KEY TAKEAWAYS

Most states have at least the majority of data needed and the ability to use it.

In 2011, only 12 states formally identified any of their teacher-preparation programs' performance as at-risk or low-performing. An increasing number of states are beginning to implement effectiveness-focused analysis of their state teacher preparation programs.

the progress of EDUCATION REFORM

EFFECTIVENESS-FOCUSED TEACHER PREPARATION

The well known 1983 report *A Nation at Risk* recommended that individuals preparing to teach should meet high education standards and demonstrate an aptitude for teaching and competence in an academic discipline — adding also that college and university teacher-preparation programs should be judged by how well their graduates meet these criteria.¹

The report's recommendations led states to begin to require that teaching candidates should take basic skills assessments and contentarea assessments.

Yet, while states set standards for programs by requiring that each program be accredited even before the report's release, most state leaders still have no idea how well these programs are preparing their graduates to be highly effective in the classroom. More than 30 years later, this remains the million-dollar question.

Effectiveness-focused teacher preparation links data on teacher performance with the institutions that prepared them.



WHY A FOCUS ON EFFECTIVENESS MATTERS

A three million-plus teaching force

In 2011, states reported data on 2,124 teacher-preparation programs from which well over 200,000 candidates exit each year.² Many of these candidates annually join the ranks of the more than 3 million public school teachers assigned to classrooms across the nation.

However, too many of these recent graduates feel unprepared as they enter the classroom. And in his quantitative analysis of mathematics instruction in classrooms, highly regarded Michigan State University researcher and author William Schmidt found that when teachers said they *felt* unprepared, it was because they *were* unprepared. He also suggested that it is unfair to blame teachers when they attend programs whose quality is not within their control.³

In this issue of *The Progress of Education Reform* we explore why, 30 years following the release of the recommendations included in *A Nation at Risk*, obtaining meaningful information on how well teacher-preparation programs are preparing our nation's teachers remains such a challenge. Moving in the direction of effectiveness-focused preparation is presented as an effective strategy and one that a number of states already have initiated.

WHAT THE RESEARCH SAYS

So let's back up. What does the research say about the effects of teacher preparation?

In 2003, the Education Commission of the States (ECS) reviewed the research on teacher preparation to ascertain what evidence the research truly provides and its implications for policy. The ensuing report — Eight Questions on Teacher Preparation: What Does the Research Say? — was based on a review of 92 studies that were selected, using rigorous criteria, from a total of more than 500.

One of the eight questions asked, Does the accreditation of teacher preparation programs contribute significantly to the likelihood their graduates will be effective and will remain in the classroom? The academic answer: No implications for policy can be drawn from the available research. In short, we don't know. Yet accreditation of teacher-preparation programs is what leaders count on as the Good Housekeeping Seal of Approval for graduating effective educators.⁴

Policy supportive of 'effectiveness focused' teacher preparation requires a solid definition of effective, very robust data systems and a lot of data sharing. ... Some states' laws restrict data sharing in ways that make implementation difficult.

— Matt Gianneschi, former vice president of policy and programs, Education Commission of the States

More recently, Richard Ingersoll and colleagues looked at the impact of preparation on teacher retention, finding that:

- Beginning teachers widely vary in the pre-service education and preparation they receive. Math and, especially, science teachers differ in their education and preparation from others.
- Interestingly, the type of college, type of degree, entry route or type of teaching certificate matter little.
- What does matter is the substance and content of new teachers' pedagogical preparation. Those with more training in teaching methods and pedagogy especially practice teaching, observation of other classroom teaching and feedback on their own teaching are far less likely to leave teaching.⁵

Historically, effectiveness is a missing piece

In the past, state and Congressional leaders have put numerous policies in place to try to ensure that all students are taught by highly qualified teachers. With passage of the No Child Left Behind Act, Congress attempted to reset the traditional paradigm for qualified (represented and measured via certification or licensure in the field being taught) to competence in the content area(s) being taught. Within the Act, however, the HOUSSE provision (High Objective Uniform State Standards of Evaluation) provided loopholes that effectively downsized the effects of this paradigm shift.

In 1967, when legal authority was vested in the respective state departments of education for defining acceptable teacher education programs, achievement data certainly was not a measure.⁶ Today, not much has changed. And as a result, program evaluations suffer from the Lake Wobegon effect (all of our children are above average) — leading to only 12 states formally identifying any of their teacher preparation programs' performance as at-risk or low-performing.⁷

Table 4.2 States identifying at-risk (AR) or low-performing (LP) teacher preparation programs, by year: 2003 through 2011

		Year							
State	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama							LP		
California						AR	AR	AR	LP
Connecticut					LP	LP			LP
Florida		LP	LP	LP	LP	AR, LP	AR, LP	AR, LP	LP
Georgia		t	t	AR	AR	AR			AR
Illinois	AR	AR	AR	AR	AR			AR	
Indiana		AR	AR					AR	AR
lowa				LP					
Kansas	AR	AR, LP	AR, LP	AR, LP	AR, LP	AR			
Kentucky		AR	LP	AR	AR, LP	AR, LP	LP		
Louisiana		AR	AR						
Maine		AR		AR	AR			AR	AR
Maryland	LP			AR					
Michigan					AR, LP				
Mississippi									LP
Missouri				AR	AR	AR			
New York	AR	AR		LP	LP	LP	LP	LP	
North Carolina	LP	LP	LP	LP					
Ohio	AR			AR	AR	AR	AR		
Puerto Rico						AR, LP	AR, LP	AR	AR
Rhode Island								AR	AR
South Carolina	AR, LP		AR	AR		AR	AR	AR	AR
Tennessee	AR	AR	AR						
Texas	LP			LP				AR, LP	AR, LP
Washington			AR		AR				
Total Number of States	9	11	11	14	12	12	9	11	12

[†] The state did not specify the designation of the program.

NOTE: The 50 states, the District of Columbia, Puerto Rico, American Samoa, Northern Mariana Islands, Palau, and Virgin Islands submitted a state Title II report in 2011. Guam did not submit a state Title II report in 2011. Micronesia did not submit a state Title II report in 2011. Marshall Islands did not submit a state Title II report in 2009, 2010, or 2011. Table entries indicate, for a given state and year, if one or more teacher preparation programs have been designated as "low-performing" (LP) or "at-risk" of being designated as low-performing (AR), respectively. Definitions of these categories were established by each state. States not included in this table have not identified any teacher preparation program as low-performing or at-risk. Data presented in this report for previous years may not be consistent with data published in earlier reports because states are able to revise their data.

SOURCE: U.S. Department of Education, Office of Postsecondary Education. (2012). Higher Education Act Title II Reporting System.

Source: https://title2.ed.gov/TitleIIReport13.pdf

What might transparency and a focus on effectiveness look like?

A transparent system of state teacher-preparation programs would include a focus on outcomes and could provide a level of public transparency similar to that of school and district "report cards." Like school report cards, outcome-focused measures of teaching quality could be selected, results on those measures gathered and public reports made to the public, to legislatures and to other state governing bodies. This would help inform state and institutional leaders about effective program elements and propel further review and reconsideration of program or process elements.

To raise the level of transparency for K-12 school and district performance, states have been moving beyond accreditation, which typically was not a transparent process, to legislatively established accountability systems based on carefully selected indicators and with greater attention to public dissemination of the data. Yet, just as with selection of the most valid, reliable and important measures for school report cards, selecting the right measures for determining effectiveness of teacher preparation programs is complicated and not a perfect science.

Recently, the National Council on Teacher Quality (NCTQ) published its second controversial analysis of curriculum from 836 teacher preparation institutions — Teacher Prep Review 2014. The review includes an optimistic note that early evidence indicates that teacher-prep programs are beginning to make changes.⁸

Why this is hard work

"Policy supportive of 'effectiveness-focused' teacher preparation requires a solid definition of effective, very robust data systems and a lot of data sharing," says Matt Gianneschi, former vice president of policy and programs for the Education Commission of the States, adding that "some states' laws restrict data sharing in ways that make implementation difficult."

Progress on the data piece

Fifteen years ago, most states simply did not have the data systems to support this work. Prior to the Data Quality Campaign's (DQC) initiative to ensure that the 10 essential elements of state longitudinal systems included a unique teacher identifier, gathering outcomes data was basically impossible. Even now, most state-level teaching evaluation systems are in their early days of implementation, although an increasing number include measures of student learning that can be tied to those unique identifiers. But if states cannot easily link such teacher identifiers to the institutions that prepared them, the link to preparation remains tenuous.

Yet states are getting better at collecting such data. According to the DQC, "states are uniquely positioned to provide feedback to teacher-preparation programs on the effectiveness of the teachers they prepare." This work requires significant data capacity to reliably and securely link teachers with their students' achievement and growth data with the state's teacher preparation programs. According to the DQC, 46 states say they can now create reports that include longitudinal statistics on school systems and groups of students to guide school-, district- and state-level improvement efforts.9

The DQC reports that in 2013, however, only 10 states had implemented a strong teacher-student data link (TSDL) incorporating a robust teacher of record definition, roster verification processes and designated governance structures.

What the Data Quality Campaign says is necessary

- Statewide definition of teacher of record
- Ability to link multiple teachers to a student for a particular course
- Roster verification process
- Collection of data multiple times per year
- Ability to link teachers to student growth data
- Ability to link teachers to name of teacher-preparation program institution
- Ability to link teachers to a teacherpreparation program specialization area (e.g., math education, special education)
- Means of sharing teacher performance data with teacher-preparation programs

SOURCE: http://dataqualitycampaign.org/files/data%20 file_teacher%20effectiveness.pdf

Progress on the evaluation piece (the definition of effective)

State teaching evaluation systems continue to evolve and improve. For instance, in states such as Tennessee, an early leader in development of its system of measuring teaching performance, value-added scores count for a portion of teachers' overall evaluation scores. For teachers in tested grades and subjects who receive an individual growth score, value-added scores count for 35 percent of the final evaluation score. For teachers in non-tested grades and subjects who do not receive an individual growth score, the school's value-added score counts as 25 percent of the overall evaluation score.

Some states assign a 50 percent weight to student achievement; some set it at 30 percent, etc., and still others states might (singly or in addition) use student learning objectives to measure individual teachers' contributions to their students' learning growth, particularly at some grade levels and subjects without statewide testing.

As the DQC notes, the states that include measures of student performance in their evaluation of teaching, only 17 reported in 2013 that they automatically share how teachers perform in the classroom with their in-state teacher preparation programs at least annually, up from six states in 2011. Sharing data on teacher performance with the institutions that prepared them is imperative for a quality educator workforce pipeline.¹⁰

Which states are doing a better job of preparing teachers?

Schmidt's Inequality for All analysis asserts that, because of the variations in state tests, it is nearly impossible to know which states are doing a better job of preparing teachers and ensuring that teachers are teaching to state standards.¹¹ State participation in the Common Core assessment consortia — Partnership for Assessment of Readiness for College and Careers (PARCC) and/or Smarter Balanced (SBAC) — should help participating states compare results with other states. But with some states choosing to leave the consortia and only one other non-college-entrance, nationally administered assessment — the National Assessment of Education Progress — the ability to compare achievement across the states could remain limited.

What do we know? What have we learned?

- Most state leaders cannot describe how well the state teacherpreparation institutions in their states are doing.
- According to the latest nationwide data available, only 11 states and Puerto Rico classified any teacher-preparation programs as being lowperforming or at risk of being classified as low-performing (at-risk).
- Little state-level transparency on effectiveness exists. Few states can say how teacher candidates from most institutions are doing after they begin working in classrooms.

However, teacher education programs themselves actively seek data that can be used to inform improvement and demonstrate accountability. According to the American Association of Colleges for Teacher Education's (AACTE) Professional Education Data System (PEDS), 34 percent of the 717 responding institutions were able to successfully track their graduates into job placements. Thirty-five percent attempted to track their graduates but had limited success; 19 percent were planning to track their graduates but had not done so yet; and 7 percent are not tracking graduates.¹³

International Quick Facts:

Finland: "Teacher education is heavily researchbased, with a strong emphasis on pedagogical content knowledge."

Canada: "Teacher training programs are housed in Canadian universities, although separate standards for teacher qualification exist across the provinces. There are only about 50 teacher education programs in Canada, so it is easy for provincial governments to regulate quality."

Singapore: "There is only one teacher training institution in Singapore — the National Institute of Education (NIE). The NIE is located in the Nanyang Technological University, one of the most prestigious institutions in the hierarchy of Singapore's institutions of higher education. ... The programs at NIE are focused on pedagogy and connections between educational subjects, rather than on advanced academic training within a specific subject. Which is to say that one cannot become a teacher in Singapore without mastery of the subject one is going to teach at a high level, as well as at least a year of challenging instruction in the craft of teaching. This curriculum is constantly updated to reflect the changing needs of Singapore's education system."

- National Center on Education and the Economy¹⁴

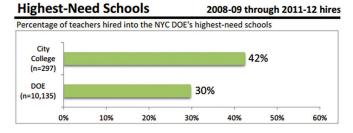
CURRENT EFFORTS

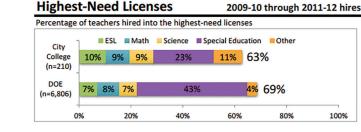
Who is working on 'effectiveness-focused' teacher preparation?

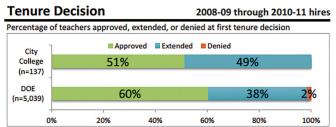
New York

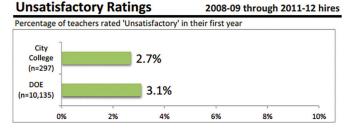
New York City released its first-ever program reports in August 2013. The data reflect the performance of new teachers from 2008-12 from the 12 education programs that supplied the most educators to the New York City Department of Education (NYCDOE) system over that time. The department asserts that it compiled these reports as a first step for the city and university education programs to open a dialogue aimed at developing a long-term strategy to improve preparation for aspiring teachers before they ever step into a NYCDOE classroom. Reports focus on six measures of teacher performance. A sample report follows.¹⁵

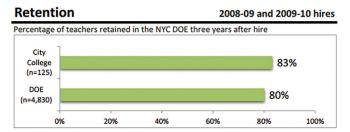
A sample NYC program report

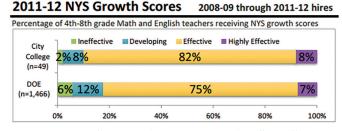












Source: http://schools.nyc.gov/NR/rdonlyres/C2931E78-D4F4-4902-A198-936291E99A05/0/NYCDOETeacherPreparationProgramReportCityCollege.pdf

Louisiana

Louisiana requires teacher preparation performance scores for each of its institutions. In 2012-13, measures included the percentage of program completers (traditional and alternative) who took and passed Praxis subtests. In 2013, state officials began working on the identification of new indicators and integration of those indicators into a system that is approved by the Louisiana Board of Regents and Louisiana Board of Elementary and Secondary Education, with a goal of having this task completed by 2015.

Types of Evidence to Report to the Public:

Evidence Currently Being Disseminated to the Public:

- State approval, regional accreditation, and national accreditation of teacher preparation programs;
- Quantity of undergraduate and alternate completers;
- Passage rates of completers on Praxis state licensure examinations;
- Mean value-added scores for teacher preparation programs (Alternate);
- Percentage of value-added scores within percentile ranges for new teachers (Alternate);
- Mean value-added scores for teacher preparation programs (Undergraduate); and
- Percentage of value-added scores within percentile ranges for new teachers (Undergraduate).

New Evidence to be Gathered to Meet CAEP Accreditation Requirements:

- Completer or graduation rates;
- Percentage of completers that meet state licensing requirements;
- Percentage of completers that obtain a license to teach;
- Percentage of completers that are hired in schools;
- Percentage of completers that are hired in positions for which they are prepared;
- Retention of new teachers once hired;
- Results of completer surveys;
- Results of employer surveys; and
- Student loan default rates.

New Evidence to be Considered for the Future:

Mean Compass teacher evaluation scores for completers of teacher preparation programs; and
 Quantity of completers in teacher shortage areas.

Other Types of Data that could be Reported to the Public:

- Total clock hours of clinical experiences before and during student teaching;
- Median GPA of candidates who enter teacher preparation programs;
- Median GPA of candidates who exit teacher preparation programs;
- Number and percentage of candidates/completers by race;
- · Number and percentage of candidates/completers by gender;
- Mean scores of completers on student teaching performance assessments; and
- Mean ACT/SAT scores of cohort members when admitted to the programs.

Source: http://regents.louisiana.gov/wp-content/uploads/2014/02/Draft-Teacher-Preparation-Transformation-2.0-2.5.14.pdf

Under the revised system, draft indicators being discussed include:

- Institutional Performance Index: An assessment of the extent to which teacher-preparation programs prepare new teachers who possess the content knowledge and pedagogical knowledge/skills to address state and national content standards (e.g., Common Core State Standards) and state and national teacher standards (e.g., Compass, InTASC).
- Human Capital Index: An assessment of the extent to which the teacher-preparation programs are successful in preparing new teachers who start and complete their programs and address the human capital needs of public schools in Louisiana.
- *Growth in Student Achievement Index*: An assessment of the growth in achievement of children taught by new teachers who completed the teacher preparation programs.¹⁶

Ohio

Ohio's broader set of metrics and report format were developed in collaboration with representatives from the 13 public and 38 private educator preparation institutions in Ohio, state agencies, and organizations. The Board of Regents works with the state department and higher education institutions to collect data on the following identified preparation metrics for the annual reports. Reports from 2013 included:

- Licensure Test Scores
- Value-added Data (EVAAS)
- Candidate Academic Measures
- Field/Clinical Experiences
- Pre-Service Teacher Candidate Survey Results
- Resident Educator Survey Results
- Resident Educator Persistence Data
- Excellence and Innovation Initiatives
- National Accreditation.¹⁷

"The Educator Preparation Performance Report permits the public to view the aggregate data for all graduates statewide and by institution and program area. School districts and charter schools can use the report to make informed decisions about hiring; students interested in pursuing educator preparation programs can use the report to make decisions regarding which program to attend; and institutions of higher education can use the report to inform continuous improvement efforts, program planning, and research."

Source: 2013 Ohio Educator Performance Reports

The following represents just one slice of an Ohio Educator Preparation Performance Report:

Ohio S.B. 316 required – by Dec. 31, 2014, and annually thereafter – that the chancellor of the board of regents report for each

Teacher Licensure Test Scores

Licensure Test	Test Score Range	Test Cut Score	Completers Tested	Program Average Scaled Score	Completers Passed	Program Pass Rate	State Average Pass Rate	State Average Scaled Score
ETS0021 - EDUCATION OF YOUNG CHILDREN	100-200	166	42	190	42	100	98	183

 $Source: http://regents.ohio.gov/educator-accountability/performance-report/2013/Ohio\%20State\%20University/OHSU_Early\%20Childhood\%20(PK-3).pdf$

teacher-preparation program the number and percentage of program graduates who were rated at each of the performance levels in the teacher evaluation system for the previous school year.¹⁸

Tennessee

The Tennessee General Assembly required in 2007 that the state board produce an assessment on the effectiveness of teacher training programs and that the annual statewide report include data on the performance of each program's graduates in placement and retention rates, Praxis II results and the teacher effect based on the Tennessee Value-Added assessment System (TVAAS) scores. The 2013 report card included additional indicators:

- Performance of completers on the most common Praxis content area exams.
- Institutions producing the largest numbers of completers, as well as the largest number of completers by content area.
- Trend analysis of statistically significant positive and negative effects for institutions from the 2011, 2012 and 2013 state report cards.

According to the Tennessee Higher Education Commission, future publication of the report card will include data from individual teacher performance assessments as collected through the Tennessee Educator Acceleration Model (TEAM), as well as the alternative teacher evaluation models.¹⁹ The state stipulated that such performance evaluation data is not public record and may only be used in evaluating preparation programs (S.B. 3024, 2012).

NOTE: Tennessee's evaluation system is much further along in its implementation than most other states.

Texas

Measures

Texas has been piloting standard-setting for value-added analysis of teacher preparation institutions.²⁰

The Texas Education Agency, the State Board for Educator Certification and the Texas Higher Education Coordinating Board are to jointly review existing preparation and admission standards for educator preparation programs, including stakeholder input in the review and development of those standards.²¹

One excerpt from "Adoption of Proposed Amendments to 19 TAC § 229.2-229.8"

Figure: 19 TAC §229.3(f)(1)		$\overline{}$		Level of reporting
Accountability System: Standards disaggregated by gender and ethnicity (see demographics chart)	Report by Program	Report by State	Description of Data	Based on what data
Certification examinations		1	Pass RateAs defined in 19 TAC §229.2(26).	- Dased Oil What data
Beginning teacher performance		1	Results of beginning teacher appraisals by school administrators.	
Student achievement		√	Improvement of student performance taught by beginning teachers for the first three years.	
Ongoing support by field supervisors to beginning teachers during their first year in the classroom	V	٧	Data collections regarding frequency, duration, and quality of field supervision	
Annual Performance Report disaggregated by gender and ethnicity: (Appendix - demographics chart)	Report by Program	Report by State	Description of Data	
Number of EPP applicants	V		Report submitted by the EPP and included on the consumer information section of the TEA website.	
Number of EPP candidates admitted	V		Report submitted by the EPP and included on the consumer information section of the TEA website.	
 Number of candidates retained in the EPP 	V		Report submitted by the EPP and included on the consumer	

Source: http://info.sos.state.tx.us/fids/201001493-1.pdf

Where to go from here: 10 building blocks to consider

- Start a discussion. Ask the governor, legislators and agency heads what questions about the effectiveness of state teacherpreparation programs they would like answered.
- 2. Find out if your state data system is in line with key elements and actions established by the DQC.
- 3. Begin construction on the data elements you don't have.
- 4. Discuss, debate and then build consensus on which measures of institutional effectiveness to use, such as:
 - Employer/principal surveys
 - Program exit assessment scores passage on first try (similar to measuring how many engineering graduates pass their professional exam on the first try)
 - Measures of student learning linked to graduates
 - Trend analysis of measures
- 5. Assess what resources and capacity are critical for successful implementation. Direct those resources to where they are most effective and regularly review capacity.
- 6. Assess key risks to success.
- 7. Create a cross-agency operational plan, produced with all of the entities that will be involved in putting that plan into practice. Make it widely available and well understood consulting with front line staff and service users.
- 8. Create a cross-agency communications or coordination plan.
- 9. Create a funding strategy for implementing the plan.
- 10. Consider creating a funding strategy for incentivizing performance and awarding proven performance.

Caveats

Dan Goldhaber, director of the Center for Education Data and Research and a professor at the University of Washington-Bothell, issued the following caveats as he reflected on the assertion that "policymakers are increasingly adopting the use of student growth measures to measure the performance of teacher preparation programs."

- Value-added measures of teacher preparation programs may be able to tell us something
 about the effectiveness of a program's graduates, but they cannot readily distinguish
 between the pre-training talents of those who enter a program from the value of the training
 they receive.
- Research varies on the extent to which prep programs explain meaningful variation in teacher effectiveness. This may be explained by differences in methodologies or by differences in the programs.
- Research is only just beginning to assess the extent to which different features of teacher training, such as student selection and clinical experience, influence teacher effectiveness and career paths.
- We know almost nothing about how teacher-preparation programs will respond to new accountability pressures.
- Value-added based assessments of teacher preparation programs may encourage deeper discussions about additional ways to rigorously assess these programs.

9

CONCLUSION

An explicit focus on teacher preparation program effectiveness matters, yet it remains hard to find at the state level — even though most states have at least a majority of the data needed and the ability to use it. Availability of data has come a long way since 1927 when national standards were first applied; and since 1983, when *A Nation at Risk* called for teacher-preparation programs to be judged by how well their graduates could demonstrate an aptitude for teaching and competence in an academic discipline. In 2014, the tools are at hand to act.

DID YOU KNOW?

PREPARATION PROGRAM TIMELINE TRIVIA

American Association of Teachers Colleges sought to apply national standards to teacher education institutions.	
AATC merged with two other associations (National Association of Teacher Education Institutions in Metropolitan Areas and the National Association of Colleges and Departments of Education) to form the American Association of Colleges for Teacher Education.	
National Commission on Teacher Education and Professional Standards' national conference theme was "Evaluative Criteria for Teacher Education Institutions."	
Establishment of the National Council for the Accreditation of Teacher Education (NCATE).	
NCATE began operations and assumed accreditation function.	
Full approval of NCATE as the national professional accrediting organization.	
Range in semester hours for professional courses required for high school teachers: 11 to 24, with a median of 20	
1967	
The range was 12-29, with a median of 18.	
By 1984, nearly all states had developed their own	
standards for approval of teacher education programs. ²²	
Formation of the Teacher Education Accreditation Council (TEAC). ²³	
2010	
Formation of Council for the Accreditation of Educator Preparation, a consolidation of TEAC and NCATE. ²⁴	
Source, unless otherwise noted: Education in the States: Nationwide Development, Council of Chief State School Officers, 1969; pp. 408-419	

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