



## Chapter 3

# The No Child Left Behind Act: Political Context and National Goals

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This is an important moment, a time when the United States government has articulated the expectation that all U.S. students will learn mathematics. The No Child Left Behind Act (NCLB) is a bipartisan commitment to the children of the United States. It has a fundamental premise: Adults in our schools and communities must take responsibility for ensuring that all students develop the fundamental knowledge and skills in mathematics, as well as in all core subjects, that will enable them to succeed in the twenty-first century. In order to achieve this goal, NCLB draws on four basic principles: Accountability for results, local control and flexibility, choice, and research-based practice.

**Accountability.** Accountability for results has taken on a new dimension for educators, one which some are not eager to embrace. Not only are teachers, principals, and superintendents responsible for student performance in the aggregate, but, for the first time, they are responsible for the performance of sub-populations of students. The performance of students of color and of different ethnicities must be examined separately to ensure that all are making progress toward the standards their state has set. Achievement in English language acquisition and mathematical knowledge must be measured for students who are not fluent speakers of English. In some states, mathematical knowledge is assessed in the students' home language; in others, it is assessed in English. Students in poverty constitute a distinct group whose achievement must be assessed and improved over time.

Moreover, students with disabilities (SWD) must be assessed and the results shared publicly. Over 52 percent of all SWD are identified as learning disabled, meaning that they have average or above average intelligence and yet have

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This is a transcript of the talk delivered by the author in her former role as Assistant Secretary in the Office of Vocational and Adult Education of the U.S. Department of Education.

difficulty learning in specific areas. Educators, including teachers and special education staff, are asked to help them develop strategies to accommodate those disabilities so the students can go on successfully in those subjects. Without assessments, it is difficult to know if students are making the progress required by NCLB, and whether the strategies used are effective for those students. Approximately eight percent of SWD, less than one percent of all students, have been identified as having significant cognitive disabilities that preclude their achievement at grade level. Each of these students is assessed at the level of the standards in his or her state that is appropriate.

NCLB is a major step forward for the future of the United States. For the first time in our history, we are taking responsibility for all children; no longer are we just mouthing the slogan “all children can learn,” but we are taking responsibility for ensuring all will learn. This is a challenge that has not been taken on before, and there are no silver bullets to ensure that it is accomplished. As a nation we are asking educators to work to bring students who are behind up to grade level, we are asking them to change past practices that have not been effective, and we are asking them to work together to develop practices that are effective.

**Local control and flexibility.** The second principle of NCLB is local control and flexibility. Given the focus on local control, each state develops an accountability plan and determines the actions to be taken if a school does not meet the established rate of adequate yearly progress. Although the law requires certain approaches to developing an accountability system, for the most part, the policies, standards, and assessments are set by each state. The assessments are measures developed by each state to determine whether students in the state have mastered the knowledge and skills established in that state’s standards for subjects and grade levels.

The United States has a decided focus on local control. It does not have a national curriculum or national exams that all students must take. Instead each state determines standards and assessments. The expected levels of achievement are set by each state and differ in difficulty and depth. The United States does have a National Assessment of Educational Progress (NAEP) that is administered to a stratified random sample of students in each state. Participation in NAEP is required by Congress to “confirm” the results of state assessment. A state’s participation allows comparisons to be made between the percentage of students classified as proficient by the state exam and the percentage of students in the state sample classified as proficient by NAEP.

**Choice.** NCLB's third principle is choice. Choice has always been available to middle and upper class parents whose decisions in buying a house are often determined by the quality of schools in that district. Affluent parents can choose between public and private schools, but, for many parents, especially those in the highest levels of poverty, choice has not been an option. NCLB allows parents of students who are enrolled in schools that are in need of improvement the opportunity to request transfer to a school that is successful in providing education to all groups of students. Many parents choose to stay for a variety of reasons, but they have been given the opportunity to make the choice to do so. Parents of a child who stays at a school in need of improvement have a choice of providers of tutorial or supplementary educational services from the public or private sector. In this case also, federal funds are used to give parents in poverty the same choices available to other parents concerned about the quality of education their children are receiving.

**Research-based practice.** The fourth principle of NCLB is practice based on research. To improve educational practice, we must use evidence as the field of medicine has done for the last forty years. It is not surprising to those at universities that there has been little consistency in what is being taught from classroom to classroom in a single school, much less from school to school and district to district. That is in part because we do not have practices to suggest that are based on research on what works. Thanks to the National Institute of Health, we have gold-standard research, random-assignment studies of how students learn to read. These studies were able to isolate five components of reading that must be included in instruction: phonics, phonemic awareness, vocabulary development, fluency and comprehension. When all five components are effectively taught in grades K-3, 95 percent of third graders read at grade level, in contrast with our current level of 40 percent. The remaining five percent will require additional, more intensive interventions to get to grade level.

Now that teachers have seen the power of this research on reading in their classrooms, they are asking for similar research on mathematics. Unfortunately, we do not have thirty years of high quality research that would enable us to tell them definitively what to teach and how to teach it in mathematics. That is, in part, the purpose of this talk — to convince others that further research is needed on content and pedagogy in order to help teachers more effectively teach their students.

**Highly qualified teachers.** Another area of NCLB is the issue of highly qualified teachers. One would not consider it controversial to ask that secondary school teachers have a major in the subject they teach, yet that is so far from current practice that it had to become part of the law. Currently over 50 percent of our middle school teachers have neither a major nor a minor in mathematics. Many of them have K–8 certification that required only one to three courses in mathematics. It is desirable that they have additional professional development in mathematics, but some do not. In addition, courses taught by unqualified teachers are not evenly distributed across all of our schools. One does not find unqualified teachers teaching mathematics as often in suburban schools as in urban or rural schools. It occurs in urban high schools or in more advantaged schools when the master schedule requires another section of algebra and no mathematics teachers are available to teach it. The solution is often to find someone else on the faculty who is available that period, regardless of whether his or her only training was an algebra course taken in high school. It is estimated that unqualified teachers teach courses in a variety of subjects to over a third of high school students for this reason.

**Assessment.** Finally, I would like to expand my discussion of assessment. Assessment occurs at many different levels. I have mentioned the state assessments that NCLB requires — at grades three through eight and once in high school. These are meant to inform policy makers about the progress students are making. NCLB requires assessments in reading and mathematics in order to provide an indicator of the health of the educational system, as temperature and blood pressure are checked in a doctor’s office as an indicator of an individual’s health. When large percentages of all student groups in a school are performing at high levels, the school is making adequate progress, and students can be expected to succeed at the next grade level. However, these assessments are not the only measure of what students know and are able to do.

Classroom assessments that use a variety of strategies and forms are critical to ensuring that students learn at the depth required in mathematics. However, classroom assessment is also connected to the qualifications of the teachers. If the teacher is not prepared in mathematics, how can he or she assess the knowledge and skills of students at the depth required? How can he or she develop valid and reliable measures of what students have learned? It is not likely that such teachers would teach or assess their students at appropriate levels.

District-level testing can inform district staff about the achievement of students in each school and within each classroom. In Houston, district staff used test results to know where to intervene with professional development for teachers and with additional classes for their students which were taught by college and graduate students majoring in mathematics.

The NAEP provides another set of statistics about what our students know and are able to do. Attaining proficiency on NAEP means that students are able to take what they have learned and apply it to solving problems. Disaggregated statistics from the 2003 twelfth grade NAEP tell us that current practices have led to a national disgrace: only twenty percent of our white students, three percent of our African American twelfth graders and only four percent of our Hispanic twelfth graders are proficient in mathematics. And these are the students who have made it successfully to twelfth grade and who are going to graduate from high school within months, unprepared for careers or further education.

Finally, I would like to mention the Mathematics and Science Initiative. In February 2003, Secretary of Education Rod Paige convened a Summit on Mathematics that focused on curriculum, teacher development, assessments, and research in mathematics teaching and learning. Presentations at the Summit made clear that unless future teachers are differently prepared and current teachers are re-educated, the next generation of students will not be prepared for careers in science, technology, engineering or mathematics, or able to pursue the wide variety of other careers that require an understanding and use of mathematics. That is why NCLB is so critical to the future of the United States. Unless we focus on the progress our students are making and change our practices to ensure that all children learn at high levels, we cannot expect our students to succeed or our country to remain at the nexus of power, productivity, and innovation.

