Toward a National Framework for Evidence of Effectiveness of Teacher Education Programs

By Alene Russell and Mona Wineburg

Overview

University-based teacher education programs and all of their components, including the content disciplines such as mathematics and science, are undergoing an unprecedented degree of scrutiny and challenge. Teacher preparation programs always have drawn critics, but for many years most of those critics came from within higher education itself, especially from faculty in traditional liberal arts disciplines. Today, the entire concept of university-based teacher preparation is being questioned, mostly by critics outside the academy. Educators in university-based programs must provide credible and persuasive evidence of the effectiveness of their programs or risk losing out to a host of existing and emerging competitors providing alternative routes to teacher licensure.

It is, however, no trivial matter to produce sound evidence of teacher or program effectiveness. Profound methodological problems occur when scholars attempt to link individual teachers' actions with the subsequent performance of their pupils. These problems include substantial intervening variables (e.g., socio-economic status, school conditions, etc.); questions about appropriate measures of pupil learning; the lack of test standardization among schools and districts; and problems in the mechanics of tracking teacher candidates and accessing data about their

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performance. Alternative measures of student learning (e.g., whole-school scores or proxies for student learning, such as teacher behavior) only add to the complexity.

State-mandated testing of teacher candidates' pedagogical and content knowledge has created one of the newer challenges to university-based teacher education. As the test results have been reported, critics have charged that too many teacher education students do not know enough content and pedagogy. Another challenge has come from critics who view university–based teacher education as a monopoly and who support multiple alternative routes to enter teaching, such as Teach for America and similar programs. Yet another challenge results from the requirements stemming from the No Child Left Behind Act (NCLB) and the pressure for schools to prove "annual yearly progress" of all pupil learning each year from kindergarten through the 12th grade. In many states, school administrators and others are supporting more relaxed state standards for teacher certification to ensure that they can find so-called "highly qualified" teachers as prescribed by NCLB.

Whatever the source of the challenge, university-based teacher education programs increasingly find themselves besieged by critics who question the fundamental assumption that teacher education and preparation belong in the university. For many colleges, schools, and programs, the attacks are frequent and persistent—and unlikely to disappear any time soon.

As a result, institutions are expending extraordinary energy and resources assessing prospective teachers and compiling data about their programs, and yet they are doing so without a consensus about what should be measured and how it should be measured. Consequently, much of the information being gathered is of dubious utility. Thus, for the most part, answers to the important questions regarding the effectiveness of programs preparing teachers cannot be clearly delineated to the satisfaction of all stakeholders.

The American Association of State College and Universities (AASCU) is committed to helping institutions improve the effectiveness of their teacher education programs and to improving the evidence and data that demonstrate that effectiveness. This work is based upon two premises: first, that teacher education accountability is an important and legitimate goal, particularly for state institutions that have an obligation to be accountable to the public; and, second, that robust, evidence-based systems demonstrating effectiveness must be in place to achieve educational outcomes, guide program improvement, and assure and protect the public. We are, however, skeptical about whether any of the

current approaches to collecting data have the power to provide such robust evidence.

For many years, administrators of teacher education programs focused on inputs, best illustrated by the almost exclusive attention in accreditation to such input measures as the quality of faculty, nature of the curriculum, adequacy of the budget, and the like. Administrators, to be sure, aimed to produce good teachers, but a focus on outcomes was absent. And the definition of good teachers was limited, usually being defined as teachers whom principals said were good or fit in well. In this new age of accountability, however, a focus on inputs is simply inadequate. The key measure of success for teacher education programs today must be how well they produce teachers who can demonstrate that they can produce learning gains in K-12 pupils.

Developing systems capable of assessing the effectiveness of teacher education programs is no small feat. There are many challenges to developing such systems, including: methodological difficulties linking teacher practice to pupil outcomes; confidentiality and privacy issues in handling access to data; problems in linking data gathered by different agencies; difficulties in ensuring the validity and reliability of data; the time and expense required to gather needed data; and varying definitions and data requirements for the formal reports mandated by states, the federal government, and national accrediting bodies.

What we need is a national framework for collecting evidence of the effectiveness of teacher education programs, including guidelines that institutions can use to develop data systems that promote a culture of evidence on their campuses. To be useful, such a framework must be developed collaboratively, broadly agreed upon, and implemented on a state-by-state basis

Promising National Initiatives

Such a national framework would not require starting from scratch because, over the past two decades, progress has been made in developing ways to document the effectiveness of teachers and of teacher education programs. Separate national initiatives have been putting together different pieces of the puzzle, but the whole picture remains to be assembled. We propose building on and consolidating what has been learned from efforts to date. Only through continued national conversation and consensus building can institutions and states receive the guidance they need to create evidence-based, high-quality teacher education programs.

Measuring Content Knowledge and Teacher Performance

National Board for Professional Teaching Standards (NBPTS). The National Board was founded in 1987 by the Carnegie Corporation of New York following the release of the 1986 report *A Nation Prepared: Teachers for the 21st Century.* That report called for the creation of a board to "define what teachers should know and be able to do" and to "support the creation of rigorous, valid assessments to see that certified teachers do meet those standards." NBPTS's first task was to spell out a vision of accomplished practice, which took the form of Five Core Propositions. From that base, committees developed standards for 24 certificate areas, identifying specific knowledge, skills, and attitudes that support accomplished teaching practice. NBPTS now supports a voluntary system for awarding advanced certificates to teachers who meet those standards. To earn certification, teachers must submit four portfolios: three are classroom based, where video recordings and examples of student work serve as supporting documentation, and the fourth entry relates to accomplishments outside of the classroom—with families, the community or colleagues—and how they impact student learning. Applicants also complete six exercises to demonstrate content knowledge in the chosen certificate area, with evaluation by trained professionals using scoring rubrics. Although it does not directly measure the effectiveness of teacher preparation programs, NBPTS's work lays the foundation for a national vision of accomplished practice and includes models for documenting content knowledge and classroom performance.

Interstate New Teacher Assessment and Support Consortium (INTASC). Also begun in 1987 and sponsored by the Council of Chief State School Officers, INTASC has worked to craft model standards for licensing new teachers. To date, INTASC has developed model "core" standards for what all beginning teachers should know and be able to do, as well as model licensing standards in specific fields. These standards were developed to be compatible with the advanced certification standards of NBPTS. INTASC currently is developing a new licensing examination, the Test for Teaching Knowledge, which will include a test of content knowledge, a test of teaching knowledge (pedagogy), and an assessment of actual teaching. INTASC has been engaged in a 15-state effort to develop reliable and valid performance-based assessments, with the goal of producing prototype portfolio assessments that could be used to evaluate teacher performance against rigorous professional standards. When completed, this work will contribute to the national framework for documenting the effectiveness of teacher preparation programs that we propose.

The Renaissance Group (TRG). The Renaissance Group is a national consortium of institutions with sizable teacher preparation programs whose presidents, provosts, and deans collaborate on issues related to the programs. In 1999 it received a Title II Teacher Quality Enhancement

Grant from the U.S. Department of Education to support a five-year project entitled the Renaissance Partnership for Improving Teacher Quality. The goal of the project was to assist member institutions to become accountable for the impact of their teacher education graduates on pupil classroom achievement, by developing systems to measure and improve teacher candidates' ability to facilitate student learning. The project focused on the concept of teacher work samples, which are exhibits of teacher performance that provide evidence of a candidate's ability to facilitate learning of all students. The Renaissance Model for Teacher Work Samples, implemented in member institutions, includes seven teaching standards with performance indicators; a set of teaching tasks related to those standards; a scoring rubric for judging a candidate's performance; and teaching exhibits that show evidence of teaching performance. Such samples provide one source of evidence to assess performance relative to national and state teaching standards.

American Association of Colleges for Teacher Education (AACTE). A decade ago, AACTE initiated the Standards-Based Teacher Education Project (STEP) to strengthen the preparation of new teachers, and since then, has worked with more than 45 teacher preparation programs in seven states. STEP focuses on aligning the programs with national and state academic content standards and professional teaching standards, proposing that teachers who know content and how to teach will have a positive impact on K-12 pupil learning. STEP works with campuses through a series of activities that support K-12 learning and assessment, and, among other tasks, facilitates the collection of data that demonstrate the success of graduates of teacher preparation programs in bringing pupils to grade-level learning.

Measuring Student Achievement

American Association of State Colleges and Universities (AASCU). For several years, AASCU's Christa McAuliffe Excellence in Teacher Education Award has honored outstanding teacher education programs that can document the success of their graduates in improving K-12 pupil learning outcomes. AASCU publishes descriptions of this work to provide concrete ideas and specific suggestions for other institutions seeking to improve their programs. Now that there is a significant mass of awardees, AASCU will do an analysis of the McAuliffe program and attempt to extract common themes.

Teachers for a New Era. In 2001, the Carnegie Corporation of New York undertook a major reform initiative, Teachers for a New Era (TNE), to stimulate construction of excellent teacher education programs at selected institutions. The project chose 11 institutions for funding over a five-year period. The awardees are expected to undergo radical changes to set a national standard for excellence and become models of best practice. A

major design principle of TNE is that a teacher education program should be guided by a respect for evidence—that a culture of research, inquiry, and data analysis should permeate the program. A variety of teacher characteristics should be considered to constitute criteria for measuring success as a teacher, but an essential criterion must be evidence of pupil learning. Institutions received funding only if they included plans— based in part on evidence of pupil learning—to evaluate the ongoing effectiveness of their teacher education programs.

Although it will take a number of years for participating institutions to implement reforms and be able to document their effectiveness, the expectation of the TNE project is that institutions will design and implement a method by which measures of pupil learning can be used to demonstrate their programs' effectiveness and that data will begin to be collected during the grant period. These institutional reform efforts currently are well under way, and we can expect several best-practice models to emerge in the next few years.

Value-added methodologies. Value-added methodologies (VAM), most often associated with the work of William L. Sanders, provide a way to estimate the contributions that teachers make to pupil learning. (For details, see *Cumulative and Residual Effects of Teachers on Future Student Academic Achievement,* by William L. Sanders and June C. Rivers, 1996.) These methods have been extremely influential in the world of education policy because they provide the strongest evidence to date of the important role teachers play in influencing pupil learning. VAM consist of complex statistical procedures for tracking gains in an individual pupil learning over time. Their strength lies in the fact that students serve as their own controls. Because of this, VAM attempts to eliminate the confounding influences that family and socio-economic background have on traditional tests of student achievement.

VAM have drawn much attention in recent years because of increased federal and state demands for accountability. Although several states and school districts have implemented systems for measuring value-added gains, many technical questions remain and debates continue about the methodologies' validity and appropriate use. Critics are concerned, for example, about using such information to make high-stakes decisions about individual teachers. At minimum, such data should be used as part of a broader system of teacher evaluation that includes other types of data. Of particular interest for our purposes is the potential of these methodologies to evaluate and improve teacher preparation programs.

Measuring Retention and Support of Teachers

A final dimension of evidence of program effectiveness is whether a program's graduates enter and stay in the teaching profession. Although institutions have gone to great lengths to track their graduates into and through the workforce, comprehensive state data systems can do so more efficiently and can provide important information to help states, institutions, and school districts educate, recruit, support, and retain high-quality teachers. The problem, in short, is the absence of such comprehensive systems. What exists is a convoluted fabric of data systems—including databases maintained by institutions, statistics gathered by state departments of education, licensure databases, and data systems tracking employment that were built for specific administrative purposes. States are at very different stages of database development and have been making uneven progress in improving their capabilities over the past decade.

Data Quality Campaign (DQC). Begun in 2005, the Data Quality Campaign is a national collaborative effort to encourage state policymakers to, first, improve the collection, availability, and use of high-quality education data and, second, to implement state-level longitudinal data systems to improve student achievement. Ten national organizations signed on as Founding Partners, and additional organizations, including AASCU, serve as endorsing partners. DQC has identified 10 essential elements of a longitudinal data system and conducts an annual 50-state survey to determine the extent to which state data systems contain these elements. [See Table 1.] Efforts to date have produced positive results. Currently, 16

TABLE 1

Data Quality Campaign: Essential Elements and Fundamentals of a Longitudinal Data System

1. A unique statewide P-12 student identifier that connects student data across key databases across years.
2. Student-level enrollment, demographic, and program participation information.
3. The ability to match individual P-12 students' test records from year to year to measure academic growth.
4. Information on untested students and the reasons they were not tested.
5. A teacher identifier system with the ability to match teachers to their students.
6. Student-level transcript information, including information on courses completed and grades earned.
7. Student-level college-readiness test scores.
8. Student-level graduation and dropout data.
9. The ability to match student records between the P–12 and higher education systems.
10. A state data audit system assessing the quality, validity and reliability of available data.

states have a "teacher identifier" system with the ability to match teachers to their students, one of the essential elements, and Florida is the first state to have all 10 elements in place.

U. S. Department of Education's Institute of Educational Sciences (IES) Statewide Longitudinal Data System (SLDS) Grants Program. The competitive SLDS Grants Program was authorized in 2002 to support the design, development, and implementation of statewide longitudinal data systems. So far, 27 state education agencies have been awarded three-year grants designed to help advance the states' data infrastructure, as well as serving as a catalyst to make high-quality longitudinal data systems a state policy and investment priority. States receiving these grants vary widely as to how advanced their data systems are, and they are using the funding in different ways to reach common goals. A 2006 DQC report, *Increasing Returns on Investment in Data Systems: Lessons Learned from Recipients of IES Statewide Longitudinal Data System Grants,* indicates that accomplishments to date are encouraging.

Promising State and System Efforts

Several states have made considerable strides in recent years toward developing a system for collecting evidence of the effectiveness of their teacher education programs. These systems are still works in progress, but preliminary data are becoming available and lessons are being learned. These exemplars illustrate how far we have come and what can be achieved when policymakers and educational leaders work together.

Louisiana. After a decade of commitment to building a comprehensive data system to evaluate teacher quality, Louisiana now comes closest of all the states to having a complete statewide model for evidence of the effectiveness of teacher preparation programs. This success is due in no small part to sustained commitment to improving teacher quality on the part of high-level policymakers. In 1999, the governor, the State Board of Regents, and the State Board of Elementary and Secondary Education created the Blue Ribbon Commission on Teacher Quality (later re-titled the Blue Ribbon Commission for Educational Excellence) to create a P-16 system responsible for recruiting, preparing, supporting, and retaining effective teachers. Additional keys to success include joint decision-making; a focus on improving both teacher education and schools, not just accountability; and, commitment to building an integrated teacher quality database to enable tracking of teacher education graduates.

The commission established four levels or types of effectiveness for examining Louisiana's teacher preparation programs. [See Table 2.] Most notably, in 2004 Louisiana adopted a plan to examine the effectiveness

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TABLE 2

Louisiana's Teacher Preparation Programs: Four Levels of Effectiveness

Level 1: *Effectiveness of Planning.* In 2001–2003, all public and private teacher preparation programs developed plans to recruit, prepare, and support new teachers; aligned those plans with state content and teacher standards; and had them evaluated by national experts.

Level 2: *Effectiveness of Implementation.* All teacher preparation programs are accredited or are pursuing accreditation by the National Commission for Accreditation of Teacher Education, and are using PASS-PORT, a web-based performance-assessment system to assess the knowledge, skills, and dispositions of teacher candidates.

Level 3: *Effectiveness of Impact.* Under a Teacher Preparation Accountability System, all teacher education programs have been assigned Teacher Preparation Performance scores and designated as Exemplary, High-Performing, Satisfactory, At-Risk, or Low-Performing.

Level 4: *Effectiveness of Growth in Student Learning.* A Value-Added Teacher Preparation Program Assessment system was developed in 2003.

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of teacher education programs by measuring P-12 pupil learning and linking it to the university programs that prepared their teachers. Instead of outsourcing the project, the state developed and tested its own methodology, the Value-Added Teacher Preparation Program Assessment Model, which uses achievement data from fourth- to ninth-graders in 66 school districts. Preliminary results show that 45 to 50 percent of the teacher preparation programs in the state are preparing teachers whose contribution to student learning is comparable to that of experienced teachers, a finding that contradicts conventional wisdom. Researchers are beginning to identify some strengths and weaknesses in how teachers are prepared to teach particular content, such as math and science, and types of teacher preparation programs. They currently are working to gather evidence of the reliability and validity of their methods, and the findings are expected to be integrated into the state's accountability system for its teacher preparation programs.

Ohio. The Ohio Teacher Quality Partnership (TQP), a statewide research effort to better understand the link between teacher preparation programs and P-12 student achievement, offers a different approach for improvement of teacher education. As in Louisiana, Ohio's governor played a key role in convening two commissions in the early 2000s, one focused on student success and the other on teaching success. One concrete result was a commitment to the collection of better data. In 2003, House Bill 3 was passed requiring that P-12 student achievement be analyzed through value-added methodologies, an action that applies to school districts'

accountability only, not to accountability for teacher preparation programs. The model chosen was an external one based on the work of William L. Sanders.

With the support of the Ohio Department of Education, the State Board of Regents, and private sources, the TQP also includes collaboration among all 50 teacher preparation institutions in the state. TQP has begun to implement an ambitious research agenda to help identify aspects of teacher preparation that positively influence P-12 student achievement. Five interrelated studies will be completed, all using multiple measures. [See Table 3.] The TQP studies are designed to improve teacher preparation, not as a high-stakes accountability effort.

California State University (CSU). CSU prepares nearly 60 percent of the newly credentialed teachers in the state of California each year, and the system's chancellor and Board of Trustees view high-quality teacher preparation as one of the highest priorities of the CSU system. In 1998, the Board of Trustees embarked on a systemwide effort to improve teacher preparation, and three years later, the first Systemwide Evaluation of Teacher Education Programs was conducted. The education deans on the system's campuses committed to an ongoing evaluation of program quality, which resulted in the CSU Mosaic of Teacher Preparation. Also at that time, the California Partnership for Achieving Student Success (Cal-

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TABLE 3

Ohio Teacher Quality Partnership

Study 1: *Pre-Service Teacher Study.* A five-year study will follow teacher education students through their beginning years of teaching. Pre-service and in-service teachers will be surveyed, and information will be collected on teacher education programs, P-12 classroom activity, mentoring and induction of teachers, and other items.

Study 2: *Novice Teacher Study.* A three-year study of novice teachers is included to assess the effects of pre-service education, induction and mentoring, and school climate and leadership on pupil learning, as measured through value-added methods.

Study 3: *Alternative Licensure Study.* A study of teachers in alternative licensure programs will be conducted to compare them with teachers in traditionally prepared programs.

Study 4: *Experienced Teacher Study.* This is designed to identify the classroom practices of high-value-added teachers.

Study 5: *Structural Equation Modeling Study.* This will link the Sanders value-added methodologies data collected by the state to key variables in the other TQP studies.

Pass) was formed, an initiative that collects, analyzes, and shares student data from elementary school through college.

The Mosaic consists of six interwoven outcomes of teacher education programs. Each has already been examined or will be studied in the next few years. [See Table 4.] More than 6,000 teacher candidates completed an exit survey in 2006 to assess the qualities of their teacher preparation programs (Outcome 1). Since 2001, CSU has been administering a survey of graduates after one and three years of teaching to shed light on the quality and effectiveness of the teacher education programs (Outcome 2). To date, 10,000 school administrators have participated in an employer survey reporting on how well-prepared teachers are (Outcome 3).

On another front, legislation passed in 1998 will require teacher candidates to pass a standardized performance assessment in order to be licensed, beginning in 2008. Two alternative systems of assessment have been developed: the state-initiated prototype assessment system (the California Teaching Performance Assessment or CA TPA), and an alternative developed by a consortium of 20 institutions (the Performance Assessment for California Teachers or PACT). These systems build on efforts by NBPTS and INTASC and incorporate similar pedagogical tasks. They will become a new source of evidence on the effectiveness of teacher preparation programs, as called for under Outcome 4 of the Mosaic.

TABLE 4

**California State University Mosaic of Teacher Preparation
Teacher Education Program Outcomes**

Outcome 1: The intrinsic qualities of a program, as reported by its graduates when they complete the program.

Outcome 2: The effects of a program on its graduates' teaching, as reported by its teaching graduates.

Outcome 3: The effects of a program on its graduates' teaching, as reported by their K-12 supervisors.

Outcome 4: The effects of a program on its graduates' teaching, as measured by valid, reliable assessments of performance.

Outcome 5: Participation and persistence in the profession of teaching by a program's graduates.

Outcome 6: K-12 pupil learning outcomes that can validly be traced to teacher education.

Delivering America's Promise

Several studies have begun to examine participation and persistence in teaching, and the CSU chancellor's office has recently released a major report about the primary reasons teachers remain in or drop out of teaching (Outcome 5). Progress is being made on the most difficult outcome to measure, the impact of teacher education on pupil learning (Outcome 6). The CSU Center for Teacher Quality has formed partnerships with seven large school districts in the state, which are providing data on pupil learning linked to teachers, schools, and teacher preparation programs. A value-added methodology will be used to assess the data and to build tools and procedures that can be used on a larger scale. In sum, the Systemwide Evaluation of Teacher Education Programs offers a comprehensive system for evaluating program effectiveness regarding the interrelated important outcomes of teacher preparation programs.

Virginia. In 2000, the Board of Education and the State Council of Higher Education for Virginia (SCHEV) established the Joint Task Force on the K-12 Teaching Profession in Virginia. A year later, the task force recommended the development and implementation of a comprehensive state plan to ensure a highly qualified teacher in every classroom. Soon after, the state was awarded a Title II Teacher Quality Enhancement Grant by the U.S. Department of Education that provided funding to achieve one of the group's highest priorities—the development of a high-quality data system on teacher and teaching-quality indicators.

In phase one, a data system known as the Teacher Education and Licensure System (TEAL I) was installed, linking information on teacher licensure, employment, and assignment. Phase two was designed to be a comprehensive state-level database for conducting research on matters related to teaching quality. This will be a data warehouse system that collects data from multiple sources, including TEAL I, SCHEV enrollment and completions data, Virginia Employment Commission data on state employees, and various survey databases.

With technical support and implementation by HigherEd.org, the system now known as VITAL—Virginia Improves Teaching and Learning—is up and running. A "dataset cutting tool" allows institutions to generate customized analyses to support program improvement. Eventually, the student data will be supplemented by a series of surveys and linked to employment data. [See Table 5.] Though not yet accomplished, the plan is to link the teacher data to value-added student outcomes data based on Virginia's standardized tests.

TABLE 5

Virginia Improves Teaching and Learning (VITAL) Surveys

Candidate Term Surveys:
• A survey of teacher candidates at the end of their final academic term.

Teacher Surveys:
• First year of teaching: A survey of novice teachers, with questions about licensure, employment, and their preparation to teach.
• Third year of teaching: A follow-up survey, with questions about licensure and employment.
• Fifth year: Another follow-up survey.

P-12 School Surveys:
• Mentor Program Survey, a questionnaire concerning mentoring programs, to be sent to school districts' mentor coordinators.
• Observer/Evaluator Survey, a questionnaire sent to the school-level person who observed the teaching of novice teachers, conducted at the end of the teachers' first year in the classroom.
• School-University Partnership Survey, a questionnaire eliciting evidence of partnering programs between institutions and schools.

Institution Surveys:
• Program Descriptors Questionnaire, a detailed questionnaire describing the institution's teacher education programs.

Analysis

While a handful of institutions, systems, and states are noteworthy in the progress they are making, much more needs to be done nationally to assist and support all institutions, systems, and states in documenting the effectiveness of teacher preparation programs for their various stakeholders. We propose the development of a national framework, a set of guidelines that institutions might use to guide data collection as they audit their programs to provide evidence of effectiveness for their various constituencies. Such a framework should be developed collaboratively, broadly agreed upon, and implemented on a state-by-state basis. Below are considerations that should guide the development of a national framework.

Emphasis on multiple measures. The proposed framework should include alternative approaches to measuring teachers' content knowledge, their performance in the classroom, their impact on K-12 pupil learning, and the retention and support of classroom teachers. These approaches should be tied to the various purposes for which data on teachers are collected and take into consideration the stakeholders who need access to these data. Each box in Table 6 would include data providing evidence in support of a

particular purpose. For example, data that demonstrate evidence of pupil learning might be useful for each of the purposes listed in the table.

No single measure can shed light on all the dimensions, and every methodology has its limitations. For example, state licensure tests may provide some useful information on teachers' content knowledge, but passing rates on licensure tests are a poor measure of teachers' performance in the classroom or their effects on K-12 pupil learning. Value-added measures have been lauded as a tool for understanding and improving effectiveness of teacher and teacher education programs, but they often are considered a risky measure when used in high-stakes personnel decisions. Portfolios of teachers' work, observational systems, and survey data have great potential for a variety of purposes, but they are relatively useless when developed and utilized out of context and without any common framework. The proposed national framework would provide guidelines for data-collection efforts and make information more meaningful.

Build on promising methods, but allow state-by-state adaptation. The proposed framework should build on the significant progress that has been made over the past two decades, as described in the various efforts above. States and institutions would not be starting from scratch in their efforts, but rather would have a growing number of outstanding tools from which to work. For example, the Renaissance Model for Teacher Work Samples and the work that emerges from the Teachers for a New Era project can be more broadly applied. At the same time, the state examples presented here suggest that what works in one state may not be suitable for another. Any national framework would have to suggest broad outlines and provide resources and alternatives, but allow for state-to-state differences. For example, although a value-added approach to measuring the impact of preparation programs on pupil learning may be advocated, it would be inappropriate to promote a specific value-added methodology. Louisiana

TABLE 6

Proposed Elements for an Institutional Audit of Teacher Programs' Effectiveness

Stakeholder	Purpose			
	Improve Programs	Approve Programs	Certify Individuals	Inform the Public
Teacher/Teacher Candidate				
Institution				
State Agency				
Local Education Agency				
Legislature				
Public				

and Ohio have demonstrated successful implementation of different value-added approaches. The same caution applies to tests of content knowledge, design of surveys, or the exact configuration of data systems. The Data Quality Campaign, for example, has identified 10 fundamentals of an effective longitudinal data system, but every state system need not be identical. The national framework we propose will be most useful in providing guiding principles, rather than exact specifications.

Need for collaboration at all levels. The most successful policy and programmatic changes are brought about through capturing the creative ideas and ensuring the buy-in of all groups of stakeholders. In the current instance, this means that both national and state discussions need to involve many stakeholders. First, in developing the national framework, policy discussions on issues such as teacher recruitment, retention and support like those occurring at the Wingspread meeting initiated by AASCU need to continue. Further, as each state addresses its own issues, wide collaboration also should occur within the state. In recent years, statewide structures focused on P-16 education have been developed in many states to facilitate the bringing together of policy experts, education leaders, school-district and university personnel, legislators, and others, and these might provide ready avenues for such discussions.

Need for better state-level data systems. It has become quite commonplace to emphasize the need for better state data, but this point cannot be overemphasized. In every state, a number of statewide databases have been created for a variety of administrative purposes, but with rare exceptions, they do not "talk to one another" or function as fully integrated systems. This has been changing gradually and significantly over the past decade or two, most recently with the growth of K-12 statewide databases that contain student-learning data. But such work needs to continue. The Data Quality Campaign has done an excellent job of identifying the elements that need to be in place to foster an integrated longitudinal data system that supports the improvement of student learning.

Need to assure validity and reliability. All too often, when promising practices are copied on a wide scale, some aspects of initial efforts are diluted. Without a framework to anchor efforts—without benchmarks for comparison—it is difficult to maintain quality. The proposed national framework is intended to provide a structure that promotes the validity and reliability of data, models for analysis, and examples of usage so that quality is preserved.

Recommendations

What Federal Policymakers Should Do:

- Provide funding for states to develop state-level data systems to track the graduates of teacher education programs and link to data on their K-12 pupil achievement.

- Help facilitate a national discussion on evidence of effectiveness of teacher education programs.

- Support research on value-added methodologies and best practices in using data.

What State Policymakers Should Do:

- Provide policy leadership; develop a policy environment and statewide framework to support a culture of evidence.

- Provide human and financial resources to support development of this culture of evidence.

- Commit to developing state-level data systems to track the graduates of teacher education programs and that link to K-12 pupil learning. According to the Data Quality Campaign, such systems should include data on the teacher pipeline, numbers of teachers produced, employment, working conditions and retention, and effectiveness in the classroom.

- Work across states to develop a national framework and national data standards.

- Require evidence of pupil learning as part of teacher preparation and licensure and program accreditation.

What Presidents and Chancellors Should Do:

Outside the University:

- Convene critical decision makers—state legislators, state education officials, and university leaders—to build coherent policies to support accountability.

- Advocate high-quality data systems in states to support accountability efforts.

Inside the University:

- Frame the discussion of teacher quality in the broader context of accountability and pupil learning.

- Support efforts to build high-quality data systems within universities to track progress.

- Publicly recognize innovative efforts.

What Chief Academic Officers and Deans Should Do:

Create working groups that include representatives from education, arts and sciences, institutional research, and the local community to:

- Identify the data needed by various constituencies to provide evidence of quality and areas for improvement (constituents, for example, may include regents/ boards of education, higher education agencies, legislators, local communities, and parents).

- Work together with K-12 partners and state agencies to gain access to data on K-12 pupil learning outcomes so that teacher preparation programs can use pupil learning as a component of their accountability systems

Conclusion

Believing that accountability of teacher education programs is important and legitimate, AASCU is concerned that most teacher education programs and their states cannot provide adequate evidence about the impact of the programs. Although some states are developing data systems that will be capable of tracking the achievement of individual graduates of teacher education programs, it is imperative that we not wait until these more elegant systems are developed before action is taken. A commitment must be made to develop systems that institutions can use to demonstrate, in credible, persuasive, and useful ways, the impact of teacher education programs.

To accomplish this, AASCU intends to lead an effort to work with other national organizations and entities to create a national framework for collection of evidence of the effectiveness of teacher education programs. Such a framework will need to be developed collaboratively, broadly agreed upon, and implemented state-by-state. This framework will include guidelines that institutions could use pro-actively to promote a culture of evidence.

AASCU is committed to playing a significant role in this process. In partnership with the University of Wisconsin System (UW System), AASCU will receive $600,000 over the next three years to create common accountability measures in preparing future math and science teachers. The project, Wisconsin's Grassroots Teacher Quality Assessment (TQA) Model, is designed to create reliable performance assessment tools to be used during student teaching. The assessments will document how well prospective teachers attain relevant math and science knowledge and skills, and information gathered will serve as a guide for ongoing changes in teacher preparation and professional development. Data generated by this project will guide program improvement and reform across the 13 four-year UW System campuses. The project has invited Wisconsin's private and independent institutions to join them in the statewide initiative.

The key measure of success for university-based teacher education programs in the future must be how well they produce teachers who can demonstrate that they can produce learning gains in K-12 pupils. It is not about inputs and not about subjective judgments. Pupil learning, after all, is what teacher education is all about.

Resources

American Association of Colleges for Teacher Education (AACTE). The association's Standards-Based Teacher Education Project (STEP) focuses on the redesign of teacher preparation programs by aligning them with national and state academic content standards and professional teaching standards. It works with campuses to develop gateway assessments to reveal teacher candidates' mastery of content knowledge, teaching skills, and their ability to improve P-12 pupil learning.
aacte.org/Programs/Standards_Practice/

Battelle for Kids Value-Added Initiatives. Battelle for Kids is an independent, nonprofit organization committed to helping students achieve academic success. It has created a model for implementing value-added assessment at the state, district, and school levels, and it provides educators with professional development, tools, and resources related to the effective use of value-added analysis to improve teaching and learning.
battelleforkids.com/home/value_added

Carnegie Corporation of New York. The goal of Carnegie "Challenge" papers is to raise issues in a way that will elevate them on the national agenda. The 2006 Challenge paper *Value Added Modeling: The Challenge of Measuring Educational Outcomes,* focuses on value-added modeling— its history, findings, uses, and critics, including its potential as a tool to rejuvenate teacher education programs.
carnegie.org/pdf/value_added_chal_paper_mockup.pdf

Center for Research, Evaluation, and Advancement of Teacher Education (CREATE). This is a consortium of 30 universities associated with the University of Houston System, the Texas A&M University System, the Texas State University System, the University of Texas System and the University of North Texas System. CREATE operates the Texas Public School Research Network, consisting of 20 school systems geographically distributed across the state. CREATE provides opportunities for member institutions and others to systematically explore quality and effectiveness issues related to teacher preparation, teacher retention, and their pupils' achievement. Its work focuses on research areas having the greatest potential to contribute practical solutions to pressing issues in education.
createtx.com

Center for Teaching Quality (CTQ). CTQ has had a long interest in building more robust state-level data systems for measuring teacher quality, in order to inform policymaking. Its Teaching Quality Data Systems Roadmap addresses data and policy issues from the point of view of different stakeholders.
teachingdata.org

Data Quality Campaign (DQC). This is a national collaborative to encourage and support state policymakers' efforts to improve the collection, availability, and use of high-quality education data, and, in addition, to implement state longitudinal data systems to improve student achievement. DQC has identified 10 elements critical to a longitudinal data system and annually tracks states' progress toward putting those elements into place.
dataqualitycampaign.org/

Teachers for a New Era (TNE). The program was created to stimulate construction of excellent teacher education programs at selected institutions. A major design principle of TNE is that teacher education programs should be guided by a respect for evidence and that evidence of pupil learning, in particular, must be considered in measuring teachers' success.
teachersforanewera.org/

Teacher Policy Research (TPR). This is a research partnership between the State University of New York at Albany and Stanford University that examines issues in teaching and teacher education to provide education policymakers with useful data to inform their policy decisions. Its Teacher Pathways Project provides a systematic, data-rich analysis of the pathways teachers take into teaching and the impact of those pathways on their pupils' achievement in the classroom. The data include detailed program information on traditional teacher preparation programs at 15 public and private institutions and two alternate routes to licensure programs in the New York City area.
teacherpolicyresearch.org

The Renaissance Group (TRG). The Renaissance Group is a national consortium of colleges and universities with a major commitment to the preparation of educational professionals. Aiming to help institutions become accountable for the impact of their teacher education graduates on pupil achievement, it has developed a model for teacher work samples that provide evidence of a candidate's ability to facilitate student learning.
education.csufresno.edu/rengroup/

State Web Sites

• California State University Center for Teacher Quality
  calstate.edu/teacherquality/

• Georgia Framework for Teaching
  usg.edu/p16/initiatives/framework.phtml

• Louisiana Board of Regents Teacher Education Initiatives
  asa.regents.state.la.us/TE

• Ohio Teacher Quality Partnership
  teacherqualitypartnership.org/

• South Carolina Center for Educator Recruitment, Retention, and Advancement
  cerra.org/

• Virginia Improves Teaching and Learning (VITAL)
  highered.org/teal/

Delivering America's Promise

AASCU's 430 public college and university members are found throughout the United States, Guam, Puerto Rico and the Virgin Islands. We range in size from 1,000 students to 44,000. We are found in the inner city, in suburbs, towns and cities, and in remote rural America. We include campuses with extensive offerings in law, medicine and doctoral education—as well as campuses offering associate degrees to complement baccalaureate studies. We are both residential and commuter, and offer on-line degrees as well. Yet common to virtually every member institution are three qualities that define its work and characterize our common commitments.

I.   We are institutions of access and opportunity. We believe that the American promise should be real for all Americans, and that belief shapes our commitment to access, affordability and educational opportunity, and in the process strengthens American democracy for all citizens.

II. We are student-centered institutions. We place the student at the heart of our enterprise, enhancing the learning environment and student achievement not only through teaching and advising, but also through our research and public service activities.

III. We are "stewards of place." We engage faculty, staff and students with the communities and regions we serve—helping to advance public education, economic development and the quality of life for all with whom we live and who support our work. We affirm that America's promise extends not only to those who come to the campus but to all our neighbors.

We believe that through this stewardship and through our commitments to access and opportunity and to our students, public colleges and universities effectively and accountably deliver America's promise. In so doing we honor and fulfill the public trust.
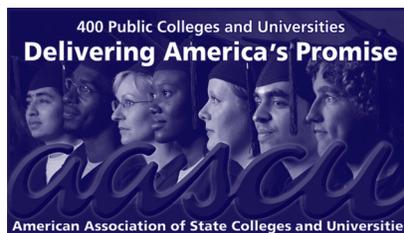
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