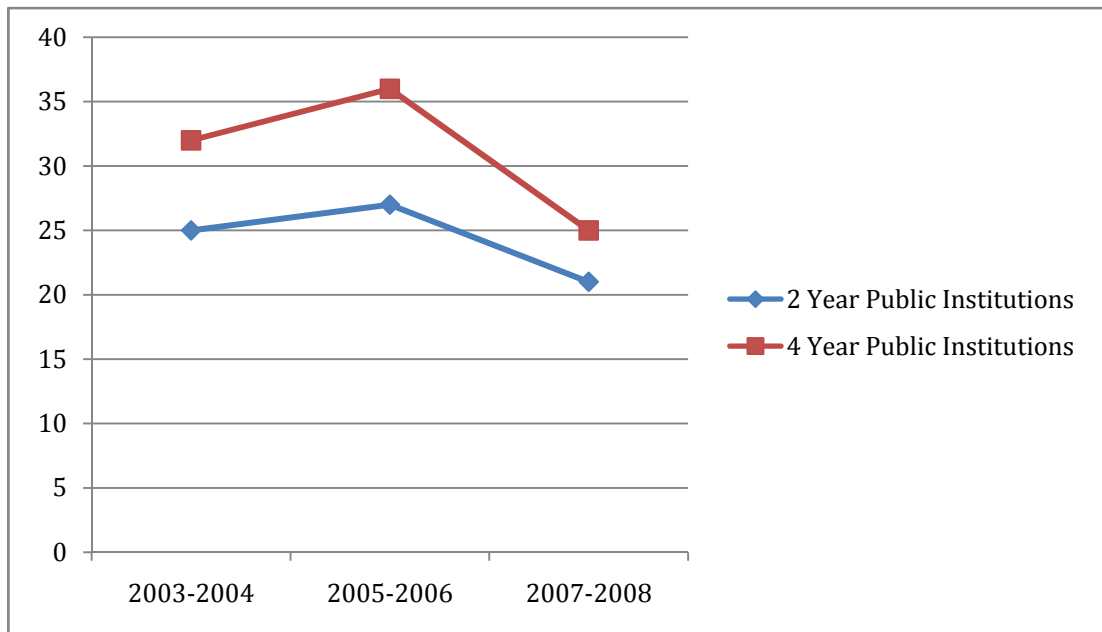
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Rhode Island



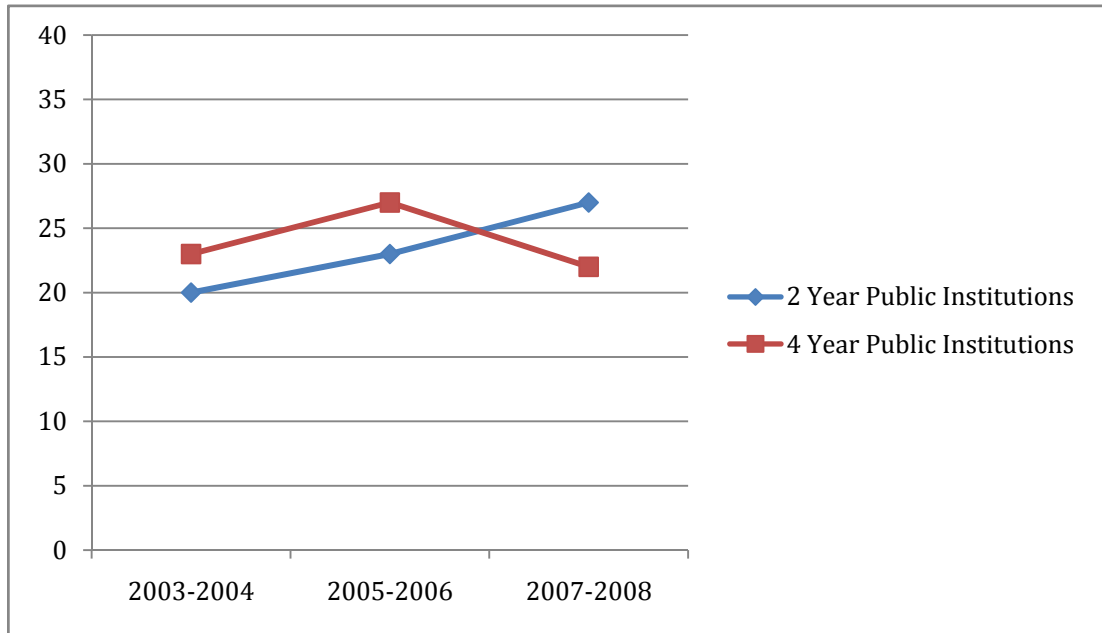
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

South Carolina



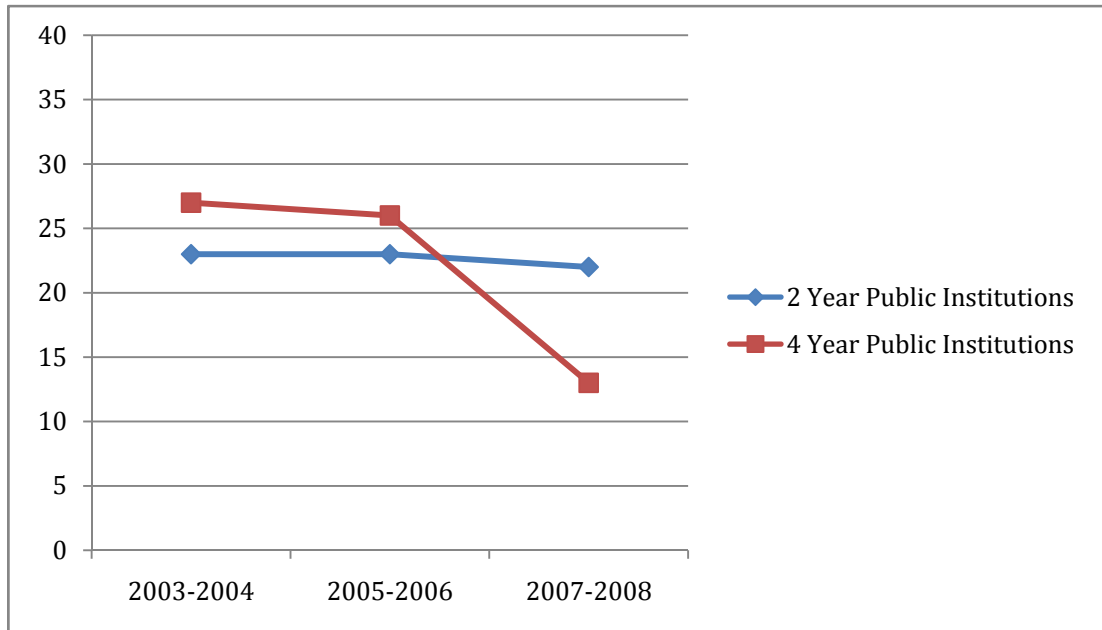
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South Dakota



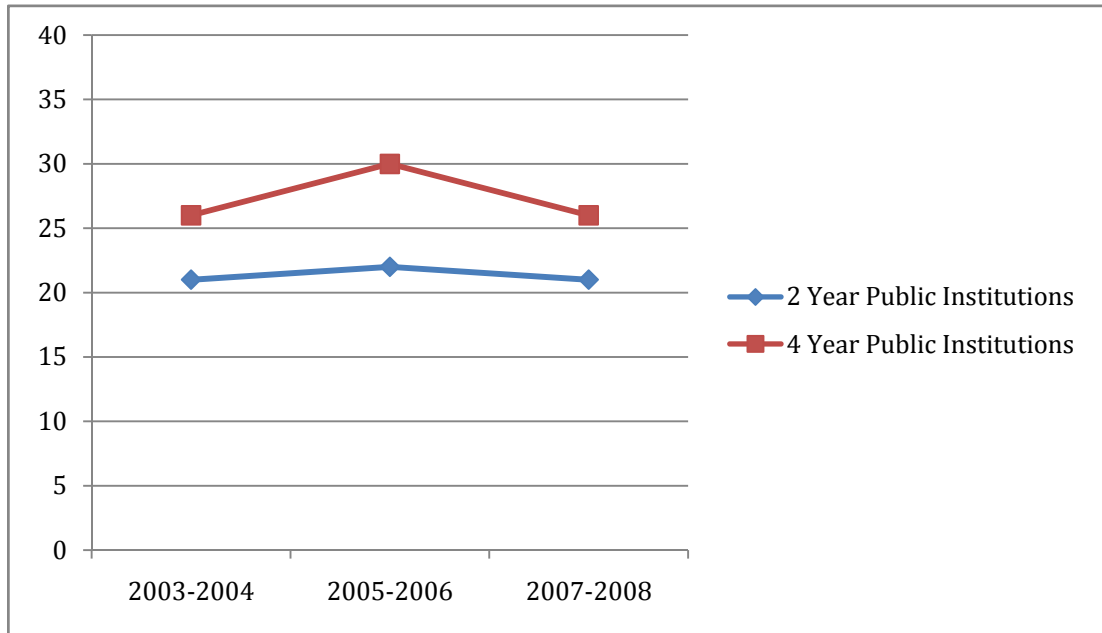
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Tennessee



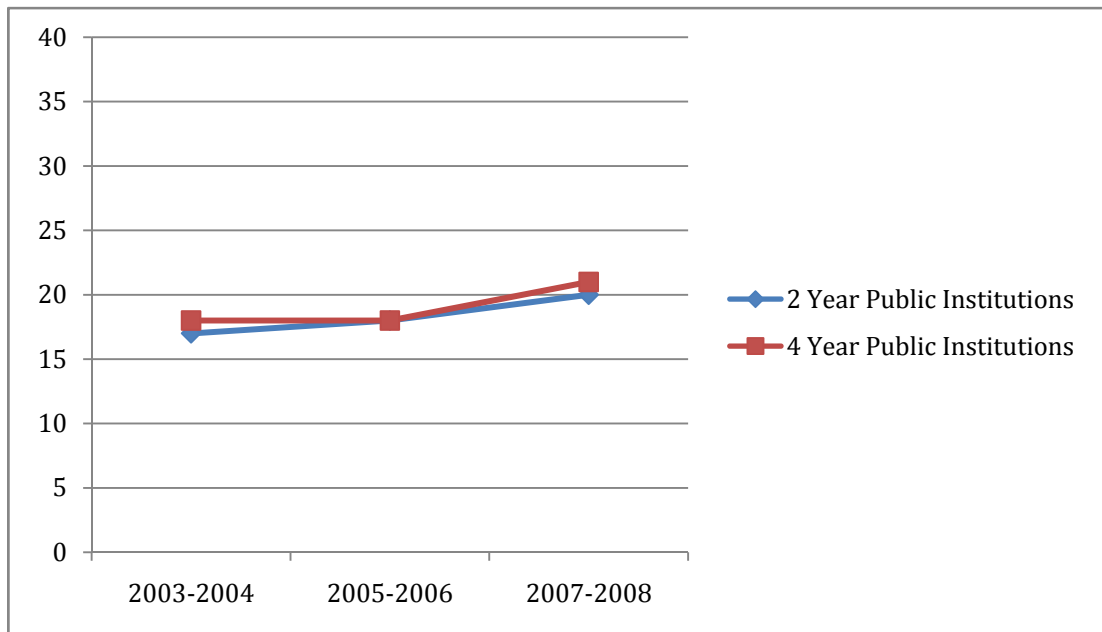
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Texas



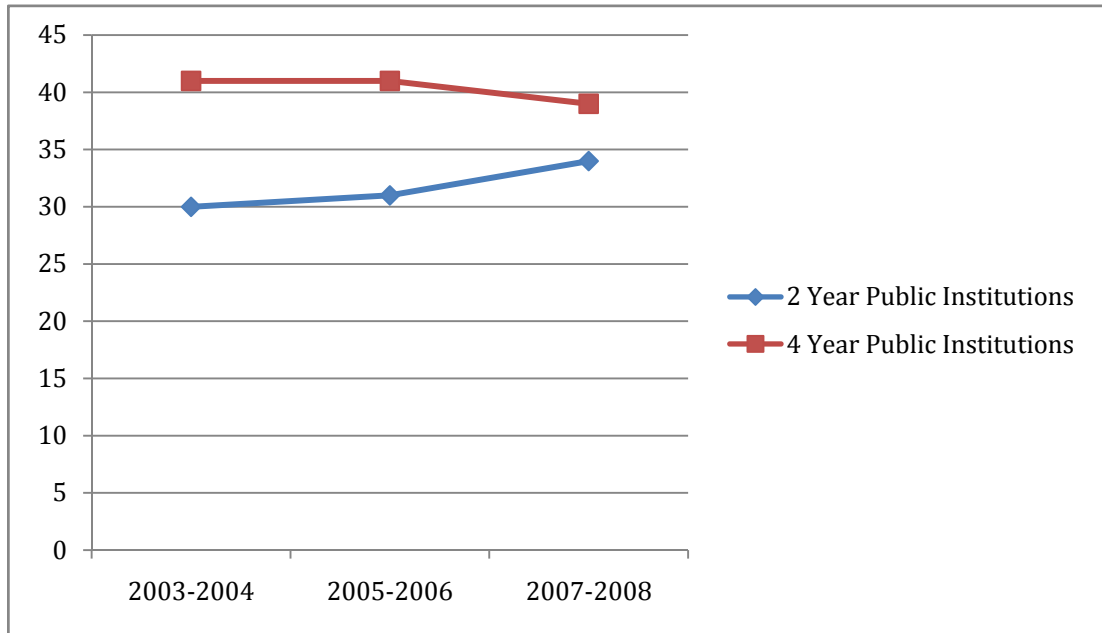
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Utah



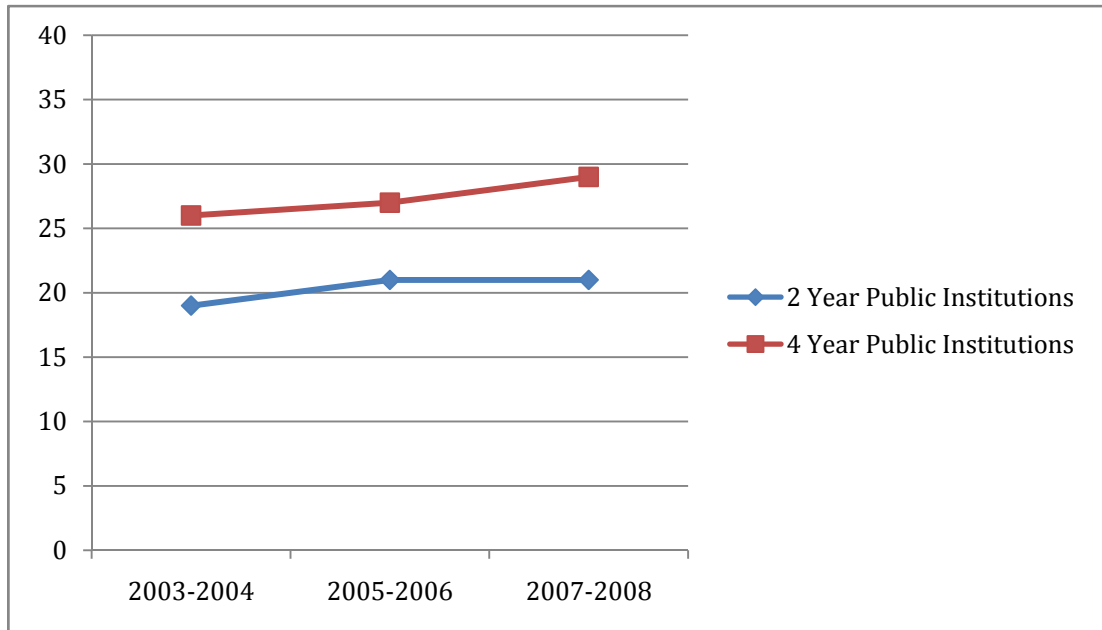
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Vermont



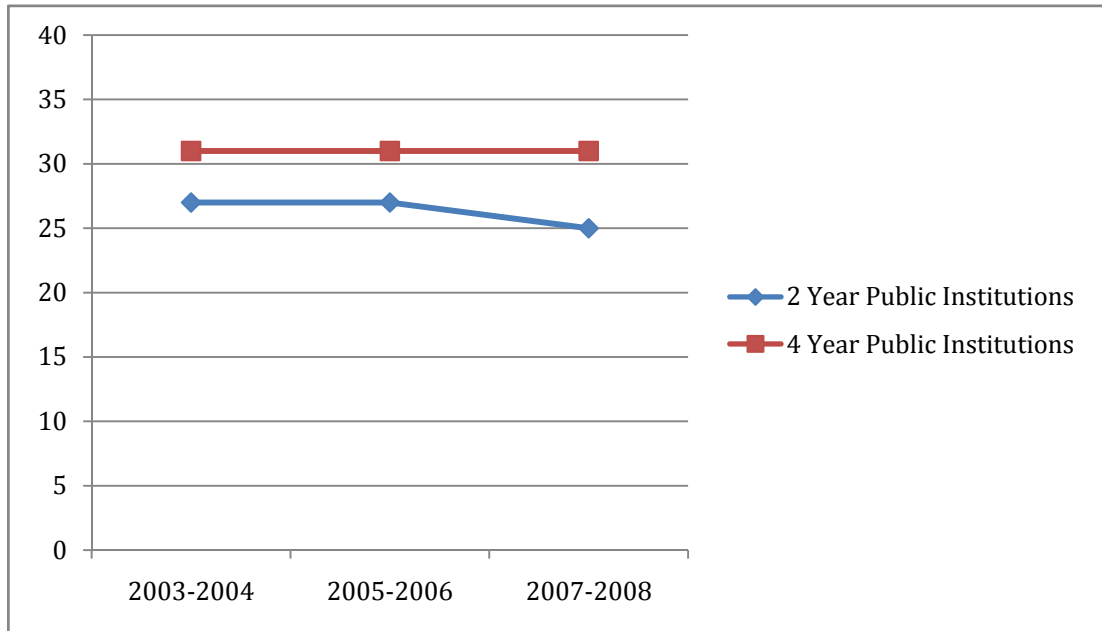
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Virginia



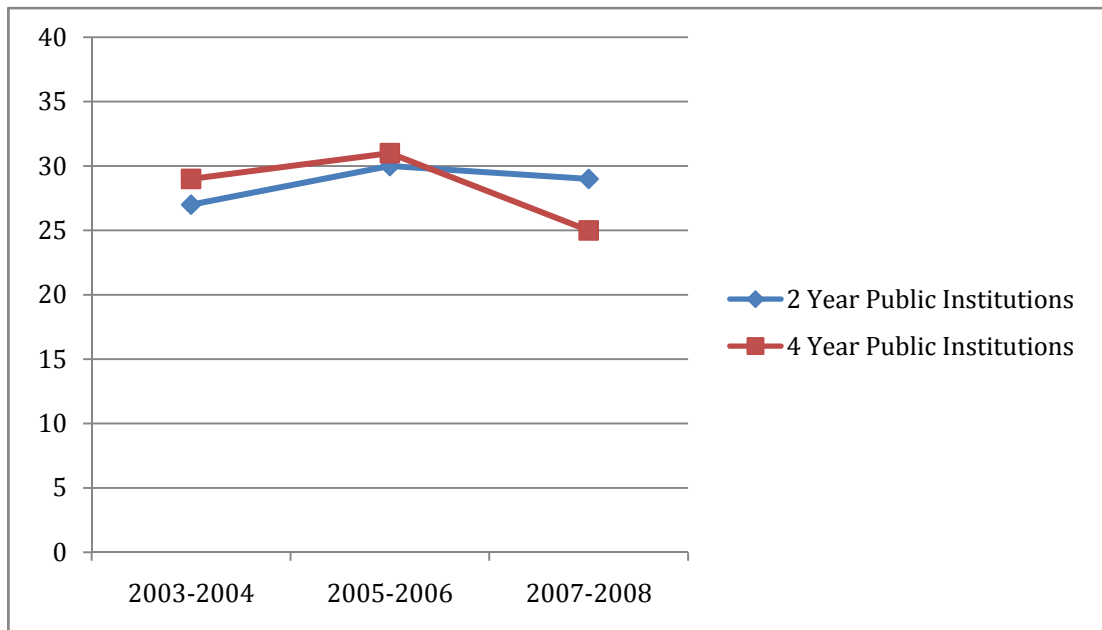
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Washington



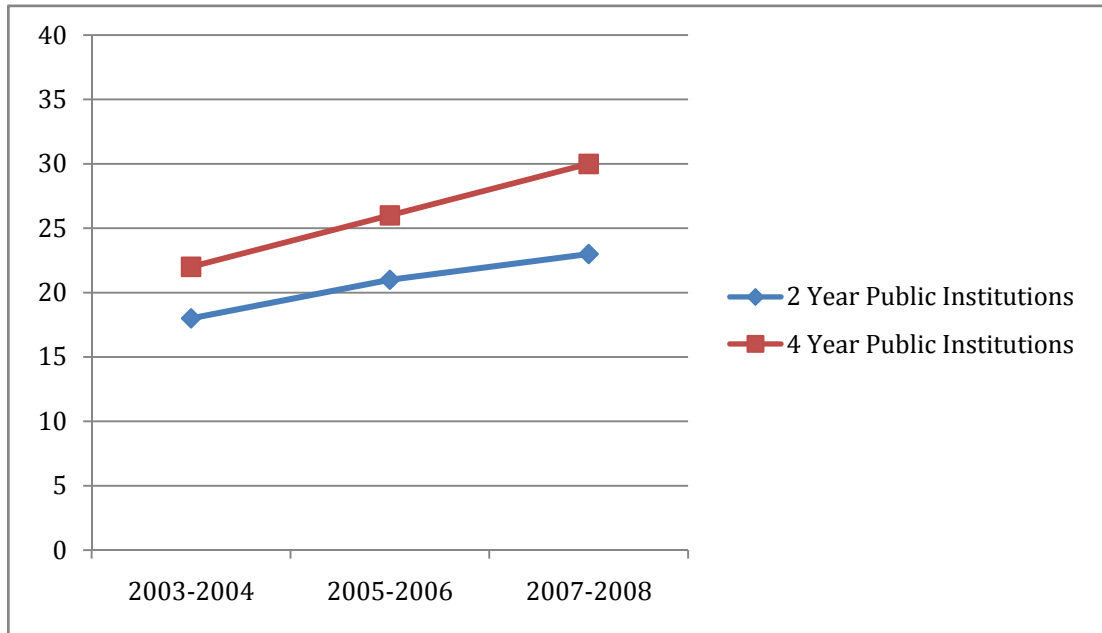
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

West Virginia



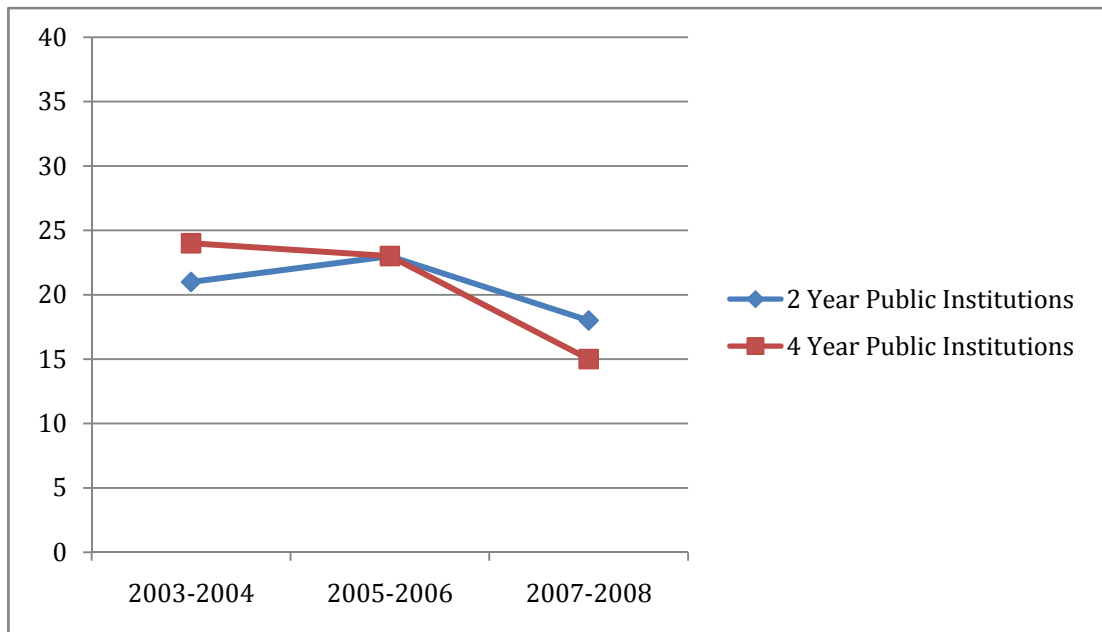
Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Wisconsin



Source: Measuring Up 2000, 2002, 2004, 2006, 2008

Wyoming

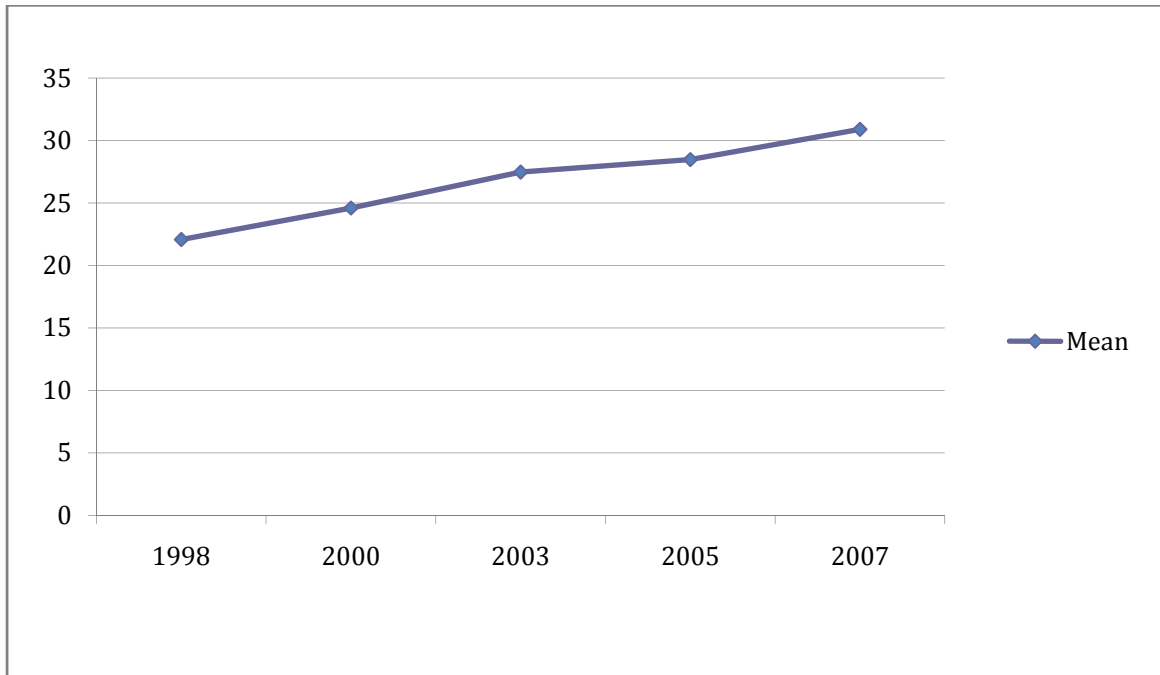


Source: Measuring Up 2000, 2002, 2004, 2006, 2008

APPENDIX H
NATIONAL AVERAGES FOR PREPARATION VARIABLES

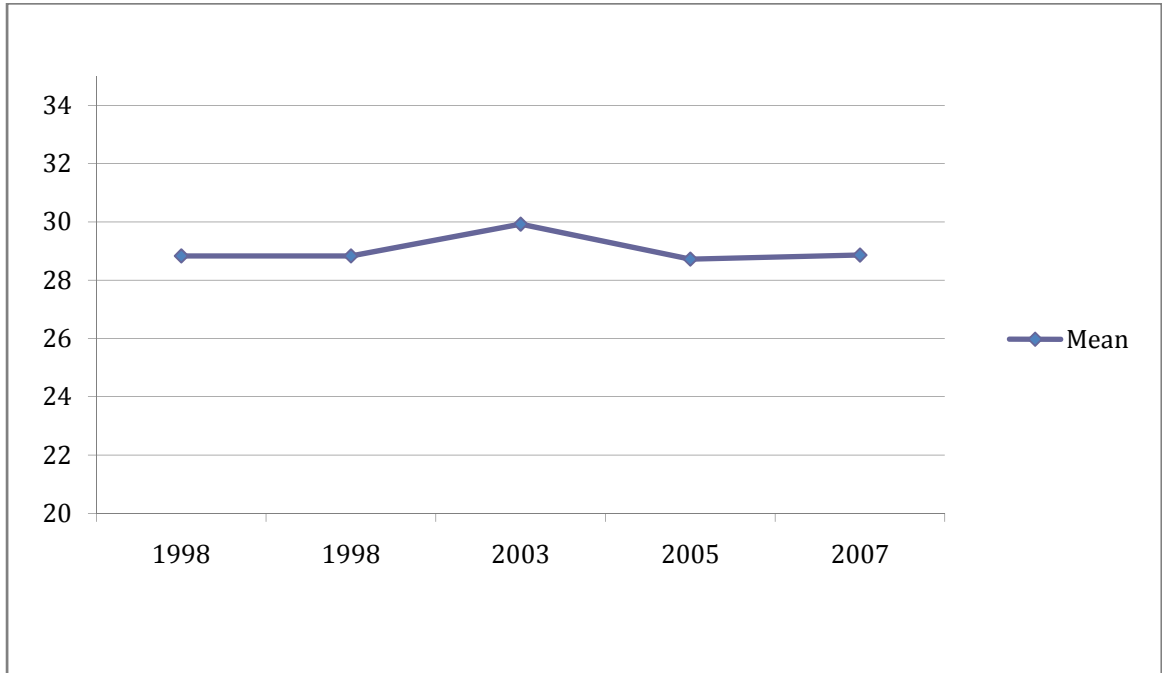
Percentage of 8th Graders at or above Proficient Level on National Math Assessments

Measuring Up Report Year	Year Captured	Mean	Valid: 40
2000	1998	22.08	
2002	2000	24.60	
2004	2003	27.48	
2006	2005	28.48	
2008	2007	30.90	



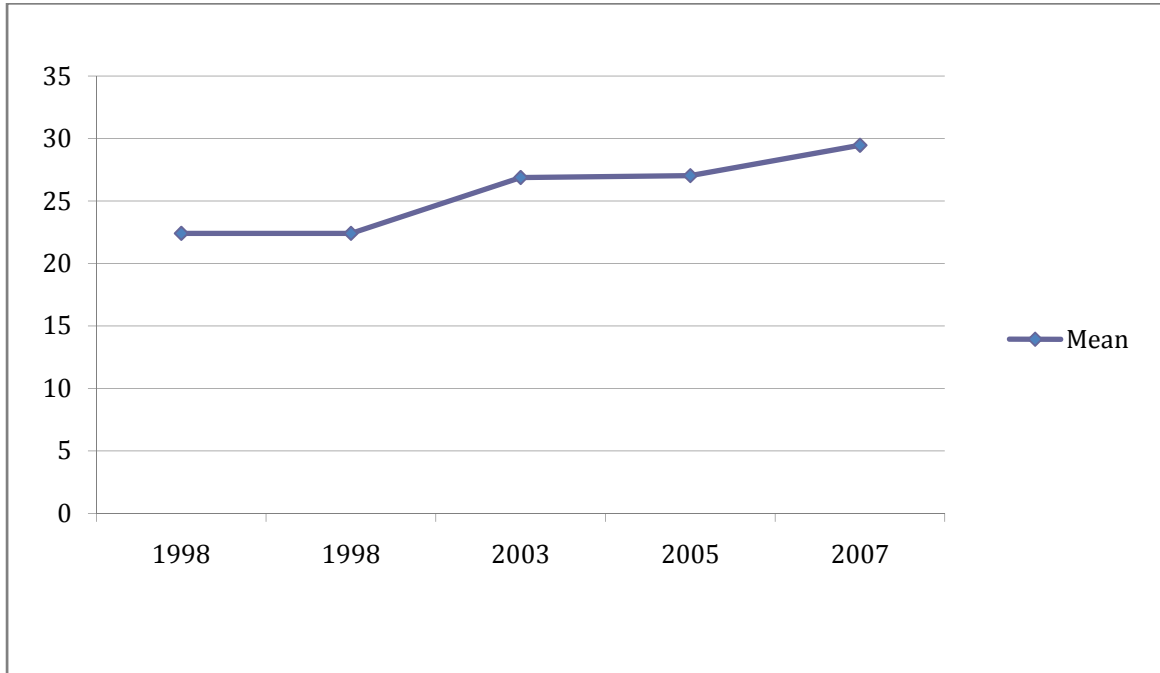
Percentage of 8th Graders at or above Proficient Level on National Reading Assessments

Measuring Up Report Year	Year Captured	Mean	Valid: 36
2000	1998	28.83	
2002	1998	28.83	
2004	2003	29.92	
2006	2005	28.72	
2008	2007	28.86	



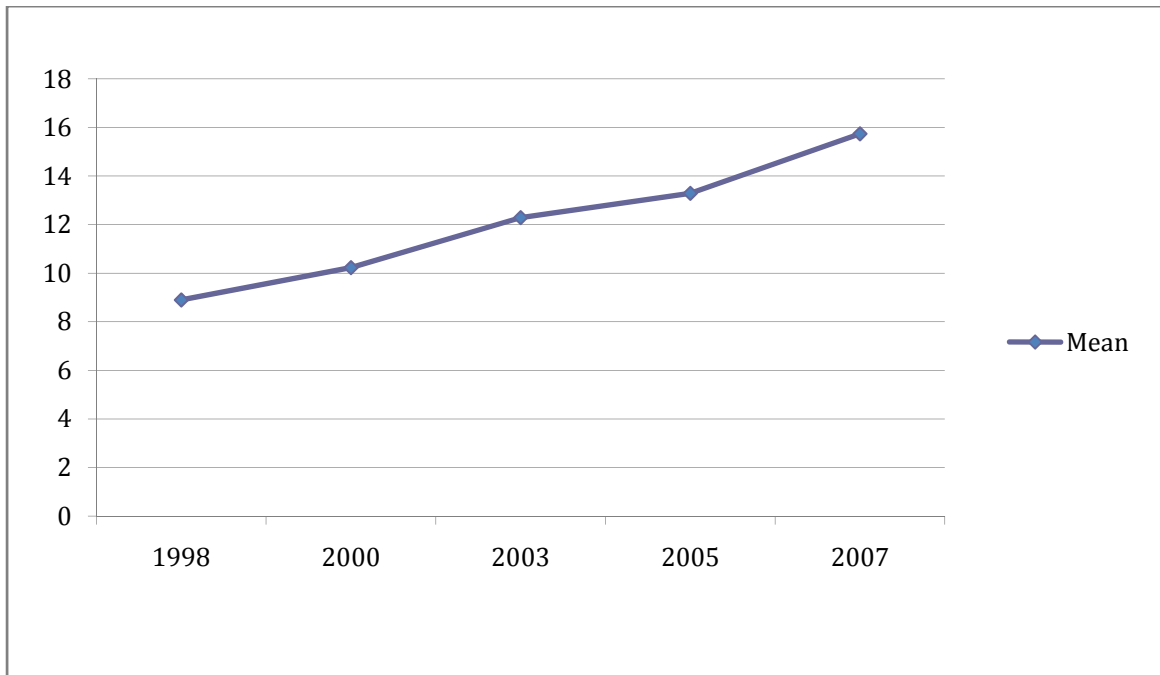
Percentage of 8th Graders at or above Proficient Level on National Writing Assessments

Measuring Up Report Year	Year Captured	Mean	Valid: 36
2000	1998	22.41	
2002	1998	22.41	
2004	2003	26.88	
2006	2005	27.03	
2008	2007	29.46	



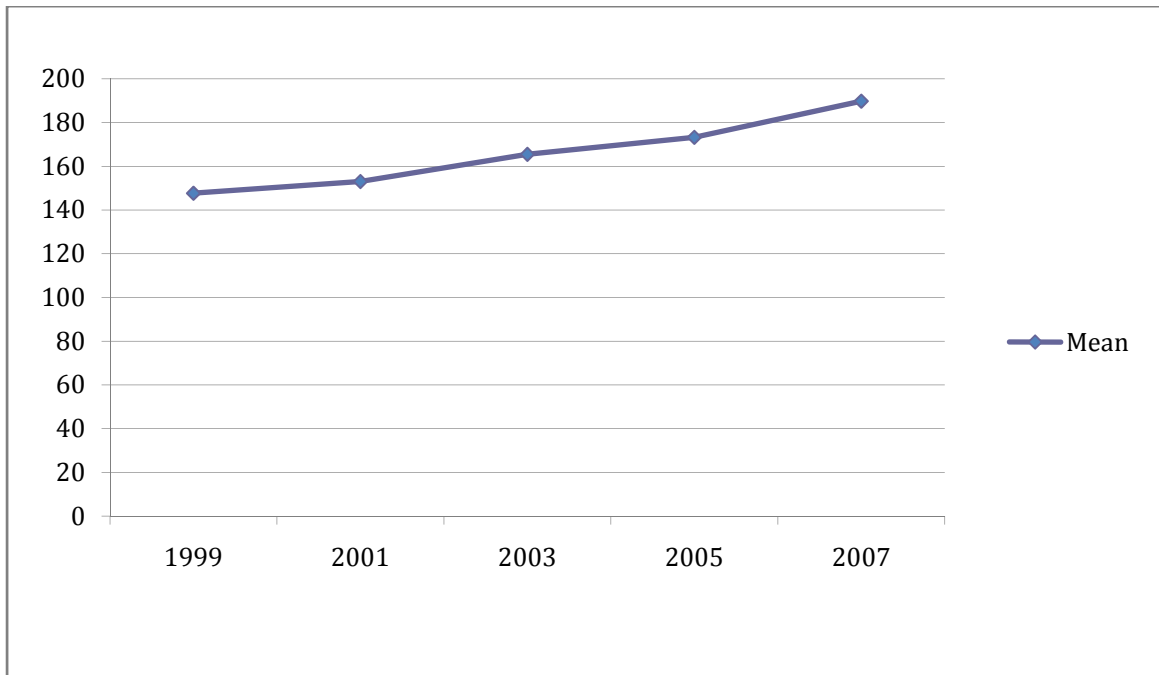
Percentage of Low Income 8th Graders at or above Proficient Level on National Math Assessments

Measuring Up Report Year	Year Captured	Mean	Valid: 36
2000	1998	8.9	
2002	2000	10.23	
2004	2003	12.29	
2006	2005	13.29	
2008	2007	15.74	



Number of Students with SAT/ACT Scores in the Top Twenty Percent Per One
Thousand High School Graduates

Measuring Up Report Year	Year Captured	Mean	Valid: 36
2000	1999	147.70	
2002	2001	153.08	
2004	2003	165.52	
2006	2005	173.28	
2008	2007	189.82	



APPENDIX I
STATE REFORMS

Table 29: State Reforms

STATE	STATE REFORM 1- Accelerated Learning Options	STATE REFORM 2- Curriculum Alignment	STATE REFORM 3- College Outreach Programs
ALABAMA			
ALASKA			
ARIZONA	X		X
ARKANSAS	X	X	X
CALIFORNIA	X	X	X
COLORADO	X	X	X
CONNECTICUT	X		X
DELAWARE			
FLORIDA	X		X
GEORGIA	X	X	X
HAWAII	X	X	X
IDAHO	X	X	
ILLINOIS	X	X	
INDIANA		X	X
IOWA	X	X	
KANSAS	X		
KENTUCKY	X		X
LOUISIANA	X		
MAINE	X		X
MARYLAND	X		
MASSACHUSETTS	X	X	
MICHIGAN	X	X	
MINNESOTA	X	X	X
MISSISSIPPI	X	X	
MISSOURI	X		X
MONTANA	X	X	
NEBRASKA	X	X	
NEVADA	X		
NEW HAMPSHIRE	X		
NEW JERSEY	X		
NEW MEXICO	X	X	
NEW YORK			X
NORTH CAROLINA	X		X
NORTH DAKOTA	X	X	
OHIO	X	X	X
OKLAHOMA	X		X
OREGON	X	X	
PENNSYLVANIA			
RHODE ISLAND	X		X
SOUTH CAROLINA	X		
SOUTH DAKOTA	X		X
TENNESSEE	X		X
TEXAS	X	X	X
UTAH	X	X	
VERMONT			
VIRGINIA	X		X
WASHINGTON	X	X	X
WEST VIRGINIA	X	X	X
WISCONSIN	X		X
WYOMING	X		

APPENDIX J
DIFFERENCE SCORES

Table 30: Difference Scores for the Percentage of 8th Grade Students at or Above Proficient Level on National Math Assessments

STATE	TOTAL DIFFERENCE	POST NCLB DIFFERENCE
ALABAMA	6	2
ALASKA	2	2
ARIZONA	8	5
ARKANSAS	11	5
CALIFORNIA	7	2
COLORADO	12	3
CONNECTICUT	4	0
DELAWARE	12	5
FLORIDA	10	4
GEORGIA	9	3
HAWAII	5	4
IDAHO	-	6
ILLINOIS	-	2
INDIANA	11	4
IOWA	3	2
KANSAS	-	6
KENTUCKY	11	3
LOUISIANA	12	2
MAINE	3	5
MARYLAND	13	7
MASSACHUSETTS	23	13
MICHIGAN	1	1
MINNESOTA	8	-1
MISSISSIPPI	7	2
MISSOURI	8	2
MONTANA	5	3
NEBRASKA	4	3
NEVADA	-	3
NEW HAMPSHIRE	-	3
NEW JERSEY	-	7
NEW MEXICO	3	2
NEW YORK	8	-2
NORTH CAROLINA	14	2
NORTH DAKOTA	8	11
OHIO	-	5
OKLAHOMA	-	1
OREGON	9	3
PENNSYLVANIA	-	8
RHODE ISLAND	4	0
SOUTH CAROLINA	18	6
SOUTH DAKOTA	-	4
TENNESSEE	8	2
TEXAS	14	10
UTAH	8	1
VERMONT	14	6
VIRGINIA	16	6
WASHINGTON	10	4
WEST VIRGINIA	5	-1
WISCONSIN	5	2
WYOMING	14	4

Table 31: Difference Scores for the Percentage of 8th Grade Students at or Above Proficient Level on National Reading Assessments

STATE	TOTAL DIFFERENCE	POST NCLB DIFFERENCE
ALABAMA	0	-1
ALASKA	-	0
ARIZONA	-4	-1
ARKANSAS	2	-2
CALIFORNIA	-1	-1
COLORADO	5	-1
CONNECTICUT	-5	0
DELAWARE	6	0
FLORIDA	5	1
GEORGIA	1	0
HAWAII	1	-2
IDAHO	-	0
ILLINOIS	-	-5
INDIANA	-	-2
IOWA	-	0
KANSAS	0	0
KENTUCKY	-1	-6
LOUISIANA	1	-3
MAINE	-5	0
MARYLAND	2	2
MASSACHUSETTS	7	0
MICHIGAN	-	-4
MINNESOTA	0	0
MISSISSIPPI	-2	-4
MISSOURI	2	-3
MONTANA	1	2
NEBRASKA	-	0
NEVADA	-2	1
NEW HAMPSHIRE	-	-3
NEW JERSEY	-	2
NEW MEXICO	-7	-3
NEW YORK	-2	-3
NORTH CAROLINA	-3	-1
NORTH DAKOTA	-	-6
OHIO	-	2
OKLAHOMA	-3	-4
OREGON	1	1
PENNSYLVANIA	-	4
RHODE ISLAND	-3	-3
SOUTH CAROLINA	3	1
SOUTH DAKOTA	-	-2
TENNESSEE	0	0
TEXAS	0	2
UTAH	-1	-2
VERMONT	-	3
VIRGINIA	1	-2
WASHINGTON	2	1
WEST VIRGINIA	-4	-2
WISCONSIN	0	-4
WYOMING	4	1

Table 32: Difference Scores for the Percentage of 8th Grade Students at or Above Proficient Level on National Writing Assessments

STATE	TOTAL DIFFERENCE	POST NCLB DIFFERENCE
ALABAMA	7	4
ALASKA	-	-
ARIZONA	2	3
ARKANSAS	14	8
CALIFORNIA	5	2
COLORADO	11	11
CONNECTICUT	9	8
DELAWARE	12	-1
FLORIDA	17	4
GEORGIA	6	4
HAWAII	5	2
IDAHO	-	0
ILLINOIS	-	-
INDIANA	-	4
IOWA	-	-
KANSAS	-	1
KENTUCKY	5	1
LOUISIANA	5	-1
MAINE	6	2
MARYLAND	12	0
MASSACHUSETTS	15	4
MICHIGAN	-	3
MINNESOTA	7	7
MISSISSIPPI	4	2
MISSOURI	9	-1
MONTANA	8	4
NEBRASKA	-	0
NEVADA	4	5
NEW HAMPSHIRE	-	-
NEW JERSEY	-	-
NEW MEXICO	-1	-1
NEW YORK	10	1
NORTH CAROLINA	2	-5
NORTH DAKOTA	-	3
OHIO	-	-6
OKLAHOMA	1	-1
OREGON	6	0
PENNSYLVANIA	-	4
RHODE ISLAND	7	3
SOUTH CAROLINA	8	3
SOUTH DAKOTA	-	-
TENNESSEE	6	6
TEXAS	-5	-5
UTAH	10	8
VERMONT	-	-1
VIRGINIA	4	-1
WASHINGTON	10	1
WEST VIRGINIA	4	1
WISCONSIN	8	-
WYOMING	11	6

Table 33: Difference Scores for the Percentage of 8th Grade Students at or Above Proficient Level on National Math Assessments

STATE	TOTAL DIFFERENCE	POST NCLB DIFFERENCE
ALABAMA	4	-1
ALASKA	-	4
ARIZONA	5	4
ARKANSAS	-	2
CALIFORNIA	7	3
COLORADO	6	4
CONNECTICUT	1	-2
DELAWARE	10	6
FLORIDA	10	5
GEORGIA	9	4
HAWAII	6	5
IDAHO	-	5
ILLINOIS	-	3
INDIANA	12	4
IOWA	-	5
KANSAS	-	4
KENTUCKY	11	4
LOUISIANA	8	3
MAINE	3	5
MARYLAND	9	5
MASSACHUSETTS	18	12
MICHIGAN	-	1
MINNESOTA	2	-2
MISSISSIPPI	5	2
MISSOURI	7	3
MONTANA	-	-1
NEBRASKA	-2	2
NEVADA	-	3
NEW HAMPSHIRE	-	1
NEW JERSEY	-	7
NEW MEXICO	2	2
NEW YORK	-	3
NORTH CAROLINA	11	3
NORTH DAKOTA	7	6
OHIO	-	5
OKLAHOMA	-	3
OREGON	8	3
PENNSYLVANIA	-	9
RHODE ISLAND	2	2
SOUTH CAROLINA	-	6
SOUTH DAKOTA	-	2
TENNESSEE	7	3
TEXAS	15	9
UTAH	2	1
VERMONT	-	8
VIRGINIA	10	4
WASHINGTON	7	3
WEST VIRGINIA	4	0
WISCONSIN	-	6
WYOMING	6	5

Table 34: Difference Scores for the Number of Students with SAT/ACT Scores in the Top Twenty Percent per One Thousand High School Graduates

STATE	TOTAL DIFFERENCE	POST NCLB DIFFERENCE
ALABAMA	48	36
ALASKA	-19	-17
ARIZONA	-29	-18
ARKANSAS	49	39
CALIFORNIA	28	14
COLORADO	101	55
CONNECTICUT	75	36
DELAWARE	13	6
FLORIDA	28	6
GEORGIA	73	33
HAWAII	29	3
IDAHO	38	33
ILLINOIS	64	44
INDIANA	32	11
IOWA	21	24
KANSAS	56	50
KENTUCKY	61	46
LOUISIANA	59	51
MAINE	21	-5
MARYLAND	42	12
MASSACHUSETTS	-17	-68
MICHIGAN	44	36
MINNESOTA	76	64
MISSISSIPPI	37	28
MISSOURI	37	32
MONTANA	56	33
NEBRASKA	53	51
NEVADA	6	-34
NEW HAMPSHIRE	59	23
NEW JERSEY	28	-1
NEW MEXICO	29	33
NEW YORK	52	17
NORTH CAROLINA	32	-3
NORTH DAKOTA	44	40
OHIO	59	38
OKLAHOMA	32	27
OREGON	34	15
PENNSYLVANIA	23	2
RHODE ISLAND	15	3
SOUTH CAROLINA	63	20
SOUTH DAKOTA	101	83
TENNESSEE	86	41
TEXAS	18	14
UTAH	53	48
VERMONT	72	49
VIRGINIA	53	18
WASHINGTON	13	4
WEST VIRGINIA	43	33
WISCONSIN	38	39
WYOMING	77	71

Table 35: Difference Scores for the Percentage of High School Graduates Who Immediately Enter College

STATE	TOTAL DIFFERENCE
ALABAMA	4
ALASKA	2
ARIZONA	2
ARKANSAS	6
CALIFORNIA	-7
COLORADO	6
CONNECTICUT	10
DELAWARE	1
FLORIDA	3
GEORGIA	7
HAWAII	-6
IDAHO	-1
ILLINOIS	-4
INDIANA	3
IOWA	-3
KANSAS	2
KENTUCKY	8
LOUISIANA	7
MAINE	10
MARYLAND	5
MASSACHUSETTS	0
MICHIGAN	2
MINNESOTA	12
MISSISSIPPI	9
MISSOURI	8
MONTANA	0
NEBRASKA	2
NEVADA	1
NEW HAMPSHIRE	8
NEW JERSEY	3
NEW MEXICO	9
NEW YORK	0
NORTH CAROLINA	9
NORTH DAKOTA	-6
OHIO	6
OKLAHOMA	9
OREGON	-1
PENNSYLVANIA	6
RHODE ISLAND	-6
SOUTH CAROLINA	4
SOUTH DAKOTA	14
TENNESSEE	9
TEXAS	3
UTAH	-4
VERMONT	2
VIRGINIA	5
WASHINGTON	-9
WEST VIRGINIA	4
WISCONSIN	4
WYOMING	2

Table 36: Difference Scores for the Percentage of 18-24 Year Olds Enrolled in College

STATE	TOTAL DIFFERENCE	POST NCLB DIFFERENCE
ALABAMA	2	0
ALASKA	-12	-11
ARIZONA	11	6
ARKANSAS	6	1
CALIFORNIA	-3	-5
COLORADO	6	1
CONNECTICUT	-9	-9
DELAWARE	10	1
FLORIDA	3	1
GEORGIA	3	-1
HAWAII	-7	-6
IDAHO	4	5
ILLINOIS	-2	-2
INDIANA	3	7
IOWA	10	9
KANSAS	1	1
KENTUCKY	4	3
LOUISIANA	-2	1
MAINE	0	1
MARYLAND	-10	-5
MASSACHUSETTS	3	5
MICHIGAN	-3	-5
MINNESOTA	2	0
MISSISSIPPI	0	3
MISSOURI	5	2
MONTANA	-3	-1
NEBRASKA	-1	2
NEVADA	7	4
NEW HAMPSHIRE	0	4
NEW JERSEY	-9	-8
NEW MEXICO	-5	-4
NEW YORK	-1	-6
NORTH CAROLINA	1	3
NORTH DAKOTA	-5	-3
OHIO	0	-1
OKLAHOMA	1	5
OREGON	7	-5
PENNSYLVANIA	2	3
RHODE ISLAND	14	9
SOUTH CAROLINA	2	-4
SOUTH DAKOTA	-1	-4
TENNESSEE	5	-1
TEXAS	0	0
UTAH	1	0
VERMONT	15	11
VIRGINIA	1	1
WASHINGTON	-3	-4
WEST VIRGINIA	3	8
WISCONSIN	-2	3
WYOMING	5	3

Table 37: Difference Scores for the Percentage of Students Who Complete High School

STATE	TOTAL DIFFERENCE	POST NCLB DIFFERENCE
ALABAMA	1	1
ALASKA	0	0
ARIZONA	6	1
ARKANSAS	4	3
CALIFORNIA	5	-1
COLORADO	1	1
CONNECTICUT	0	0
DELAWARE	-4	3
FLORIDA	2	2
GEORGIA	-1	-2
HAWAII	2	1
IDAHO	3	2
ILLINOIS	2	2
INDIANA	-2	-2
IOWA	5	3
KANSAS	-1	3
KENTUCKY	2	0
LOUISIANA	1	-3
MAINE	0	1
MARYLAND	-4	3
MASSACHUSETTS	1	1
MICHIGAN	-2	-1
MINNESOTA	2	0
MISSISSIPPI	1	3
MISSOURI	-2	0
MONTANA	-4	-8
NEBRASKA	0	1
NEVADA	7	3
NEW HAMPSHIRE	3	3
NEW JERSEY	0	1
NEW MEXICO	5	2
NEW YORK	4	2
NORTH CAROLINA	2	2
NORTH DAKOTA	2	2
OHIO	0	4
OKLAHOMA	0	0
OREGON	11	0
PENNSYLVANIA	3	2
RHODE ISLAND	6	1
SOUTH CAROLINA	-2	-2
SOUTH DAKOTA	-2	-4
TENNESSEE	1	4
TEXAS	4	0
UTAH	0	3
VERMONT	3	6
VIRGINIA	5	4
WASHINGTON	1	1
WEST VIRGINIA	1	3
WISCONSIN	-1	-1
WYOMING	3	0

Table 38: Difference Scores for the Percentage of Family Income Needed to Pay for Two-Year Public Institutions

STATE	POST NCLB DIFFERENCE
ALABAMA	1
ALASKA	3
ARIZONA	-3
ARKANSAS	-4
CALIFORNIA	1
COLORADO	2
CONNECTICUT	3
DELAWARE	5
FLORIDA	0
GEORGIA	-1
HAWAII	3
IDAHO	2
ILLINOIS	3
INDIANA	0
IOWA	4
KANSAS	0
KENTUCKY	0
LOUISIANA	1
MAINE	1
MARYLAND	1
MASSACHUSETTS	4
MICHIGAN	1
MINNESOTA	6
MISSISSIPPI	-2
MISSOURI	4
MONTANA	-5
NEBRASKA	3
NEVADA	2
NEW HAMPSHIRE	7
NEW JERSEY	3
NEW MEXICO	-3
NEW YORK	-1
NORTH CAROLINA	1
NORTH DAKOTA	5
OHIO	3
OKLAHOMA	0
OREGON	1
PENNSYLVANIA	6
RHODE ISLAND	4
SOUTH CAROLINA	-4
SOUTH DAKOTA	7
TENNESSEE	-1
TEXAS	0
UTAH	3
VERMONT	4
VIRGINIA	2
WASHINGTON	-2
WEST VIRGINIA	2
WISCONSIN	5
WYOMING	-3

Table 39: Difference Scores for the Percentage of Family Income Needed to Pay for Four-Year Public Institutions

STATE	POST NCLB DIFFERENCE
ALABAMA	7
ALASKA	4
ARIZONA	-6
ARKANSAS	-6
CALIFORNIA	-4
COLORADO	6
CONNECTICUT	0
DELAWARE	7
FLORIDA	-7
GEORGIA	-9
HAWAII	4
IDAHO	2
ILLINOIS	5
INDIANA	1
IOWA	5
KANSAS	5
KENTUCKY	6
LOUISIANA	-9
MAINE	2
MARYLAND	-4
MASSACHUSETTS	1
MICHIGAN	2
MINNESOTA	7
MISSISSIPPI	-3
MISSOURI	2
MONTANA	1
NEBRASKA	3
NEVADA	0
NEW HAMPSHIRE	4
NEW JERSEY	0
NEW MEXICO	-6
NEW YORK	-5
NORTH CAROLINA	-2
NORTH DAKOTA	9
OHIO	3
OKLAHOMA	2
OREGON	2
PENNSYLVANIA	6
RHODE ISLAND	1
SOUTH CAROLINA	-7
SOUTH DAKOTA	-1
TENNESSEE	-14
TEXAS	0
UTAH	3
VERMONT	-2
VIRGINIA	3
WASHINGTON	0
WEST VIRGINIA	-4
WISCONSIN	8
WYOMING	-9

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