



Policy Brief

APPENDIX II

Making Public Schools Great – An Initial Look at Approved and Rejected States’ Models in the U.S. Department of Education’s “Growth Model Pilot Project”

In response to growing dissatisfaction from the states and education groups, the U.S. Department of Education (Department) announced a pilot program in November, 2005, to allow up to ten states to use growth models to measure adequate yearly progress (AYP) under the No Child Left Behind (NCLB) Act. On May 17, 2006, the Department approved proposals from two states—North Carolina and Tennessee—to participate in the growth model pilot project for 2005-06.¹ The two approved states are among 20 that submitted proposals to participate in the pilot in 2005-06 and 2006-07.

In general, growth models track individual student’ test scores over time, comparing actual and expected rates of growth. In the context of NCLB, growth models provide schools with the opportunity to make AYP if the same students show achievement gains over time, even if these gains fall short of proficiency in any given year. All students—including those whose academic progress is measured using a growth model—must still be proficient by 2013-14.

What sets North Carolina and Tennessee apart from the other 18 state applicants? What did the other states propose that left their applications wanting? What can state department of educations expect next from the Department in its decision-making process on growth models?

The Approved Models: North Carolina and Tennessee

North Carolina and Tennessee are the only states that have been approved to use their proposed growth models to determine if schools and districts made AYP in 2005-06. Table 1 shows the status of the total number of proposals ($n = 20$) states submitted to the Department.

Table 1
Status of Growth Model Proposals from North Carolina, Tennessee, and Other States

Approved for 2005-06: NC and TN
Not approved for 2005-06. Sent to peer review panel: AK, AZ, AR, DE, FL and OR
Not approved for 2005-06. No peer review: CO, IN, IA, SC and UT
Applied for 2006-07. No action by the Department: HI, MD, NH, NV, OH, PA and SD

Tennessee received full approval to implement its model, while North Carolina’s approval was contingent upon the state’s receiving the Department’s final approval of its assessment system by

July 1, which has now occurred. Both states proposed models that built on experience with longitudinal test data and a well-honed state system for tracking test scores from grade to grade and year to year.

For example, the peer reviewers noted that North Carolina has a history of dealing competently with large-scale data systems and statewide testing. In addition, it has been using growth modeling in its accountability systems for nearly a decade.² Similarly, the reviewers pointed to Tennessee's history of using achievement data in school management and to the state's capacity to operate data systems.³

North Carolina's Model: North Carolina will implement a modified form of a growth component that has been part of the state's accountability system since 1996-97. It will determine if schools make AYP by first applying NCLB's status model and safe harbor provisions, and then applying the growth model. In broad terms, the growth target is the average growth of each AYP subgroup in which at least 40 full academic year students have been tested. The growth target for proficient students is the same expectation as is currently in the state's accountability system. Growth targets for non-proficient students will be based on a trajectory that will place them as performing proficiently within four years of entering a tested grade in a school district.⁴ North Carolina notes that an additional 40 schools would have made AYP using its proposed growth model.

Peer Reviewers' Comments: Half the peer reviewers⁵ recommended approval of North Carolina's growth model; half did not. Those who did not were especially concerned with the state's use of average growth in trajectories that will determine if subgroups made AYP. They worried that the performance of highly proficient students could mask the performance of non-proficient students. The subgroup could make AYP, but contain students who might not reach proficiency by 2014. In addition, the proposal called for resetting growth targets for students who moved from one school district to another, which some reviewers felt backpedaled from uniform growth targets for all students across the state. These concerns were considered serious.

Other concerns the reviewers raised: Students who are close to proficiency may meet the target in less than four years; individual students' growth would not be reported to parents; and the rate at which the state matches students' test records from year to year for students is low in some subgroups.

The reviewers cited the following as strengths of the North Carolina growth model:

1. Proficient students are included in the growth calculations.
2. State tests have a vertical scale so they function well across grade levels.
3. Students attain proficiency in four years and the growth targets are absolute rather than being reset periodically.
4. Students and student subgroups are not excluded due to missing test data.
5. North Carolina has a history of analyzing longitudinal test data.

Tennessee's Model: Tennessee proposed a "projection model" — not a value-added model — that determines the percent of students, by subgroup and subject area, who are projected to attain proficiency on the state assessment three years into the future. The model relies on statistical methodology that Tennessee has used since 2002 to consider all of an individual student's prior scores on the state assessment to estimate the student's achievement level at a future point in time. The state's longitudinal data system tracks student progress across time, schools and districts. In its growth model, Tennessee expects fourth and fifth grade students to make accelerated progress toward attaining proficiency so they are prepared for high school work. It

expects sixth, seventh, and eighth grade students to make accelerated progress toward attaining proficiency on the state’s graduation standards. The projection model gives schools credit for all students who are projected to be proficient within three years, whether they are currently proficient or non proficient.⁶ Tennessee estimated that an additional 47 schools (13 percent) would have made AYP using this model.

Peer Reviewers’ Comments: Tennessee’s was the only proposal to receive the reviewers’ unanimous approval, but they recommended acceptance for one year with the condition that the state address two concerns before renewal or extension. The first concern relates to the accuracy of the state’s growth projections. Because the state has done growth modeling previously, the reviewers felt it was important for Tennessee to report on the accuracy of its projections, particularly by subgroup. The second concern is that the model may result in systematic errors in its projections because it is based on a student receiving an average school experience, something not all students in the state do, in fact, receive.

The reviewers cited the following as strengths of Tennessee’s growth model:

1. The growth projections use all available test information on all students (both proficient and non-proficient) and updates these projections when new tests are available.
2. The model reports on individual student’s performance and growth targets to schools and parents.
3. The state has a history of using achievement data in school management and has shown a capacity to operate data systems.

Table 2 summarizes features of the North Carolina and Tennessee models that the reviewers noted as well as other features of interest that were not mentioned in the reviews. For example, neither model includes high schools, which will continue to be accountable using the current AYP model. In fact, most of the 20 states that submitted proposals did not include high schools in their growth models. Their exclusion could be attributed to the fact that NCLB requires states to test in only one grade in high school which precludes the kind of grade-to-grade comparisons in grades 3-8 that provide data for growth models.

Table 2
Key Features of North Carolina’s and Tennessee’s Approved Growth Models

Characteristics	North Carolina	Tennessee
Type of growth model?	On track to proficient	Projection model
How many years for students to reach proficiency?	4 years	3 years
Which grade levels are in the growth model?	Grades 3-8	Grades 4-8
Are high schools included?	No	No
Students with disabilities included?	Yes	Yes
English language learners included?	Yes	Not Addressed
Are students scoring above proficient included?	Yes	Yes
Are student growth targets reset?	No	No
Are parents provided with reports of growth?	No	Yes

Tennessee’s proposal does not address the participation of English Language learners (ELL) in the growth model, while North Carolina does. It includes ELL students in growth calculations provided they meet the full academic year requirements and have previous test scores that align with the change scale in its growth model.

Both states include students with disabilities in their growth models. North Carolina includes students if the assessment that is specified in their IEP is scaled in a way that can be converted to the change scale used in the growth model. This precludes students who are expected to attain alternate and modified achievement standards. Tennessee includes in its growth model current year scores from students with disabilities who participate in the alternate assessment. They are considered proficient if they score above the proficiency standard for that alternative assessment.

PEER REVIEWERS’ RECOMMENDATIONS

The Department will approve no more than 10 state growth pilots for 2005-06 and 2006-07. With the approval of North Carolina and Tennessee, eight slots remain. Some of those slots maybe filled by six that applied for the pilot program in 2005-06 and whose applications were deemed worthy of peer review. The six states are: Alaska, Arizona, Arkansas, Delaware, Florida, and Oregon.

The Department recently announced that it will give “early consideration” to these states in the next round of proposals and its has invited the six to submit revised proposals for 2006-07 by Sept. 15, 2006.⁷

As the box to the right demonstrates, so far the Department has apparently considered other information in addition to the peer reviewers’ recommendations in making the final decision to approve the states’ proposals. For example, although most of the peer reviewers recommended approval for Arizona, its growth model was not approved for 2005-06. In contrast, the reviewers’ vote to approve North Carolina’s model was split 5/5, but the Department approved its model.⁸

Peer Reviewers’ Recommendations to Approve States’ Growth Models		
State	Yes	No
Alaska	0	10
Arizona	8	2
Arkansas	1	9
Delaware	0	10
Florida	0	9
North Carolina	5	5
Oregon	0	9*
Tennessee	9	0*

**One reviewer abstained.*

In its report, the peer review panel notes that it recommended approval of two models. Based on panel members’ individual votes these appear to be Arizona and Tennessee. The reviewers go on to say that “on a third state [North Carolina], there were more mixed views. Half of the panel members recommend approval if the state agreed to make the substantive changes necessary to meet the panel’s conditions. The remaining members were not convinced either that the state is ready at this time or that the state can be expected to make sufficient adjustments.”⁹

The Special Case of Arizona: The peer review panel recommended conditional approval of Arizona’s growth model. It indicated that Secretary Spellings needed to decide if the Department would allow states to incorporate growth into their accountability systems as Arizona proposed. Under the Arizona model, a student subgroup would make AYP if it met its growth target, regardless of its performance based on the NCLB status model or the law’s safe harbor provision. If the subgroup met the growth target, it made AYP.

In addition, although Arizona computed growth for all students, it only factored growth into its progress calculations for non-proficient students. The reviewers concluded that this approach effectively ignored growth for proficient students. They left to the Secretary the decision whether or not to accept models that measure growth for all students, but allow proficiency status to override growth targets for proficient students.

The peer reviewers also raised concerns about the use of confidence intervals in Arizona's growth model, which was one of several "cross-cutting" themes they identify in their summary report and we discuss below.¹⁰

But rejection of the Arizona growth model may also be tied to ongoing negotiations between the Department and the Arizona Department of Education around the number of years ELL students could be in schools before their test scores were included in AYP calculations. The Department attached as a condition for approval of the growth model the requirement that ELL students' test scores count for AYP purposes after the students' first year in school. The Arizona Department of Education had argued consistently that ELL students' scores should only be factored into AYP calculations after students had been enrolled in Arizona schools for three years. In 2003, the Department agreed to the three-year allowance but subsequently insisted on counting ELL students' scores after one year. The state filed suit on this matter in early July.¹¹

FIVE CROSS-CUTTING THEMES IN STATES' GROWTH MODELS

During its review of the growth proposals submitted by Alaska, Arizona, Arkansas, Delaware, Florida, North Carolina, Oregon, and Tennessee, the peer review panel identified five issues that it indicated "would need to be addressed by any future growth model proposals considered by the Department."¹² The issues are:

- 1. Resetting Student Growth Targets Annually.** Three states (AK, AR, and FL) planned to reset individual student growth targets annually after they had established an initial trajectory for non-proficient students to reach proficiency in three or four years. The reviewers questioned whether these models really expected students to reach proficiency in that timeframe. By resetting growth targets each year, the reviewers argued these states could postpone the grade by which a student was proficient for six or more years, and at the same time, credit schools and districts with making AYP during the majority of those years. In addition, the reviewers pointed out that none of the states discussed any special interventions for students who did not attain proficiency in the three- or four-year period. Nor did they discuss how they would ensure that all students are proficient by 2014. The review panel concluded that growth proposals that routinely reset growth targets, and by doing so leave the timeframe for a non-proficient student to reach proficiency open-ended, should not be approved.
- 2. Including Proficient Students in the Growth Model.** Five states (AK, AZ, AR, DE, and FL) planned to apply their growth models exclusively to non-proficient students. Students who scored at or above proficient on state assessments in their current grade would be counted as meeting AYP and would not be included in the growth model.

The reviewers indicated that empirical data from a number of states show that some proficient students will fall into the non-proficient category in the future. They pointed out that a potential advantage of growth models is their ability to identify downward trends in

students' achievement, including the achievement of students who scored proficient at one time. Some reviewers felt that states should continue to collect data about the future performance of proficient students, but failure to do so should not eliminate a state from participating in the growth pilot.

- 3. Aggregating Growth for Determining AYP.** Three states (DE, NC, and OR) used procedures for aggregating test results across students that were reviewed negatively. However, the reviewers disagreed about what constituted an acceptable approach. One group argued that only a system that reported students' progress in terms of numbers and/or percentages of students satisfies NCLB guidelines. Other reviewers indicated that other systems, which might even include some form of averaging, could be used as long as the number/percentage of non-proficient students declined over time and 100 percent of students were proficient by 2013-14.¹³
- 4. Matching Student Test Records.** Information about how students test records would be matched from year to year that five states (AZ, AR, DE, NC, and OR) provided raised reviewers' concerns. The pointed out that states must hold schools accountable for the performance of the same student subgroups whether AYP is based on status or growth. Equally important, the students on which AYP is calculated — those who have matched test records from year to year — must be representative of the student subgroup(s) to which they belong. In addition, this pool of matched test records should be as large as possible so that the maximum number of subgroup members contributes to AYP determinations. For these reasons, the reviewers focused on what the proposals said about state's match "rate" — the percentage of students for which test data is available in the current and previous school years. The reviewers were especially interested in comparable match rates for student subgroups, arguing that without assurances, a subgroup with low match rates would yield data that are not fully representative of the group as a whole. The reviewers recommended holding schools accountable for subgroups that had a low match rate based on status rather than growth.
- 5. Using Confidence Intervals.** Seven states (AR, AZ, AR, DE, NC, OR, and TN) proposed using 95 percent or 99 percent confidence intervals to determine if student subgroups met growth targets and thereby made AYP. By guarding against error caused by the variation in students' performance from test to test and year to year, confidence intervals increase the likelihood that students are properly classified. Many states previously received the Department's approval to incorporate them into the AYP status model/safe harbor components of their accountability systems.

The reviewers argued that using confidence intervals in the law's status model is appropriate. It can reduce the impact of variations in test scores across student cohorts that are assessed from one year to another, which in turn, reduces the potential for misclassifying students as making or not making AYP. The reviewers contend that under the growth model the issue of student cohorts is no longer in play since the models measure the performance of individual students over time. The reviewers concluded that states need to justify the use of any confidence interval around growth projections, and that very wide confidence intervals (e.g., 95 percent or 99 percent) are inappropriate for growth models.¹⁴

“CORE PRINCIPLES” STATES MUST ADDRESS

The Department required states to address the following seven “Core Principles” in the proposals they submitted to date to participate in the growth model pilot project. States that participate in the second round of proposals in fall 2006 also will need to address these principles:¹⁵

Core Principle 1: Ensure all students are proficient by 2013-14, and set annual goals to ensure that the achievement gaps are closing for all students.

Core Principle 2: Set expectations for annual achievement based upon meeting grade-level proficiency, not based on student background or school characteristics.

Core Principle 3: Produce separate accountability decisions about student achievement in mathematics and reading/language consistent with the NCLB statute and regulations.

Core Principle 4: Include all districts, all schools, and all students in the tested grades; hold schools and districts accountable for the performance of student subgroups.

Core Principle 5: Include annual assessments in each of grades 3-8 and high school in mathematics and reading/language arts that have been operational for more than one year, have been approved through the NCLB peer review process for 2005-06, and produce comparable results from grade to grade and year to year.

Core Principle 6: Track student progress through the accountability model and state data system.

Core Principle 7: Include student participation rates in the state’s assessment system and student achievement on an additional academic indicator.

WHY OTHER STATES’ MODELS WERE NOT APPROVED

The Department did not approve growth model proposals for 2005-06 from Colorado, Indiana, Iowa, South Carolina, and Utah, stating that they were ineligible for peer review because the states failed to adhere to the “Core Principles” the Departments had established for participating in the pilot. The grounds for the Department’s decision are explained in letters to each state and are summarized below. In all cases, except one, the grounds related to specific features of the proposed growth model. The exception is Iowa. The grounds for not approving its model related, in part, to the state’s failure to meet all of the requirements related to NCLB’s highly-qualified teacher provisions. Iowa is the only state that the Department has said must submit a plan for meeting these provisions as a condition for release of its FY 2006 Title I, Part A and Title II, Part A grants.¹⁶

Colorado

- Did not establish growth targets that would meet 100% student proficiency by 2013-14 (Core Principle 1).
- Established growth targets for student cohorts rather than individual students (Core Principle 2).
- Did not make changes in response to Department’s concerns.¹⁷

Indiana

- Provided few details about the how the model met the Department’s Core Principles or issues described it its peer review guidance.
- The state’s revised proposal lacked details related to establishing student growth targets (Core Principle 2) or describing how schools would be held accountable for growth (Core Principle 1).¹⁸

Iowa

- Did not provide evidence that all students are included (Core Principle 5). In the previous 2 years not all schools participated in the state’s voluntary statewide assessment.
- Did not meet the “bright line” principle that all teachers be qualified which is a “precondition to consideration of additional flexibility” [such as a growth model].¹⁹

South Carolina

- Unclear that growth targets will achieve 100% student proficiency by 2013-14 (Core Principle 1).
- Proposed a higher minimum subgroup size for students with disabilities and ELL students than for other student subgroups (Core Principle 4).
- Did not make changes in response to Department’s concerns.²⁰

Utah

- Establishes a goal that only 75% of students will be proficient by 2013-14 (Core Principle 1).
- Combines various student subgroups into one subgroup for analytic purposes (Core Principle 4).
- Does not examine achievement in mathematics and reading/language arts separately, but combines several components into one calculation (Core Principle 3).²¹

SECOND ROUND OF PROPOSALS IN FALL 2006

The Department has invited Alaska, Arizona, Arkansas, Delaware, Florida, and Oregon to submit revised growth proposals for 2006-07 by Sept. 15, 2006. Seven additional states (Hawaii, Maryland, Nevada, New Hampshire, Ohio, Pennsylvania, and South Dakota) have already applied to be part of the pilot for 2006-07. The Department has taken no formal action on these proposals, but the states are eligible to re-apply by Nov. 1, 2006. In addition, the five states whose proposals for 2005-06 were not sent to the peer review panel, and were not approved by the Department can, re-apply by Nov. 1.

Table 3

Timeline for Next Round of Growth Model Proposals

Invited to submit revised proposals by 9/15/06: AK, AZ, AR, DE, FL and OR
Can submit new proposals by 11/1/06: CO, HI, IN, IA, MD, NH, NV, OH, PA, SC, SD and UT

Some observers were surprised that as many as 20 states submitted proposals to be part of the pilot. Many questioned whether states currently have the infrastructure in place to track student growth over time.²² In addition, two requirements the Department imposed appeared to disqualify many states. First, states had to have at least two years of students test data from grades 3-8 and high school to be part of the pilot. This disqualified 23 states that are adding tests in at least some of these grades to meet the NCLB 2005-06 deadline for grade-by-grade testing in

grades 3-8. Second, states' testing systems must have been approved by the Department for the 2005-06 school year. During the period that the proposals were under review, only four states had received final approval (Delaware, South Carolina, Tennessee, and Utah).²³ All submitted proposals to participate in the growth model pilot but only Tennessee was approved.

NEA'S POSITION ON GROWTH AND THE DEPARTMENT'S PILOT

The NEA's priorities for the 2007 reauthorization of the Elementary and Secondary Education Act (ESEA) include revising NCLB's accountability model so that it rewards success and supports educators to help students learn.²⁴ To that end, NEA has argued for an improved accountability system that includes a growth component. (See box).

In addition, NEA is a member of an alliance of more than 80 national organizations representing education, civil rights, children's, disability, and citizens' organizations that has proposed several changes to the law, including one that would "allow states to measure progress by using students' growth in achievement as well as their performance in relation to pre-determined levels of academic proficiency."²⁵

"An improved accountability system should allow states the flexibility to utilize growth models and other measures of progress that assess student learning over time, and recognize improvement on all points of the achievement scale."

NEA, May 2006

NEA President Reg Weaver recently issued the following statement about the Department's growth model pilot:

"We are encouraged that the U.S. Department of Education is allowing two states to participate in this pilot program—they now acknowledge the potential for a better way. Yet other states were denied the opportunity to use this common-sense growth model system, which would give schools credit for progress in student achievement both over time and within the school year. NEA stands ready to work with the Administration to improve the current system and expand the growth model pilot program to include more states. And we call on Congress to amend the law to include such a provision." (Weaver, May 18, 2006).²⁶

IMPLICATIONS FOR STATE AND LOCAL AFFILIATES

The Department's growth model pilot project is in its initial phase. To date, it has only approved two of 10 state growth models. The next round of state proposals is due in September and November 2006. As affiliates—especially state affiliates—track the pilot project, they should be aware of the following:

1. The Department used peer review to evaluate eight states' growth model proposals, but did not feel bound by the reviews in making its final decision to approve the models. In fact, the Department approved one model (North Carolina) that only half the peer review panel recommended for approval, and it did not approve a model (Arizona) that all but two of the reviewers said merited approval

2. Based on the Department's approvals to date, and the peer reviewers' comments, we anticipate that if states propose growth models that do the following, the models are unlikely to be approved:
 - Fail to consider the growth of proficient as well as non-proficient students;
 - Reset student growth targets each year;
 - Set a larger minimum size for certain student subgroups;
 - Aggregate student test scores in ways that suggest high-performing students are masking the performance of low-performing students; and
 - Propose using wide confidence intervals in the growth model
3. NEA affiliates may want to encourage their state departments of education to build political support for their proposed growth models among their Congressional delegation, and secure letters of support from Members of Congress.
4. The Department is unlikely to refer all the proposals states submit in September and November 2006 to its peer review panel if it follows procedures used in the first round of proposals. The Department notified some states that its internal review (not a peer review) of their proposals indicated the states did not meet one or more of seven "Core Principles."
5. States that decide to submit proposals in September and November 2006 have several sources of information that can inform their proposals. These include proposals 20 states have submitted to date, additional information eight states provided the Department about their proposed models, and peer review comments and approval/disapproval letters for these states (AK, AZ, AR, FL, NC, OR, and TN).
6. If the Department follows the same review timeline in the next rounds of proposals as it did in the initial round, approval decisions are likely in December 2006–January 2007 for proposals submitted by September 15, 2006, and in March–April 2007 for proposals submitted by November 1, 2006.

For more information on the Department's growth model pilot, contact Marcella Dianda, mdianda@nea.org.

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¹ U.S. Department of Education. (May 17, 2006). Secretary Spellings approves Tennessee and North Carolina growth model pilots for 2005-06. Available online at www.ed.gov/print/news/pressreleases/2006/05/051706a.html.

² U.S. Department of Education. (April 17-19, 2006). Growth model peer report: North Carolina. Available online at www.ed.gov/searchResults.jhtml.

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- ³ U.S. Department of Education. (April 17-19, 2006). Growth model peer report: Tennessee. Available online at www.ed.gov/searchResults.jhtml.
- ⁴ North Carolina Department of Education. (March 2006). North Carolina's proposal to pilot the use of a growth model for AYP purposes (amended to reflect the U.S. Department of Education letter dated March 10, 2006). Available online at www.ed.gov/admins/lead/account/growthmodel/nc/index.html.
- ⁵ The Peer Review Panel members are Eric Hanushek, Stanford University (chair); Mitchell Chester, Assistant Superintendent for Policy and Accountability, Ohio Department of Education; David Francis, University of Houston; Margaret Goertz, University of Pennsylvania; Kati Haycock, The Education Trust; Sharon Lewis, Retired, Council of Great City Schools; Robert Mendro, Dallas Independent School District; Jeff Nellhaus, Deputy Commissioner, Massachusetts Department of Education; Chris Schatschneider, Florida State University; and William Taylor, Citizens Commission on Civil Rights.
- ⁶ Tennessee Department of Education. (Feb. 16, 2006). Proposal to the U.S. Department of Education. NCLB growth model pilot program. Revised March 17, 2006. Available online at www.ed.gov/admins/lead/account/growthmodel/tn/index.html.
- ⁷ Department of Education. (May 17, 2006). Secretary Spellings approves Tennessee and North Carolina growth pilots for 2005-06. Press release. Available online at www.ed.gov/print/news/pressreleas.
- ⁸ U.S. Department of Education. (April 17-19, 2006). Growth model peer report: North Carolina. Available online at www.ed.gov/searchResults.jhtml.
- ⁸ U.S. Department of Education. (May 17, 2006). Summary by the peer review team of April 2006: Review of growth model proposals, p. 2. Available online at www.ed.gov/searchResults.jhtml.
- ¹⁰ U.S. Department of Education. (April 17-19, 2006). Growth model peer report: Arizona. Available online at www.ed.gov/searchResults.jhtml.
- ¹¹ Davenport, P. (July 6, 2006). Arizona sues feds over No Child Left Behind scoring for schools. Associated Press.
- ¹² U.S. Department of Education. (May 17, 2006). Summary by the peer review team of April 2006: Review of growth model proposals, p. 1. Available online at www.ed.gov/searchResults.jhtml.
- ¹³ Alaska's approach received a positive review. States that did not raise this issue specifically in their proposals, and presumably avoided the problem, were Arkansas, Arizona, Florida, and Tennessee.
- ¹⁴ Florida is the only state that did not propose using confidence intervals in its growth model.
- ¹⁵ U.S. Department of Education. (January 25, 2006). Peer review guidance for the NCLB growth model pilot applications. Available online at www.ed.gov/policy/elsec/guid/growthmodelguidance.doc.
- ¹⁶ Johnson, H.L. (May 25, 2006). Letter to Judy Jeffrey, Director of Education, Iowa Department of Education. Washington, DC: U.S. Department of Education.
- ¹⁷ Johnson, H.L. (March 31, 2006). Letter to William Maloney, Commissioner of Education, Colorado Department of Education. Washington, DC: U.S. Department of Education.
- ¹⁸ Johnson, H.L. (March 31, 2006). Letter to Suellen K. Reed, Superintendent, Indiana Department of Education. Washington, DC: U.S. Department of Education.

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- ²¹ Johnson, H.L. (March 31, 2006). Letter to Patti Harrington, Superintendent of Public Instruction, Utah State Office of Education. Washington, DC: U.S. Department of Education.
- ²² Olson, L. (Feb. 1, 2006). States to vie to be part of NCLB 'growth' pilot. *Education Week*, 25(21), pp. 24, 25.
- ²³ Olson, L. & Huff, D.J. (Nov. 30, 2005). U.S. to pilot new gauge of 'growth.' *Education Week*, 25(13), p. 1.
- ²⁴ National Education Association. (May, 2006). ESEA: It's time for a change! NEA's positive agenda for the ESEA Reauthorization. Adopted by the NEA Executive Committee May 2, 2006.
- ²⁵ Forum on Educational Accountability. (October 2005). Joint organizational statement on the No Child Left Behind (NCLB) Act. Washington, DC: Author.
- ²⁶ Weaver, R. (May 18, 2006). NEA president Reg Weaver calls for Bush Administration to give states flexibility in measuring student progress. NEA Press Statement. Washington, DC: National Education Association.