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5-1-2007

# The Impact of Standardized Testing on Student Performance in the United States

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There has been a strong movement in recent years to use curriculum standards as a basis for assessing student performance in the United States. There has also been a high demand by legislators and citizens at large for higher test scores and better school performance due to the enactment of The No Child Left Behind Act of 2001, or No Child Left Behind (NCLB) This thesis will examine and synthesize the evidence both for and against this legislation. This paper will answer the question: Has the No Child Left Behind Act and the initiatives mandated in this act improved student performance across the United States especially in inner city and rural areas across the nation?

Education in the United States has continually evolved from the beginning of the public school movement of the early 1990's until now. In 1990, prior to the No Child Left Behind Act, the New Standards Project was the first of many professional organizations and committees created to develop standards in education. There were both content and performance standards created in many subject areas for each grade level, K-12. Content standards are "documents that define what students should know and be able to do in given subject areas" (Floden, R.E. (ed). (2004). Content standards were organized and implemented more generally on a national level, and more specifically in each state. Performance Standards are standards that "tell how good is good enough--that is, how well the student has to perform to achieve or exceed the standard" (Rhode Island Department of Education, 2006). Many committees, such as the New Standards Project (1990), a joint venture between The Learning Research and Development Center of the University of Pittsburgh and the National Center on Education and the Economy were established to develop these standards and many reports were published outlining the findings and creations of those committees. Already existing organizations such as the National Council of Teachers of Mathematics were also involved in the creation of these content standards.

Currently in the United States there is no national curriculum that each state follows as there is in other countries such as England and Ireland. Rather, each state has been required to develop curriculum frameworks, standards, or grade span/level expectations. For example, Rhode Island has K-12 continuums in Reading, Mathematics, and Written and Oral Communications. These continuums outline developmental learning for that subject from kindergarten through grade 12. Rhode Island also has Grade Level Expectations for kindergarten though grade eight and Grade Span Expectations for high school which describe what a student should know and be able to do in relation to curriculum, instruction, and assessment. (Rhode Island Department of Education, 2006) This means that each state has its own standards to which it can hold students attending its educational institutes, and these standards many differ from those of other states across the nation. While many states may have a similar curriculum outline, the fact that curriculum is defined and created at a state level allows for many discrepancies across the nation.

Prior to the conception and implementation of No Child Left Behind in 2001, there had been other national policies and legislations put into place. With the publication of the results of the report, *A Nation at Risk*, by the National Commission on Excellence in Education in April of 1983, a movement towards standards-based education in the U.S. was put into motion. *A Nation at Risk* brought to light the fact the America's students were falling behind the international average, and that something had to be done to improve the quality of education in the United States. The analyses that the report completed found that in other industrialized nations, left unnamed, schools introduced courses on advanced math and science concepts at grade six, and required their students to take them. In the U.S., the amount of time spent on these two subjects was three times less than the instructional time devoted to these subjects in the other countries.

The report also found that not enough experienced teachers and professionals were involved in writing textbooks. Textbooks were even being "written down" to lower and lower reading levels. The movement suggested that "We must emphasize that the variety of student aspirations, abilities, and preparation requires that appropriate content be available to satisfy diverse needs" (National Commission on Excellence in Education, 1999). The statement goes on to list specific recommendations for specific standards in content areas such as English, Mathematics, Science, Social Studies, Computer Science and Foreign Languages. This was the beginning of the movement towards standards-based education. (National Commission on Excellence in Education, 1999)

In 1989, the governors of all fifty states and President George H. W. Bush met at the Education Summit at the University of Virginia in Charlottesville, Virginia to discuss national education goals. In 1990, the President decided to adopt National Education Goals for the year 2000.

There were six goals: 1.) ready to learn

2.) school completion

3.) student achievement and citizenship

4.) mathematics and science

5.) adult literacy and lifelong learning

6.) a safe and disciplined alcohol and drug-free schools.

The plan designed to carry out these goals specified that schools nationwide would have met these goals by the year 2000. President George H.W. Bush announced these goals to the world in his state of the union speech on January 31st, 1990. (Mid-content Research for Education and Learning, 2007)

Annual National Education Goals Reports were published by the National Education Goals Panel to assess how well America was meeting this new mandate. In the 1993 report (the third annual), it was stated that the progress that had been made in our schools so far was not adequate to meet the National Education Goals. The panel found that the percentage of students in grades four and eight who met the mathematics performance standards set by the Goal Panel did increase, but was still much too low. The report supported nation-wide standards and believed that meeting theses standards would allow American education to reach its full potential. (United States Department of Education, 1993)

The Learning Research and Development Center of the University of Pittsburgh joined forces with the National Center for Education and the Economy in 1990 to create the New Standards Project. The project's mission was to create a system of standards to measure student performance in several areas. The project released a draft containing three volumes in 1995 that outlined performance standards for English language arts, mathematics, and science. (Mid-content Research for Education and Learning, 2007)

Another organization that was instrumental in promoting the creation of content standards on a national level was the National Council on Education Standards and Testing. This council was established by congress at the request of the Secretary of Education, Lamar Alexander in June of 1991. (Mid-content Research for Education and Learning, 2007) Its purpose was to reach a consensus on the use of national testing and standards, and to decide what standards to select for the nation. The council was the next step in actually creating content standards. The NCEST was made up "largely of educators, along with representatives from the policy and business communities". The NCEST released a report in 1992 stating their findings on content standards and national assessment. It found that the implementation of "content and

performance standards alone would not change students achievement and teacher performance unless they were part of a coherent and systematic approach to improving instruction" (United States Department of Education, 1993).

Throughout the entire year of 1992, different committees were created to develop standards in specific content areas. The National Council for Social Studies created a task force to develop standards in that content area. Funding was given to the National History Standards Project from the U.S. Department of Education and the National Endowment for the Humanities, as well as the Consortium of National Arts Education and the Center for Civic Education. Standards for physical education were begun by the National Association for Sport and Physical Education. The committee for National Health Education Standards gained funding from the American Cancer Society, and the Geography Standards Education Project put out a first draft of standards for geography. (Mid-content Research for Education and Learning, 2007)

Also, three large professional organizations; the National Council of Teachers of English, the International Reading Association, and the Center for the Study of Reading at the University of Illinois were rewarded with funding from the Bush administration to create standards in English. In 1993, the National Standards in Foreign Language Project was granted federal funding to begin the development of new standards. Also in that year, the U.S. Department of Education and the National Science Foundation granted funds to the National Research Council to create the National Committee on Science Education Standards and Assessment, which would develop standards in science for content, teaching, and assessment. (Mid-content Research for Education and Learning, 2007).

One of the most famous organizations to change and update curriculum was the NCTM, National Council of Teachers of Mathematics. In the year 2000, NCTM published Principles

and Standards for School Mathematics, a guideline for mathematics education and a call to challenge students. The standards are available online, as well as in print. NCTM also offers valuable resources to teachers and administrators, such as five professional journals, grant money, and professional development opportunities. (National Council of Teachers of Mathematics, 2007) In 2000, technology standards were also published by two different organizations. The International Technology Association published *Standards for Technological Literacy: Content for the Study of Technology*, and the International Society for Technology in Education published *National Educational Technology Standards for Students: Connecting Curriculum and Technology*. (Mid-content Research for Education and Learning, 2007)

Then in the fall of 1999, The National Education Summit met. The first meeting was held in 1989, when former President George H. W. Bush convened the group and called for national standards. (Beirbaur, 1996) The members agreed that there were three major challenges facing U.S. schools;

1.) improving educator quality
2.) helping all students reach high standards
3.) strengthening accountability (Mid-content Research for Education and Learning, 2007)

Again on a national level, educational movements were revised and re-implemented. As the national administration moved from a Republican to a Democratic leader, President Clinton introduced Goals 2000: The Educate America Act, which was an act he signed into law in 1994. This law was basically a revised edition of the National Education Goals proposed by President H.W. Bush in 1990, but President Clinton added two new goals to this act, teacher quality and parental involvement, now making eight national education goals. (McNergney, R. F., &

McNergney, J.M. (2004) These goals were endorsed by educators, businesses, and parents across the country, and they still influence national education programs today. In a update published by the U.S. Department of Education in October of 1996, it was reported that local and standard educational leaders were uniting to provide a high quality education to all children that will prepare them for productive employment and citizenship, even though Goals 2000: The Educate America Act was still in the first stages of implementation. (United States Department of Education, 1996)

In President Clinton's version of the national education goals, voluntary national testing was recommended. However, these tests were never created or administered to schools across the nation. (Olson, 2005) The Goals 2000: Educate America Act also created the National Education Standards and Improvement Council, whose mission was to certify, or make official, drafts of national and state performance and content standards. (Mid-content Research for Education and Learning, 2007) Throughout the next three or four years, standards were finalized and released from all of the committees and professional organizations that were working to develop them. In the years leading up to the No Child Left Behind Act, standards were continually being revised, new standards created, and then revised again.

No Child Left Behind (NCLB) is a piece of legislation that was first introduced in 2001 by President George W. Bush three days after he was signed into office in January of 2001. He sent the act to Congress and asked them to debate on we could close the achievement gap using the federal role in education. This educational reform was signed into law by President George W. Bush on January 8, 2002. (United States Department of Education, 2006) He had worked with Democratic Congressman George Miller of California and Democratic Senator Ted

Kennedy from Massachusetts to create this bill that passed by 381 votes in the House, and 87 votes in the Senate. (Hess, 2007)

No Child Left Behind reauthorized an earlier piece of legislation called the Elementary and Secondary Education Act (ESEA) of 1965, but includes and expands upon the four principles of President George W. Bush's plans for reform; increased accountability, more choices for both parents and students, greater flexibility for states and school districts, and a stronger emphasis on reading. NCLB increased accountability by strengthening the accountability already in place through Title I. Schools and districts were required to implement accountability systems. Educational standards were kept, and became a measure of accountability. The act provides more choices for parents and students by laying out options for those students attending "low-performing" schools. These students are given the choice to receive tutoring or even attend another school. To ensure flexibility for states, school districts, and schools, the act allows these organizations to have control over half of the funding they receive. The act puts reading first by putting into practice strategies that have been scientifically proven to work.

NCLB also combined the Eisenhower Professional Development and Class Size Reduction programs into the new Teacher Quality State Grants program, which focuses on using scientifically proven methods to train and recruit highly qualified teachers. The act also facilitates the planning and implementation of better programs for English language learners. NCLB also focuses on keeping schools drug-free and safe, and allows students attending dangerous schools the option of transferring. The ESEA was the principal federal law mandating educational practices in the years before the No Child Left Behind Act. (United States Department of Education. (2002a)

The ESEA was created for the purpose of providing monetary grants that would be used to educate low-income students. In the Nation's Report Card Trial Urban District Assessment of Mathematics from 2003, the numbers show that the average score for public schools across the nation was 234. Only one of the nine urban districts that participated in the assessment, Charlotte-Mecklenburg Schools, scored higher than the national average with a 242. (Institute of Education Sciences, 2005) In 1970, it was decided that the funding from ESEA must only be a supplement to other education spending, meaning that the money schools receive from the act should be extra monies, and not their sole source of funding. These were called Title One funds and schools who received these funds were referred to as Title One Schools. Title 1 is the section of the ESEA that provides school systems with extra funding and other resources to help improve instruction and provide minority students with the same opportunities to meet state standards. A few years later, the ESEA decided to allow money from the Title One budget to be used school-wide when at least 75% of a school's population was designated as low-income students based on the most current US census data for that community. Standardized testing became a requirement for the assessment of schools in 1988 due to ESEA. (NCLB timeline 1965-2014, 2006)

The ESEA had many positive effects on education in America, including acting as a catalyst for other education acts such as the Individuals with Disabilities Education Act and the Bilingual Education Act, which champion the rights of students with special needs. The act was authorized through 1970, and then was continually re-authorized every five years, meaning the government voted to continue its use as educational reform until major amendments and name-changes were introduced. (National Education Association, n.d.) In 1994, the ESEA was reinstated and re-named the "Improving America's Schools" Act. In this act the idea of

maintaining adequate yearly progress was introduced. Schools which were not making adequate yearly progress had to be identified by the state through assessment. (NCLB Timeline, 2006)

No Child Left Behind was created by the development and combination of the previous acts and their amendments. This educational reform has been growing and changing both in small details and in drastic measures since the publishing of *A Nation at Risk* in 1983.The act has four commonsense pillars;

1.) expanded flexibility and local control

2.) expanded parental options

3.) an emphasis on implementing what works best based on scientific research

4.) accountability for results. (United States Department of Education. (2002a)

The act consists of seven titles that are performance-based. The purpose of Title I, *improving the academic performance of disadvantaged students*, is to ensure that all students are given the opportunity to receive a high quality education and reach proficiency on state standards and exams. It is the largest federal program funding elementary and secondary education, which can be used to hire extra staff, develop new programs, offer professional development and identify other strategies that can be used to raise achievement levels in schools with high poverty levels. The aim of Title II, *Boosting Teacher Quality*, is to increase student achievement through the recruitment and professional development of qualified teachers and administrators. There is funding available through Title II as well, and it uses scientifically based professional development interventions to improve teacher quality, which has been shown to directly correlate to student achievement. (United States Department of Education, 2002b)

Title III, *Moving limited English proficient students to English fluency*, aims to assist schools and districts in successfully teaching English to limited English proficient students so that they can meet the same standards required of all students.

The purpose of Title IV, *21st Century Schools*, is to prevent violence in schools, prevent the use of drugs and alcohol, and to promote a safe learning environment supportive of academic achievement. Funding is available, as long as those receiving it follow certain guidelines.

Title V, *Promoting Informed Parental Choice and Innovative Programs*, provide grants to local educational reforms that are consistent with state-wide reform. The title also supports charter and magnet schools, and informs parents of choices by beginning to offer voluntary school choice and programs for gifted students. (United States Department of Education. (2002b)

Title VI, *Flexibility and Accountability*, supports states in developing assessments, allows states to direct their funding towards who needs it most, and provides additional funding to small rural and low-income schools.

Title VII, *Indian, Native Hawaiian, and Alaska Native Education*, supports the efforts of the institutions of these groups to help their students meet the same standards all students are being asked to meet.

Additional titles include Title VIII, *Impact Aid*, which provides funding to those school districts being affected by federal activities. Federal property is exempt from taxes, so this title replaces the money lost that would otherwise be used to support education.

Title IX, *General Provisions*, covers general provisions that affect all programs that are a part of NCLB.

Lastly, Title X is *Repeals, Re-designations, and Amendments to Other Statutes*. This title describes changes that have been made to the act. (United States Department of Education. (2002b)

No Child Left Behind mandates that every school in the United States must make Adequate Yearly Progress, or AYP, each school year. Adequate Yearly Progress is the minimum amount of improvement a school district, school, or state must make each year. Each state department of education is responsible for defining AYP and developing annual objectives that measure student performance. These objectives are meant to ensure that in 12 years, every student in the United States will score at the "proficiency" level on standardized tests. Each year, a state must review the progress of each district and school receiving Title 1 funds to determine whether or not they are making AYP. If a school or district is unable to make adequate yearly progress consecutively for two years, then that school or district is labeled as "in need of improvement". These "low performing" schools must then give their students the option of transferring to another school, invest in professional development for teachers and administrators to attempt to fix the problem. (United States Department of Education. (2002b)

If a school fails to make AYP for a third year, students from low-income families in that school must be given the option of supplemental education services such as tutoring. If a school still fails to make AYP for a fourth year, corrective actions may be taken. These can include implementing a new curriculum, replacing staff members, appointing experts to advise the school, decreasing the amount of managerial responsibility the school officials have, or even extending the school day or year. Failing to make AYP for a fifth year means that the school district must develop plans to fundamentally restructure the failing school. This can include replacing much of the staff if they were a part of the school's failure, reopening the school as a

charter school, or turning over control of that school to either the state or a successful private company. (United States Department of Education. (2002b) Each state is left to create its own interpretation of the "proficiency" level because there is not a national definition of proficiency for states to base their levels on. Therefore, each state can decide how high or low their students need to score to reach their "proficient" level.

According to the Nation's Report Card Trial Urban Districts Assessments for Reading and Math, which was released in December of 2005, students in urban school districts are actually improving under NCLB. The report states that students in select districts (Atlanta City, Boston School District, Charlotte-Mecklenburg Schools, City of Chicago School District 299, Cleveland Municipal School District, Houston Independent School District, Los Angeles Unified, New York City Public Schools, and San Diego City Unified) are improving faster than others over the past two years. In eight out of ten districts, fourth graders in urban schools have made larger gains than the national average in mathematics. In seven out of ten districts, fourth graders in urban school districts have also made larger gains than the national average in reading. In seven out of ten districts, eighth graders in urban schools made more progress in basic mathematics skills than the national average. The Nation's Report Card Trial Urban Districts Assessments for Science, released in November of 2006, showed that fourth graders improved four points from 1996 to 2000. (United States Department of Education, 2006)

According to an article in the journal *Education Week,* entitled *NCLB Timeline: 1965-2014,* in the 2002-2003 school year an estimated 19,644 schools in America did not make adequate yearly progress as described by NCLB. It was also estimated that 11,008 schools were still labeled as "in need of improvement". By June of 2006, all teachers were expected to be highly qualified, meaning that a teacher can prove he or she knows the subject area they are

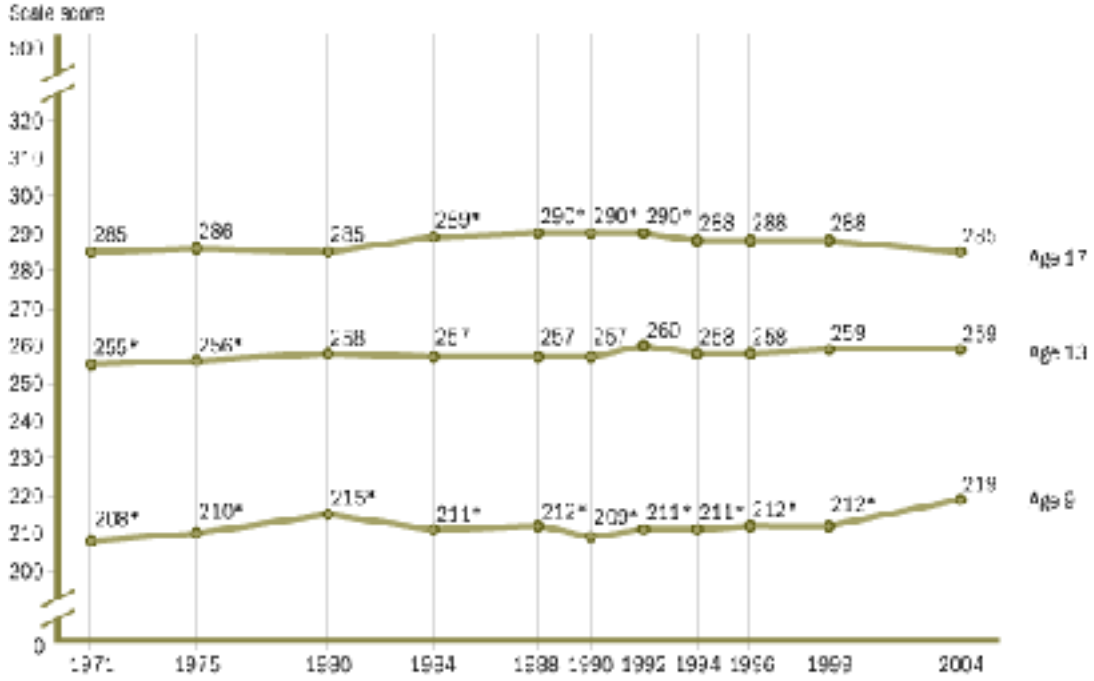
teaching, has a college degree, and is state-certified. (United States Department of Education, 2005) For example, states must have a test they can use to assess the content-area expertise of new elementary teachers in the key elementary curriculum subject areas they will teach. (United States Department of Education. (2002b) Many states were granted a year long extension because all of the teachers in their school did not meet the criteria for a highly qualified teacher. In the 2007-2008 school year, according to NCLB, science tests must also be administered once in each of the three grade spans (3-5, 6-9, 10-12). The ultimate assessment goal of NCLB is that by the year 2014, all students in America will test at the proficient level. A bi-annual sample of students will complete the National Assessment of Educational Progress 4th and 8th grade assessment in reading and math to help the U.S. Department of Education track assessment results. (NCLB Timeline, 2006)

There is much debate in the United State over the implementation of No Child Left Behind, as well as its goals and methods. Teachers, administrators, parents and concerned citizens nationwide have a wide range of strong opinions about the effectiveness of this act. Many believe that NCLB is a constructive law that will help to develop equal education for all students. Others completely disagree with NCLB, feeling that such a strong focus on standardized testing is not adequately measuring what students can actually do. Still others think that NCLB is a step in the right direction, something that can do some good, but specific points within the legislation need to be amended.

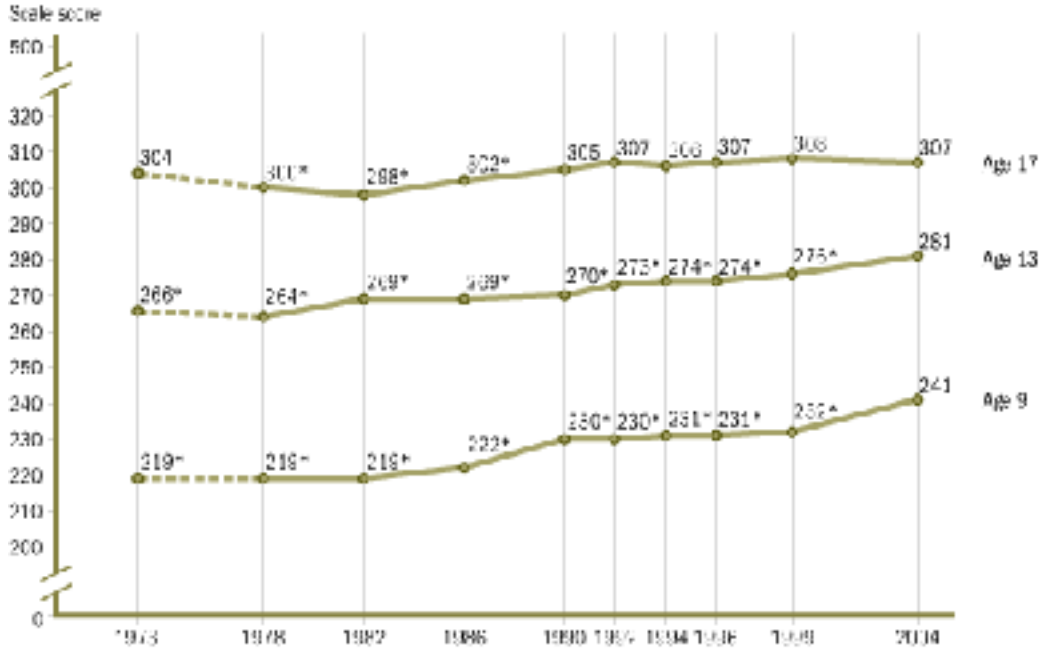
In the United States, there are those who strongly support No Child Left Behind. One strong supporter of NCLB is Secretary of State Margaret Spellings. In response to "The Nation's Report Card", the long-term results of the National Assessment of Educational Progress released in 2006, Spellings stated "Today's report card is proof that No Child Left Behind is working. It

is helping to raise the achievement of young students of every race and from every type of background." (Educational Vital Signs, 2006) The report showed that the nation's test scores have been slowly rising for 30 years, and the achievement gap has been closing. (Educational Vital Signs, 2006)

**Trends in average reading scale scores for students ages 9, 13, and 17: 1971–2004**




**Trends in average mathematics scale scores for students ages 9, 13, and 17: 1973–2004**



(National Assessment of Educational Progress, 2003)

One opinion is that this legislation has mandated that teachers differentiate instruction for all students in the classroom. A former Assistant Principal in Delaware, Stephen E. Schwartz believes that NCLB has brought attention to those diverse subgroups of students such as minorities, ESL students, and students in special education that were previously often not a top priority in the classroom, or were even ignored because they could not keep up with the rest of the class. He believes that it is a good thing that counselors, principals, and both mainstream and special education teachers have been held accountable for student success in the classroom. (Flake, M.A., Benefield, T.C., et al, 2006)

Robert Bassett, a special education teacher in California, adds that we have always had to set the bar in order to measure the achievement of our nation's students and schools. Before NCLB, we had Goals 2000 from Presidents Bush and Clinton. We didn't make the goals stated in that legislation because accountability was less strict than it is now, and schools were not giving their best service to all of their students. Due to this, we had to go back and redevelop our standards. Basset states, "No Child Left Behind and standards-based accountability is a step in the right direction". Specifically in special education, Bassett finds that NCLB has caused improvements in his field, believing that the new curriculum standards and guidelines give all students a more level playing field in school. (Flake, M.A., Benefield, T.C., et al, 2006)

As a math teacher in New Mexico, Brian Every is seeing changes in his district that he has been awaiting for years. For the first time in years, his district is making an effort to align their curriculum with the new state standards. *Educational Leadership* posed the question "how has No Child Left Behind affected you, your students, or your school?" to its readers. In response, Every wrote in to the journal, saying, "Before NCLB, we would have been under

tremendous pressure to pass our students regardless of their skill level and mathematical understanding". (Flake, M.A., Benefield, T.C., et al, 2006) His district was more concerned with passing students than with taking the time to re-evaluate courses and curriculums to improve student learning. With NCLB in effect, requests for curriculum and course changes are met with more interest and approval. The district is testing students to determine their academic abilities, and revising courses to better meet student needs. He also noticed that there is a stronger effort to teach mathematics, reading, and writing across the curriculum than there was years ago. (Flake, M.A., Benefield, T.C., et al, 2006)

Ellen Kahn, an Assistant Superintendent in Washington, sees No Child Left Behind as a way to help students realize the American Dream. Although part of the American dream is that individuals can take advantage of the many opportunities available in our country, the down side is that the burden of success is placed on the shoulders of the individual. Kahn believes that NCLB places the responsibility of education with the entire school community rather than the individual. Educators are asked not only to provide opportunities for each student to learn, but to "provide whatever it takes to ensure that every student succeeds". (Flake, M.A., Benefield, T.C., et al, 2006)

To provide whatever it takes to make sure every child in the classroom receives whatever it is he or she needs to be a successful learner is a large and daunting task. The ability level and willingness to work and learn is different for every child. Some students excel in any subject, while others have only certain subjects in which they are naturally gifted. Many students have a troubled home situation, poor family support, or other issues that affect them in the classroom. The real challenge now is for teachers to work with all of the social variables involved in a classroom full of students, and give each one the support, attention, and discipline they need to

get a good education. This puts a lot of pressure on both teachers and school systems. Teachers have to develop ways to reach every child and give them total support, and schools and districts have to find ways to support their teachers so that they can succeed.

In an article titled *Beyond 'No Child'* in USA Today, the point was made that NCLB is the "primary driver of improvement in the nation's schools – particularly to provide equal opportunity, regardless of economic status". (Beyond "No Child", 2007) The article goes on to say that the act does not provide the means to change, only the incentive. It is up to our nation's schools and districts to encourage those changes to be realized. The benefits of NCLB in the eyes of this newspaper are the innovative practices that have been put into place across the United States to meet the demands of this new act. (Beyond "No Child", 2007)

There are some recognized positive effects of NCLB. Schools must make an effort to align their curriculums with state academic instruction and assessment. Testing data is also proving to be helpful in restructuring instruction to meet the needs of the students.

A controversial issue in the implementation of NCLB is the reallocation of instructional time. Many schools are reducing the length of instructional time spent on other subjects such as social studies in order to devote more time to the tested content areas (mathematics, reading, writing, and now science). Opinions are divided on the effectiveness of this reaction to the mandate for testing, but some believe that this is a necessary step in order to help those students who might be struggling to improve their scores in crucial content areas. (Azzam, A., Perkins-Gough, D., Thiers, N., 2006)

In her article *How NCLB Drives Success in Urban Schools*, Heather Zavadsky speaks out in support of No Child Left Behind. Zavadsky cites the finalists for the 2005 Broad Prize for Urban Education, a scholarship program created by the Los Angeles-based *Broad Foundation* as

perfect examples of how NCLB has promoted positive change in schools. The five finalists were Norfolk Public Schools, in Norfolk, Virginia, Aldine Independent School District, in Houston, Texas, Boston Public Schools in Boston, Massachusetts, New York Department of Education, New York, and San Francisco Unified School District in California. (The Broad Foundation. n.d.) In all five of the finalist school districts, teachers were supported by access to curriculum guides and pacing charts. The curriculum was aligned between the grade levels and curriculum implementation was monitored by school and classroom walk-throughs. These methods were all initiated to facilitate teachers to help their students to achieve proficiency. Zavadsky also noted that states are improving their core subject curriculums due to NCLB, since the act focuses on guiding students to achieve proficiency in all core academic subjects. Many schools districts are working to develop curriculums that are sequenced and detailed to aid their students in achieving proficiency. In the districts selected as Broad Prize finalists, classroom teachers and curriculum experts worked together as a team to develop their curriculum.

In one district in particular, the Aldine Independent School District in Houston, Texas, the curriculum has been aligned across all of the grade levels in all of the public schools in the district. That way, the uniform benchmarks assessments, objectives, calendars, and lessons ensure that all children in the district received the same opportunities in instruction, no matter what school they attended. All of the finalist districts also used statistical data to make informed decisions about instruction and how it would affect the student, the classroom, the school and even the district. These districts have also created testing sessions in addition to the standardized tests required by NCLB that they administer throughout the year, because they feel that waiting until the end of the year to find out if their students have mastered the instructional objectives is not an effective teaching practice.

According to Zavadsky, NCLB has helped to create a stronger, more coordinated educational system. She admits that there are some problems with the legislation that still need to be worked out, such as funding, which is often inadequate for many schools. However, looking at the evidence that NCLB caused key changes to be made in the five finalist urban school districts, she maintains that NCLB is strengthening and improving American education. This is accomplished by motivating districts to meet the requirements of the act by implementing essential changes in their schools. (Zavadsky, H., 2006)

The U.S. Department of Education provides evidence to support the opinion that NCLB is working. The long-term results of the Nation's Report Card, released by NAEP in July of 2005, show that more progress was made in reading by nine-year-olds in the past five years than has been made in the last 28 years combined.

Average scale scores for long-term trend reading, age 9, All students [TOTAL]: 1980, 1984, 1988, 1990, 1992, 1994 and 1996

| All students | Year | Average Scale Score | Standard Error |
|---|---|---|---|
| **All students** | **1980** | 215 | ( 1.0) |
| | **1984** | 211 | ( 0.8) |
| | **1988** | 212 | ( 1.1) |
| | **1990** | 209 | ( 1.2) |
| | **1992** | 211 | ( 0.9) |
| | **1994** | 211 | ( 1.2) |
| | **1996** | 212 | ( 1.0) |

NOTE: The NAEP long-term trend reading scale ranges from 0 to 500. Observed differences are not necessarily statistically significant.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1971-2004 Long-Term Trend Reading Assessments.

(Institute of Education Sciences, 2005)

Average scale scores for long-term trend reading, age 9, All students [TOTAL]: 1999 and 2004

| All students | Year | Average Scale Score | Standard Error |
|---|---|---|---|
| All students | 1999 | 212 | ( 1.3) |
| | 2004 | 219 | ( 1.1) |

NOTE: The NAEP long-term trend reading scale ranges from 0 to 500. Observed differences are not necessarily statistically significant.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1971-2004 Long-Term Trend Reading Assessments.

(Institute of Education Sciences, 2005)

The report also states that American nine-year-olds have achieved the highest scores in mathematics since 1973, and achieved the highest scores in reading since 1971. The nation's thirteen-year-olds (8th graders) achieved the highest mathematics scores ever recorded by this test. The Nation's Report Card Science, released in 2005, showed that fourth-graders improved by four points over their levels in 1996 and 2000. The lowest performing of those fourth graders were the ones who made the most gains. (United States Department of Education, 2006)

This law was created to change our education system by making it more accountable for its actions. It requires testing twice a year in grades three through eight and one test in high school. It was based on the thought that interpretation of test results would cause changes in teaching and in test preparation. The results of the tests are divided by groups, allowing the government to see both how well an entire grade scored, and how each subgroup in that grade performed as well. This information allows schools to know which students may need extra help. (United States Department of Education. (2002b)

In the article *Did Help Get Left Behind?*, author Elizabeth Weiss Green cites success stories from schools around the country. One superintendent in Montana replaced his old reading texts with an entirely new literacy curriculum based on the results from the standardized testing. At an elementary school in Atlanta, the staff had never before separated their testing

data so that they could see the results as they described the scores of specific subgroups. When they did, they realized there was a large gap between the special education students and the others. Once they realized this, the staff devoted more time to providing extra help for these students, reviewing their progress and holding more frequent parent conferences. The special education students' proficiency rose from 41% to more than 80% as a result of the actions the teachers took. (Green, E.W., 2007)

The Senate education committee is currently meeting to discuss the renewal of NCLB. In an article by David J. Hoff describing the ideas and concerns during these hearings, there are varying opinions on what needs to be changed, how we can fix low-performing schools, and the governments role in aiding those schools that need assistance. However, the majority of Senators agreed that this law had "provided every school with a wealth of data that [is] giving educators clues on how to refine their instruction to help students who are struggling to reach the law's goal that all students become proficient in reading and mathematics". (Hoff, D.J, 2007) The law has helped the United States to see the failures and short-comings in its education programs. Using this data, teachers and schools can identify the skills their students need to either learn or improve upon, and can therefore develop strategies to help strengthen those skills. (Hoff, D.J., 2007)

According to proponents of No Child Left Behind, this law is encouraging accountability in our schools, decreasing the achievement gap, and offers parents a wider variety of educational options to educate their children, and there is data to support these claims. African-American and Hispanic students have reached an all-time high in mathematics and reading scores. The achievement gap between both white and Hispanic students and white and African-American students has reached an all-time low. Also, 43 states and the District of Columbia have either

academically held steady, or improved in fourth and eighth grade reading and mathematics. Supporters also argue that NCLB forces schools to "focus their attention on the academic achievement of traditionally under-served groups of children". (Wikimedia Foundation, Inc, 2007) Another argument is that NCLB improves the quality of education by requiring that schools use practices in the classroom that have been proven to work based on scientific research findings. Federal funding for education has increased 59.8% from the year 2000 to the year 2003. This leads supporters to acclaim NCLB because it provides more resources to schools. Supporters also argue that state content standards are now linked much more closely to student performance. (Wikimedia Foundation, Inc, 2007)

Many educators, administrators and government officials see No Child Left Behind in a different light. It has been said that NCLB is too focused on the results of standardized testing and higher performance scores on certain subjects, at the expense of the subjects that are not tested.

In the United States, the dominant assessment tool that has been used to measure the level of student learning in our education system has become standardized testing. A shocking statistic shows that to assess the reading and math abilities of our students throughout the nation each year requires 45 million standardized tests. (Scherer, M, 2006) In 1997, President Clinton had proposed national standardized testing. The estimated cost each year to administer those tests was $96 million dollars. (Newshour, 1997) The estimated total cost of standardized testing nationally was over $407 million dollars in 2006. (United States Department of Education, 2007)

There are also several hitches in the testing process. Different states are allowed to use different tests, since there is no national standardized test, and they also use different scoring methods and standards to determine their idea of "proficiency". The testing industry is still

struggling to produce valid and reliable tests that accurately measure student achievement. (Scherer, M, 2006)

Another issue with NCLB policy is creating a corps of highly qualified teachers in all classrooms. Not one state had met the deadline last summer (2006) and had placed "highly qualified" teachers in each classroom. (Scherer, M, 2006) According to the NCLB literature, a "highly qualified" teacher is one with full certification, a bachelor's degree, and one who has shown competence in content knowledge and teaching skills. Each state education agency is supposed to have created a plan to ensure that all of their teachers meet the criteria for a "highly qualified" teacher. The plan must have measurable objectives for each district and school to be met annually. (United States Department of Education, 2002b)

Some of the consequences of implementing NCLB in schools are 1.) it has put an enormous amount of pressure on teachers, administrators, and especially students. If a school is identified as a "low performing school", it is required to give students the option of leaving their current school and attending a higher-performing school, or providing supplemental educational services. For teachers, parents and students, these new options can cause new problems. One worry is how to manage sending a child to a new school outside their district, which can add time to a parent's morning commute, or cause difficulties in finding alternate transportation. Another worry is how school districts can afford to hire tutors and extra help for any number of students with budgets that are already overstressed. 2.) Some educators have claimed that trying to implement this law takes away opportunities for innovation and narrows the curriculum due to the focus on facts in a small number of content areas. Labaree states, "Whatever is not on the test is not worth knowing, and whatever is on the test need be learned only in the superficial manner

that is required to achieve a passing grade". For many people, learning only what is on the test, and only learning that well enough to pass a test is not best practice. (Guilfoyle, C., 2006)

All of these new tests, deadlines, and achievement goals are only adding more demands to the already stretched time a teacher has. There should be a focus on the teacher in a classroom, and the number of students he or she is responsible for. As Goldie Klugman stated in her article *No Child Left Behind Isn't Helping Teachers Help Students*, "A waiter who is working five tables knows his customers better than one who is working ten". A teacher can benefit his or her students much more if there is a more manageable ratio of students to teacher. (Klugman, G., 2007)

The pressure placed on students to perform high enough on these tests is enormous. According to The National Assessment of Educational Progress, students across the nation are showing improved reading scores in the early elementary years. However, after the fourth grade, test scores stop increasing. In a survey done by Scholastic, Inc. in 2006, 40% of children between five and eight read every day. That number plummets to 29% by fourth grade. In Spring Valley, California at the Kempton Elementary School, 26% of second grade students tested either at the "proficient" level or the "advanced" level in reading. In third grade, the percentage dropped to 15%. From these figures, it seems obvious that something is causing these students to choose not to read. Many teachers and administrators believe their students are burned out from too much testing. (Tyre, P., Springen, K., 2007)

In the process of complying with all of the regulations and goals presented by NCLB, schools have developed ways to navigate around and even trick the system. Instead of really changing their curriculums and increasing the level of student learning, schools have become consumed with doing anything they need to do to increase student test scores. At the state level,

schools are making testing questions easier in order to ensure that their students achieve higher performance scores. At the school level, low-performing students are being excluded from testing opportunities, and those students who are just below the cut-score level are being tutored because they are the most likely group to reach the "proficiency" level. Teachers are even encouraging or discouraging certain students from attending school during testing dates. All of these strategies may help to raise test scores, and keep schools from being labeled "low performing", but they have not helped to improve student learning. (Guilfoyle, C., 2006, November)

Many teachers and administrators are very vocal about the problems they and their schools have faced under NCLB. Fran Etter, is the chair of Fine Arts and Foreign Language in Illinois. She wrote in to Educational Leadership to tell the story of a high school in her state. The school, Belleville High School-East was put on the "needs improvement" list, which brought about instant changes. The school introduced reading across the curriculum, math tutors, and lunchtime seminars for students who needed extra help. The school also aligned its core curriculum with the Illinois State Learning Standards. An overload of information became the priority of the teachers, rather than quality time for meaningful discourse with students. Pressure hovered over the faculty to raise the test scores. The sister school to the school Etter described, Belleville High School-West, did make Adequate Yearly Progress that year, so there was a feeling of inferiority amongst students and teachers alike. Such a feeling of inferiority can discourage both students and staff and make it harder for them to raise their scores. The school was able to make AYP in 2006 after they implemented changes in their curriculum. (Flake, M.A., Benefield, T.C., et al, 2006).

A science teacher in Iowa wrote about the control NCLB had over her classroom. In her school, teachers were asked to prepare their students for testing about a month in advance. As the tests approached, all other curriculum was pushed aside to make time for test preparation. She felt that NCLB directly influenced what was taught in her classroom. As a teacher, she was unable to teach the curriculum she had planned and thought would best benefit her students, because she was made to prepare the class for the testing. (Flake, M.A., Benefield, T.C., et al, 2006).

In his article *The Side Effects of NCLB*, Gordon Cawelti discusses three negative effects that this legislation has had on public schools. The first effect that he mentions is: 1.) a skewed curriculum. Marshall S. Smith is quoted as saying, "If we focus only on math and language literacy, what happens to the rest of the curriculum?". (Cawelti, G., 2006) In a study conducted in 2006 by The Center on Education Policy, it was found the 71% of school districts had reduced the time given for instruction of at least one other subject in order to devote more time to math and reading. Subjects that are being shortened or left out completely can include social studies, music, and art. It also found that some schools even gave struggling students double periods of math or reading, causing them to miss other content areas altogether. (Cawelti, G., 2006)

2.) The second effect that Cawelti discusses is the discouragement of teachers. Due to NCLB, teachers are teaching to the test and neglecting the needs of their students in order to present them with as much information as possible to prepare them to take the test. Their top priority should be application of concepts and development of skills. Teachers are also boring themselves and their students with relentless drill and practice, and many are finding it difficult to incorporate creative teaching methods into test preparation drills. The morale of teachers across the nation is also being negatively impacted by these assessments. Testing results can be

just as frustrating to the teachers who worked hard to prepare their students as they are to students who study hard to pass the test. Especially for teachers in inner city schools, where scores are usually lower, it is a demanding job to prepare students for the tests. If the jobs of these inner city teachers are going to depend on their ability to raise student performance, it may become difficult to find teachers who are willing to work in these schools under these conditions. (Cawelti, G., 2006)

3.) The third effect that Cawelti mentions is the idea of funny numbers. Schools and districts are finding unethical ways to beat the system without making the necessary changes. Earning high test scores has become an end to itself, and more important than actually improving the quality of student learning. Many schools are making poor choices just to meet the requirements of the law. Schools are doing anything that they can to meet the requirements of NCLB. (Cawelti, G., 2006) For example, in Texas, officials reported that 91% of fourth graders scored at the "proficient" level in 2002. However, after a more demanding test was implemented the following year, the percentage fell to 76%. Also, the National Assessment of Educational Progress found that only 29% of fourth graders in Texas were at the "proficient" levels, and that this particular statistic had remained unchanged since 1998. Illinois, New Jersey, and California have also attempted to alter their figures. Since the mid-1990's, Illinois has claimed that 35% more of its fourth graders were reading at the "proficient" level than the federal report stated. In New Jersey, the annual achievement report states that 42% more of its fourth graders were reading at the "proficient" level than the federal report stated. California officials reported that 49% of its fourth graders scored at the "proficient" level in math. The federal testing officials reported that only 29% had actually scored at the "proficient" level. (Maclay, K, 2006)

In 2003 Texas and South Carolina performed similarly, with 25% of their students reported as reaching the "proficiency" level in reading. However, at the state level, they claimed that 83% of Texas students reached proficiency, in comparison to only 29% of South Carolina students. These numbers suggest that the students in South Carolina were being held to a higher state standard than those in Texas, which is an unfair discrepancy. Another trick schools have attempted is to alter their scoring systems. Certain states, such as Louisiana, Connecticut, Colorado, and Arizona have tried to change their scoring systems in order to increase the number of schools in their state making adequate yearly progress. In California and Hawaii, schools are receiving conflicting reports. In an analysis of data from the 2004-2005 school year, Education Week stated that California's percentage of schools making AYP was down by 10 points, and Hawaii's percentage down by 21 points. Although these states both had a serious decrease in the number of their schools making AYP, each state showed a significant increase in the number of students scoring at the "proficient" level. This conflict in data is due to higher state performance targets, which increases the number of "in need of improvement" schools, while varying state accountability systems can show conflicting data about student proficiency. (The Brookings Institution, 2005)

In the article *Standardized Testing and It's Victims*, Alfie Kohn quotes Democratic Senator Paul Wellstone, who stated, "Far from improving education, high-stakes testing marks a major retreat from fairness, from accuracy, from quality, and from equity". (Kohn, A., 2000) Some reasons are that many standardized tests are unfair due to the fact that there is a cultural bias in the questions themselves. This kind of testing will not be able to close the gap between rich and poor students if it is based on knowledge that one group is more likely to know and understand. (Kohn, A., 2000)

In her article *The Impact of NCLB*, Amy M. Azzam presents points of interest on both sides of the issue. The fact that schools are taking time away from other subjects in order to devote more time to reading and mathematics has been used to support both sides of the argument. Those who are in support of NCLB see this as a necessary step to help those students who may be struggling. However, those who oppose NCLB do not agree with this view. Opponents see this as a disservice to both teachers and students because it is taking away from students' overall education and is forcing teachers to endlessly review testing information with students. (Azzam, A., Perkins-Gough, D., Thiers, N., 2006)

A study done by the American Federation of Teachers, which was released in July of 2006, investigated the standards and assessment for reading, mathematics and science in the 50 states and Washington D.C. One of the goals of No Child Left Behind is to have the states align their tests to their content standards. Only 11 states (California, Indiana, Ohio, Louisiana, Nevada, New Mexico, New York, Tennessee, Virginia, Washington, and West Virginia) show that their testing is strongly aligned to their curriculum standards. According to this study, many states are still struggling to align their tests with the goals of NCLB. Out of the 50 states, 18 (California, Georgia, Indiana, Louisiana, Massachusetts, Michigan, Nevada, New Jersey, New Mexico, New York, North Carolina, Ohio, South Dakota, Tennessee, Virginia, Washington, and West Virginia) have succeeded in creating detailed and specific content standards in all grades and tested content areas under NCLB. (American Federation of Teachers. (2006)

Many opponents of No Child Left Behind believe that the goals outlined in this act are not realistic and cannot be met. One of the members of a panel discussion lead by the Reading Hall of Fame, S. Jay Samuels, commented on the improbable aim of the legislation. He stated that the goal to have all students score at the proficiency level on the tests is naïve and

unrealistic. Countries that have attained high scores on international assessments never have 100% of their students score at the "proficient" level. (Hot Topic: NCLB, 2006, June/July)

One very strong and vocal opponent of the standardized testing movement is Alfie Kohn. Kohn is a widely known author and lecturer in the United States. He writes and speaks on social topics such as human behavior, educational issues, and parenting. One of the special topics to which he has devoted much of his time and energy is the standards movement and testing.

In 2000, Kohn wrote an article in Education Week titled *Standardized Testing and Its Victims*. In the article, he discusses facts about standardized testing that support his views in opposition of the movement. He writes that tests have never been so frequently given in America, or had so much prominence in assessment. On an international level, standardized testing is not usually given before the high school level, and multiple choice tests are rarely used in any grade.

Kohn focuses on societal issues and cites a 1992 study done by the National Assessment of Educational Progress, which showed that 89% of test score variance could be accounted for by four socio-economic factors:

1.) the number of parents at home

2.) the type of community

3.) the poverty level

4.) the level of education of the parents. (Kohn, A., 2000)

This shows that calling for higher test achievement and focusing only on test scores is not going to help those students who are affected by social issues.

For them, testing alone will not improve their academic performance or their life. They need other types of support, such as after-school programs, tutoring, or even counseling. To look

at a more specific example, in Florida, schools that did not make adequate yearly progress had a student body which, on average, contained 40% more poor students than those that did make AYP. The failing schools' student bodies also contained considerably more minority students. (The Brookings Institution, 2005)

Kohn also notes that the money and effort that all the test preparation requires comes at the cost of other important educational and social services. According to MSN.com, a standardized testing preparation book for sixth graders can cost anywhere between nine and eleven dollars. (MSN.shopping, 2007) Multiply that by three classes of sixth graders with 25 students and you get roughly $700 on test preparation materials. That doesn't even take into consideration hiring a tutor or other books or resources students may need in test preparation. Schools nation-wide are cutting back or eliminating programs such as the arts, recess, use of literature, and even entire subject areas such as science, if it is not covered on the test, in order to be able to devote that time and funding to preparing their students to take and do well on standardized tests.

Many teachers and administrators are becoming strongly discouraged by the constant pressure on them to raise their students' test scores. Educators are considering or actually leaving their jobs because they are unable to engage in high quality teaching in the current atmosphere in their schools. (Kohn, A., 2000)

Now that this strong legislation has been put in place, schools are still waiting for the funding to back it up to appear. In 2006, President Bush only asked for 13.3 billion dollars of his 22.75 billion authorized funding budget for educational reform. This lack of adequate funding is placing even further strain on schools struggling to improve their curriculum and student performance under NCLB. (Wikimedia Foundation, Inc, 2007) Another unrecognized fact about

NCLB is that many schools nationwide are unable to measure the annual progress of their students. A recent survey by the Data Quality Campaign showed that most schools still lacked the resources and technology necessary to be able to implement a growth-based model. Some schools have updated their systems, but many are still far from having all the resources they need. (The Brookings Institution, 2005)

Also, schools are looking to textbook publishers to get help in raising their scores. Many companies are marketing test-preparation materials, but again, only schools with the money will be able to afford to buy these types of materials. When poorer schools do raise enough money to buy these materials, it is usually at the expense of other valuable educational resources that the students really need. (Kohn, A., 2000)

To some, it is common sense to allocate more money to those districts that are in need of it, and less to those who are already well-off. As Kohn writes, most often when this is the case, the money is only offered in a short term grant that will not be able to make up for years of inadequate funding. (Kohn, A., 2000) Even with the suggested alternatives for students attending "low performing" schools, improvements are not always guaranteed. In some schools, tutoring is offered online, but the families of their students do not have Internet access. Nationally, only 17% of students took advantage of tutoring when it was offered in the 2003-2004 school year. Less than 1% of students attending a "low performing" school chose to transfer. In some districts, there are no better alternatives for students, and sadly, in some districts, students and families are not properly informed about their options. (Green, E.W., 2007)

Another unfair effect of the push for high performance is the rewards and punishments for success or failure. Many educators who teach low-performing children are the ones most

likely to be thought of as failures, and they may be forced to leave their positions. Also, many teachers have become severely frustrated by trying to engage in high quality teaching in the present environment of strict testing and accountability. This strong focus on raising test scores and other demands are making teaching, an already difficult job, even more challenging. These teachers and administrators are often the very best, the ones who are devoted to high-quality teaching, and they are the ones who are seriously considering quitting or already have left their positions. (Kohn, A., 2000)

In a 2001 article titled *Emphasis on Testing Leads to Sacrifice in Other Areas*, Kohn gives many facts that support his opinion that standardized testing is depriving students of a valuable education in order to teach to the test. He discusses how many states have cut back on subjects such as science and social studies that are not included in their tests. Recess is also something that has been shortened despite research findings that show that time for play is a critical part of development in elementary school. Kohn also notes how music and art classes have been severely reduced or removed altogether from many schools. Other educational experiences such as field trips, community service projects, classroom meetings and opportunities for students to become not only effective learners but productive and socially responsive citizens are being removed from classrooms. One very important factor in education is being ignored. Since only isolated language skills are appearing on these tests, children are being given less time to read real books, which is a huge obstacle for the many ELL children who have literacy problems in the United States. (Kohn, A., 2001)

Kohn makes a very strong and important point in an introduction he wrote to *What Happened to Recess and Why Are Our Children Struggling in Kindergarten?* by Susan Ohanian. Kohn points out that with the high standards movement, our government is aiming to increase

test performance and student achievement. If our schools do make the drastic improvement that is hoped for, would schools and students be considered successful? The idea of "high standards" really means standards that everyone can not meet. Therefore, if the majority of students are meeting the standards, that success would be taken as proof that those standards are too low or easy because so many students can meet them. Standard difficulty would be increased until failures were created, showing that more improvement in the schools is needed. The standards movement is really not a system for helping every child to improve, but a system to segregate those who do well on the test from those who do not. (Kohn, A., 2002)

In a letter written to *USA Today*, reader Robert Grossman presents an analogy about evaluating teachers. He compared teachers to workers in a business where the product they are selling is backed by a warranty. In response, Mark Rudolph of Woodbridge, CT writes that although a business can control its materials and send back any it considers lacking, a teacher is unable to do so. A teacher must take "individuals of varying abilities, maturity, health, nutrition, amount of rest, and family stability". (Rudolph, M., 2007) A business coping with such variables and still providing a guarantee on its product is nearly impossible. Therefore, it is unfair that all children are made to meet predetermined levels of progress when there are so many different levels of ability, maturity, family support and health. (Rudolph, M., 2007)

There are several national issues in the United States that can affect students and their ability to perform highly and consistently. One such issue is poverty. In 2005, the poverty rate for children under 18 was 17.6%, or 12.9 million children. This percentage is higher than the percentage of children over 18 living in poverty (11.1%, or 20.5 million) or the percentage of people over 65 who were living in poverty (10.1%, or 3.6 million). (U.S. Census Bureau, 2006)

Poverty can affect students because without available funds, parents cannot provide their children with school supplies, books to read, materials for projects, or even test preparation resources. Another national issue that affects students is homelessness. According to a report done by the National Alliance to End Homelessness in January 2007, there were 744, 313 people living homeless in the United States in 2005. Out of those 744, 313 people, 41% were living in families that had children. In total, 98, 452 homeless families were counted. (National Alliance to End Homelessness, 2007) For a child, not having a consistent and safe home environment can cause undue stress and make it hard to keep school supplies and complete homework.

The U.S.'s average ranking in International Assessment tests has been a strong incentive in support of raising test scores. The Trends in International Mathematics and Science Study (TIMSS) is one such assessment that evaluates the performance of students in both fourth and eighth grades on the mathematics and science tests. The test was first administered in 1995, and runs on a four year cycle, with testing again in 1999, 2003, and currently underway in 2007. The testing shows what students know and can do, as well as which countries perform best. The study recorded achievement by empirically deriving benchmarks by which to compare data from different countries. The benchmarks show performance of the top ten percents, top quarter, top half and lower quarter of the students in the participating countries. (Lynch School of Education, Boston College, 2007)

The study determined the performance of the top 10%, the upper quarter, the median, and the lower quarter internationally. These benchmarks correspond to the $90^{th}$, $75^{th}$, $50^{th}$, and $25^{th}$ international percentiles of achievement. The results of the study show that 10% of all fourth graders performed at or above a certain score on the test. That score becomes the benchmark for the top 10% of the students on an international level. For example, 10% of the fourth grade

students in all the countries that participated in the study scored a 658 or higher in mathematics. Therefore, 658 becomes the international benchmark for the top 10% of students. (Lynch School of Education, Boston College, 2007)

In the US, the percentage of students who were at or above the Top 10% (90$^{th}$ percentile) international benchmark of mathematics performance was 9%. Out of the 26 countries that participated in the study, The US had a higher percentage in the top percentile than 13 countries (including England, Scotland and Canada). There were 11 countries that had a higher percentage in the top percentile, including Australia, Hong Kong and Japan. The next benchmark is the Upper Quarter (75th percentile). In the US, 26% of the fourth grade students performed at or above this benchmark. The United States performed better and worse than the same number of countries as for the first benchmark. The third benchmark is the Median Benchmark (50$^{th}$ percentile). Over half, (56%) of the fourth graders in the United States performed at or above the Median Benchmark. Lastly, the final benchmark is the Lower Quarter (25$^{th}$ percentile). In the United States, 83% of the fourth grade students performed at or above the Lower Quarter. (Lynch School of Education, Boston College, 2007)

In looking at mathematical achievement in the United States for both fourth and eighth graders, an interesting pattern emerges. For fourth grade, there was no testing in 1999, so the only data available is from the 1995 and 2003 tests. The average scale score of fourth grade students in both years was 518. This means that there was no improvement or decline in the performance of United States fourth graders in eight years. The fact that our students' achievement remained the same can be looked at as an accomplishment, or a disappointment that there was not improvement. The eighth grade data, however, is somewhat different. In 1995, the average scale score for an eighth grader in the U.S. was 492. In 1999, the average score was

501, and in 2003, the score was 504. This shows that the performance of eighth graders improved considerably; 12 points from the first testing, and 3 more points from the second. So far it seems that the older students are performing better than the younger. (Lynch School of Education, Boston College, 2007)

Next, we look at the achievement of the international benchmarks. In fourth grade, again there is no data from 1999, so we can only compare 1995's results with 2003's. For the advanced benchmark, 9% of U.S. fourth graders reached the benchmark in 1995, but only 7% met it in 2003. This trend is repeated for the high benchmark, where 37% of fourth grades made the goal in 1995, and only 35% did in 2003. The figures are slightly better for the last two benchmarks. 71% of fourth graders made the intermediate benchmark in 1995, and 72% made it in 2003. Also, 92% of U.S. fourth graders made the low benchmark in 1995, and in 2003, the number moved up to 93%. So we notice that in the higher two benchmarks, there is a small decrease in achievement, while in the lower two benchmarks, there is an even smaller increase in achievement. (Lynch School of Education, Boston College, 2007)

For the eighth graders, we again have three test results to compare. In 1995, 4% of U.S. eighth graders were at the Advanced Benchmark. In 1999 the percentage jumped to 7%, and it stayed the same in 2003. For the High Benchmark, 26% of students met the goal in 1995. In 1999, 30% of eighth graders were at the benchmark, and in 2003 the number went down to 29%. At the Intermediate Benchmark we see a slow increase. In 1995, 61% of students were at or above the benchmark. In 1999, the percentage went up to 62%, and in 2003 up to 64%. Lastly, there were 86% of eighth graders at the Low Benchmark in 1995. In 1999, there were 87%, and in 2003 there were 90%. Here we notice that each benchmark shows some improvement except

for the High Benchmark which went down 1% in the most recent testing. (Lynch School of Education, Boston College, 2007)

The data for the science achievement follows the same parameters; there are three sets of results for eighth grade students and only two for fourth graders. The average scale score for fourth graders in 1995 was 542. In 2003, the average score was 536. This shows a decrease of 6 points. For eighth graders, the average scale score in 1995 was 513. In 1999, the score increased to 515, and in 2003 it increased again to 527. This data shows a 15-point total increase over eight years. Again we notice that the eighth graders in the United States are performing much better than the fourth graders on these tests. (Lynch School of Education, Boston College, 2007)

The international benchmarks for science are the same as the ones used for mathematics. In 1995, 19% of fourth graders met or surpassed the Advanced Benchmark. In 2003, only 13% were able to do the same. For the High Benchmark, 50% of students performed at or above it in 1995, and only 45% in 2003. In 1995, 78% of fourth graders met or surpassed the Intermediate Benchmark, and the number stayed the same in 2003. Lastly, in 1995, 92% of the students performed at or above the Low Benchmark, and in 2003, 94% made it. For the higher two benchmarks, performance among the fourth graders slightly decreased. For the lower two benchmarks, performance remained stable or slightly improved. (Lynch School of Education, Boston College, 2007)

For the eighth graders, 11% met or surpassed the Advanced Benchmark of science in 1995. Performance went up to 12% in 1999, and back down to 11% in 2003. For the High Benchmark, 38% of students performed at or above in 1995. Performance decreased to 37% in 1999, and increased to 41% in 2003. In 1995, 68% of eighth graders met or surpassed the Intermediate Benchmark. Their performance went down to 67% in 1999, and shot up to 75% in

2003. Finally, for the Low Benchmark, 87% of students performed at or above in 1995. In 1999, performance stayed the same, and in 2003 it jumped to 93%. So for eighth graders, with the exception of the Advanced Benchmark which remained the same, there was marked improvement over the eight years. (Lynch School of Education, Boston College, 2007)

Trends in Percentages of Students Reaching TIMSS 2003 International Benchmarks of Science Achievement in 1995, 1999, and 2003

| Countries | Advanced International Benchmark (625) | | | High International Benchmark (550) | | |
|---|---|---|---|---|---|---|
| | 2003 (Percent of Students) | 1999 (Percent of Students) | 1995 (Percent of Students) | 2003 (Percent of Students) | 1999 (Percent of Students) | 1995 (Percent of Students) |
| Singapore | 33 (1.6) | 29 (1.2) | 29 (1.2) | 86 (2.3) | 60 (3.5) | 54 (2.6) |
| Chinese Taipei | 26 (1.5) | 27 (1.8) | ◇ ◇ | 63 (2.9) | 61 (2.1) | ◇ ◇ |
| Korea, Rep. of | 17 (1.0) | 14 (1.1) | 17 (1.4) | 57 (1.1) | 50 (1.3) ○ | 46 (1.3) ○ |
| Japan | 15 (0.7) | 16 (1.2) | 18 (0.9) ● | 53 (1.1) | 52 (1.3) | 54 (1.1) |
| Hungary | 14 (1.1) | 19 (1.3) ● | 12 (1.1) | 46 (1.2) | 53 (1.8) ● | 44 (1.7) |
| Hong Kong, SAR | 13 (1.2) | 7 (0.8) ○ | 7 (1.0) ○ | 50 (1.8) | 45 (2.1) ○ | 33 (2.7) ○ |
| United States | 11 (0.8) | 12 (1.2) | 11 (1.1) | 41 (1.2) | 37 (1.9) | 38 (2.0) |
| Australia | 9 (1.1) | – – | 10 (1.1) | 40 (2.0) | – – | 36 (1.7) |
| Sweden | 8 (0.8) | ◇ ◇ | 19 (1.6) ● | 38 (1.6) | ◇ ◇ | 32 (2.4) ● |
| Slovak Republic | 7 (1.0) | 17 (1.1) ● | 17 (1.4) ● | 48 (1.4) | 44 (1.4) ● | 37 (1.4) ● |
| New Zealand | 7 (1.5) | 10 (1.3) | 9 (1.2) | 35 (3.0) | 35 (3.2) | 34 (2.1) |
| Netherlands | 6 (0.8) | 14 (2.1) ● | 12 (1.8) ● | 43 (2.4) | 50 (3.6) | 48 (2.8) |
| Russian Federation | 6 (0.8) | 15 (2.3) ● | 11 (1.1) ● | 32 (1.8) | 41 (2.8) ● | 38 (2.3) ● |
| Lithuania | 6 (0.6) | 5 (0.9) | 2 (0.5) ○ | 34 (1.2) | 22 (1.6) ○ | 14 (1.5) ○ |
| Scotland | 6 (0.7) | ◇ ◇ | 9 (1.4) | 32 (1.9) | ◇ ◇ | 30 (2.1) |
| Slovenia | 6 (0.5) | | 8 (0.8) ● | 33 (1.4) | | 32 (1.5) |
| Israel | 5 (0.5) | 5 (0.3) | – – | 24 (1.3) | 23 (1.4) | – – |
| Latvia (LSS) | 4 (0.6) | 5 (1.1) | 3 (0.6) | 30 (1.8) | 27 (3.5) | 18 (1.1) ○ |
| Bulgaria | 4 (0.7) | 12 (2.0) ● | 22 (1.7) ● | 23 (1.7) | 38 (2.6) ● | 46 (2.3) ● |
| Italy | 4 (0.6) | 6 (0.9) ● | | 23 (1.3) | 25 (1.8) | |
| Romania | 4 (0.0) | 5 (0.8) | 5 (0.8) | 20 (1.8) | 21 (2.1) | 22 (1.6) |
| Malaysia | 4 (0.8) | 5 (0.8) | ◇ ◇ | 28 (2.2) | 24 (3.0) | ◇ ◇ |
| Jordan | 3 (0.5) | 4 (0.4) | ◇ ◇ | 21 (1.4) | 12 (1.0) ○ | ◇ ◇ |
| Belgium (Flemish) | 3 (0.3) | 9 (1.3) ● | 9 (1.0) ● | 33 (1.6) | 44 (1.5) ● | 43 (2.5) ● |
| Norway | 2 (0.3) | ◇ ◇ | 6 (0.6) ● | 21 (1.1) | ◇ ◇ | 32 (1.5) ● |
| Macedonia, Rep. of | 2 (0.3) | 3 (0.4) ● | ◇ ◇ | 13 (1.2) | 17 (1.9) ● | ◇ ◇ |
| Moldova, Rep. of | 1 (0.3) | 4 (0.4) ● | ◇ ◇ | 15 (1.2) | 13 (1.9) | ◇ ◇ |
| Iran, Islamic Rep. of | 1 (0.2) | 1 (0.3) | 1 (0.4) | 9 (0.6) | 11 (1.3) | 11 (1.3) |
| South Africa | 1 (0.2) | 0 (0.2) | – – | 3 (0.7) | 2 (0.7) | – – |
| Chile | 1 (0.1) | 1 (0.1) | ◇ ◇ | 5 (0.6) | 2 (1.1) | ◇ ◇ |
| Cyprus | 0 (0.2) | 2 (0.4) ● | 2 (0.4) ● | 8 (0.6) | 14 (0.8) ● | 13 (1.2) ● |
| Philippines | 0 (0.1) | 1 (0.3) | ◇ ◇ | 4 (0.6) | 4 (0.7) | ◇ ◇ |
| Indonesia | 0 (0.1) | 1 (0.3) ● | ◇ ◇ | 4 (0.5) | 8 (1.0) ● | ◇ ◇ |
| Tunisia | 0 (0.0) | 0 (0.1) | ◇ ◇ | 1 (0.2) | 3 (0.5) ● | ◇ ◇ |
| ‡ England | 15 (1.7) | 17 (1.2) | 15 (1.2) | 48 (2.2) | 45 (2.4) | 43 (1.8) |
| International Avg. | 7 (0.2) | 9 (0.2) ● | 11 (0.3) ● | 30 (0.3) | 32 (0.3) | 37 (0.4) ● |
| **Benchmarking Participants** | | | | | | |
| Indiana State, US | 8 (1.5) | 14 (2.1) ● | ◇ ◇ | 40 (2.8) | 44 (3.5) | ◇ ◇ |
| Ontario Province, Can. | 7 (0.7) | 7 (0.9) | 5 (0.6) | 41 (1.8) | 34 (1.6) ○ | 36 (1.6) ○ |
| Quebec Province, Can. | 6 (1.0) | 10 (2.2) | 7 (1.3) | 39 (2.0) | 43 (3.7) | 30 (2.8) ○ |

○ Not significantly other

● Not significantly over

(Lynch School of Education, Boston College, 2007)

Trends in Percentages of Students Reaching TIMSS 2003 International Benchmarks of Science Achievement in 1995, 1999, and 2003

| Countries | Intermediate International Benchmark (475) | | | | | | Low International Benchmark (400) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2003 (Percent of Students) | 1999 (Percent of Students) | | 1995 (Percent of Students) | | | 2003 (Percent of Students) | 1999 (Percent of Students) | | 1995 (Percent of Students) | | |
| Singapore | 83 (1.7) | 84 (2.4) | | 91 (1.3) | ▼ | | 95 (0.8) | 95 (1.2) | | 99 (0.2) | ▼ | |
| Chinese Taipei | 88 (1.1) | 86 (1.3) | | ◇ ◇ | | | 98 (0.4) | 96 (0.6) | ▲ | ◇ ◇ | | |
| Korea, Rep. of | 88 (0.7) | 81 (1.0) | ▲ | 81 (0.9) | ▲ | | 98 (0.4) | 96 (0.4) | ▲ | 95 (0.5) | ▲ | |
| Japan | 86 (0.8) | 84 (0.9) | | 85 (0.7) | | | 98 (0.3) | 97 (0.4) | | 97 (0.3) | | |
| Hungary | 82 (1.1) | 83 (1.3) | | 80 (1.5) | | | 97 (0.6) | 96 (0.8) | | 95 (0.7) | | |
| Hong Kong, SAR | 81 (1.4) | 80 (1.9) | ▲ | 70 (2.7) | ▲ | | 95 (0.7) | 96 (0.9) | | 90 (1.3) | ▲ | |
| United States | 75 (1.4) | 67 (1.9) | ▲ | 68 (2.2) | ▲ | | 93 (0.8) | 87 (1.3) | ▲ | 87 (1.6) | ▲ | |
| Australia | 76 (1.5) | | | 69 (1.6) | ▲ | | 95 (0.8) | | | 89 (1.3) | ▲ | |
| Sweden | 75 (1.4) | ◇ ◇ | | 83 (1.7) | ▼ | | 95 (0.7) | ◇ ◇ | | 97 (0.7) | ▼ | |
| Slovak Republic | 72 (1.5) | 79 (1.4) | ▼ | 77 (1.5) | ▼ | | 94 (0.7) | 96 (0.6) | ▼ | 95 (0.5) | | |
| New Zealand | 73 (2.2) | 66 (2.0) | ▲ | 67 (2.2) | ▲ | | 94 (1.3) | 88 (1.4) | ▲ | 89 (1.2) | ▲ | |
| Netherlands | 65 (1.7) | 83 (3.3) | | 82 (2.7) | | | 98 (0.7) | 96 (1.2) | | 96 (2.0) | | |
| Russian Federation | 70 (1.8) | 73 (2.3) | | 71 (2.2) | | | 93 (0.9) | 92 (1.0) | | 92 (1.1) | | |
| Lithuania | 74 (1.3) | 57 (2.0) | ▲ | 75 (2.2) | ▲ | | 95 (0.6) | 86 (1.7) | ▲ | 79 (1.8) | ▲ | |
| Scotland | 70 (1.7) | ◇ ◇ | | 61 (2.2) | ▲ | | 93 (0.9) | ◇ ◇ | | 86 (1.4) | ▲ | |
| Slovenia | 73 (1.3) | – – | | 69 (1.6) | ▲ | | 95 (0.6) | – – | | 93 (0.7) | ▲ | |
| Israel | 57 (1.6) | 50 (2.1) | ▲ | – – | | | 85 (1.1) | 75 (2.0) | ▲ | – – | | |
| Latvia (LSS) | 72 (1.8) | 65 (1.9) | ▲ | 51 (1.8) | ▲ | | 95 (0.9) | 91 (1.2) | ▲ | 83 (1.4) | ▲ | |
| Bulgaria | 55 (2.1) | 70 (2.0) | ▼ | 75 (1.9) | ▼ | | 81 (2.0) | 89 (1.4) | ▼ | 93 (1.1) | ▼ | |
| Italy | 59 (1.5) | 59 (2.0) | | – – | | | 87 (1.1) | 86 (1.2) | | – – | | |
| Romania | 49 (2.2) | 50 (2.6) | | 51 (2.2) | | | 78 (1.9) | 78 (2.0) | | 77 (1.7) | | |
| Malaysia | 31 (3.0) | 50 (2.2) | ▲ | ◇ ◇ | | | 95 (0.7) | 87 (1.4) | ▲ | ◇ ◇ | | |
| Jordan | 53 (1.9) | 42 (1.4) | ▲ | ◇ ◇ | | | 80 (1.3) | 69 (1.6) | ▲ | ◇ ◇ | | |
| Belgium (Flemish) | 76 (1.4) | 81 (1.5) | ▼ | 80 (3.0) | | | 94 (0.8) | 97 (1.0) | ▼ | 94 (2.3) | | |
| Norway | 64 (1.3) | ◇ ◇ | | 72 (1.3) | ▼ | | 91 (0.8) | ◇ ◇ | | 94 (0.8) | ▼ | |
| Macedonia, Rep. of | 42 (1.9) | 46 (2.0) | | ◇ ◇ | | | 72 (1.5) | 73 (2.2) | | ◇ ◇ | | |
| Moldova, Rep. of | 50 (1.9) | 44 (1.8) | ▲ | ◇ ◇ | | | 83 (1.5) | 74 (1.6) | ▲ | ◇ ◇ | | |
| Iran, Islamic Rep. of | 38 (1.3) | 38 (1.8) | | 43 (2.2) | ▼ | | 77 (1.3) | 72 (1.8) | ▲ | 81 (1.6) | ▼ | |
| South Africa | 6 (1.4) | 7 (1.5) | | – – | | | 13 (1.8) | 14 (2.1) | | – – | | |
| Chile | 24 (1.3) | 27 (1.7) | | ◇ ◇ | | | 56 (1.3) | 60 (1.5) | ▼ | ◇ ◇ | | |
| Cyprus | 35 (1.3) | 45 (1.5) | ▼ | 43 (1.3) | ▼ | | 71 (1.2) | 77 (1.1) | ▼ | 72 (1.1) | | |
| Philippines | 18 (1.7) | 15 (1.9) | | ◇ ◇ | | | 47 (1.3) | 34 (2.7) | ▲ | ◇ ◇ | | |
| Indonesia | 25 (1.9) | 33 (1.7) | ▼ | ◇ ◇ | | | 61 (2.1) | 68 (2.5) | ▼ | ◇ ◇ | | |
| Tunisia | 12 (1.0) | 25 (1.6) | ▼ | ◇ ◇ | | | 52 (1.5) | 68 (2.1) | ▼ | ◇ ◇ | | |
| † England | 81 (1.8) | 76 (1.9) | | 75 (1.4) | ▲ | | 96 (0.6) | 94 (0.7) | ▲ | 93 (0.7) | ▲ | |
| International Avg. | 61 (0.3) | 58 (0.3) | ▲ | 69 (0.4) | ▼ | | 84 (0.3) | 81 (0.3) | ▲ | 90 (0.2) | ▼ | |
| **Benchmarking Participants** | | | | | | | | | | | | |
| Indiana State, US | 79 (2.1) | 76 (2.6) | | ◇ ◇ | | | 96 (0.8) | 93 (1.2) | ▲ | ◇ ◇ | | |
| Ontario Province, Can. | 81 (1.2) | 72 (1.6) | ▲ | 61 (1.9) | ▲ | | 97 (0.3) | 95 (0.5) | ▲ | 88 (1.1) | ▲ | |
| Quebec Province, Can. | 82 (1.5) | 83 (2.4) | | 69 (3.5) | ▲ | | 98 (0.4) | 98 (0.5) | | 92 (2.0) | ▲ | |

▲ 2003 significantly higher

▼ 2003 significantly lower

SOURCE: IEA's Trends in International Mathematics and Science Study (TIMSS) 2003

(Lynch School of Education, Boston College, 2007)

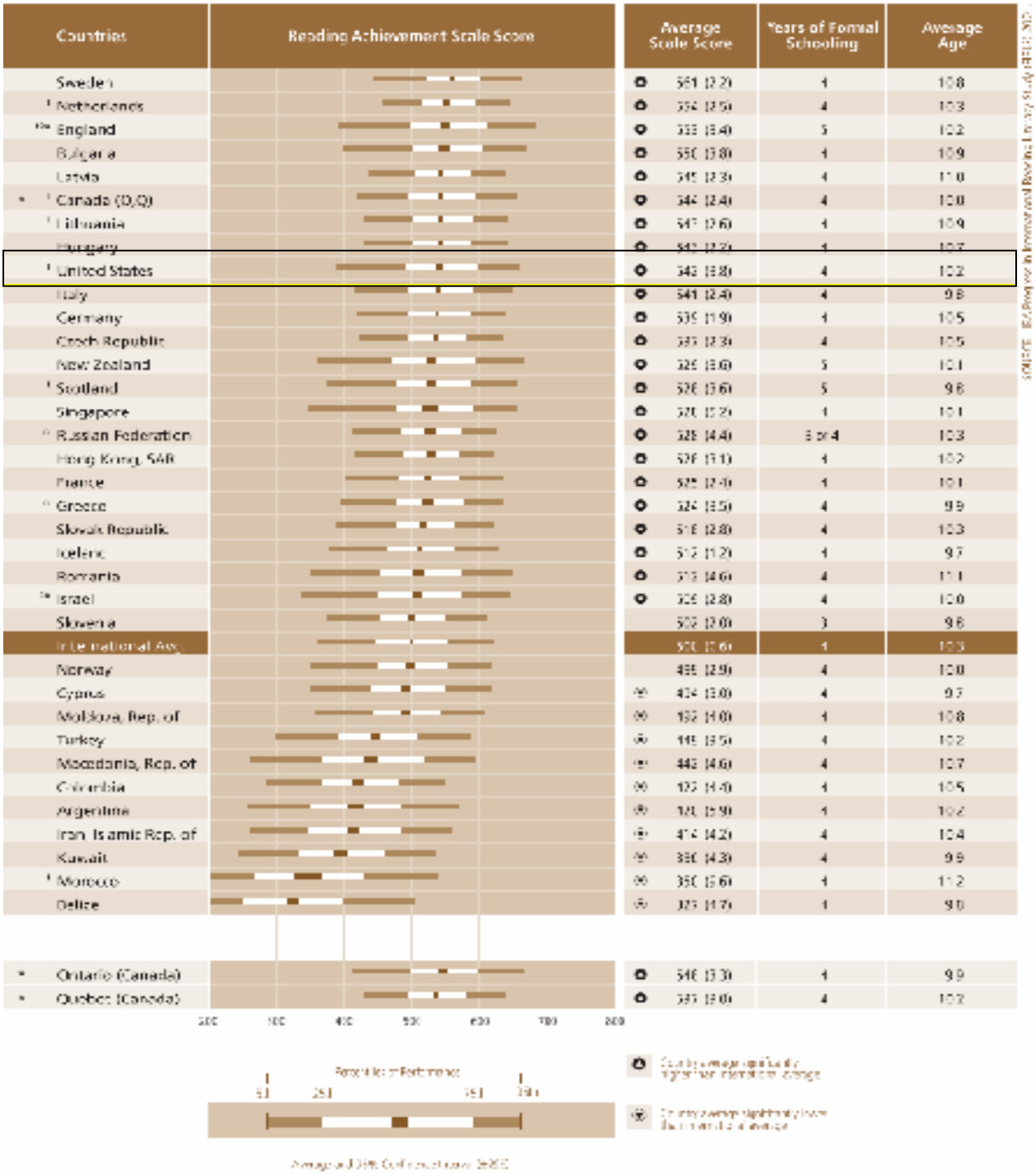
After looking at this data, it seems there is a common trend. In both mathematics and science, eighth grade students seem to be performing at either the same or a steadily increasing rate. However, students in the fourth grade are struggling to meet the same level of performance attained in past years, and their level has even decreased. What these performance levels may suggest is that students in the eighth grade are being given better test preparation sessions than the fourth graders, or that the higher age of and wider range of classes taken by the eighth graders has given them an advantage that the fourth graders do not have. Either way, we need to find out why the test scores of fourth graders have decreases in recent testing. (Lynch School of Education, Boston College, 2007)

Another international test given by the International Association for the Evaluation of Educational Achievement is the Progress in International Reading Literacy Study (PIRLS). This test has been administered every five years, starting in 2001, and was given again in 2006. At its conception, the test was given to fourth grade students in 41 countries, and most recently was distributed in 50 countries. The test asks questions designed to assess the achievement of students in reading for literacy and in reading to acquire and use information. (Lynch School of Education, Boston College, 2007)

For this study in 2001, the international average was determined to be 500. In looking at the data, one can see that 23 countries performed significantly above the average score, 2 countries performed at the average, and 10 countries performed significantly below the average score of 500. The average scale score for the United States was a 542, only 19 points behind the highest scoring country which was Sweden. When comparing this data, we see that the United States was only significantly out-performed by Sweden (561), the Netherlands (554), and

England (553), which suggests that overall reading achievement by fourth graders in our country is rather high. (Lynch School of Education, Boston College, 2007)

**Distribution of Reading Achievement – PIRLS 2001, 4th Grade**




(Lynch School of Education, Boston College, 2007)

Next the study investigated the performance of the countries in reading; literary and informational. The international average for these scores was also 500. The average scale score for the United States in reading for literary purposes was a 550. This score is significantly higher than the international average, and only three countries performed higher-Sweden, England, and the Netherlands. In reading for informational purposes, the United States scored a 533. In comparing the two average scores, it seems the strengths of the U.S. fourth graders lie in reading for literary purposes and not reading for information. (Lynch School of Education, Boston College, 2007) As adults and as children, we read for information every day, whether it be reading the newspaper, manuals, maps and directions, textbooks, signs, memos, magazines, or other print. If our children are not being properly taught how to read for information, how can we expect them to succeed in life? In a global economy, a student will need to be able to read for information and communicate and network with people around the globe.

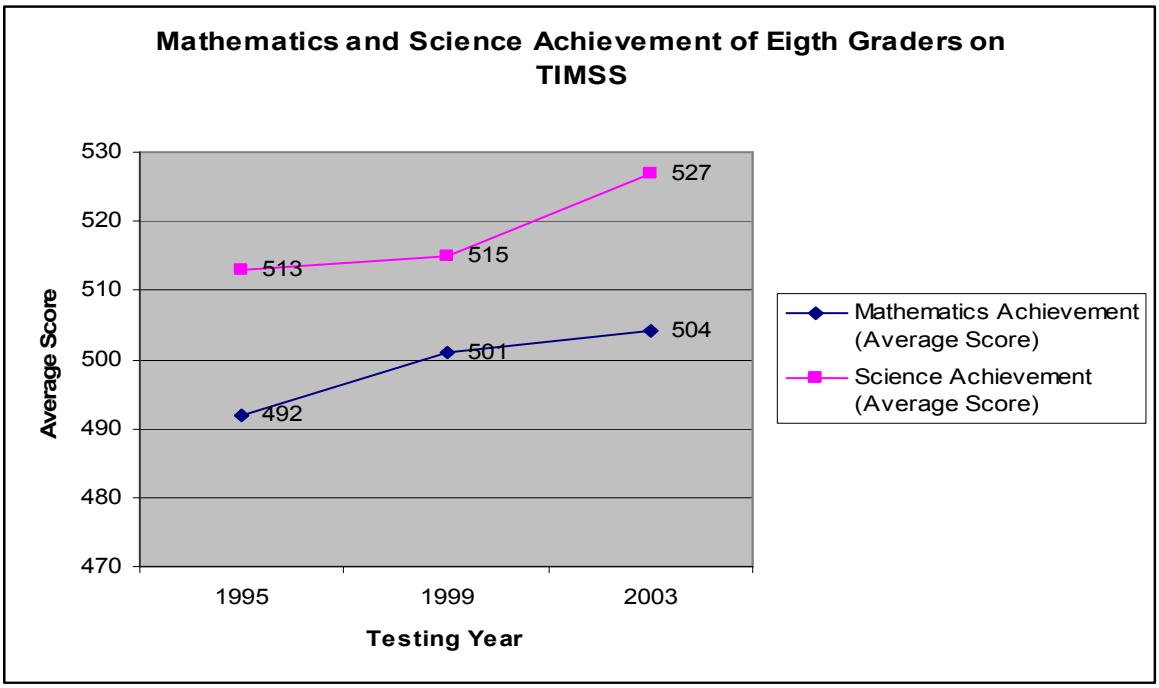
The PIRLS also created international benchmarks similar to those used in the TIMSS. There are four benchmarks, each corresponding to a percentile and an average scale score. The first is the Top 10% Benchmark. It is defined at the 90$^{th}$ percentile, and equals a score of 615. This benchmark is the point above which the top 10 percent of students scored. The second level is the Upper Quarter Benchmark. It is defined as the 75$^{th}$ percentile and equals a score of 570. This is the score above which the top 25 percent of the students performed. The third is the Median Benchmark. It is the 50$^{th}$ percentile and equal to a score of 510. It is also the point above which the top 50 percent of the students scored. Lastly, the fourth is the Lower Quarter Benchmark. It is the 25$^{th}$ percentile and equals a score of 435. The top 75 percent of the students participating in this study scored above this benchmark. (Lynch School of Education, Boston College, 2007)

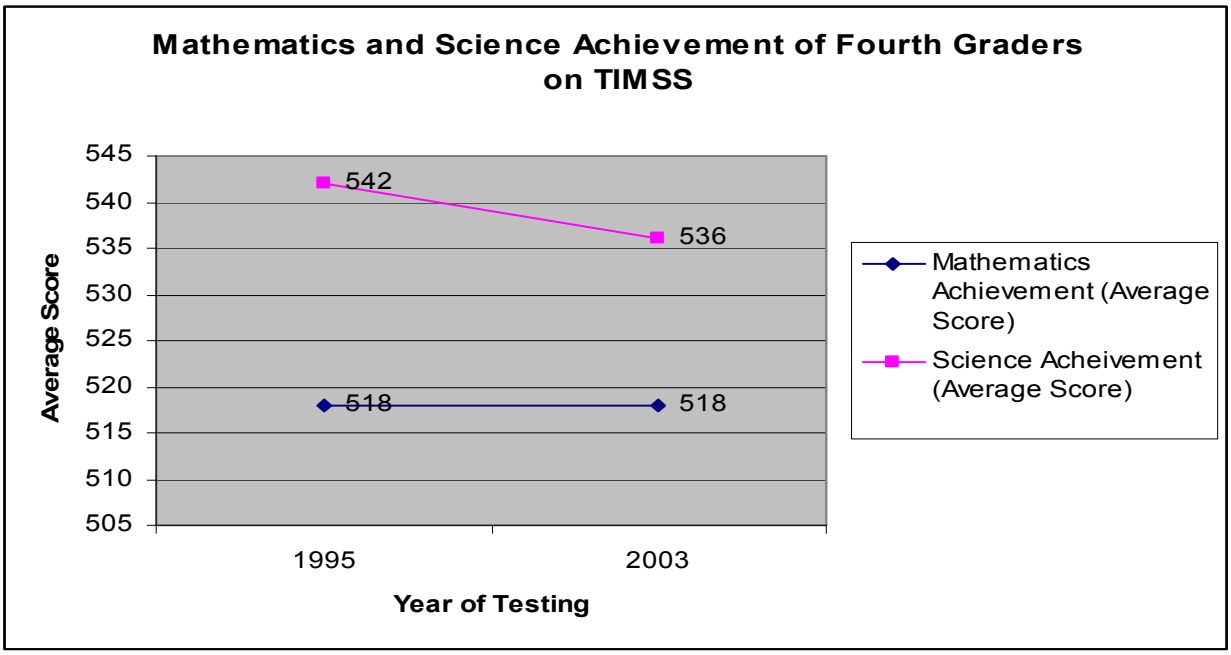
Amongst the 41 countries that participated in the study, the United States performed considerably well at meeting the benchmarks. According to the data, 19% of all the fourth graders participating in the study in the U.S. performed at or above the Upper 10% Benchmark. 41% of the students performed at or above the Upper Quarter Benchmark. The percentages look at the total number of students that participated who met this benchmark, so this statistic includes the students who met the Upper 10% Benchmark. Also, 68% of the total number of students performed at or above the Median Benchmark, and 89% of the students performed at or above the Lower Quarter Benchmark. (Lynch School of Education, Boston College, 2007) Based on the information provided, it seems that the United States is performing well when tested on reading for information and literary purposes in relation to other countries around the world. However, there is a considerably difference in the scores of our students in reading for literary purposes and reading for informational purposes. It would appear that something needs to be done to increase their skills in this area. Many questions on standardized tests require students to read a passage and answer questions by analyzing and interpreting the data in it. Reading for information is an important skill students need in order to perform well on these types of questions, since if they are unable to garner information from the passages they read, they will be unable to successfully answer any questions that follow.

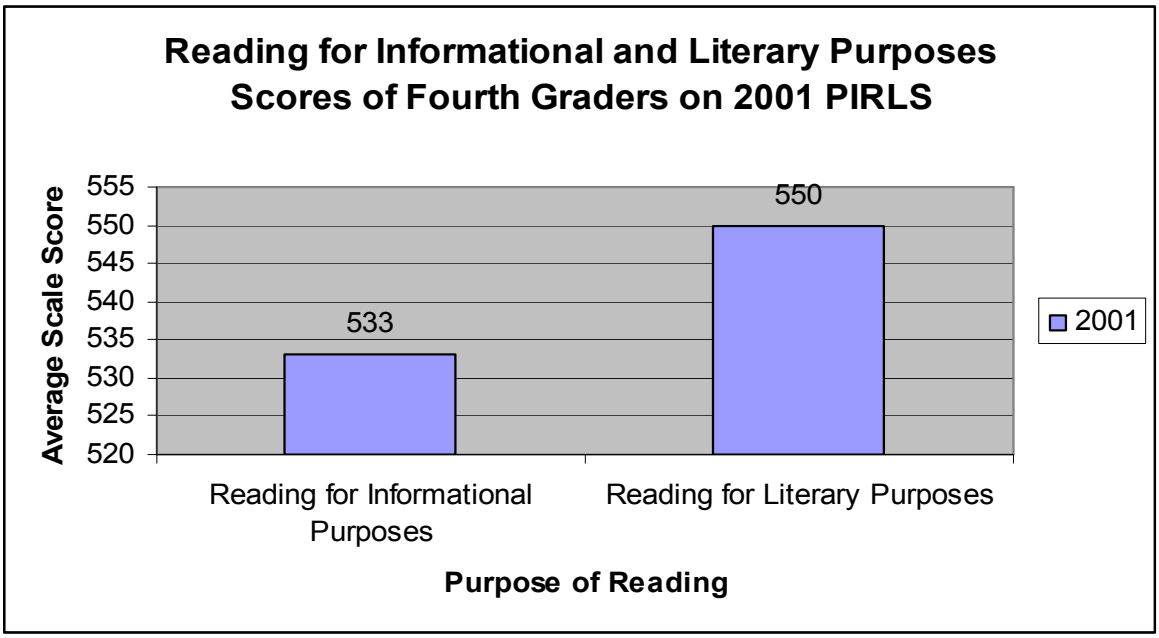
Based on the data provided by both the TIMSS and the PIRLS studies, it seems that standardized testing is having some effect on the achievement of our students. In looking at the TIMSS, it seems that the eighth graders are improving under this new emphasis on standardized testing. In the eight years between the first tests and the last data in 2003, American eighth graders improved by 12 points to end up at 504 in mathematics and 15 points to end up at 527 in science. These improvements are significant, since the international average in mathematics for

eighth graders is 467, and the international average in science is 474. The fourth grade students are struggling to remain just at the same level of achievement. In 2003, fourth graders decreased six points to land at a score of 536 in science, which is still above the international average of 489. In mathematics, the fourth graders stayed the same with a score of 518, which is not too much higher than the international average of 495.

The fourth grade students are also struggling to meet the international benchmarks, while the eight graders seem to be steadily improving. This suggests to me that there is something wrong at the fourth grade level in both mathematics and science. However, the testing seems to be helping the older students, and therefore may be somewhat beneficial. In looking at the PIRLS, one can see that the fourth graders in the United States are performing above the average international score. Also, close to half the students performed at the Upper Quarter Benchmark. If one was to make a decision whether or not to continue with the standardized testing based solely on the testing results, it would seem to me that the standardized testing is aiding achievement in some way, and should therefore not be disposed of.




Mathematics and Science Achievement of Fourth Graders on TIMSS
Average Score
545
540
535
530
525
520
515
510
505
542
536
518
518
1995
2003
Year of Testing
Mathematics Achievement (Average Score)
Science Acheivement (Average Score)


Reading for Informational and Literary Purposes Scores of Fourth Graders on 2001 PIRLS
Average Scale Score
555
550
545
540
535
530
525
520
533
550
Reading for Informational Purposes
Reading for Literary Purposes
Purpose of Reading
2001

However, it is important to take into consideration the many varied opinions of teachers, administrators and the public on this important topic. The National Education Association, or NEA, believes that NCLB has created laudable goals for all students. However, the association feels that the law needs to be improved and more appropriate funding made available if NCLB is to meet its goals. The NEA has developed recommendations for improvement to the law. Some of their ideas include criteria for great public schools, accountability that rewards success and supports educators, smaller class sizes, and ideas for how to ensure there are quality educators in every classroom, especially inner city classrooms. (National Education Association, 2002-2007)

Another prominent teacher's union, the American Federation of Teachers, or AFT, feels that flaws in NCLB such as unclear guidance for states, lack of funding, and unsuccessful attempts to make the law more flexible, are limiting its ability to meet the original promises made. The AFT has also worked to create some recommendations for NCLB, covering areas such as utilizing all funding available and creating more challenging but attainable adequate yearly progress goals. Their recommendations also include pressing the government to require that states develop high-caliber programs to support teachers and provide continuing professional development, and a school improvement process that allows schools time to create improvement plans and the resources to see those plans through. (American Federation of Teachers, n.d.)

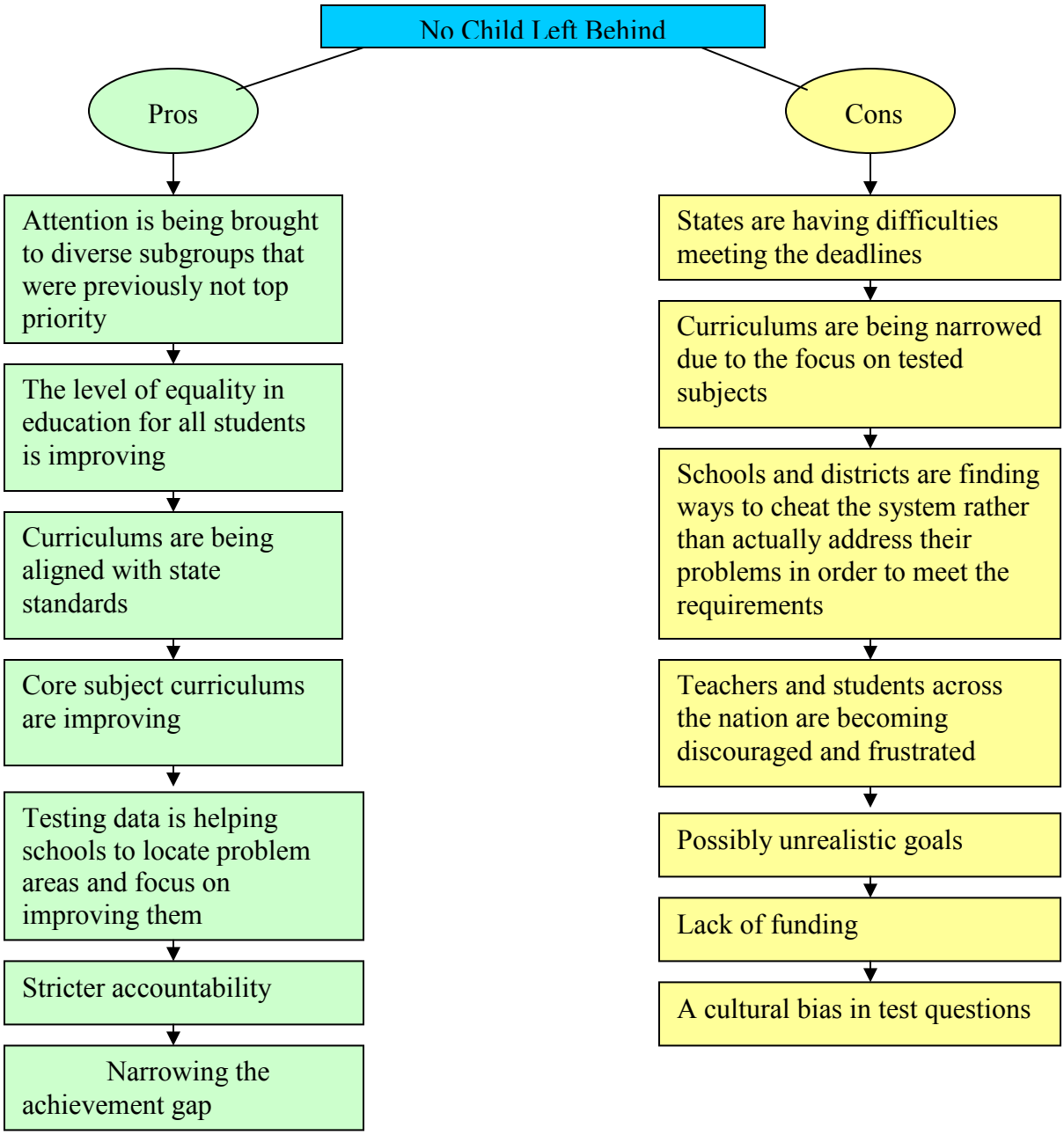
After analyzing the opinions and recommendations of these various professionals and educational organizations, I tend to agree with many of the issues raised by those who believe that standardized testing should be removed from our schools. The fact that schools and districts are finding covert ways to alter their numbers makes me believe that this strong focus on standardized testing is not in the best interest of our students. Lowering our expectations and focusing on certain students to ensure that our schools score high enough is not best practice.

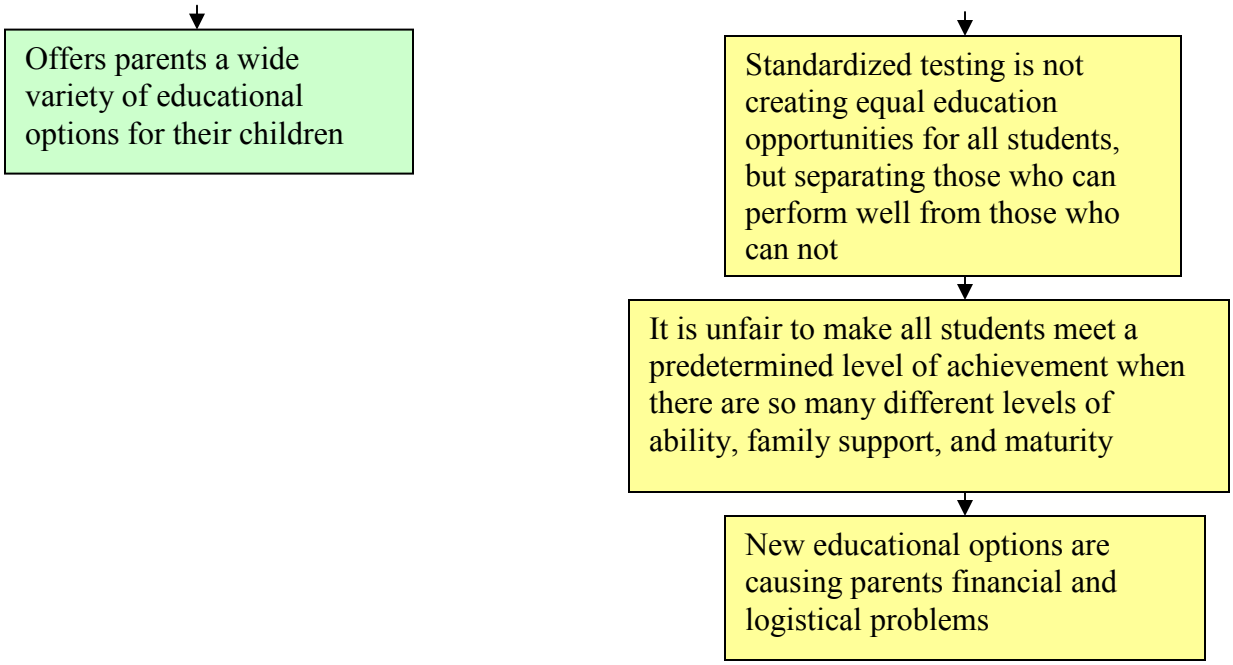
Gordon Cawelti also has a strong opinion on the subject of curriculum. If we narrow our focus to only those subjects on the test, we are denying our students their right to a broad and diverse educational experience. Students deserve to study a variety of subjects so that they can best be prepared for life after school. Alfie Kohn states that there needs to be some serious improvement in the area of funding. Schools should not need to cut back on special programs just to find the money to support testing. Valuable content areas such as art and music are important subjects that students need to experience, and even those subjects that are not on the tests should not be ignored – they are just as valuable to young minds as the subjects on the test. According to The Chicago Arts Partnerships in Education Summary Evaluation, released in 1999, 60% of students attending schools integrated with Chicago Arts Partnerships in Education were able to perform at or above grade level on mathematics testing in 1998. Previous to the integration, only 40% of students were able to do the same in pre-Chicago Arts Partnerships in Education schools, and only 28% district wide. The report also stated that students who were involved in creating original opera participated more in class than those students who were not involved (50% versus 33%). (Americans for the Arts, n.d.)

According to *Critical Links: Learning in the Arts and Student Academic and Social Development*, a report put out in 2002, at-risk urban students with artistic talent who were involved in arts training and arts integrated classrooms over the course of three years made greater gains than a control group of students who were taught in a regular classroom without art integration. (Americans for the Arts, n.d.)

I believe that it might be more beneficial to the overall goals of NCLB to lessen the amount of standardized testing, or alter the testing process in some way. In examining the numbers from the international testing, it can be seen that even though there is some

improvement at the eighth grade level, it is not that impressive. The fourth grade numbers are even slightly decreasing. The percentage of fourth graders performing at or above the Advanced and High Benchmarks in mathematics has decreased two percent from 1995 to 2003, and decreased five to six percent from 1995 to 2003 in science. When considering recommendations for NCLB, it is important to consider the pros and cons. Below is a concept map comparing the points for and against NCLB.






Many schools and districts across the country have already worked hard to make specific recommendations for the improvement of NCLB and have even begun to implement those recommendations. They are:

At Ridgewood Middle School in Arnold, Missouri, the principal and assistant principal worked together to introduce a character education curriculum into their school, to help improve student attendance, socialization, and performance in the classroom. Character education is designed to help students "become morally responsible, engaged citizens". (Haynes, C.C., Berkowitz, M.W., 2007) At Ridgewood, the administration raised the bar on attendance, sometimes even going out to students' homes and physically bringing them into the school. They also instituted a "no failure" policy, which forbid teachers to give out a zero for missed assignments. Instead, the students make up the missed work during their lunch period.

The school also made sure to allot resources to support staff development. In an effort to promote kind and supportive relationships, the school developed a mentorship program. For a half an hour each day, a small group of students meets with an adult mentor to discuss topics and

give advice. These groups promote proper socialization techniques and allow students and teachers to develop a bond. Ridgewood Middle School has the statistics to show their success. Disciplinary referrals have decreased by 70%, and their student failure rate has gone down to zero. Also, their almost daily home visits to find non-attending students have decreased to only four or five visits a year. (Haynes, C.C., Berkowitz, M.W., 2007)

Two things that Ridgewood did to improve their school seemed especially positive and successful. Using a "no failure" policy is a great way to keep students motivated. Not only do they not feel like a failure for receiving a zero, they still have to suffer the consequences of not doing their work by completing it during lunch hour, which may deter them the next time they consider not to complete an assignment. The idea of small mentor groups is also a great one. By creating a strong bond between teachers and students, we can create a more comfortable and understanding learning community and students will be able to grow and flourish together.

One strong leader in educational reforms in the wake of NCLB's implementation is New York City under the mayoral leadership of Michael Bloomburg. There, principals are signing performance contracts that grant them more control over their schools in exchange for accountability. (Stop Pandering on Education) The contracts these principals sign outline their new powers, resources, and responsibilities, and they must use their new resources to help their schools meet and fulfill target goals. (NYC Department of Education, 2006) This means that if their school is not performing well, they will loose their jobs. New York is also tackling the issue of teacher tenure. Schools chancellor Joel Klein is making an effort to toughen tenure standards so that less qualified teachers who have seniority cannot bump newer teachers who may be more highly qualified. (Alter, J., 2007)

New York has also spent time investigating what works in the classroom and identified two of the most successful innovators in education, Achievement First Charter Schools, founded by Dacia Toll, Stephan Pryor and Doug McCurry, and Knowledge is Power Program (KIPP), founded by Mike Feinberg and Dave Levin, and recruited them to come into the city and implement their techniques.

Another strategy for improvement is to increase the amount of time on academic tasks. At KIPP charter schools, 60% more time is spent on academic tasks than is spent in the regular public schools. (Beyond "No Child", 2007) All of these suggestions and innovations can be part of the solution to improving student achievement. Encouraging teachers as well as students, bringing in what has been shown to work, and spending more time on academics can all help to boost morale and boost test scores.

States across the nation have taken different approaches to implementing positive changes. In Michigan, the education department has begun identifying "high-priority" schools, and appointing school support teams to those institutions. These teams examine the school's performance and work with the administration to create a plan to improve the school. In Alabama, regional reading coaches are helping schools to identify problem areas and work towards fixing them. Their goal is to change the attitude of their schools so that everyone believes that the students can meet the goals of NCLB. In Virginia, at the K-8 Achievable Dream Academy, teachers have been using test results to create instructional strategies which will work on students' weaknesses and increase their strengths. (Hoff, D.J., 2007)

It seems that it is up to individual schools and districts to create the means by which their students can reach the goals of NCLB. "The real reward from the law is the innovative and

successful practices that have sprung up to address demands for improvement" (Beyond "No Child", 2007)

The administration also has made recommendations to strengthen NCLB. Schools will be able to use growth models to track student improvement. More funding will be provided to schools, and states will be allowed to create assessments for small groups of students with disabilities to meet modified achievement standards. More rigorous coursework is suggested for high school students, and more teachers trained to teach advanced placement classes. A Teacher Incentive Fund is proposed to reward teachers and administrators who raise student achievement. More funding will be delegated for improvement of schools, and to support students who choose to transfer to a different institution. Lastly, supplemental services will be offered to students attending "low-performing" schools one year sooner then originally suggested. (United States Department of Education. (2005)

The Pell Scholars Honors Program focuses on the themes of international relations and public policy. No Child Left Behind and the issue of the educational system in the United States address both of these themes. Education in the United States is a matter of public policy. There are both public and private schools, and parents have a choice as to where they want their children to learn. There have been many national reforms of the educational system over the years. Many of these reforms have been voted on by Congress and the Senate, and those representatives took into consideration the views and opinions of their constituents, many of whom are teachers, administrators and parents. No Child Left Behind has been the issue of much heated debate since its implementation in 2001. School staff and parents have come together to attempt to improve their schools and the performance of their students. Some support

the law and its changes, while others do not believe in it, and this difference of opinion has sparked much discussion and much change in schools across the country.

No Child Left Behind can also be looked at from an international perspective. As quoted by Alfie Kohn in his article *Standardized Testing and It's Victims*, "Internationally, few countries give standardized tests before high school level, and multiple choice tests are rarely used at all". (Kohn, A., 2000) As one can see from the international testing data, there are countries such as Sweden and England who are outperforming the U.S. in both mathematics and science. That may leave some wondering whether the strong focus on standardized testing is a movement that will catch on with other countries and truly benefit students, or if it is something other countries have already tried and seen fail. Only time will tell whether other countries will adopt similar reforms, and more importantly, whether this strong focus on standardized tests will really raise student performance and achievement in academics.

This thesis has examined many different journal articles, personal opinions, and the most current research on NCLB. This law has developed from a continuing chain of educational acts and laws, and has caused heated debate in the United States. After evaluating international testing data, and first hand accounts of success and failure in schools across the country, I personally feel that No Child Left Behind is not giving students in the United States the best possible educational experience.

It seems that the standardized testing movement has the potential for success, but needs strong reforms in areas such as funding, resources and the quality of educators. As previously mentioned in this paper, President George W. Bush only used 13.3 billion of his allotted 22.75 billion dollar budget for educational reform. Without proper funding, schools will be unable to purchase the test-preparation materials they need, re-design their curriculum to align with state

standards, or provide professional development opportunities for their teachers and administrators so that they can meet the requirements of NCLB. All of theses things are essential improvements schools need to implement under this act. (Wikimedia Foundation, Inc., 2007) The issue of lack of funding is directly related to the issue of resources. Test preparation materials can become quite expensive, with a sixth grade book running anywhere from $9-$11. (msn.com [33]) With the lack of proper funding, schools must find alternative ways to purchase these materials. Sadly, many schools have cut extracurricular programs such as art, music, or subjects not featured on the tests, even though there is much research that supports the improvement of student achievement when exposed to these disciplines. (Americans for the Arts, n.d.)

Finding and retaining highly qualified teachers is another problem area. As mentioned before, the strides taken in New York to eliminate the problem of under-qualified teachers usurping more highly qualified teachers due to tenure is a novel and potentially successful idea. (Alter, J., 2007) Without highly qualified teachers, students will not receive best practice and will not be as prepared for testing as they could be, which sets both the students and their schools up for failure. I strongly support the changes and recommendations I cited earlier in this thesis. Schools need to make changes such as aligning their curriculums with standards, implementing mentorship programs and "no failure" policies to boost student moral and confidence, recognizing successful educational strategies and implementing them, allotting more time for academic studies, and providing experts and support to schools that need assistance in meeting the goals of NCLB. If more changes like these are made, the flaws and problems of the act addressed, and the intense focus on standardized testing is lightened so that students and teachers are not under so much pressure, it is possible that the No Child Left Behind Act could improve

the education system in the United States. America's future lies in its youth, and it is our most important task to support the growth and development of these children with a rich, varied, and challenging education.

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