



## Education Policy Brief

VOLUME 26, APRIL 2008

### *No Child Left Behind: A Realistic Expectation?*

As Delaware's poorest performing students progress through school, their risks of continuing to score at performance level 1 on the Delaware Student Testing Program assessments increase.

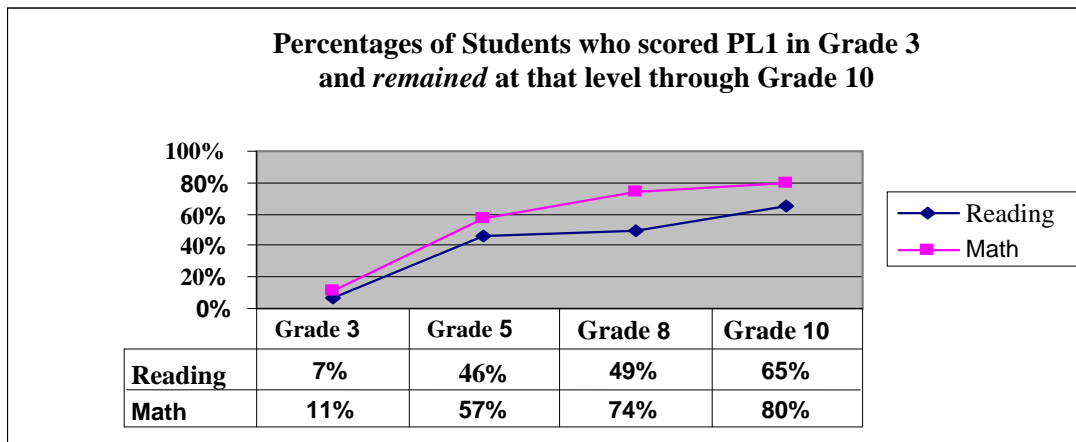


Figure 1. Tracking three cohorts of Delaware's lowest performance level students over time.

**Figure 1** shows the performance of three cohorts of Delaware's lowest performing students (performance level 1) on the reading and mathematics portions of the Delaware Student Testing Program from 1998 through 2007. It shows the percentages of students who initially scored at performance level 1 in grade 3 and remained at that level through 5th, 8th, and 10th grades.<sup>1</sup> That is, while 11% of these three cohorts scored a PL1 in 3<sup>rd</sup> grade math, 80% of that group was still at PL1 by the time they took the 10<sup>th</sup> grade test. Only 20% of these most academically disadvantaged students improved beyond the lowest score between 3<sup>rd</sup> and 10<sup>th</sup> grade.

This policy brief explores No Child Left Behind's requirement that all Delaware public school students reach proficiency on Delaware content standards in reading and mathematics by 2014 through the use of longitudinal data analyses of students' Delaware Student Testing Program (DSTP) performance.

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## INTRODUCTION

The No Child Left Behind Act of 2001<sup>2</sup> (NCLB) lays out an ambitious plan to increase the academic performance of all students on standardized tests. NCLB is “an Act to close the achievement gap with accountability, flexibility, and choice, so that no child is left behind.”<sup>3</sup> The federal legislation’s ultimate goal is for all public elementary and secondary students to meet and/or exceed their state’s proficiency standards in certain subjects by the 2013-14 school-year.<sup>4</sup> To meet this goal, NCLB requires states to develop challenging accountability systems that ensure every child is proficient in reading/language arts and mathematics on state assessments by 2014.<sup>5</sup> Under NCLB, each state is given the flexibility to set proficiency standards for its assessments. As a result, states have varying proficiency definitions; some states have more rigorous proficiency standards than others.<sup>6</sup>

The U.S. Department of Education (USDOE) monitors states’ compliance with the Act’s accountability provisions. It does so by comparing actual student performance on annual state assessments to the projected adequate yearly progress (AYP) targets that each state established to meet the required 2014 proficiency deadline. The Department defines AYP as “an individual state’s measure of progress toward the goal of 100 percent of students achieving to state academic standards in at least reading/language arts and math. It sets the minimum level of proficiency the state, its school districts, and schools must achieve each year on annual tests and related academic indicators.”<sup>7</sup>

Many researchers have projected that NCLB’s deadline of having all students reach proficiency on state assessments is highly unlikely.<sup>8</sup> Mathis (2006) wrote, “Expecting all children to reach mastery on their state’s standardized tests by 2014, the fundamental requirement of AYP, is unrealistic.”<sup>9</sup> Further, consistent with national studies on the Act’s student proficiency requirement, Haas, Wilson, Cobb, & Rallis (2005) determined NCLB’s 100% student proficiency provision is not attainable globally. Based on an international analysis of students who participated in the 2003 mathematics portion of the Programme for International Student Assessment (PISA), they found the following:

No country has achieved a 100% pass rate at any reasonable level of achievement. In the 2003 results from the PISA test, not one country – even the highest performing countries of Finland, Korea, and Canada – had all of its students pass the *lowest* standard in either math or reading. We agree that 100% proficiency on a challenging academic assessment is impossible by 2014. We further argue that it is fiscally untenable at any time (p. 181).

Even though many research studies show that states will not meet NCLB’s 2014 deadline, the USDOE’s 2006 *National Assessment of Title I: Interim Report to Congress: Volume I: Implementation of Title* declares otherwise. In this study, Stullich, Eisner, McCrary, & Roney (2006) examined trend data for 21 states from 2000-01 to 2002-03. They concluded that Delaware was one of only four states<sup>10</sup> in the country projected to meet NCLB’s 2014 deadline for all low-income students<sup>11</sup> to achieve proficiency in reading on the state assessment. This report raises two important points. First, the authors acknowledge their predictive model “assumes no variation in the rate of change.”<sup>12</sup> In other words, they expect all Delaware students from low-income families will continue to gain 3.5 percentage points in reading each year for 11 years. Second, although this report proclaims NCLB’s 100% proficiency requirement in Delaware is possible, their findings are limited to one subgroup of students, low-income students, in one subject area, reading. NCLB mandates proficiency in both reading and mathematics for all students. Universal student proficiency includes students from all major racial/ethnic groups, English language learners, migrant students, students with disabilities, and students from families across all income levels. Our longitudinal analyses of Delaware students’ performance on the DSTP strongly contradict the USDOE findings.

## DELAWARE’S ACCOUNTABILITY SYSTEM

The DSTP is administered annually in reading, writing, mathematics, social studies, and science to elementary and secondary public school students. For purposes of NCLB’s accountability provisions, Delaware students in grades 3, 5, 8, and 10 are tested in reading and mathematics.<sup>13</sup> Delaware established

five performance levels (PLs) to measure student performance on the DSTP. According to the Delaware Department of Education (DEDOE), “PLs tell how students are performing relative to the State’s content standards.”<sup>14</sup> To meet the first state’s proficiency standards, students must score PL 3 or greater on the assessments.<sup>15</sup> Table 1 illustrates the DSTP PLs.

Table 1. The DSTP performance levels.

| Level               | Category                | Description               |
|---------------------|-------------------------|---------------------------|
| Performance Level 1 | Well Below the Standard | Needs lots of improvement |
| Performance Level 2 | Below the Standard      | Needs improvement         |
| Performance Level 3 | Meets the Standard      | Good performance          |
| Performance Level 4 | Exceeds the Standard    | Very good performance     |
| Performance Level 5 | Distinguished           | Excellent performance     |

Note. Adapted from the DSTP Proficiency Levels, Delaware Department of Education, 1999, p. 1.

In 2003, Delaware established AYP targets that project the percentages of students expected to meet and/or exceed the state’s proficiency standards in the reading and mathematic portions of the DSTP from 2003 through 2014. The chart below depicts Delaware’s accountability plan.

“AYP assumes learning is predictable, regular, and easily mapped across grade levels.”<sup>16</sup>

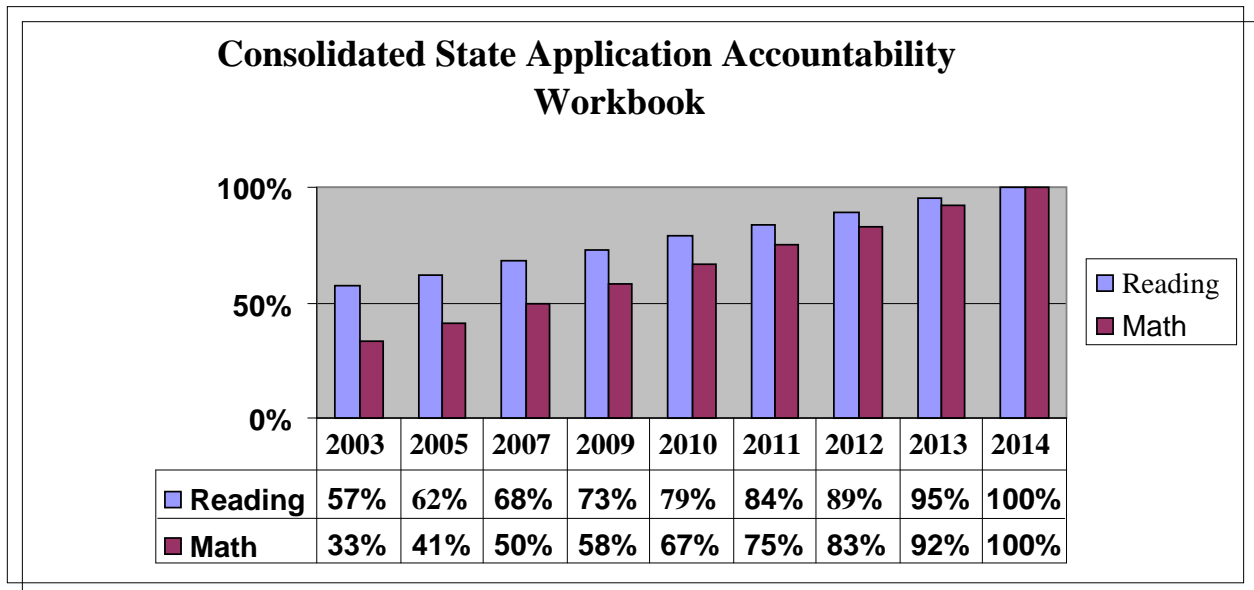


Figure 2. Percentages of DE students meeting/exceeding the standards to reach NCLB requirements  
 Note. Adapted from the State of Delaware Consolidated State Application Accountability Workbook, 2007, p. 30.

Currently, Delaware’s accountability system utilizes two models: the NCLB model (the ‘traditional model’) and the growth model. In fall 2006, USDOE selected Delaware to participate in its growth model pilot program.<sup>17</sup> The description of Delaware’s growth model states:

All students in grades 3 through 10 will be included in the growth model calculation provided the students were in the school for a full academic year in the current year and have a DSTP test score from the previous year....[I]f a student has only one test score, the student will still be included in the traditional model (USDOE, 2006b, p. 24).

Delaware’s growth model is designed “for school accountability purposes, not for determining individual growth.”<sup>18</sup> The growth model differs from the traditional model in two respects: (a) the growth model defines proficiency on one level by combining performance levels 3-5 of the traditional model,<sup>19</sup> and (b)

the growth model will use confidence intervals to calculate AYP; the traditional model does not use confidence intervals.<sup>20</sup> A confidence interval is “a statistical technique that permits a school or subgroup to make AYP, even if it misses its target, as long as its performance falls within a band set around that target, similar to the margin of error in polling data.”<sup>21</sup>

## RESEARCH FINDINGS: ACHIEVEMENT OF DELAWARE STUDENTS OVER TIME

In 2006, the Delaware Education Research and Development Center (DERDC) tracked the progress of Delaware’s lowest performing students on the reading and mathematics portions of the DSTP from 1998-2005. Altogether, over 15,000 student performance test results were analyzed. The DERDC distributed these research findings in a series of technical reports<sup>22</sup> available online at [www.rdc.udel.edu](http://www.rdc.udel.edu).

### Significant Implications for Delaware Students

- It is highly improbable that every elementary and secondary public school student in Delaware will meet the state’s proficiency standards in reading and mathematics by 2014.
- A strong indicator of a student’s ability to achieve proficiency on the reading and mathematic portions of the DSTP by grade 10 is the student’s performance level on the grade 3 assessments. See figure on page 1.
- Over time, students performed better on the reading assessments than the math assessments. If students score low in third grade, it is much more difficult for students to gain ground in mathematics than in reading.

The DERDC’s findings are consistent with the DEDOE’s annual DSTP reports. Dating back to the DSTP’s initial administration in 1998, Delaware students have consistently performed better in reading than math. Similarly, DEDOE’s annual DSTP reports indicate elementary school students perform better on the DSTP than high school students.

## POLICY QUESTIONS FOR CONSIDERATION

1. Given the data clearly indicate that NCLB’s 2014 deadline is unattainable, what potential effects might this unrealistic goal have on both students and teachers?
2. Considering the role the federal government has taken in regards to k-12 education and the impact of early learning on students’ academic performance, should the state consider formally expanding the k-12 system to include early childhood education?
3. How early should math intervention begin in schools and communities to increase the likelihood of students performing better in the primary grades?
4. It is commonly accepted that everyone (e.g., parents, community groups, and teachers) can and should contribute to a child’s reading literacy. How can the state foster a similar commitment to children’s literacy in mathematics?

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## NOTES

<sup>1</sup> Janerette, D. (2007). [Longitudinal performance level study]. Unpublished raw data from study.

<sup>2</sup> No Child Left Behind Act of 2001, Public Law 107-110-Jan. 8, 2002, 115 Stat. 1425, 20 U.S.C. § 6301 et seq.

<sup>3</sup> Id.

<sup>4</sup> 20 U.S.C. § 6311 (b)(2)(F).

<sup>5</sup> Id.

<sup>6</sup> Cronin, Dahlin, Adkins, & Kingsbury, 2007; Stoneberg, 2007; Linn, 2005.

<sup>7</sup> USDOE, 2007a.

<sup>8</sup> Lee, 2006; Sunderman, 2005; Linn, 2005, 2003.

<sup>9</sup> Mathis, 2006, p. 3.

<sup>10</sup> The four States are Delaware, Kansas, North Carolina, and Oklahoma.

<sup>11</sup> A student is identified as low income if he/she participates in the school's free and/or reduced lunch program.

<sup>12</sup> Stullich, Eisner, McCrary, & Roney, 2006, p. 20.

<sup>13</sup> Beginning in the 2007-08 school-year, the Act requires states to measure students' proficiency in science (20 U.S.C. § 6311 (b)(3)(v)(II)).

<sup>14</sup> DEDOE, 2006, p. 2.

<sup>15</sup> DEDOE, 1999, p. 1.

<sup>16</sup> Shannon, 2004, p. 35.

<sup>17</sup> USDOE, 2006a.

<sup>18</sup> DEDOE, 2006, p. 29.

<sup>19</sup> DEDOE, 2006, p. 7.

<sup>20</sup> DEDOE, 2006, p. 31.

<sup>21</sup> Draft bill: Changes to AYP. (2007, September 5). *Education Week*, 27 (2), 21.

<sup>22</sup> Delaware Student Testing Program Performance Level 1 Study Preliminary Findings, July 2006; Delaware Student Testing Program Performance Level 1 Study District Level Findings, August 2006; and How Do Performance Level 1 and 2 Students in Delaware Perform Over Time?, Fall 2006.