Building an Evidence-Based System for Teacher Preparation

by

Teacher Preparation Analytics:

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Message from CAEP President Jim Cibulka

Dear Stakeholders:

We are delighted to have been able to commission this report from Teacher Preparation Analytics to help us move forward the urgent agenda of creating a more evidence-based based system of teacher preparation. I would like to express my gratitude to the authors for their thoughtful and careful contributions to this report. The Council for the Accreditation of Educator Preparation (CAEP) intends the Teacher Preparation Analytics report and their suggested Key Effectiveness Indicators as a starting point for a much needed discussion among stakeholders.

The contents are particularly timely as the terrain for data about teacher preparation is churning rapidly and states are changing their roles, responsibilities, and commitments in response. Further, CAEP has reframed educator preparation to be more evidence informed, more rigorous regarding data expectations, and to provide more emphasis on continuous improvement.

If CAEP is to help the field shift to better data, we need a foundation to know where we are in order to move forward. Thus, CAEP's purposes in commissioning this report include:

1) generating a national discussion of the measures, incorporating which measures are most meaningful as well as how to achieve more common measures across states and CAEP, that should be part of a system for reporting teacher preparation key effectiveness indicators;

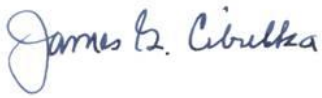
2) aligning CAEP accreditation with these reporting systems as closely as possible to strengthen accreditation, facilitate state data collection and reporting, and reduce reporting burdens for EPPs; and

3) promoting collaboration and best practices among states, CAEP, and other stakeholders (such as piloting new measures, sharing information on requirements for building strong data systems, and related issues).

In these ways, the report will help CAEP and its collaborators frame how to move forward so that teacher preparation data by 2020 will be strong, informative and useful. From CAEP's perspective, this is one of the greatest challenges and opportunities for our field.

We look forward to collaborating with stakeholders on this critical issue.

Sincerely,



James G. Cibulka

Preface

In fall 2013, the Council for the Accreditation of Educator Preparation (CAEP), with support from Pearson Teacher Education, presented a challenge to Teacher Preparation Analytics (TPA) to develop a comprehensive framework for analyzing the state of assessment and accountability for educator preparation in the United States. CAEP and Pearson proposed a report that would review existing research and examine state data and information available in 15 selected states, and highlight programs or initiatives that demonstrated excellence at a national, state, and programmatic level. In addition, CAEP and Pearson called for the report to identify gaps in data collection and weaknesses in data systems and make recommendations to the field on how to improve the quality of data to create a more complete, reliable and useable data profile of educator preparation. They proposed that the goal of the report would be to create a discourse and spur tangible action in the field of educator preparation that could ultimately serve to improve student outcomes.

CAEP and Pearson further proposed a report whose contents should be distinct in a few key ways:

- That it be focused less on inputs and process and more on outcomes data that would be meaningful to a variety of stakeholders
- That the information and data used as the basis of the report originate from objective sources and thoughtful analysis.
- That it provide recommendations to the field and serve to spark action and improvement.

In the end, the report presented here will be of interest principally to teacher educators, state education officials (specifically those dealing with educator preparation program approval), and education policymakers, particularly since it is not really a report <u>of</u> data so much as it is a report <u>about</u> data. Based on a sample of only 15 states that were of particular interest to CAEP and Pearson, the report cannot claim to be a comprehensive analysis of the issue of educator preparation program evaluation in the U.S., but the authors hope that the breadth and depth of analysis contained in the report nevertheless provide a solid understanding of the territory. Specifically the report:

(1) Summarizes the research on our nation's current ability to evaluate the effectiveness of teacher preparation programs;

(2) Identifies and develops a proposed framework and a set of Key Effectiveness Indicators (KEI) and measures that the authors believe states and educator preparation providers should be using to assess the effectiveness of programs by the year 2020;

(3) Uses the KEI extensively as a lens to examine the teacher preparation program evaluation policies and practices in the 15 states – both current and under development, facilitate comparisons and contrasts between them, and determine their alignment with the KEI;

(4) Identifies a number of hopeful policies and practices that hold promise for moving states forward in their efforts to develop stronger preparation program evaluation systems; and

(5) Recommends, based on the entire analysis in the report, a concise set of actions for states, the educator preparation community, and other stakeholders to take in order to improve the nation's capacity to evaluate – and thereby improve – its teacher preparation programs.

The authors have attempted to make the report as reader-friendly as possible and thus to limit the technical discussion in the narrative to the minimum necessary and to eschew footnotes. The Appendices contain some of the information that was intentionally limited in the narrative, and the reader is encouraged to seek more technical and detailed information there.

Developing *Building an Evidence-Based System for Teacher Preparation* was a collaborative project. CAEP and Pearson provided financial support and continuing counsel to TPA in producing the report. Jim Cibulka approved the scope of the work and supported the engagement of Mark Lacelle-Peterson, Emerson Elliot, and Jennifer Carinci at CAEP. Nina Angelo was the driving force for the collaboration with Pearson Teacher Education, aided by her colleague Jeffery Johnston. Janice Poda and Mary-Dean Berringer of the Council of Chief State School Officers (CCSSO) generously provided financial support and afforded TPA access to the seven states involved in the Network for Transforming Educator Preparation (NTEP). Additionally, CCSSO engaged the support of Julie Mikuta at the Schusterman Foundation, who provided additional funding to extend the analysis of the NTEP states. The authors benefited greatly in crafting the Key Effectiveness Indicators from the sage insight and critique of Robert Floden at Michigan State University, Stephen Meyer at RMC Research, and Charles Thompson, at UNC-Chapel Hill. And it would have been impossible to construct profiles of the 15 sample states without the enormously patient and helpful state contacts who helped the authors better understand the specifics of their states' current efforts and verified the summaries contained in the report. These individuals' names and professional roles are listed in Appendix B.

In spite of all of the assistance they received from others, the authors know that there may be weaknesses and errors in the report that remain uncorrected. The authors take full responsibility for those and any other shortcomings, as well as for any opinions and points of view expressed.

Finally, it is worth noting that the KEI had some of its genesis in prior NSF-funded work by one of the present report's authors to create what came to be known as the Analytic Framework (AF) (Coble 2013), a comprehensive tool for the self-assessment of teacher preparation programs. The AF, however, focuses much more heavily on identifying the key program and institutional policies and practices that can impact teacher preparation quality than on developing program evaluation measures.

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Section I. Introduction

Arguably, no other American institution is subjected to as much local, state, and national scrutiny as our public schools. And probably no other profession is the subject of as much concern as teaching. This is perhaps as it should be given the importance of universal education to our democratic society. The shift over the last half-century to a knowledge-based and technology-intensive economy has further driven home the message that strong schools staffed by highly effective teachers and leaders have never been more important to the economic well-being of our nation and the livelihood of its individual citizens.

The public's concern about our schools and teachers is heightened by the continuing mediocre performance of U.S. students in comparison with students of other industrialized nations on international assessments. In addition, the persistently large achievement gaps between Asian and white students and students of color, and between our affluent and low-income students, fuel doubts about the ability of our nation's schools and teachers to ensure that all children will acquire the knowledge and skills necessary for full and productive participation in our society. Quite logically, these doubts about our teachers have resulted in significant mistrust in the quality of our teacher preparation programs.

Skepticism about the quality of teacher education in the U.S. has a long history (Labaree, 2004). But the continued poor outcomes of so many of our K-12 students over the past several decades have led some critics to question whether traditional multi-year programs of teacher education are of any value at all (Walsh, 2001). Even leading voices within the teacher education profession itself have issued reports strongly critical of the status quo and have called for a fundamental restructuring of the way teachers in the U.S. are prepared (NCTAF, 1996; Levine, 2006; NCATE, 2010). These and other reports over the last several decades have led to many reforms in teacher education ranging from increased focus on clinical preparation in university/college programs, to the creation of district-run residency programs, to the emergence of "alternate routes" into the profession that place teachers in classrooms with minimal "pre-service" preparation and, in some states, with no prior training if they pass a satisfactory licensure examination.

These critiques and innovations in teacher preparation have added fuel to a nagging – and fundamental – question underlying the pervasive skepticism about teacher preparation and the debate about its proper character: **How do we identify high-performing preparation programs that produce routinely effective teachers and programs that do not?** Developing the capacity and commitment to assess program effectiveness – and to enhance meaningful accountability - is an essential prerequisite to using better data to guide the improvement of existing programs as well as to designing whole new models for teacher preparation.

There have been repeated calls for a "Flexner II" report on teacher preparation –a systematic study of the quality of teacher preparation programs in the U.S. based on valid and rigorous criteria that parallels Abraham Flexner's landmark study of medical education early in the 20th century. But the

possibility of such a study has been undermined, in the first instance, by the huge proliferation of programs that prepare teachers in the U.S. – undergraduate programs and post-baccalaureate programs in two-year and four-year higher education institutions, on-line universities, school districts, regional service centers, and independent graduate schools of education. This wide array of programs increases to the thousands if "program" is defined more narrowly as the course of instruction and training leading to a specific type of teaching certificate (e.g., elementary, special education, middle grades and high school science, math, history, English, the arts, physical education, etc.).

Perhaps more seriously, the possibility of a "Flexner II" report on teacher preparation has been undermined by the absence of an adequate knowledge base and the lack of data that allow us to identify confidently (as Flexner did) what the essential characteristics of strong teacher preparation programs are (ECS, Allen 2003; AERA, Cochran-Smith and Zeichner 2005; NRC, 2010). The National Academy of Education recently released a report on evaluation in teacher preparation (Feuer et al., 2013) reaffirming the limitations of virtually all sources of evidence in the field, noting the potential for undermining validity by investing evaluations with consequences, and suggesting that the only safe guidance the evidence can support is to address seven questions that can inform program evaluation decisions.

This report, *Building an Evidence-Based System for Teacher Preparation,* attempts to move beyond prior efforts and to provide the field with a uniform framework for the actual assessment of teacher preparation program performance. The proposed framework is intended to serve as the basis for a comparable evaluation of all teacher preparation programs within a state – both "traditional" and non-traditional – and ideally between states. The Key Effectiveness Indicators (KEI) identified in this report are proposed as annual and public reporting requirements for states and program providers in order to ensure that all stakeholders have clear, essential, and timely information about the programs in their states and in order to facilitate continuous improvement efforts on the part of the teacher educators and state officials who are responsible for them.

A fundamental premise of this report is that evaluation in teacher preparation should focus primarily on program outcomes that show evidence of: (1) the strength of program candidates and of their acquired knowledge and teaching skill; (2) the effectiveness of program completers and alternate route candidates once they have entered the classroom; and (3) the alignment of a program's teacher production to states' teacher workforce needs and to the learning needs of K-12 pupils. These are the program outcomes and characteristics that are of greatest interest to policymakers, K-12 educators, business leaders, and the general public. And their satisfactory evaluation requires a commitment on the part of teacher educators to develop and implement rigorous and transparent measures of programs' success in promoting them.

The hope is that the present report will provide momentum for the development of a national assessment system for teacher preparation even though the assessment framework it proposes is not yet fully "ready-to-use." Indeed, the inclusion of the year 2020 in the title is a nod to the needed work

ahead. Although the 12 Key Effectiveness Indicators (KEIs) have been vetted with leading experts and are foundational to this report, not all – or even most – of the indicators reflect current practice. For example, the "Teaching Promise" indicator will require education program providers to go well beyond current practices of accepting candidates into programs, and it will stretch measurement and assessment specialists to develop valid measures of effective practice in the recruitment and selection of candidates.

The report makes every effort to ground the recommendations for key indicators and proposed metrics in the available body of research. However, the paucity of research and data underlying some of teacher preparation's current practices, as noted earlier, extends to some of the indicators proposed here, as well. Nevertheless, it is imperative to move forward in developing assessments of teacher preparation programs using the best measures available to us now and simultaneously working earnestly to improve them. This report is intended to serve as a call to action to teacher educators, education researchers, education assessment and technology developers, state and federal officials, and others to contribute to the effort to place the evaluation of teacher preparation on more solid ground so that It can serve the needs of all our nation's preparation programs by the year 2020.

There is already significant movement in the direction the report calls for. A number of states have developed more outcomes-based measures for their teacher preparation programs, and several states now issue annual program "report cards" that have strong affinities with the KEI framework proposed here. Some of these developments are referred to in this report as Points of Light, and they are summarized in Section VI. The educator preparation field itself is making important changes along the same lines. The field's new accrediting body – The Council for the Accreditation of Educator Preparation, or CAEP – has developed new program accreditation standards that focus on program outcomes and include annual program reporting requirements. The U.S. Department of Education and Congress also have been working to adopt more rigorous and outcomes-based program quality measures for the annual Title II state teacher preparation reports, and new reporting requirements could be finalized by the fall of 2014. Secretary of Education Arnie Duncan has indicated that the Department is particularly interested in making teacher preparation programs more accountable for their completers' performance in the classroom.

Finally, the specific concern of *Building an Evidence-Based System for Teacher Preparation* is development of a solid performance evaluation system for programs that prepare teachers. The need extends to development of a performance system in educator preparation more generally, however, and a number of states are working to develop both. Because efforts to develop an evaluation system for teacher preparation programs are generally farther ahead and because of time and financial constraints, the present report focuses only on teacher preparation.

Section II. Evaluating the Effectiveness of Teacher Preparation: A Vision for the Not-so-Distant Future

The Introduction of this report noted the problematic state of current efforts to evaluate teacher preparation programs. And the third section of the report will elaborate on those further. It is not the goal of this report, however, to dwell on current limitations but rather to help move preparation program evaluation in this country from where we are to where we'd ideally like to be. The distance from here to the ideal is too great to arrive at in one year or two years, but it's not only possible, but imperative, to make substantial progress by the year 2020.

What would that ideal look like?

First, all stakeholders with a vested interest in the quality of teacher preparation in the U.S. would be able to make confident judgments about the effectiveness of teacher preparation programs on the basis of solid measures grounded in high-quality data. Those data would be publicly available, transparent and readily understood, comparable for all preparation programs, and compelling. The data would address a range of concerns that stakeholders have about preparation programs: the quality of candidates accepted, the strength of candidates' content knowledge and their ability to teach it effectively, their skill in managing their classrooms and engaging all pupils in the learning process, and – above all – program completers' readiness to succeed the day they begin their professional teaching careers. The number of data points and measures would be relatively few in order to minimize state and program reporting burdens and to enable stakeholders to make an informed, confident appraisal of program effectiveness on the basis of clear and concise information. And the data would be continuously updated – at least annually – in order to ensure their currency.

The data required of teacher preparation programs would not only provide a solid basis for program assessments, but also a guide for program improvement. Thus, the data would serve several critical needs:

1. To provide public understanding of the extent to which public and private, "traditional" and "alternative" programs are graduating teachers who have the knowledge and skills necessary to educate each student they teach to the highest learning standards;
2. To undergird appropriate state and federal oversight and accountability, and thus to enable officials to either identify excellence or to impose sanctions when programs fail to demonstrate adequate effectiveness; and
3. To facilitate the continuous improvement of preparation programs by program staff and faculty, who will need to identify how the specific elements of their programs contribute their program effectiveness outcomes.

To have such data available by the year 2020, however, will require the consensus of a broad group of stakeholders that this is a goal worth attaining. It will require concerted and committed action to move forward and the confident belief that attaining a more satisfactory set of metrics and data for

evaluating preparation program effectiveness is not just an ideal but a genuine possibility. And it will require a common vision of the goal to be achieved and a shared road map to ensure the unity of our efforts to get from where we are to where we want to be.

As a critical step toward achieving that common vision, Table 1 on the following page presents a set of Teacher Preparation Program 2020 *Key Effectiveness Indicators* (KEI). Although some of the measures included in this set of indicators are not yet as solid as they eventually will need to be, all of them could be adopted as state requirements for program reporting across the country by 2020. Indeed, a number of states have implemented many of these measures already and are moving to strengthen them and develop others. With sufficient political will and cooperative effort, as well as some important work in R&D and improvements in data quality, these indicators – or indicators very much like them – could standardize the collection and reporting of data on teacher preparation by the end of the decade. The KEI addresses four Assessment Categories that the authors believe are of most immediate interest to the broad spectrum of stakeholders concerned with teacher preparation. Each of these assessment categories contains a group of Key Indicators the authors believe are the characteristics of programs or candidates that are most indicative of effectiveness in those four areas. And each indicator is accompanied by a description of one or more Measures that define the actual data for assessing program effectiveness related to that indicator.

The 2020 KEI provides an adequate grounding for solid annual state reports on teacher preparation programs. Indeed, as part of its new program accreditation process, CAEP has adopted annual reporting requirements that closely parallel many of the indicators in the 2020 KEI. And several states already have implemented similar annual reporting requirements. The annual reports based on the KEI will not provide all of the data important for the evaluation of specific program policies and practices; that ultimately requires the kind of nuanced information produced in an accreditation study or other internal program assessment. But the concise, very accessible data generated through a KEI-based annual report would support an important initial assessment that can be supplemented by additional information for purposes of specific corrective action. Indeed, one state in our sample – Missouri – is making its annual performance reports the focal point of its state program approval process in the belief that they will provide a sufficient basis for the initiation of state sanctions and interventions for programs with a history of low performance on annual reporting measures.

The Key Effectiveness Indicators identify the kinds of data and measures that can provide a valuable picture of teacher preparation programs. They do not however, prescribe specific benchmark values for those indicators that preparation programs may be expected to attain. Those benchmarks are left to accreditors, state officials and policymakers, and the programs themselves to promote. Even without such benchmarks, however, the KEI would provide clear comparisons between programs' performance on the indicators covered.

Table 1. Teacher Preparation Program 2020 Key Effectiveness Indicators

Assessment Categories	Key Indicators	Measures
I Candidate Selection Profile	Academic Strength	**PRIOR ACHIEVEMENT**—(1) For Undergraduate Programs: Non-education course GPA required for program admission. Mean and range of high school GPA percentile (or class rank) for-candidates admitted as freshmen. Mean and tercile distribution of candidates' SAT/ACT scores. GPA in major and overall required for program completion. Average percentile rank of completers' GPA in their major at the university, by cohort. —(2) For Post-Baccalaureate Programs: Mean and range of candidates' college GPA percentile and mean and tercile distribution of GRE scores **TEST PERFORMANCE**—For All Programs: Mean and tercile distribution of admitted candidate scores on rigorous national test of college sophomore-level general knowledge and reasoning skills
	Teaching Promise	**ATTITUDES, VALUES, AND BEHAVIORS SCREEN**—Percent of accepted program candidates whose score on a rigorous and validated "fitness for teaching" assessment demonstrates a strong promise for teaching
	Candidate/Completer Diversity	**DISAGGREGATED COMPLETIONS COMPARED TO ADMISSIONS**—Number & percent of completers in newest graduating cohort AND number and percent of candidates originally admitted in that same cohort: overall and by race/ethnicity, age, and gender
II Knowledge and Skills for Teaching	Content Knowledge	**CONTENT KNOWLEDGE TEST**—Program completer mean score, tercile distribution, and pass rate on rigorous and validated nationally normed assessment of college-level content knowledge used for initial licensure
	Pedagogical Content Knowledge	**PEDAGOGICAL CONTENT KNOWLEDGE TEST**—Program completer mean score, tercile distribution, and pass rate on rigorous and validated nationally normed assessment of comprehensive pedagogical content knowledge used for initial licensure
	Teaching Skill	**TEACHING SKILL PERFORMANCE TEST**—Program completer mean score, tercile distribution, and pass rate on rigorous and validated nationally normed assessment of demonstrated teaching skill used for initial licensure
	Completer Rating of Program	**EXIT AND FIRST YEAR COMPLETER SURVEY ON PREPARATION**—State- or nationally-developed program completer survey of teaching preparedness and program quality, by cohort, upon program (including alternate route) completion and at end of first year of full-time teaching
III Performance as Classroom Teachers	Impact on K-12 Student Learning	**TEACHER ASSESSMENTS BASED ON STUDENT LEARNING**—Assessment of program completers or alternate route candidates during their first three years of full-time teaching using valid and rigorous student-learning driven measures, including value-added and other statewide comparative evidence of K-12 student growth overall and in low-income and low-performing schools
	Demonstrated Teaching Skill	**ASSESSMENTS OF TEACHING SKILL**—Annual assessment based on observations of program completers' or alternate route candidates' first three years of full-time classroom teaching, using valid, reliable, and rigorous statewide instruments and protocols
	K-12 Student Perceptions	**STUDENT SURVEYS ON TEACHING PRACTICE**—K-12 student surveys about completers' or alternate route candidates' teaching practice during first three years of full-time teaching, using valid and reliable statewide instruments
IV Contribution to State Needs	Entry and Persistence in Teaching	**TEACHING EMPLOYMENT AND PERSISTENCE**—(1) Percent of completers or alternate route candidates, by cohort and gender – race-ethnicity, employed and persisting in teaching years 1-5 after program completion or initial alternate route placement, in-state and out-of-state —(2) Percent of completers attaining a second stage teaching license in states with multi-tiered licensure
	Placement/Persistence in High-Need Subjects/Schools	**HIGH-NEED EMPLOYMENT AND PERSISTENCE**—Number & percent of completers or alternate route candidates, by cohort, employed and persisting in teaching in low-performing, low-income, or remote rural schools or in high need subjects years 1-5 after program completion or initial alternate route placement, in-state and out-of-state

Similarly, the KEI framework does not provide guidance for weighing the relative importance of the key indicators and measures or for arriving at a composite program score. Such an effort is problematic for several reasons. First, it is arbitrary; there is no empirically justified formula for assigning different weights to the different measures. Second, in different contexts, some indicators may be more important to stakeholders than others. If a state is experiencing a critical shortage of teachers in high-need subjects, for example, that indicator may rise to the top. Third, assigning a large enough weight to a single indicator so that it becomes the de facto standard of program evaluation may overreach the validity and reliability of the indicator used. Finally, assigning a single score to a program based on a weighting of the indicators used in the scoring can mask important strengths and weaknesses programs demonstrate on each of the different indicators.

The authors believe that the variety of the indicators and measures, which nevertheless may be interrelated or interdependent, is a strength of the KEI or similar indicator framework because it facilitates the "triangulation" of the different indicators and thus can provide a richer and more reliable assessment of a program than any single indicator or score can. Every indicator in the KEI can reveal important information about program effectiveness, so all should be seriously considered in an overall program assessment.

KEI Background Briefs

The following Background Briefs explain the importance of each of the 12 indicators and summarize some of the important practical and methodological issues involved in implementing the indicators and improving the measures behind them. The Literature Review in Appendix C provides additional insight into the issues raised in the Background Briefs through a discussion of relevant research literature, state policy efforts, and additional developments in the field.

I. Candidate Selection Profile

The KEI includes three key indicators to capture different aspects of teacher preparation program candidate selection:

1. The academic strength of candidates accepted into teacher preparation programs
2. A measure of "teaching promise" for these accepted candidates
3. Demographic diversity of admitted candidates and of program completers

These indicators do not involve measures of candidate or completer performance, and they thus do not in that sense convey candidate or program outcomes. Nonetheless, each indicator grouped in the Candidate Selection Profile component of the KEI is relevant and valuable to an overall assessment of program effectiveness. The indicators address key concerns that teacher educators, policymakers, and education leaders have about the strength, diversity, and aptitude for teaching of the candidates who enter and complete teacher preparation programs. The judicious selection of teacher candidates should increase the likelihood of their success in the program, effectiveness in the classroom, and long-term commitment to the teaching profession.

Academic Strength

Available measures of academic ability include high school and college grade point averages, high school rank in class, and standardized test scores on the ACT and SAT (and the GRE for graduate programs). State preparation program regulations usually set minimum GPA scores for students admitted to preparation programs, generally ranging from 2.5 to 3.0, with most state minimum requirements clustered nearer 2.5. The new CAEP standards will require an average of 3.0 GPA for each admitted cohort. CAEP standards further provide that the average ACT, SAT, or GRE of a program's "accepted cohort" must be in the top third of the national test score distribution by 2020. A rigorous, national college-level assessment of general knowledge also would be a helpful measure of candidates' academic ability by the end of their sophomore year and permit comparisons between programs.

Teaching Promise

Preparation programs, school districts, and national organizations like Teach for America and UTeach all seek to measure individual attitudes, values, and behaviors that may predict suitability for and success in teaching. While there is little research evidence linking specific beliefs, values, or habits to measures of teaching quality or teacher effectiveness, in those cases where there is some evidence, the findings hold promise for pre-screening applicants to preparation programs as is done routinely in other professional fields and employment recruitment. There is reason to believe that programs could make effective use of protocols that seek to determine "goodness of fit" between an applicant seeking admission and the career that she or he hopes to join.

While it is not difficult to imagine preparation programs being encouraged to screen applicants with an instrument such as the Duckworth team's Grit Scale, it is harder to envision programs reporting results of the screening for individual candidates or for cohorts of applicants/ admitted students in a way that supports easy-to-use comparisons across programs or states. That is one of two current limitations to the role of this indicator as a measure of program effectiveness. The second is the need to find one or more "teaching promise" metrics that can be linked directly to important components of high quality classroom teaching. Working with Pearson, the state of Missouri has developed an assessment that employs such metrics, but the assessment is used only for candidate development and scores are not reported out.

Candidate and Completer Diversity

Policy leaders and teacher educators support the idea that the teaching force should be diverse, not only to provide opportunities for talented individuals but also because of the increasing diversity of the K-12 student population in the United States. Currently, about 84 percent of US K-12 teachers are white, seven percent are African-American, and six percent are Hispanic. Men comprise 16 percent of the K-12 teaching population. The demographic composition of the K-12 student population is far more diverse than that of the teacher workforce.

Most preparation programs collect information about the demographic composition of applicants, admitted students, and program completers – though little of this is widely shared outside the

program. While there isn't enough yet known about the empirical relationships between teacher demographics and K-12 student outcomes, the demographic composition of program candidates and completers is a policy concern in every state. Current data and reporting resources are not adequate to support universal and reliable indicators on this subject, but given the diverse composition of US school enrollment and of the adult population, it is reasonable to include demographic measures of those admitted to and graduating from every preparation program. If the goal is to ensure that programs are indeed increasing the diversity of the teacher workforce, then it is particularly important to collect, report, and analyze comparable data *from the same program* on the diversity of admitted and completing candidates from the admitted cohort in order to ensure that admitting a diverse pool of candidates is more than an exercise in affirmative action.

II. Knowledge and Skills for Teaching

Four Key Effectiveness Indicators measure and report on the knowledge and skills of preparation program completers:

1. The academic content knowledge of program completers as measured through nationally normed assessments of college-level content knowledge
2. Measures of program completer pedagogical content knowledge captured by nationally normed tests
3. An indicator of teaching skills for program completers, again measured via a reliable and valid national assessment
4. Survey results from program completers, rating the program that prepared them for K-12 classroom teaching

There are lingering questions about the extent to which existing assessments in these four areas meet the KEI standards for rigor and quality. There appears to be no current examination of pedagogical content knowledge (content knowledge for teaching) that meets the goal of a rigorous examination that tests for broad and deep knowledge of how to teach specific subjects. Test developers claim to be moving forward, however, in strengthening these assessments and ensuring that they align with rigorous K-12 achievement standards. And new performance assessments of teaching skill are becoming available. The KEI focuses specifically on assessments that are required for licensure – i.e., on summative rather than interim assessments.

Attention also must be given to surveys of program completers to ensure they are rigorous and have an adequate response rate.

Content and Pedagogical Content Knowledge

Teachers' strong knowledge of both the content they are teaching and of the pedagogical understanding required to teach that content effectively to all students are essential. There has been a longstanding concern about the rigor of assessments of content knowledge, and whether the available assessments used by the states are sufficiently broad and deep to ensure that candidates who pass the assessments have the requisite knowledge. Test developers – notably ETS and Pearson – insist that

their examinations are adequate, and they sometimes suggest benchmark scores on the Praxis II (ETS) and NES (Pearson) assessments that denote adequate or excellent understanding. In actual practice, however, states set their own passing scores (or "cut scores") that diverge widely and undermine confidence that all candidates who pass the examinations truly have an adequate grasp of their teaching subject.

A second problem is that there are multiple variations of a licensure test in the same subject, even by the same test developer, and this adds to concerns that not all tests are equally rigorous. Far too many of these tests focus on narrow specializations, and even when the same tests are used by different states there is the problem of differing passing scores. Secretary Duncan's annual reports to Congress on teacher quality have identified more than 1,000 teacher tests in use across the 50 states with over 800 content knowledge tests alone.

Although all states require teacher candidates for licensure to pass a content knowledge assessment, few states require teacher candidates to pass a comprehensive assessment of their pedagogical content knowledge. The new performance assessments that are being developed, such as the edTPA and the PPAT (Praxis Performance Assessment for Teachers) assess some pedagogical content knowledge, but only that required for the narrowly focused lessons involved in the assessment and not for the broad scope of the teaching subject.

Because of these serious problems of quality control as well as lack of consistent reporting by accreditors, states, and others, the content knowledge and pedagogical content knowledge indicators recommended in the KEI are aspirational and yet to be developed. Stronger assessments in these areas (including more demanding passing scores) linked to vital teaching knowledge and K-12 learning outcomes would make a significant contribution to understanding the outcomes of preparation programs. Such tests ought to measure college-level content knowledge with passing scores set to ensure that all candidates have a solid grasp of their subject.

Most importantly for the quality and credibility of any reporting system, pass rate data and performance levels – as well as their calculation – must be made transparent to the public. Furthermore, states need to end the practice of reporting pass rates only for "program completers," who are narrowly defined to produce artificially high pass rates.

Demonstrated Teaching Skills for Program Completers

Classroom observation and assessment of on-the-job teaching performance of program candidates should be regarded as a key measure of quality because no single measure tells us all we need to know about a program or its completers. Some programs now employ classroom observation to gauge development of requisite knowledge and teaching skills by their teacher candidates, suggesting there might really be two performance-related measures here for outcomes-focused teacher education programs: performance of candidates *during* the program and their performance as teachers of record upon *completion* of the program. The Key Indicators framework developed by Teacher Preparation Analytics advocates both uses of this measure – one as an assessment of teaching skill for licensure

(Teaching Skill) and one as an assessment of program completers as classroom teachers (Demonstrated Teaching Skill).

Fortunately, a growing number of quality classroom observation instruments are available. These include, for example, the Danielson Framework for Teaching, Teachstone's Classroom Assessment Scoring System (CLASS), and several others used in the Gates Foundation funded Measures of Effective Teaching (MET) project (Cantrell & Kane, 2013). The MET project and another Gates-funded project, Understanding Teaching Quality, have produced relevant findings by examining links between observation instruments and pupil learning gains through videotaped observations of many teachers. In addition, the edTPA is now being adopted by several states and has shown promise in its pilot phase as a valid and rigorous performance-based assessment of teaching. And the PPAT, another performance-based teaching assessment, will be available in the near future.

Widespread implementation of a classroom teaching performance outcome measure would be a major step in providing robust and relevant evidence about the connection between teacher preparation and student achievement. It is important to bear in mind, however, that a system of quality classroom observation must support fair judgments based on reliable and valid findings for individual teachers and for groups of teachers.

Completer Rating of Program

Employer and completer satisfaction with teacher preparation programs constitute outcome measures that are already being used by a growing number of programs. They take on meaning when the employers or completers are satisfied – or dissatisfied – with particular aspects of the completer's preparation (e.g., in use of assessments to monitor student learning and provide feedback). The results can then be of direct utility to preparation programs as well as states in pointing to the need for changes. Combined with indicators of student achievement, classroom teaching, and persistence in the profession, the feedback of completers and those who hire them offers a comprehensive picture of program effectiveness. Indeed, the American Psychological Association 2014 task force on teacher preparation program improvement and accountability has recognized the value of such surveys (Worrell et al., 2014). Surveys and their response rates, however, must meet standards of quality to yield reliable results. In addition to survey quality and adequate response rates, few programs have the ability (or the will) to track their completers into employment. This is another area where better state data systems—and cross-state collaboration—would be beneficial.

As publicly reported indicators of program quality, in concert with the other measures recommended in the KEI, feedback surveys will be useful signals for programs, policymakers, and the public. Some hurdles need to be overcome on the road to robust use of quality surveys: questions need to address important features of the program experience; these questions have to be asked in similar ways across programs and states; and survey response rates must be reported along with the findings. Ensuring adequate response rates among completers who have left the program and are in the classroom is a particular challenge.

III. Performance as Classroom Teachers

Three Key Effectiveness Indicators address the performance of program completers as teachers of record in our nation's schools:

1. Impact of teachers on K-12 students through measures of academic achievement
2. Demonstrated teaching skill during the early years of a teacher's career
3. K-12 Student Perceptions captured by surveys of public school students.

As with the other key indicators we propose as measures of preparation program quality, these three should be understood as components of a set of measures that, taken together, offer important insights about teacher preparation programs, are suitable for accountability, and provide resources for programs to analyze and improve themselves. Unlike some of our other indicators, robust current examples of these performance indicators are already in use.

Impact on K-12 Students

Since high-quality instruction is the main in-school driver for student achievement, it makes sense that teacher effectiveness measures ought to be a central outcome. Currently only a few states have elevated teacher effectiveness as a core expectation or outcome for preparation programs, but many more states are building or implementing teacher evaluation systems in which student achievement has a central role. These evaluation policies and practices require sophisticated district-level data systems, but some also can tap state-level data systems that are fed from the districts.

There are other approaches to measuring the impact of teachers on the academic achievement of their students, such as district benchmark tests and state-developed approaches to capturing teacher impact for non-tested students, but the literature about the quality and usefulness of these approaches is far less developed. Apart from any other concerns, there is also the problem of finding measures of learning that can be compared across states.

Many preparation program completers across the country teach grades and subject areas that are not tested by the states; according to one estimate, about two-thirds of teachers fall into this category. A major challenge, therefore, is to develop learning outcomes for students of teachers in these untested subjects and grades. CAEP and others interested in this problem can tap work underway by Race to the Top states that face the same problem and are trying to address it.

Expanded use of these value-added analyses and growth model calculations of student learning has stimulated efforts to improve the tests of K-12 students that function as dependent variables, and it is safe to say that the nation will see further work to refine the analytical models and methods used to determine the impact of teachers on the academic achievement of their pupils. All of this supports optimism about the viability of using student learning as an indicator of program quality and for preparation program accountability.

Demonstrated Teaching Skill

This report's analysis of this Key Effectiveness Indicator for program completers in the early years of

their professional careers (first three years of classroom teaching) tracks with the discussion of Teaching Skill in Section Two above. Points made about the relevance of teaching skills as a key quality metric, availability of some strong instruments for generating this information, and implementation challenges suggest that progress can be made in the next few years on widespread use of this indicator. A number of states have implemented annual performance assessments of their teachers, many of which include a classroom observation assessment, and several of the states profiled in this report plan to use the results of these annual assessments as measure of the effectiveness of their teacher preparation programs. It is critically important, in this endeavor, to ensure that the observation assessment is rigorous and valid and that standards and measures are compatible between districts.

K-12 Student Perceptions

K-12 student surveys as an indicator of program quality provide another way to measure program performance. Student perceptions about instruction are related to teaching effectiveness, and those that have the strongest correlation with positive learning outcomes are a "teacher's ability to control a classroom and to challenge students with rigorous work." School administrators concerned about the classroom management skills of new teachers, as well as parents worried that too many teachers have low expectations for their children, would understand the meaning of these findings.

The MET project argues that student perceptions are an "inexpensive way" to construct a teaching quality indicator that can supplement other measures. And the 2014 APA task force states that appropriately constructed student surveys of their teachers are more highly correlated with student achievement than either teacher self-evaluation or principal ratings (Worrell et al., 2014). Of course, the quality of this indicator depends on the instrument used to capture student attitudes.

Distributing, collecting, and analyzing student surveys for the purposes of program evaluation, however, would be a large logistical task. State data systems could be used to aggregate the data from different schools and link findings to the completers of specific preparation programs, just as they will have to do for other outcomes measures. State data systems or consortia like the Texas-based CREATE could perform these tasks as well as manage a reporting platform for public dissemination of findings.

IV. Program Productivity and Alignment to State Needs

Two Key Quality Indicators comprise this group:

1. Entry and persistence in teaching
2. Placement and persistence as teachers in high-need subjects and high-need schools

Two outcomes related to the impact of preparation programs on K-12 schools are how long completers persist in teaching and where they are employed as teachers. The KEI measures in this area also address the proportion of program completers who successfully attain a second-stage teaching license in states with multi-tiered licensure, a measure that blends persistence in teaching with advancement in the profession. Although not explicitly one of the twelve Key Indicators, implicit in the measures

required is the program completion rate – the proportion of entering teacher candidates who complete their course of study and obtain certification to be a classroom teacher. This statistic can be disaggregated by gender, ethnicity, and subject area.

Preparation programs are not solely responsible for turnover or for its solution, but given the causes and consequences of teacher turnover, persistence in teaching is a program outcome that can help to align the interests of producers and employers (Henry, Fortner, & Bastian, 2012). Some programs do track the persistence rates of their own completers. But a reliable strategy to acquire data on persistence as a program outcome requires data systems that enable all programs to locate their completers in the schools and districts where they teach. Thanks to the federally funded State Longitudinal Data System (SLDS) initiative, such systems are becoming more common in the states. Data system availability and functionality, however, doesn't mean that states or programs actually track their completers and analyze persistence rates. And tracking program completers out-of-state remains a virtually impossible proposition for both states and programs, although the National Association of State Directors of Teacher Education and Certification (NASDTEC) is working with a small group of states to pilot an Interstate Data Sharing project that will include the exchange of teacher employment data. This development is one of the Points of Light noted in this report. In addition, collecting and using these data requires collaboration among state higher education commission and system heads, education agencies, and state employment agencies, as well as collaborative efforts across states to share data. The Western Interstate Commission for Higher Education (WICHE) has a project underway in their service region to build such systems.

Persistence rates in key subject areas and in high-need schools are also important to track, report, and analyze. The highest turnover rates are in low performing and high minority population schools. Programs, schools, and policymakers need stronger incentives to address this problem more aggressively; public reporting of these rates as a measure of program quality will help. High-need schools are not the only places where students need and deserve good teachers, so the KEI persistence indicator tracks program persistence rates overall as well.

States are unlikely to make much progress in attracting and retaining strong teachers into high-need (i.e., shortage) subjects without focused attention on this issue. Programs can do their part, first, by moving teacher production into shortage subjects and away from oversubscribed licensure areas and, second, by strengthening the quality of preparation in these subject areas. Through their Race to the Top work, some states have added an indicator for the subject areas taught by program completers, hoping to create incentives and pressure on programs to concentrate output in fields like special education, ESL, and STEM, while reducing chronic overproduction in a field like elementary education.

Section III. Teacher Preparation Program Evaluation Today

How well served are we by the measures currently at our disposal to evaluate the performance of teacher preparation programs?

As noted previously, criticism of the quality of teacher preparation in the U.S. has a long history. In an effort to strengthen the confidence of the public and policymakers, state governments require preparation programs in teaching (and in other professions) to be officially approved in order to operate in their states. In addition to state approval, the teaching profession itself reviews programs through its designated (and federally recognized) accrediting agency, now CAEP. National accreditation in teacher preparation is voluntary, however, and slightly fewer than half of the 1,685 higher education programs and almost none of the 439 known alternative providers or 219 alternative sponsors of alternative programs in the U.S. are nationally accredited. Moreover, continuing criticism of teacher preparation programs – even from within the profession itself – has prevented state approval and accreditation from becoming the trusted hallmarks of program quality they have aspired to be.

Thus, there is an increasing interest in developing new measures of teacher preparation program quality, including measures that are accessible to the public and focus on the outcomes of teacher preparation that are of concern to the various individuals with the most direct interest in program quality – especially prospective teachers, their eventual employers, and policymakers. The federal government has responded to this interest in developing reporting requirements under Title II of the Higher Education Act, and a growing number of states are developing their own annual program performance "report cards." In addition, several national associations and advocacy organizations have also undertaken noteworthy efforts. The most significant recent effort is the development of new accreditation standards and annual reporting requirements by CAEP, although there are no plans at this time to share specific program data publicly.

Another source of data about teacher preparation programs is the Professional Education Data System (PEDS) maintained by the American Association of Colleges for Teacher Education (AACTE). The PEDS database contains longitudinal data on the teacher preparation programs at approximately 800 AACTE member institutions. The focus of these data is general institutional and financial information, program faculty, candidate demographics, program completion, and technology and distance learning. AACTE issues periodic reports based on PEDS that identify trends in the field, but PEDS itself is not a public database, does not include all traditional providers or any non-traditional providers, and was never intended to be used for the evaluation of specific institutions or programs.

The National Council on Teacher Quality (NCTQ) collects and reports data on teacher preparation programs that are specifically used as the basis for program assessment. Most prominently, NCTQ launched an annual Teacher Prep Review (Greenberg, McKee, & Walsh 2013) in partnership with U.S. News and World Report. The inaugural publication was an assessment, based on 18 standards, of the quality of some 1,200 preparation programs in specific fields at just over 600 institutions. Three of those standards – Candidate Selection, Program Outcomes, and Evidence of Effectiveness – are

mirrored in the KEI, but the other standards are related to qualitative information about program coursework, assessments, etc. that the KEI does not address. The NCTQ review's reliance on qualitative assessment differs significantly from the quantitative approach of the KEI.

For the purposes of this report, the Title II reporting requirements and the CAEP reporting requirements are the most relevant and important to discuss further.

Title II Reporting Requirements

In the absence of confident, publicly accessible indicators of the quality of our nation's teacher preparation programs, the U.S. Congress in 1998 incorporated the first set of annual reporting requirements into Title II of the reauthorized Higher Education Act. Those requirements have been revised with each new HEA reauthorization and by subsequent changes in rules authorized by the U.S. Department of Education. They require every approved teacher preparation program to provide an annual report to the state and require every state, in turn, to incorporate that information as part of an annual report to the U.S. Secretary of Education. Thus, Title II provides the only comprehensive database on teacher preparation in the U.S.

Some states provide public access to their annual Title II reports through the state department of education websites. But even for states that do not, every state's Title II report is publicly accessible by law at https://title2.ed.gov. And that public accessibility is a critically important step forward.

The Title II reports now in place meet reporting requirements mandated by the federal government in 2008 and provide several valuable kinds of information, for example:

- The numbers of teachers produced in the various teaching fields
- The identified subject shortage areas in each state
- The demographic make-up of teacher preparation candidates in the states
- Enrollment in different kinds of teacher preparation programs – public, private, "traditional," and "alternative" (as reported and defined by each state)
- Similarities and differences in state policies related to teacher preparation and certification

However, there are several problems with the evaluative information on preparation programs currently reported under Title II:

1. The measures are flawed in their heavy dependence upon unreliable institutional self-reports of data that may be unverified, and they are based on constructs that do not yield the most salient data on the outcomes being measured.
2. The measures do not report on some of the most important features or outcomes of teacher preparation programs (e.g., the demonstrated teaching skill of program completers)
3. States and programs use different definitions, assessments, and evaluation criteria (e.g., for passing licensure examinations) to fulfill the reporting requirements. This prevents the Title II

indicators from serving as a valid basis for comparisons between states and even, in some cases, as a basis for program comparisons within states

4. The Title II measures have little value as an aid to preparation program improvement efforts
5. Apart from the potential infamy of identification in a national report as a low-performing or at-risk institution, there is very limited accountability at the federal or state level attached to the Title II reports – especially since so few programs are identified as problematic. According to the 2013 Secretary's Annual Report, only 9 preparation programs out of 2,124 were designated as low-performing in 2011 and only 29 identified as at-risk.

Table 2 below (pp. 18-20) compares the Title II indicators and measures (in blue type) that are in force as of August 2014 with the Key Effectiveness Indicators and their measures (in black type). The table shows that the KEI and Title II report indicators have minimal commonality, and that the reporting requirements for Title II are slight and lacking in rigor and specificity compared to those of the KEI.

CAEP Reporting Requirements

In replacing the two previous federally recognized accrediting bodies in teacher education, NCATE and TEAC, the Council for the Accreditation of Educator Preparation is attempting to restore confidence that accreditation signals preparation program quality by bringing substantial reform to the accreditation process. Preparation programs seeking accreditation, whether "traditional" or "alternative," will have to meet new standards in five areas, including more rigorous standards for candidate selectivity, clinical preparation, and program impact.

What is particularly significant about CAEP's emphasis on program impact is that it requires not only assessment of candidates' skills and knowledge acquired during the program itself, but also the assessment of candidates' post-completion performance as classroom teachers. To acquire this evidence, CAEP requires preparation programs to report eight outcomes indicators annually, which CAEP will monitor as part of its oversight responsibility. Table 3, on pp. 21-22 below, compares CAEP's annual reporting requirements (in blue type) to the 2020 Key Effectiveness Indicators (in black type). In addition, CAEP standards in areas related to the KEI that require program compliance, but not annual reporting, are listed (in green type) because the expectation of compliance with these standards is a constant from year to year. In reality compliance may not be constant, and thus a program that falls short of meeting the expected standard in a given year may not be flagged in the CAEP reporting system.

The CAEP-KEI comparison table shows considerable affinity between the measures the two systems have adopted. It is left to the reader to note the specific differences in the coverage of indicators and the description of the specific metrics. Some differences, however, between the CAEP and KEI systems warrant specific mention.

First, the CAEP annual reporting indicators are embedded in a more comprehensive accreditation process that involves the accumulation and assessment of a great deal more information, including both qualitative and quantitative data, on the preparation programs CAEP reviews for accreditation.

Table 2. Title II Required Program Performance Measures and the 2020 Key Effectiveness Indicators

KEI Program Effectiveness Indicators	Corresponding Title II Indicators and Measures	Comparative KEI Measures
Candidate Selection Profile		
Academic Strength	Institutional requirements for program admission and completion, which could include (at state and institutional discretion) any or all of the following: (1) minimum and/or mean GPA overall or in content or professional education courses upon entry/exit; (2) minimum required ACT/SAT scores; (3) minimum required score on a basic skills test; (4) subject knowledge exam or other verification upon entry/exit; (5) minimum required course credits for program entry/exit	For Undergraduate Programs: Non-education course GPA required for program admission. Mean and range of high school GPA percentile (or class rank) for candidates admitted as freshmen. Mean and tercile distribution of candidates' SAT/ACT scores. GPA in major and overall required for program completion. Average percentile rank of completers' GPA in their major at the university, by cohort. For Post-Baccalaureate Programs: Mean and range of candidates' college GPA percentile and mean and tercile distribution of GRE scores For All Programs: Mean and tercile distribution of admitted candidate scores on rigorous national test of college sophomore-level general knowledge and reasoning skills
Teaching Promise	NA	Percent of accepted program candidates whose score on a rigorous and validated "fitness for teaching" assessment demonstrates a strong promise for teaching
Candidate/Completer Diversity	Number of enrolled candidates – in total and by gender and race/ethnicity	• Number and percent of admitted candidates in newest cohort, overall and by race/ethnicity, age, and gender • Number and percent of admitted candidates in graduating cohort completing program – overall and by race/ethnicity, age, and gender
Other Title II-Requested Data	Whether finger print and background check are required for program entry and exit	NA
Knowledge and Skills for Teaching		
Content Knowledge	Number of test takers, pass rate, and average scale score for completers compared to state averages on content area licensure exam	Program completer mean score, tercile distribution, and pass rates on rigorous and validated nationally normed assessment of college-level content knowledge used for initial licensure
Pedagogical Content Knowledge	NA	Program completer mean score, tercile distribution, and pass rates on rigorous and validated nationally normed assessment of comprehensive pedagogical content knowledge used for initial licensure
Teaching Skill	NA	Program completer mean score, tercile distribution, and pass rate on rigorous and validated nationally normed assessment of demonstrated teaching skill used for initial licensure

Table 2. Title II Required Program Performance Measures and the 2020 Key Effectiveness Indicators (cont.)		
KEI Program Effectiveness Indicators	**Corresponding Title II Indicators and Measures**	**Comparative KEI Measures**
Knowledge and Skills for Teaching – cont.		
Completer Rating of Program	NA	State or nationally developed program completer survey of teaching preparedness and program quality, by cohort, upon program (including alternate route) completion and at end of first year of full-time teaching
Other Title II-Requested Data	• Average number of required hours for student teaching and other clinical experiences and number of full-time and adjunct faculty assigned to these • Confirmation special education teachers are prepared in core academic subjects • Confirmation candidates are taught to use technology effectively in instruction	NA
Performance as Teachers of Record		
Impact on K-12 Students	NA	Assessment of program completers or alternate route candidates during their first three years of full-time teaching using valid and rigorous student-learning driven measures, including value-added and other statewide comparative evidence of K-12 student growth overall and in low-income and low-performing schools
Demonstrated Teaching Skill	NA	Annual assessment based on observations of program completers' or alternate route candidates' first three years of full-time classroom teaching, using valid, reliable, and rigorous statewide instruments and protocols
K-12 Student Perceptions	NA	K-12 student surveys about completers' or alternate route candidates' teaching practice during first three years of full-time teaching, using valid and reliable statewide instruments
Program Productivity, Alignment to State Needs		
Entry and Persistence in Teaching	NA	• Percent of completers or alt. route candidates, by cohort and gender-race-ethnicity, employed and persisting in teaching years 1-5 after program completion or initial alternate route placement, in-state and out-of-state • Percent of completers attaining a second stage teaching license in states with multi-tiered licensure

Table 2. Title II Required Program Performance Measures and the 2020 Key Effectiveness Indicators (cont.)		
KEI Program Effectiveness Indicators	**Corresponding Title II Indicators and Measures**	**Comparative KEI Measures**
Program Productivity, Alignment to State Needs – cont.		
Placement/Persistence in High-Need Subjects/Schools	NA	Number and percent of completers or alternate route candidates, by cohort, employed and persisting in teaching in low-performing, low-income, or remote rural schools or in high need subjects years 1-5 after program completion or initial alternate route placement, in-state and out-of-state
Other Title II-Requested Data	• Number of program completers prepared in each credential area • Confirmation whether program responds to identified state or district teacher needs • Confirmation whether program prepares completers to teach to a diverse student population, and in urban or rural schools • Confirmation whether institution met annual goals for teacher production in shortage areas	NA

Table 3. CAEP Annual Program Reporting Requirements and the 2020 Key Effectiveness Indicators

KEI Program Effectiveness Indicators	Corresponding CAEP Indicators and Measures	Comparative KEI Measures
Candidate Selection Profile		
Academic Strength	Standards Measures not annually reported • Average college GPA of entering cohort equals or exceeds 3.0 • Average college GPA of entering cohort in subject major compared to other students in major • Average percentile rank of entering cohort on SAT, ACT, GRE, or other nationally normed assessment of academic strength (e.g., AP or IB) is in the top 1/3 of all test takers nationally (by 2020)	For Undergraduate Programs: Non-education course GPA required for program admission. Mean and range of high school GPA percentile (or class rank) for candidates admitted as freshmen. Mean and tercile distribution of candidates' SAT/ACT scores. GPA in major and overall required for program completion. Average percentile rank of completers' GPA in their major at the university, by cohort. For Post-Baccalaureate Programs: Mean and range of candidates' college GPA percentile and mean and tercile distribution of GRE scores For All Programs: Mean and tercile distribution of admitted candidate scores on rigorous national test of college sophomore-level general knowledge and reasoning skills
Teaching Promise	Providers expected to use factors other than academic strength in selection decisions. No specific assessment or metric identified. (Standards Measure not annually reported)	Percent of accepted program candidates whose score on a rigorous and validated "fitness for teaching" assessment demonstrates a strong promise for teaching
Candidate/Completer Diversity	Providers expected to seek a diverse candidate pool, but no specific benchmark or metric provided [Standards Measure not annually reported]	• Number and percent of admitted candidates in newest cohort, overall and by race/ethnicity, age, and gender • Number and percent of admitted candidates in graduating cohort completing program – overall and by race/ethnicity, age, and gender
Knowledge and Skills for Teaching		
Content Knowledge	Pass rate (80% benchmark) and average scaled score on state licensure examination (two tries) with common cut score across states [Annual Reporting Measure]	Program completer mean score, tercile distribution, and pass rates on rigorous and validated nationally normed assessment of college-level content knowledge used for initial licensure
Pedagogical Content Knowledge	Pass rat) (80% benchmark) and average scaled score on state licensure examination [2 tries] with common cut score across states [Annual Reporting Measure]	Program completer mean score, tercile distribution, and pass rates on rigorous and validated nationally normed assessment of comprehensive pedagogical content knowledge used for initial licensure
Teaching Skill	Standardized capstone assessments of teaching skill [Standards Measure not annually reported]	Program completer mean score, tercile distribution, and pass rate on rigorous and validated nationally normed assessment of demonstrated teaching skill used for initial licensure
Completer Rating of Program	Valid, reliable survey data showing that program completers perceive their preparation as effective and relevant (Annual Reporting Measure)	State- or nationally-developed program completer survey of teaching preparedness and program quality, by cohort, upon program (including alternate route) completion and at end of first year of full-time teaching

Table 3. CAEP Annual Program Reporting Requirements and the 2020 Key Effectiveness Indicators (cont.)		
KEI Program Effectiveness Indicators	**Corresponding CAEP Indicators and Measures**	**Comparative KEI Measures**
Performance as Teachers of Record		
Impact on K-12 Students	Any available growth measures required by the state (including value-added measures, student-growth percentiles, and student learning and development objectives), other state-supported P-12 impact measures, and any other measures used by the provider [Annual Reporting Measure]	Assessment of program completers or alternate route candidates during their first three years of full-time teaching using valid and rigorous student-learning driven measures, including value-added and other statewide comparative evidence of K-12 student growth overall and in low-income and low-performing schools
Demonstrated Teaching Skill	Annual Reporting Measures: • To be demonstrated through structured and validated observation instruments • Employer satisfaction with completers' preparation for their assigned responsibilities	Annual assessment based on observations of program completers' or alternate route candidates' first three years of full-time classroom teaching, using valid, reliable, and rigorous statewide instruments and protocols
K-12 Student Perceptions	To be demonstrated through K-12 student surveys (Annual Reporting Measure)	K-12 student surveys about completers' or alternate route candidates' teaching practice during first three years of full-time teaching, using valid and reliable statewide instruments
Program Productivity, Alignment to State Needs		
Entry and Persistence in Teaching	Ability of completers to be hired in positions for which they were prepared [Annual Reporting Measure]	• Percent of completers or alt. route candidates, by cohort and gender-race-ethnicity, employed and persisting in teaching years 1-5 after program completion or initial alternate route placement, in-state and out-of-state • Percent of completers attaining a second stage teaching license in states with multi-tiered licensure
Placement/Persistence in High-Need Subjects/Schools	NA	Number and percent of completers or alt. route candidates, by cohort, employed and persisting in teaching in low-performing, low-income, or remote rural schools or in high need subjects years 1-5 after program completion or initial alternate route placement, in-state and out-of-state
Other CAEP-Requested Data	▪ Graduation rate [Annual Reporting Measure] ▪ Student loan default rate and other consumer information [Annual Reporting Measure]	NA

That the CAEP annual reporting indicators considered alone may not convey as much overall information about program performance as the KEI is understandable in this context. CAEP's overall goal is to determine, from the perspective of professionals in the field, whether the preparation programs it evaluates are maintaining, or perhaps even enhancing, the quality of new entrants into the profession. And the voluminous data CAEP collects is intended to aid programs in their efforts to identify specific program practices and features that may need to be changed in order to improve their outcomes for program completers. CAEP is expected to publish its annual reporting data as part of the organization's annual report, which will be publicly accessible. But whether that information will be published in its totality or in an abridged or aggregated manner has yet to be decided.

The KEI, by contrast, was developed to provide a self-sufficient basis for assessing the effectiveness of preparation programs absent additional information. The KEI is not intended to diagnose specific program strengths and weaknesses but rather to provide a signal that programs appear either to be doing well or poorly depending on their scores on the various performance measures. In addition, the KEI information is intended to be fully accessible and meaningful to the public, policymakers, and educators in the field – and at the same time useful in its signaling capacity for program accountability and improvement efforts.

Individual State Efforts

A number of states have independently developed or begun to develop new measures of the performance of their educator preparation programs. This report includes information on 15 states that are at different stages in this developmental process. The states include some where EPPs are piloting implementation of the new CAEP accreditation standards, as well as all states participating in the Network for Transforming Educator Preparation (NTEP) led by the Council of Chief State School Officers (CCSSO). The 15 states profiled were not selected randomly, and they do not include all states that have made significant progress in the effort to develop new program effectiveness reporting measures. They do, however, reflect a variety of approaches, as well as notable differences in their level of progress.

Appendix A includes detailed information on the status and efforts of all 15 states (as of May 31, 2014) with respect to teacher preparation performance assessments. The authors made strenuous efforts to verify the information reported in the appendix. They contacted key officials in all 15 of the states, often multiple times, and received considerable assistance from them in obtaining the level of detail required for the analysis undertaken in this report. Based upon the information in the appendix, the report seeks to answer three different questions about the efforts of the 15 sample states to assess the effectiveness of their teacher preparation programs:

Question 1: How does the current capacity of the states to assess program effectiveness measure up to the ideal indicators and measures proposed in the 2020 Key Effectiveness Indicators?

Question 2: What are the current and emerging key features of the preparation program assessment systems that most of the 15 states are developing?

Question 3: What might the states' capacity to assess program effectiveness look like several years from now if the assessment system features currently under development were to be implemented?

These questions will be addressed principally by three tables in this section and the next section of the report. Tables 4 and 5 provide information in response to Questions 1 and 2 respectively, and Table 6 addresses Question 3. All tables are based upon information gathered as of May 31, 2014.

The report also emphasizes the need for states to develop comparable and publicly reported data on their teacher preparation programs. Virtually all states have significant program reporting requirements for purposes of state approval or national accreditation, but only the accreditation and approval status are generally reported systematically to the public – not the program performance measures themselves. And many of those measures are not meaningful or transparent to the larger public. Significantly, CAEP's standards and annual reporting require information, such as measures of completer impact, are shared on preparation providers' websites and acted upon by providers and their stakeholders for continuous improvement. The only preparation program measures currently reported publicly by every state are the Title II measures, and Table 2 above indicates that these measures fall far short of the ideal envisioned in the KEI. The amount and types of information individual states make available to the public varies, as displayed in Table 5.

As the analysis here indicates, a number of the 15 sample states have already implemented or are well along in the development of new preparation program performance assessments that are far more robust than Title II. Other states have only begun such a process, and a main goal of the report is to provide direction for those states through the KEI and encouragement from the noteworthy progress that their colleagues in other states have been able to achieve.

Table 4 – *States and the 2020 Key Effectiveness Teacher Preparation Program Indicators* – on p. 26 addresses Question 1. It provides a baseline assessment of how the current annual public data reporting requirements for teacher preparation programs in each of the 15 sample states specifically compare to the recommendations in the KEI. The authors fully understand that states have not specifically signed on to implement all of the data elements in the KEI, and it is not the purpose of this report to portray states as failing to do so. Rather, the aim of the report and the analysis it provides is simply to illustrate how close states' current efforts are to the 2020 ideal envisioned in the KEI. The principal purpose of the analysis here is to describe rather than to evaluate, although some assessment of the adequacy of states' current measures is unavoidable.

It is important to emphasize that Table 4 only recognizes how the states' current capacity to report public information about program performance compares to the KEI. That means that the table reflects only indicators that a state has at least partially implemented – i.e., for which there are at present publicly reported data. The table defines "current capacity" in terms of both the indicators a

state meets by satisfying Title II requirements and indicators that reflect the publicly reported data that are part of any additional annual or biennial program performance assessment system the state may have adopted on its own initiative.

Table 4 uses Harvey Ball icons to symbolize the extent of similarity between a state's currently implemented performance measures and those of the KEI. The complete definitions of the four different Harvey Balls appear below. An abbreviated definition appears beneath Table 4 and beneath Table 6, which also uses Harvey Balls.

 = Reporting system does not contain this indicator or equivalent measures.

 = Reporting system includes this indicator but employs measures that have low alignment to the suggested KEI measures. The source of low alignment could be in data, quality of assessments used, or computational methods employed.

 = Reporting system includes this indicator and employs measures that approach the power of those suggested in the KEI but are not fully aligned in data, quality of assessments, or computational methods. The measures for this indicator also may not include a large portion (1/4 or more) of the target population of candidates or completers or may not cover a number of programs in core teaching subjects.

 = Reporting system includes this indicator and employs robust measures that are functionally equivalent to the KEI measures. The measures cover approximately 3/4 or more of the target population of candidates or completers and virtually all programs in core teaching subjects.

To help the reader identify which part of a state's current capacity is tied to its autonomously developed program assessment system and which to Title II, Table 4 uses black balls to designate indicators that are part of the state's own system and orange balls to designate those that are currently only part of the state's Title II reporting capacity. In a very few cases, a state's self-developed measures are not as close to the KEI suggested measures as the corresponding Title II measures for the indicator.

Table 5 – *State Teacher Preparation Program Annual Public Performance Report Features* –on pp. 28-29 contains the information relevant to Question 2. The table provides a summary of the current (as of May 31, 2014) and emerging features of the state program performance assessment systems that many of the 15 sample states are in the process of developing, and it yields a much more fluid and complex picture than Table 4. Table 5 identifies which states are developing new preparation program performance reports and the extent of those efforts where they are underway. It notes (1) the primary purposes of the annual data that states require their programs to collect, including accountability implications; (2) the levels of analysis the state data reporting system allows; (3) the developmental status and scope of the data system; and (4) the extent of current public access to the data.

Table 4. States and the 2020 Key Effectiveness Teacher Preparation Program Indicators

NOTE: States are in various stages of developing these systems. Therefore, this table is intended as a diagnostic and information tool - not as an evaluation.

Assessment Categories	TPA Key Indicators	State-KEI Comparison Status														
		CA	CT	FL	GA	ID	KY	LA	MA	MO	NY	NC	OH	TN	TX	WA
I Candidate Selection Profile	Academic Strength															
	Teaching Promise															
	Candidate/Completer Diversity															
II Knowledge and Skills for Teaching	Content Knowledge															
	Pedagogical Content Knowledge															
	Teaching Skill															
	Completer Rating of Program															
III Performance as Classroom Teachers	Impact on K-12 Student Learning															
	Demonstrated Teaching Skill															
	K-12 Student Perceptions															
IV Contribution to State Needs	Entry and Persistence in Teaching															
	Placement/Persistence in High-Need Subjects/Schools															

○ = reporting system does not contain this indicator or equivalent measures

◔ = reporting system includes this indicator but employs measures that have low alignment to the suggested KEI measures

black balls = indicators that are part of the state's own system

◑ = reporting system includes this indicator and employs measures that approach the power of those suggested in the KEI but are not fully aligned in data, quality of assessments, or computational methods.

● = reporting system includes this indicator and employs robust measures that are functionally equivalent to the KEI measures

orange balls = indicators that are currently only part of the state's Title II reporting capacity

Table 5 is designed to emphasize the affinity of the indicators included in the program effectiveness assessment systems of the 15 states with those that comprise the 2020 Key Effectiveness Indicators (See Table 1). However, Table 5 also recognizes that states may have adopted indicators outside of the KEI framework, and the last row of the table indicates when that is the case. The reader is encouraged to refer to the individual state information summaries in the appendix for more details about the specific state indicators. The table does not show the extent to which the specific measures states employ under an indicator match the measures recommended in the KEI. That relationship is illustrated (but only for indicators already implemented) in Table 4 above.

The challenge for the analysis shown in Table 5 is the significant variation between the 15 states in the extent to which they have developed and implemented new preparation program performance assessments. The more fully developed the system, the easier it is to describe. The less developed the system, the more uncertainty surrounds it – sometimes even among the state officials responsible for moving it forward.

Table 5 is sufficiently complex that it warrants a brief discussion of the application of the predicates in the table cells. First, table 5 recognizes a state-developed reporting system only if it is at least partly operational or is actively under development – i.e., well beyond the planning stage alone. The table designates a state data system as "fully operational" when all of its planned performance indicators are developed as designed, have actual program data behind them, and are currently being reported to the public. In cases where a state has definite plans to add additional indicators or to add performance benchmarks or accountability dimensions to its current indicators, Table 5 considers the system as "partly operational" so long as its current indicators have publicly reported data behind them. In distinction to the "operational" designation, Table 5 considers a state's data system to be "in development" if its proposed indicators are supported by an organized and state-sanctioned planning or development process but the system is not yet publicly reporting data.

The specific indicators identified in Table 5 are designated either as "Implemented," "Partially Implemented," "In Development," or "From Title 2." An "Implemented" or "Partially Implemented" indicator is one that publicly reports data on a majority of the state's programs. An indicator is "Partially Implemented" if it is in use and the state is actively engaged in enhancing it or plans to alter it, or if the indicator reports data on only a portion of the programs or completers the state ultimately intends for it to cover. An indicator is "In Development" if the state is actively developing or piloting it, but there are no publicly reported data behind it. If a state can be said to meet an indicator solely on the basis of fulfilling Title II reporting requirements, the indicator is noted in the table as "From Title 2." If a state has not implemented or is not in the process of developing program performance measures under a specific indicator, Table 5 shows "None" in the appropriate cell.

Table 5. State Teacher Preparation Program Annual Public Performance Report Features

General Report Features		State Implementation Status							
		CA	CT	FL	GA	ID	KY	LA	MA
Public Data System Status New System: Fully/Partly Operational or in Development; or Title 2 Data Only		Title 2 Only (data from state-developed system not public)	Title 2 Only	Partly Operational	Partly Operational	Title 2 Only	Partly Operational	In Development	In Development
Data Reporting Purpose State Accountability, Program Improvement, or Public Information		Public Info	Public Info	•Accountability •Progr Imprvmnt •Public Info	•Accountability •Progr Imprvmnt •Public Info	Public Info	•Accountability •Progr Imprvmnt •Public Info	•Accountability •Progr Imprvmnt •Public Info	•Accountability •Progr Imprvmnt •Public Info
Accountability Implications Basis for State Action or Advisory Information		Advisory	Advisory	•Advisory •State Action	State Action	Advisory	•Advisory •State Action	To Be Determined	•Advisory •State Action
Aggregation Level of Data Specific Program/Field, Institutional Provider, or State		• Program • Provider • State	• Program • Provider • State	•Program •Provider •State	• Program • Provider • State	•Program •Provider •State	•Program •Provider •State	•Program •Provider •State	•Provider •State
Scope of Report All or Limited Providers and/or Completers		Limited Completers	Limited Completers	Limited Completers	Limited Completers	Limited Completers	Limited Completers	Limited Completers	Limited Completers
Current Public Access Full, Partial, Very Limited, Title 2		Title 2 (via state website)	Title 2	Partial	Partial	Title 2	Full	Very Limited	Partial
Annual Report Indicators		Implemented, Partially Implemented, In Development, or From Title 2 (State indicators identified in the last row (in blue) are not included in the 12 Key Effectiveness Indicators)							
Candidate Selection Profile	**Academic Strength**	From Title 2	From Title 2	From Title 2	From Title 2	From Title 2	Implemented	From Title 2	Partially Impl
	Promise for Teaching	None	None	None	None	None	None	None	None
	Gender/Ethnic Diversity	From Title 2	From Title 2	From Title 2	From Title 2	From Title 2	Partially Impl	From Title 2	Implemented
Knowledge and Skills for Teaching	**Content Knowledge**	From Title 2	From Title 2	From Title 2	Implemented	From Title 2	Partially Impl	From Title 2	•Implemented •In Development
	Pedagogical Content Knowledge	None	None	Partially Impl	In Development	None	•Implemented •In Development	None	None
	Teaching Skill	None	None	Partially Impl	In Development	From Title 2	Partially Impl	From Title 2	None
	Completer Rating of Program	None	None	Partially Impl	Implemented	None	Implemented	None	Partially Impl
Performance as Teachers of Record	**Impact on K-12 Student Learning**	None	None	Implemented	In Development	None	None	Partially Impl	In Development
	Demonstrated Teaching Skill	None	None	Implemented	In Development	None	None	None	Partially Impl
	K-12 Student Perceptions	None	None	None	In Development	None	None	None	None
Contribution to State Needs	**Entry/Persistence in Teaching**	None	None	Implemented	In Development	None	Implemented	In Development	Partially Impl
	Placement/Persistence in High-Need Subjects and Schools	From Title 2	From Title 2	Implemented	From Title 2	From Title 2	From Title 2	From Title 2	From Title 2
Other Requested Public Data A=Accreditation Status; E=Annual Teacher Evaluation Score; C=Program Completion Rate; O=Other		Other (See Title 2)	Other (See Title 2)	A, C, O (See Appendix A state summary)	None	Other (See Title 2)	A, C, O (See Appendix A state summary)	A, C, O (See Appendix A state summary)	A, C, O (See Appendix A state summary)

Table 5. State Teacher Preparation Program Annual Public Performance Report Features (cont.)								
General Report Features		**State Implementation Status**						
		MO	**NY**	**NC**	**OH**	**TN**	**TX**	**WA**
Public Data System Status New System: Fully/Partly Operational, or In Development; or Title 2 Data Only		Partly Operational	Title 2 Only	Partly Operational	Fully Operational	Fully Operational	Partly Operational	Partly Operational
Data Reporting Purpose State Accountability, Program Improvement, or Public Information		•Accountability •Progr Imprvmnt •Public Info	• Accountability • Public Info	•Accountability •Public Info	•Accountability •Progr Imprvmnt •Public Info	•Accountability •Progr Imprvmnt •Public Info	•Accountability •Progr Imprvmnt •Public info	•Accountability •Progr Imprvmnt •Public Info
Accountability Implications Basis for State Action or Advisory Information		State Action	Advisory	• Advisory • State Action	Advisory	Advisory	•Advisory •State Action	Advisory
Aggregation Level of Data Specific Program/Field, Institutional Provider, or State		• Program • Provider • State	• Program • Provider • State	•Program •Provider •State	• Program • Provider • State	•Program •Provider •State	•Program •Provider •State	•Program •Provider •State
Scope of Report All or Limited Providers and/or Completers		Limited Completers	Limited Completers	Limited Providers and Completers	Limited Providers and Completers	Limited Completers	Limited Completers	Limited Completers
Current Public Access Full, Partial, Title 2		Partial	Partial	Partial	Full	Full	Partial	Full
Annual Report Indicators		Implemented, Partially Implemented, In Development, or From Title 2 (State indicators identified in the last row (in blue) are not included in the 12 Key Effectiveness Indicators)						
Candidate Selection Profile	**Academic Strength**	•Implemented •In Development	From Title 2	From Title 2	Implemented	Implemented	Partially Impl	From Title 2
	Promise for Teaching	None	None	None	None	None	None	None
	Gender/Ethnic Diversity	From Title 2	From Title 2	From Title 2	From Title 2	Implemented	Partially Impl	Implemented
Knowledge and Skills for Teaching	**Content Knowledge**	• Implemented • In Development	From Title 2	From Title 2	Implemented	Implemented	Implemented	Implemented
	Pedagogical Content Knowledge	None	None	None	In Development	In Development	None	In Development
	Teaching Skill	In Development	From Title 2	Partially Impl	In Development	• Implemented • In Development	From Title 2	In Development
	Completer Rating of Program	Implemented	None	Implemented	Implemented	None	Implemented	None
Performance as Teachers of Record	**Impact on K-12 Student Learning**	None	None	None	Implemented	Implemented	In Development	None
	Demonstrated Teaching Skill	Implemented	None	Implemented	In Development	In Development	In Development	None
	K-12 Student Perceptions	In Development	None	None	None	None	None	None
Contribution to State Needs	**Entry/Persistence in Teaching**	None	None	Implemented	In Development	Implemented	Implemented	Implemented
	Placement/Persistence in High-Need Subjects and Schools	From Title 2	From Title 2	From Title 2	In Development	Implemented	From Title 2	From Title 2
Other Requested Public Data A=Accreditation Status; E=Annual Teacher Evaluation Score; C=Program Completion Rate; O=Other		O (See Appendix A state summary)	Other (See Title 2)	A,C,O (See Appendix A state summary)	A, E, O (See Appendix A state summary))	A, O (See Appendix A state summary)	A,C,O (See Appendix A state summary)	C, O (See Appendix A state summary)

Section IV. Looking Towards 2020: Challenges and Essential Conditions

Movement in the States

Table 4 illustrates clearly that full implementation of the KEI or similar program effectiveness indicators lies well beyond the current efforts of the 15 sample states and that some states have farther to go than others should they aspire to adopt the KEI. But Table 4 does not illustrate the whole story. As Table 5 indicates, there is movement in a number of the 15 states toward the adoption of many of the preparation program performance measures suggested in the KEI. Assuming that states follow through on their efforts that are already underway and in some places close to implementation – and also assuming that they complete additional efforts now in the planning stages, the picture of states' capacity to employ solid annual reporting measures to gauge the effectiveness and progress of their preparation programs could look different in several years.

Table 6 – *Seven States and the 2020 KEI: Currently and Projected by 2016-17* – on p. 31 is a response to Question 3 in the previous section:

> What might the states' capacity to assess program effectiveness look like several years from now if the assessment system features currently under development were to be implemented?

The table illustrates the difference between the current status and the projected status by 2016-17 of seven states from the larger sample that have adopted clearly identified mid-range goals for the further development of their preparation program assessment systems. The projected status, shown by blue Harvey Balls, assumes that states will have implemented the additional measures already under development or scheduled to be enacted by that time. Current status reflects the Harvey Ball assignment in Table 4 using black Harvey Balls for all state-enacted indicators (whether via Title II or the state's own assessment system).

Table 6 illustrates movement by the states between now and 2016-17, with some states showing progress on a number of indicators. The projections are only that, however. Some states may not move forward as much as they expect to. And other states may have sufficiently improved assessments or sufficiently expanded the population included in some of the measures to merit a higher mark of progress than indicated by the table.

Even with the anticipated progress of these seven states, however, the overall gap between their projected status and the 2020 KEI ideal remains large over a number of indicators. Several KEI indicators barely register on states' radar – if, indeed, they register at all. These include K-12 Student Perceptions of their teachers' effectiveness, Placement and Persistence in High Need Schools and Subjects, and above all Teaching Promise – an indicator which no state has included in its planned set of program performance measures.

Table 6: Seven States and the 2020 KEI: Currently and Projected by 2016-17

Assessment Categories	Key Indicators	State KEI Comparison Status: Currently and Projected by 2016-17													
		FL		GA		KY		MA		MO		OH		TN	
I Candidate Selection Profile	Academic Strength	◔	◑	◔	◔	◔	◑	◔	◔	◔	◔	◑	◑	◑	◑
	Teaching Promise	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Candidate/Completer Diversity	◔	◔	◔	◔	◑	◑	◑	◑	◔	◔	◔	◔	◔	◔
II Knowledge and Skills for Teaching	Content Knowledge	◑	◑	◑	◔	◑	◑	◑	◑	◔	◑	◑	◑	◔	◔
	Pedagogical Content Knowledge	◔	◑	○	◔	○	◑	○	◔	○	○	○	◔	○	◔
	Teaching Skill	◔	◔	○	◑	◑	◑	○	○	○	◑	○	◑	◔	◑
	Completer Rating of Program	◔	◔	◔	◔	◑	◑	◔	◑	◔	◔	◑	◑	○	○
III Performance as Classroom Teachers	Impact on K-12 Student Learning	◔	◑	○	◔	○	○	○	◔	○	○	◔	◔	◑	◑
	Demonstrated Teaching Skill	◔	◑	○	◔	○	○	◔	◑	◔	◔	○	◑	○	◔
	K-12 Student Perceptions	○	○	○	◔	○	○	○	○	○	◑	○	○	○	○
IV Contribution to State Needs	Entry and Persistence in Teaching	◔	◑	○	◔	◑	◑	◔	◑	○	○	◑	◑	◑	◑
	Placement/ Persistence in High-Need Subjects/Schools	◔	◑	◔	◔	◔	◔	◔	◔	◔	◔	◔	◔	◔	◔

○ = reporting system does not contain this indicator or equivalent measures.

◔ = reporting system includes this indicator but employs measures that have low alignment to the suggested KEI measures.

◑ = reporting system includes this indicator and employs measures that approach the power of those suggested in the KEI but are not fully aligned in data, quality of assessments, or computational methods.

● = reporting system includes this indicator and employs robust measures that are functionally equivalent to the KEI measures.

Challenges and Essential Conditions

What will it take to accelerate states' forward movement towards the adoption of educator preparation program effectiveness measures that mirror those of the KEI?

Within the individual states themselves, several important conditions must be met:

- **Commitment to the Enterprise**

  Nothing is more important than agreement among key state stakeholders that improving and acting on performance assessments of teacher preparation programs is a first order state priority. The broader such agreement, the more likely states will be able to marshal the fiscal, political, and institutional support necessary for the sustained development and implementation of valid, reliable, and rigorous performance measures. Teacher educators, higher education leaders, state education agency officials (K-12 and post-secondary), the broad spectrum of state policymakers, and K-12 teachers and administrators all ought to be supportive of this priority. CCSSO's Network for the Transformation of Educator Preparation specifically aims to gain broad, multi-state buy-in and support for the development of improved preparation program data systems and other important high-leverage policies.

- **Focus on Program Performance Measures That Have Efficacy**

  States must adopt and implement performance measures that are meaningful and convincing to key stakeholders, validly reflect important program strengths and limitations, and therefore justify program improvement efforts or, if necessary, program sanctions.

- **Willingness to Invest Performance Measures With Consequences**

  States and preparation programs must attach real consequences to programs' performance on the measures states are developing. Otherwise, the effort will be merely a formal exercise that is unlikely to generate the support and momentum necessary to sustain the effort. Solid performance measures should come with accountability and motivate program improvement either by the programs themselves or by state officials who are responsible for approving them.

Beyond these important state conditions, there are additional requirements and challenges for the development and implementation of the Key Effectiveness Indicators or similar program performance measures. These reflect difficulties inherent in the various measures themselves, limited understanding of the requirements for their adequate development, or lack of awareness of their potential importance and efficacy.

Table 7 – *Challenges and Requirements for KEI Implementation* – on the following page notes the key requirements and challenges for each of the 12 KEIs and their corresponding measures.

Table 7. Challenges and Requirements for KEI Implementation

Assessment Categories	Key Indicators	Challenges and Requirements				
		More Strategic Use of Data	New or Improved Assessments	Improved Measures and Statistical Models	Completer Tracking and Participation	Stronger Support for Adoption
I Candidate Selection Profile	Academic Strength	✓	✓			
	Teaching Promise		✓			✓
	Candidate/Completer Diversity	✓				✓
II Knowledge and Skills for Teaching	Content Knowledge		✓			
	Pedagogical Content Knowledge		✓			✓
	Teaching Skill		✓			
	Completer Rating of Program			✓	✓	
III Performance as Classroom Teachers	Impact on K-12 Student Learning		✓	✓	✓	✓
	Demonstrated Teaching Skill		✓		✓	
	K-12 Student Perceptions				✓	✓
IV Contribution to State Needs	Entry and Persistence in Teaching	✓		✓	✓	
	Placement/Persistence in High-Need Subjects/Schools	✓		✓	✓	✓

The Background Briefs for the Key Effectiveness Indicators in Section II touch on a number of the challenges and requirements that are denoted in Table 7 by the checkmarks for each indicator. Some of those challenges and requirements are summarized here:

- **More Strategic Use of Data**

  For some of the 2020 Key Effectiveness Indicators and their corresponding measures (see Table 1), the data required for valid measurement of program performance on the indicator need to be selected more strategically than they often are. For Academic Strength, for example, there are multiple proxy measures such as GPA and standardized test scores, and the challenge is to choose those that are most valid and salient and that will provide the most helpful information to the program and stakeholders. Similarly, it is important to select the best available measures of diversity and of persistence in teaching.

- **New or Improved Assessments**

  A number of indicators in the KEI rely on various types of assessments to provide at least part of the data necessary for the development of appropriate measures, and some of those currently available are deficient in important ways. To strengthen the measures needed, the assessments must be improved or replaced. For other assessments, such as assessments of Teaching Promise, there has been so little demand for them – especially to serve as measures of program effectiveness – that R&D efforts may be necessary to develop them further. Similarly, one of the difficulties plaguing value-added assessments – especially for subjects in which students are not tested through large scale standardized examinations – is that the K-12 student tests used for these subjects are frequently of questionable validity or lack sufficient range in the difficulty of questions to distinguish different levels of mastery. Recent efforts to create improved assessments of candidates' teaching performance, such as the edTPA and the PPAT, are an important step forward. Neither of these performance assessments, however, tests the breadth and depth of candidates' pedagogical content knowledge of their entire teaching field. Thus, a rigorous assessment of pedagogical content knowledge remains an important priority in need of development.

- **Improved Measures and Statistical Models**

  In a number of instances, what is required is a refinement of the measures independently of any assessments upon which they may depend. Measures of teacher impact – and imputation of preparation program impact on teacher impact – require sophisticated statistical regression models in order to isolate the teacher's influence on student achievement from other influences. The significant controversies over the relative strengths and weaknesses of different models that have been developed for this purpose make it important to employ the model or models that are methodologically

the strongest. More accurate measures of preparation-related persistence in the profession also require a complex statistical model to distinguish between education-related ("endogenous") factors that may be at play in a teacher's decision to stay or leave a school or the profession and "exogenous" factors unrelated to teaching itself, such as economic conditions, which also can influence retention or attrition.

- **Completer Tracking and Participation**

  A very basic challenge for some of the measures useful for assessing preparation program effectiveness is the difficulty of tracking program completers and engaging their participation in surveys or other assessments once they leave the program. It is particularly difficult to track completers who leave the state in which they were prepared because few states currently exchange employment information, and teacher preparation programs do not systematically gather longitudinal data on their completers. This seriously compromises the validity of available measures of completer persistence. Similarly, measures of program completers' classroom teaching effectiveness are restricted to those who teach in-state. They are further limited in most states to completers who teach in public schools because private school students generally are not required to take state achievement tests. Greater collaboration between state agencies and between states is critical in order to meet this challenge.

- **Stronger Support for Adoption**

  There is an unfortunate lack of awareness or acceptance of the importance of some of the Key Effectiveness Indicators for the evaluation of teacher preparation programs. This is true of measures of teaching effectiveness, such as value-added models, even given the increasing number of states moving towards the adoption of outcomes-based and performance-based assessments of their teachers. In addition, there seems to be little recognition that current assessments of pedagogical content knowledge are not adequate to test truly broad and deep teaching knowledge in the various teaching subjects. And the KEI's Teaching Promise indicator is virtually off the radar as a preparation program effectiveness measure. Although a number of programs regularly administer assessments of their candidates' "dispositions" or "fitness for teaching," and at least one state (Missouri) requires a uniform assessment of all candidates' teaching-relevant attitudes and behaviors. However, the information gained from this assessment is used only for candidate development and is not made public or used as a measure of program performance. Another indicator with weak support is Candidate/Completer Diversity. Seen as the KEI regards it, as an indication of whether the demographic make-up of a program completer cohort mirrors the make-up of that same cohort as first-year candidates, the measure can help states and programs ensure that programs have the capacity to meet the diverse needs of admitted teacher candidates.

Section V. A Call to Action

Utterly lost in Wonderland, Alice encounters the Cheshire Cat and asks him for directions:

> "Would you tell me, please, which way I ought to go from here?"
> "That depends a good deal on where you want to get to."
> "I don't much care where."
> "Then it doesn't matter which way you go."

In our desire to improve evaluations of educator preparation program effectiveness, we stand in a much better position than Alice did. Unlike Alice, we know where we want to get to. We have a reasonably clear idea of what the endpoint of our journey should look like. We know that we are very close to it in some respects but much farther away in others. We're aware of many of the key requirements and conditions for getting there and the challenges involved in meeting those conditions. We can build on the efforts of several states and other institutions that have already cleared part of the path and provided Points of Light to help illuminate the way.

Our goal is attainable, but we will not achieve it without the concerted effort of many stakeholders, each of whom has a distinctive contribution to make to the quest. Nor will we succeed by waiting to move forward until we've perfectly honed all of the tools in our toolbox. To be sure, the full development of the 2020 Key Effectiveness Indicators requires that we strengthen the measures upon which the KEI depends. And it requires that we deploy as many of the indicators as possible now using the best measures currently at our disposal. Full development and implementation of the KEI also demands the commitment of states and preparation programs to use those measures for purposes of program improvement and accountability because only if we actually use them will we discover their promise and their limitations, and only if we invest them with consequences will we sustain the effort to improve them.

And, so –

> *We call upon **All Stakeholders** to unite behind the effort to strengthen the ability of educator preparation programs, the states, and the nation to develop and implement measures of program effectiveness that can serve as the basis for annual, public reports on program progress and can help guide state and institutional program improvement decisions.*

We issue calls to specific stakeholder communities whose expertise and commitment will be essential in taking the accountability and effectiveness measures in educator preparation from where they are now to where they ought to be by 2020. We call upon:

> ***State Policymakers**, to unite and place their full support – including fiscal support – behind an effort in their states to develop and implement an annual report on educator*

preparation program effectiveness that employs the best available measures and that aims to provide public information and to motivate and guide program improvement efforts. We also urge state policymakers across the country to unite in adopting the same measures, assessments, and passing scores for their report cards.

***State Officials**, to work collaboratively with presidents and chancellors of university systems, with state employment agencies and others to improve the quality of data and the sharing of data necessary for reporting on educator preparation outcomes in order to develop a comprehensive and reliable state-wide system that merges data on "traditional" and "alternative" preparation programs, teacher employment and performance, and K-12 schools and students.*

***Teacher Educators**, to provide guidance to annual report development efforts in their states and, in particular, to ensure that the reports will be useful for program improvement efforts. We also urge teacher educators to enhance the scope and quality of the data they collect on their programs and to assist ongoing efforts to improve the annual program reports.*

***Higher Education Leaders**, to set the expectation and support educator preparation programs in their institutions in strengthening their program data and creating a culture of continuous program improvement.*

***Researchers and Developers**, to develop, field test, and implement a small number of high quality assessments of teacher content knowledge, pedagogical content knowledge, teaching skills, and teaching promise.*

***CAEP, AACTE, and the Teacher Education Support Community**, to advocate for and actively participate in the development of rigorous assessments and other high quality measures of preparation program quality; and to provide strong support to preparation program providers for improving their institutional capacity to use and report such measures and to collect the data necessary to do so.*

***Foundation Officers**, to support the development of preparation programs report cards, both in individual states and through national multi-state initiatives that create synergy and facilitate interstate comparability. We also urge foundation support for related R&D efforts such as multi-site trials that can strengthen evidence about the program practices and features – and especially clinical preparation – that produce effective teachers.*

***Federal Policymakers and Government Officials**, to support the efforts of the states by providing funding support for the development of state preparation program report cards and for the development and adoption of stronger assessments. We also urge the federal government to support R&D efforts to improve assessments and program reporting measures and to revise the educator preparation program reporting*

requirements under Title II of the Higher Education Act to reflect the strongest and most meaningful measures available.

***Teachers, School Administrators, and the Public**, to demand and support efforts in their states to implement effective preparation program reporting requirements that will strengthen preparation programs, enhance the teaching profession, and thereby improve student outcomes in their schools.*

Section VI. Points of Light

This section of the report describes ten different actions or strategies undertaken by various organizations to improve the accountability and effectiveness of teacher preparation. Interest in these particular programs or initiatives grew out of the work to develop the Key Effectiveness Indicators - and out of identifying state's capacity to measure, assess and make known the quality of teacher preparation aligned to the KEI. Many of the initiatives that are emerging from state agencies, universities, professional organizations, and non-profit organizations are encouraging. The programs and initiatives highlighted here are not designated as "best practices" or even "promising practices." Rather, the efforts are referred to as "points of light" in a landscape otherwise lacking strong innovation and accountability.

In identifying these Points of Light, the authors do not assert that all of the programs or initiatives described herein are rigorously evidence-based practices. Practical politics and pressures for change have played a role in creating many of the initiatives included. The authors accept this reality even as they have probed for data and evidence of impact on the public and/or in the professional domain attributed to these initiatives. However, if readers judge what is included here only through the lens of research evidence, they are likely to be disappointed. Viewed more broadly, these initiatives can speak to practices that a larger audience can adopt or adapt in ways that can have positive impact on teacher preparation.

The ten Points of Light featured here fall under five categories:

1. New State Program Performance Assessment Systems

2. Promise for Teaching

3. Candidate Performance Assessment

4. Value-Added Teacher Preparation Assessment

5. Tracking Program Completers across State Lines

The authors are also aware of several emerging practices in state accountability systems, new program evaluation models and program redesign efforts that are not yet fully developed or implemented. These give hope for growing professional and public support for quality teacher preparation in the United States.

<u>New State Program Performance Assessment Systems</u>

The Kentucky EPSB Dashboard was created and is managed by the Kentucky Education Professional Standards Board to be a publicly available, comprehensive source of accountability

data and information about all educator preparation programs in the state. When fully completed, it will contain five sub-dashboards under the headings of Teacher Preparation, Certification, Work Force, Ethics, and EPSB Research Reviews & Surveys.

The Teacher Preparation Dashboard is currently operational and provides information under two major headings: Program Demographics and Program Performance. Program Demographics contains information by institution and certification levels and by race, ethnicity, and gender. Under Program Performance, there are detailed data regarding institutional selectivity in admitting candidates, their persistence through programs, the performance of candidates on required new teacher assessments, the percent of candidates who achieve full certification in Kentucky, and the results of surveys of candidates and their supervisors regarding the effectiveness of the candidate's preparation.

The Teacher Preparation component of the Dashboard houses institutional reports on the first time pass rates and the % of completers scoring at or above the 75th national Percentile level on Praxis II Content and Pedagogy tests. The KY Title II Federal Report is also accessible on this dashboard site.

Source:
https://wd.kyepsb.net/EPSB.WebApps/Dashboard/DashbrdWeb/TeacherHomePage.aspx

The Ohio Board of Regents Annual Educator Preparation Performance Report was a mandate of the 128th Ohio General Assembly called for sharing of data between the Ohio Board of Regents and the Ohio Department of Education to link the performance of educators to the 13 public and 38 private institutions of higher education in Ohio institutions that prepare them. The annual report that has now been developed is intended to provide information to the public about programs and their completers' performance statewide, to help school districts and charter schools make informed decisions about hiring, to provide information to prospective program candidates, to inform continuous improvement efforts, and to inform state program approval decisions.

EPP data are summarized in an annual Educator Preparation Performance Statewide Report. The metrics reported include: licensure test scores; value-added data (EVAAS); candidate academic measures; field/clinical experiences; pre-service teacher assessment results; candidate survey results; survey results from completers in teaching; data on completer persistence in teaching; program excellence and innovation initiatives; and national accreditation status. The data do not cover teachers who went on to teach in private schools or in schools outside Ohio.

Source: https://www.ohiohighered.org/educator-accountability/performance-report

The Tennessee Report Card on the Effectiveness of Teacher Education Programs came about through legislation by the Tennessee General Assembly in 2007 requiring the State Board of Education to produce an assessment on the effectiveness of teacher training programs. The law requires that the report include data on the performance of each program's graduates in the following areas: placement and retention rates; Praxis II content tests; teacher effect data for early career teachers based on scores on beginning the Tennessee Value-Added Assessment System (TVAAS); grade point averages; SAT and ACT scores; demographic distribution; and numbers of completers by program area. In future years, the Report Card will include data from the new individual teacher evaluation system, which will include observational data.

The goal is to: (a) identify programs that tend to produce highly effective or ineffective new teachers, and (b) determine program quality in comparison to reference distribution levels of effectiveness with a fair and reliable statistical test. The performance of early career teachers from a specific program is compared to that of veteran and other early career teachers, as well as to the statewide distribution of teacher effectiveness.

The 2013 Report Card on the Effectiveness of Teacher Preparation Programs includes additional indicators for each program and provides programs with opportunities for improvement. Future publications of the Report Card will include data from the new individual teacher evaluation system, which will include observational data.

Source:
http://www.tn.gov/thec/Divisions/fttt/13report_card/1_Report%20Card%20on%20the%20Effectiveness%20of%20Teacher%20Training%20Programs.pdf

Promise for Teaching

UTeach was created in 1997 at the University of Texas-Austin to recruit to top undergraduate science (and later mathematics) students for K-12 teaching careers. Since its inception, UTeach has grown to now include replication sites at 34 institutions in 17 states. Almost 7,000 students have enrolled in UTeach programs, of which 24 percent are minority, 78-90 percent enter teaching, and 97 percent of those entrants remain in teaching for five-plus years. UTeach leaders believe that the program's rigorous recruitment and selection process is indispensable to its success.

The UTeach recruitment process includes two one-hour courses offered to interested STEM majors prior to program admission and designed to encourage them to try out teaching and then decide whether they are a good fit for the UTeach program. The courses allow participants to develop and implement inquiry-based lessons with elementary and middle school pupils. UTeach faculty and supervising K-12 teachers evaluate participants' performance in and

response to the two courses using common rubrics developed by the program, and their assessment becomes one of the principal bases for a program admission decision.

Sources: http://uteach.org and http://uteach-institute.org/about

Teach for America (TFA) was founded in 1989 is a national teacher recruitment program that seeks to attract college graduates to the classroom. In 2013, more than 57,000 individuals applied to TFA and 14 percent were admitted. Applicants pass through three sequential steps in the in the TFA selection process, which was carried out by 1,800 TFA staff and alumni: (1) submission of online application materials; (2) for selected applicants, an online activity and often a phone interview; (3) in the final stage, an in-person interview, participation in a group discussion, and delivery of a sample lesson.

Based on research on the characteristics of effective TFA-trained teachers, TFA looks for specific qualities of applicants. These include demonstrated leadership, perseverance, good critical-thinking and interpersonal skills, experience working with a diversity of people, and a strong commitment to the success of all students. TFA has developed a rubric and scoring system for each main candidate competency and invests heavily in the training of selectors. It also employs checks and balances in the selection process, including a statistical model based on historical student achievement data. Finally, TFA continually evaluates and seeks to improve the recruitment process.

Source: http://www.teachforamerica.org

The Missouri Educator Profile (MEP) measures work-relevant attitudes and behaviors that contribute to or impede job performance in a school setting. The self-assessment tool creates scores in what are termed Six Drivers of Performance: Achievement; Social Influence; Interpersonal; Self Adjustment; Conscientiousness; and Practical Intelligence. Sixteen subscales across the drivers assess different dimensions. For example, under the Achievement driver are included Achievement/Effort, Persistence, and Initiative.

All teacher candidates in teacher preparation programs in Missouri are required to take the MEP assessment at entry to the program and prior to student teaching. Test completers are given their scores in a guide to help them, their supervisors, and mentors interpret the scores and develop a personal development plan for promoting growth in areas in need improvement. The tool, developed by NCS Pearson, Inc., is used to provide information about candidates to preparation program staff and faculty and not as a requirement for program admission or as a program evaluation metric.

Source: http://www.mo.nesinc.com/

Candidate Performance Assessment

edTPA is a pre-service assessment process designed by educators to answer the essential question, "Is a new program completer ready for the job?" Using an observational assessment of a candidate's actual classroom teaching supplemented by a portfolio of related teaching materials, edTPA is intended to document and demonstrate each candidate's ability to effectively teach his/her subject matter to all students in a classroom by differentiating instruction. Evidence of a candidate's ability to teach is drawn from a subject-specific learning segment of three to five lessons from a unit of instruction taught to one class of students. Materials assessed as part of the edTPA process include video clips of instruction, lesson plans, student work samples, analysis of student learning, and reflective commentaries.

A Teacher Performance Assessment Consortium (TPAC) that spans 23 states, plus the District of Columbia and the on-line Western Governors University, is helping to guide the implementation process for edTPA. As states reference data generated from this tool to inform teacher licensure and recruitment, the hope is to establish a national standard for relevant and rigorous practice that advances student learning and provides a credible teaching performance assessment. The hope is that the assessment will enable states, school districts, and teacher preparation programs to share a common framework for defining and measuring teaching performance based on a valid and robust vision of teaching quality. Several states are planning to implement edTPA as part of their initial licensure assessment.

Source: http://edtpa.aacte.org

***Praxis*™ Performance Assessment for Teachers (PPAT)** is to be used by teacher candidates required to submit a teacher performance assessment to show what they know and are able to do. PPAT was developed by ETS and will be available in the fall of 2014.

The PPAT assesses teacher candidates' command of basic pedagogical content knowledge and their readiness to teach effectively. The assessment is designed to align feedback from faculty supervisors and cooperating teachers to help candidates develop a professional growth plan and identify areas of strength and areas needing improvement. The PPAT is intended to be administered throughout the culminating student teaching experience rather than only at the end in order allow candidates' to refine their teaching practices during that time.

The PPAT measures candidates' skill in five task areas:

- Task 1: Knowledge of Students and the Learning Environment
- Task 2: Assessment and Data Collection to Measure and Inform Student Learning
- Task 3: Designing Instruction for Student Learning

- Task 4: Implementing and Analyzing Instruction to Promote Student Learning.

Source: http://www.ets.org/ppa/candidates

Value-Added Teacher Preparation Assessment

The Louisiana Value-Added Teacher Preparation Assessment was the first state in the nation to develop and implement a statewide system to identify the extent to which specific teacher programs completers teach effectively in grades 4-9. Student data are drawn from several standardized student achievement tests administered in the state's public schools, the Louisiana Educational Accountability Data System (LEADS) linking students to teachers, and supplemental databases. Individual teachers are provided value-added scores for subjects in which data are available.

Value-added results for teacher preparation programs using the value-added teacher evaluation model are calculated for teachers in Louisiana who are teaching grades 4-9 in science, social studies, mathematics, language arts, and reading. The value-added scores are indicators for teacher preparation programs of the degree to which they are successful in preparing new teachers whose students reach the level of achievement that would be expected based on their educational history in specific content areas. The mean value-added result does not provide information regarding the absolute level of achievement of those students.

One of the unique features of Louisiana's effort is that it has been strategically employed for program improvement in different universities and programs. Programs that have scored low on their completers' value-added assessments have set up teams of faculty to carefully examine the curriculum and instructional strategies and sequencing of elementary reading and/or math courses. They also have required faculty to spend more time observing student-teachers in the problem content areas.

Source: http://www.louisianabelieves.com/teaching/value-added-model

Tracking Program Completers across State Lines

The NASDTEC Interstate Teachers Tracking System (ITTS) is a developing system for tracking teacher preparation program completers who choose to teach in other states, which has been a long-standing problem. Education program providers (EPPs) find it virtually impossible to track program completers who leave the state in which they were prepared to teach. To address this problem, and problems hiring districts face as well, the National Association of State Directors

of Teacher Education and Certification (NASDETC) has created a model Interstate Teachers Tracking System (ITTS).

ITTS will develop of a “hub” through which information (already public) passes electronically so that participating states can validate credentials, employment, and preparation records for out-of-state educators who apply for a certificate or license. For employers this would eliminate the need for letters of confirmation from other jurisdictions, and for EPPs it would create the capacity to track their out-of-state employed program completers.

ITTS is not yet operational; it is being piloted by the Georgia Professional Standards Commission and several cooperating states. Issues of programming code, cost, and policy supports are being addressed.

Source: http://www.nasdtec.net/?page=InterstateDataShare

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Appendix C

15 State Data Quality Reporting Features and Annual EPP Reporting Measures

Note: This information captures the status in all states as of May 31, 2014.

CALIFORNIA

General Features of State EPP Quality Reporting System

Data System Features	Specific Features	Notes
Data System Purpose	• Public Information (Title II) • Program Improvement, Accountability (Biennial Report)	• The only annual preparation program measures on which California current reports **publicly** are for Title II. • The state requires all approved program providers to submit a report to the California Commission on Teacher Credentialing every two years, and the indicators and measures required for this biennial report are noted in the Indicators and Measures section of this table. However, they are **not part of a public reporting system** in California. The state is planning to revise its reporting requirements over the next several years and may begin public reporting of some of the information contained in the biennial institutional reports.
Aggregation Level of Data	• For Title II, data at program, institutional, state levels • For biennial report, data at program and institutional levels	
Scope of Report	All public and private program providers in the state approved to prepare teachers for licensure, including both "traditional" and "alternative programs"	
Data System Status	• No public, annually-reported data at present other than Title II • Biennial reports (non-public) fully implemented	
Data Accessibility	Link to Title II report through California Commission on Teacher Credentialing (CTC)website: http://www.ctc.ca.gov/reports/TitleII_2011-2012_AnnualRpt.pdf Information on biennial report (no public data) at http://www.ctc.ca.gov/educator-prep/program-accred-biennial-reports.html	
Reporting Vehicle and Frequency	• Annual state Title II report • Biennial program provider report submitted to CTC	
Program Rating or Scoring System	None under Title II or biennial report	
Relationship of Annual Report to State Program Approval Process	• None for Title II • Biennial report a formal requirement for state program approval process	

CALIFORNIA

Specific Indicators and Measures of State EPP Quality Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Candidate Selection Profile			
Academic Strength	• Required minimum GPA for program admission and completion • Median GPA of admitted candidates and completers • Whether SAT or ACT minimum score required for program entry • Whether basic skills test minimum score required for program admission or completion	Reported for Title II	• GPA required varies by program provider
Teaching Promise	NA (Not Addressed)		
Candidate/Completer Diversity	Percent of enrolled candidates by gender and race/ethnicity	Reported for Title II	
Other State-Requested Data			
Knowledge and Skills for Teaching			
Content Knowledge	Pass rate and average scale score on content area licensure examination (California Subject Examinations for Teachers)	Reported for Title II	
Pedagogical Content Knowledge	NA		
Teaching Skill	Not publicly accessible	Reported for non-public biennial report only	Completer pass rate, score mean and/or range over 2 years on state-approved teacher performance assessment aggregated to program level

CALIFORNIA

Specific Indicators and Measures of State EPP Quality Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Knowledge and Skills for Teaching (cont.)			
Completer Rating of Program	Not publicly accessible	Reported for biennial report only	For required biennial report, rating of program by exiting completers and first-year teachers – which are required by the state – may be used by providers as evidence of program effectiveness.
Other State-Requested Data	• Average number of required hours for student teaching and other clinical experience and number of full-time and adjunct faculty assigned to these • Confirmation that special education teachers are prepared in core academic subjects	Reported for Title II	Data self-reported by program provider
	Providers must report data from additional assessments and surveys as evidence of candidate competence. They can be provider-selected and developed.	Reported for biennial report only	Options include candidate portfolios, student teaching evaluations, key coursework assignments, or others
Performance as Classroom Teachers			
Impact on K-12 Students	NA		
Demonstrated Teaching Skill	Not publicly accessible	Reported for biennial report only	Providers may report data from surveys/interviews of employers or field supervisors, or other provider-selected sources, as evidence of effectiveness of

CALIFORNIA

Specific Indicators and Measures of State EPP Quality Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
			candidate preparation
Performance as Teachers of Record (cont.)			
K-12 Student Perceptions	NA		
Other State-Requested Data			
Program Productivity, Alignment to State Needs			
Entry and Persistence in Teaching	NA		State officials believe teacher entry and persistence are too tied to economic circumstances to serve as valid indicators of program effectiveness. State does report program completion rate biennially, but not publicly.
Placement/Persistence in High-Need Subjects/Schools	• Number of program completers prepared in each credential area • Confirmation whether program (a) responds to identified state or district needs; and (b) prepares completers to teach to a diverse student population, and in urban or rural schools	• Reported for both Title II and biennial report • Reported for Title II only	Data self-reported by provider
Other State-Requested Data			

CONNECTICUT

General Features of State EPP Effectiveness Reporting System

Data System Features	Specific Features	Notes
Data System Purpose	Public Information	At the present time, the only public accountability system the state has for teacher preparation is Title II Over the next two years the Educator Preparation Advisory Council (EPAC) is committed to achieving these long-term, medium and short-term goals: Long-term goals: develop new data collection, analysis and reporting system to ensure accountability in the system for program approval and institutional reporting of performance measures, as well as provide biennial research data on supply and demand. Medium: develop framework for institutional reporting Short-term goals: establish stakeholder work group to advise development of the data system:
Aggregation Level of Data	Title II data at program, institutional, and state levels	
Scope of Report	All public and private institutions in the state approved to prepare teachers for licensure	EPAC is also committed to developing an accountability system that may include the following indicators: • Candidate recruitment (completer/graduation rates, completers in shortage areas, diversity of candidates, alignment with supply and demand data, admission criteria and goals) • Candidate employment and retention (e.g., numbers employed in CT schools, employment of completers in hard to staff or high-need schools and subjects, years in

CONNECTICUT

General Features of State EPP Effectiveness Reporting System

Data System Features	Specific Features	Notes
		field 1, 5 and 10 years) • Candidate program performance (e.g., pass rates for external assessments, required tests, clinical experience and student-teaching evaluations and pre-service assessments) • Educator effectiveness data (e.g., exit surveys of candidates 1-3 years from program completion, surveys of employers about candidates readiness 1-3 years from program completion, aggregate teacher evaluation data, aggregate student performance data) • District Partnership (e.g., surveys of superintendents regarding shared responsibility and shared accountability with preparing institution partners)
Data System Status	Currently Title II only	Over the next 12 months EPAC intends to (1) design a new data system infrastructure and architecture; (2) develop feedback surveys of candidates and their employers about preparation quality; (3) identify stakeholders for discussion of unique identifiers; and develop draft policies regarding data
Data Accessibility	Title II federal government website: title2.ed.gov	
Reporting Vehicle and Frequency	Annual state Title II report	
Program Rating or Scoring System	None under Title II	

CONNECTICUT

General Features of State EPP Effectiveness Reporting System

Data System Features	Specific Features	Notes
Relationship of Annual Report to State Program Approval Process	None	

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Candidate Selection Profile			
Academic Strength	Passing Praxis I CBT or its equivalent as approved by the board, prior to admission to the educator preparation program;	Implemented for Title II	Appropriate EPP academic and non-academic standards are enforced: ▪ Achieving a cumulative grade point average of at least a B-minus for all undergraduate courses; • Candidates must have the qualities of character and personal fitness for teaching as determined by EPPs: • Candidates must also meet NCATE requirements related to the 'dispositions' of candidates.
Teaching Promise	NA		
Candidate/Completer Diversity		Implemented for Title II	
Other State-requested Data			
Knowledge and Skills for Teaching			

CONNECTICUT

Specific Indicators and Measures of State EPP Effectiveness Reporting System

Content Knowledge	Number and percentage of program completers who passed Praxis II initial licensure examination, plus the EPPs must develop and implement assessments of candidate's abilities on the Connecticut Mastery Tests and the Connecticut Academic Performance Test. Results are not reported to the state.	Implemented for Title II	All EPPs must adhere to the 2010 Common Core of Teaching (CTT). The CTT teaching standards describe two levels of effective knowledge, skills, and qualities.
Pedagogical Content Knowledge	NA		
Program Effectiveness Indicators	**State Indicators and Measures**	**Development Status**	**Notes**
Knowledge and Skills for Teaching (cont.)			
Teaching Skill	NA		In less than 2 years, a new accountability system is to begin tracking candidate program performance (e.g., pass rates for external assessments, required tests, clinical experience and student-teaching evaluations and pre-service assessments)
Completer Rating of Program	NA		One of NCATE's Target standards is for the unit's assessment system to provide regular and comprehensive data on candidate performance at each stage of its programs, extending into the first years of completers' practice. This data is not submitted to a state agency, thus candidate/completer feedback data is not publicly available.

CONNECTICUT

Specific Indicators and Measures of State EPP Effectiveness Reporting System

Other State-Requested Data	• Average number of required hours for student teaching and other clinical experience and number of full-time and adjunct faculty assigned to these • Confirmation that special education teachers are prepared in core academic subjects	Reported for Title II	Self-reported data by program provider

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Performance as Classroom Teachers			
Impact on K-12 Students	NA		
Demonstrated Teaching Skill	NA		EPPs are currently required to seek employer assessments of candidates, but are not required to present the findings to the CT Department of Education. EPAC is currently developing plans to implement strategies for generating and collecting educator effectiveness data (e.g., exit surveys of candidates 1-3 years from program completion, surveys of employers about candidates

CONNECTICUT

Specific Indicators and Measures of State EPP Effectiveness Reporting System

			readiness 1-3 years from program completion, aggregate teacher evaluation data, aggregate student performance data)
K-!2 Student Perceptions	NA		There is a state teacher assessment system, but not disaggregated by EPP for teachers in the first 3 years of teaching.
Program Effectiveness Indicators	**State Indicators and Measures**	**Development Status**	**Notes**
Program Productivity, Alignment to State Needs			
Entry and Persistence in Teaching	NA		
Placement/Persistence in High-Need Schools/Subjects	• Number of program completers prepared in each credential area • Confirmation whether program responds to identified state or district teacher needs • Confirmation whether program prepares completers to teach to a diverse student population, and in urban or rural schools	Reported for Title II	A component of the CCSSO (NTEP) Implementation grant will be to track completers recruited and employed in shortage areas, alignment with supply and demand data.
Other State-Requested Data			

FLORIDA

General Features of State EPP Quality Reporting System

Data System Features	Specific Features	Notes
Data System Purpose	▪ Public information ▪ Accountability ▪ Program improvement	Annual Program Performance Report: New performance targets based on completer outcomes who are employed in Florida public schools are recommended until such time the Florida State Board of Education approves them in 2014.
Aggregation Level of Data	• Individual program evaluation reports • Reports by teaching grade level and subject • Reports include comparison to statewide mean performance by program area	Statewide aggregation of data is reported through annual Title II-HEA report and another annual report to the Governor, Legislature and State Board of Education
Scope of Report	Six performance metrics include: placement rate, retention rate, student learning growth based on performance on statewide assessments using value-added model (VAM), teacher evaluation data, student performance by subgroups, and critical teacher shortage area production.	
Value-Added Model Details	Performance of a teacher's students is based upon data and indicators of student learning growth assessed annually and measured by statewide assessments. Florida adopted a value-added model which produces scores that represent an estimate of a teacher's impact on student learning, after accounting for other factors that may impact the learning process. The formula produces a predicted score for each student based on the factors included in the model. The difference between the students' predicted performance and the actual performance represents the value–added by the teacher's	Currently three cohorts included program completers from 2008-2009, 2009-2010 and 2010-2011 who were employed in 2011-2012 and who received VAM scores. For further information: http://www.fldoe.org/profdev/studentgrowth.asp

FLORIDA

General Features of State EPP Quality Reporting System

Data System Features	Specific Features	Notes
	instruction. A score of "0" indicates that students performed no better or worse than expected based on the factors in the model. A positive score indicates that students performed better than expected. A negative score indicates that students performed worse than expected. For more information about Florida's value-added model (VAM), visit	
Data System Status	A "sample" annual report was published for each state-approved teacher preparation program in June 2013 and can be found at https://www.florida-eipep.org/public.asp. A final annual report card will be available upon approval of the targeted performance levels by the Florida State Board of Education in 2014.	
Data Accessibility	The Department reports annually on the results of each state-approved teacher preparation program's annual progress on the performance measures and the current approval status of each program through a public report that is delivered to the Governor and other policymakers, as well as K-12 public school district superintendents. The annual report cards are available for public viewing at https://www.florida-eipep.org/public.asp.	
Reporting Vehicle	Annual report for policymakers, EPPs, the public, and other stakeholders.	The annual report is posted at http://www.fldoe.org/profdev/ar.asp
Data Collection and Reporting Frequency	1004.04(4)(f), F.S requires that there shall be an annual report to the Governor, Legislature, SBE, Board of Governors and other entities that must include the results of each program's annual progress on the performance measures and the approval status of each program. Additionally, each program must annually submit an	

FLORIDA

General Features of State EPP Quality Reporting System

Data System Features	Specific Features	Notes
	institutional program evaluation plan (IPEP) which includes how each program and institution addresses continuous program improvement utilizing the variety of data required to be collected by statute and state board rule, with a primary focus on the outcome data including program completer's positive impact on P-12 student learning.	
Program Rating or Scoring System	Florida is currently under rule development in which the State Board of Education will establish performance level targets for each program as a result of the performance metrics created in law. The results of the continued approval site visit and the annual report cards will result in a continued approval program rating and decision. The rule will be reviewed by the board for possible approval in 2014.	
Relationship of Annual Report to State Program Approval Process	Section 1004.04(4)(a), F.S., specifies that continued approval of a teacher preparation program is contingent upon specific performance measures for programs and completers, and authorizes the State Board of Education (SBE) to adopt rules for setting performance level targets on the following six performance measures: • Placement rate of program completers into instructional positions in Florida public schools and private schools, if available; • Rate of retention for employed program completers in instructional positions in Florida public schools; • Performance of students in PK-12 who are assigned to in-field program completers on	

FLORIDA

General Features of State EPP Quality Reporting System

Data System Features	Specific Features	Notes
	statewide assessments using the results of the student learning growth formula adopted under s. 1012.34, F.S.; • Performance of students in PK-12 who are assigned to in-field program completers aggregated by student subgroup, as a measure of how well the program prepares teachers to work with a diverse population of students in a variety of settings in Florida public schools; • Results of program completers' annual evaluations; and • Production of program completers in statewide critical teacher shortage areas as identified in s. 1012.07, F.S.	

FLORIDA

Specific Indicators and Measures of State EPP Reporting System

Program Quality Indicators	State Indicators and Measures	Development Status	Notes
Candidate Selection Profile			
Academic Strength	For undergraduate programs, applicants must have a 2.5 on a 4.0 scale in general education component of undergraduate studies and demonstrate mastery on the General Knowledge test of the FL Teacher Certification Examination as a prerequisite for admission. To demonstrate sufficient mastery of general knowledge as a prerequisite for admission into a graduate level program, FL requires that the individual has obtained a baccalaureate degree from an accredited institution. Each EPP can waive these requirements for up to 10% of the students admitted.	Implemented for Title II	
Teaching Promise	NA		
Candidate/Completer Diversity	Collected through annual Institutional Program Evaluation Plan (IPEP) reports and Title II, but not used as part of pre-program admission decisions.	Implemented for Title II	
Other State-Requested Data			
Knowledge and Skills for Teaching			
Content Knowledge	As a condition of program completer, the candidate must pass an appropriate subject area/content test for the license they are seeking	Implemented for Title II	

FLORIDA

Specific Indicators and Measures of State EPP Reporting System

Program Quality Indicators	State Indicators and Measures	Development Status	Notes
Knowledge and Skills for Teaching (cont.)			
Pedagogical Content Knowledge	As a condition of program completion, the candidate must take and pass the Professional Education Test, which assesses pedagogical content knowledge and teaching skills.	Partially Implemented	State-adopted student content standards include scientifically researched reading instruction, content literacy and mathematical practices, strategies for the instruction of English language learners, strategies for the instruction of students with disabilities, and school safety.
Teaching Skill	1004.04(2)(d) specifies that before program completion, each candidate must demonstrate his or her ability to positively impact student learning growth in the candidate's area of program concentration during a P-12 field experience/student internship, as well as pass each subtest of the Florida Teacher Certification Examination. Each program must document evidence of this and report it annually in its IPEP. Continued program approval will also be dependent on program completers' success in the classroom by demonstrating a positive impact on student learning growth as reported by the Annual Program Performance Reports.	Partially Implemented	Each teacher preparation program must guarantee the high quality of its program completers during the first 2 years immediately following completion of the program or following initial certification. Individual programs/institutions may use edTPA, but FL does not anticipate requiring it statewide.

FLORIDA

Specific Indicators and Measures of State EPP Reporting System

Program Quality Indicators	State Indicators and Measures	Development Status	Notes
Knowledge and Skills for Teaching (cont.)			
Completer Rating of Program	Current law specifies that the State Board of Education may adopt additional criteria that could include a program completer's satisfaction with instruction and an employer's satisfaction. Each program's annual institutional evaluation plan may include additional data chosen by the program, such as completers' rating of preparedness for the classroom.	Partially Implemented	Prior to July 2013, the state required an annual survey of program completers employed in Florida public schools and their employers/principals to determine their satisfaction of the level of preparedness for teaching.
Other State-Requested Data	Individuals who instruct or supervise pre-service field experiences must demonstrate: • Specialized training in clinical supervision; • At least three (3) years of successful, relevant PK-12 teaching, student services or school administration experience; and • An annual demonstration of experience in a relevant PK-12 school setting.		

FLORIDA

Specific Indicators and Measures of State EPP Reporting System

Program Quality Indicators	State Indicators and Measures	Development Status	Notes
Performance as Classroom Teachers			
Impact on K-12 Students	Teacher rating based on performance of students in prekindergarten through grade 12 who are assigned to in-field program completers aggregated by student subgroup, as defined by ESEA, as a measure of how well the program prepares teachers to work with a diverse population of students in a variety of settings in Florida public schools. This metric applies only when a program has at least 10 completers, trained in-program, and teaching in- field. Data are available only for program completers who have Value-Added Model (VAM) data associated with them. Average VAM score of program completers one year following program completion; aggregated across three years (i.e., three cohorts of program completers).	Process due to be fully implemented in 2014-15	Districts have the option to use achievement measures in their evaluation systems rather than learning growth measures, if the district determines they are more appropriate for courses using local assessments or when the state has not selected a growth measure
Demonstrated Teaching Skill	Evaluation results of program completers employed in an instructional position in a Florida public school district; aggregated across three years (i.e., three cohorts of program completers) as Highly Effective; Effective; Needs Improvement; Developing; Unsatisfactory.	Implemented	
K-12 Student Perceptions	NA		

FLORIDA

Specific Indicators and Measures of State EPP Reporting System

Program Quality Indicators	State Indicators and Measures	Development Status	Notes
Other State-Requested Data			
Program Productivity, Alignment to State Needs			
Entry and Persistence in Teaching	**Placement** – Percentage of program completers who become employed in an instructional position in a Florida public school district (including public charter schools) their first or second year following program completion. **Retention** – Percentage of program completers continuously employed in an instructional position in a Florida public school district (or public charter schools) at the third year and fifth year marks.	Implemented	**Placement** - Data include 2009-2010 completers employed in 2010-2011 or 2011-2012, the latest information available. **Retention** - Data reported include 2008-2009 program completers continuously employed for three years (2009-2010, 2010-2011 and 2011-2012).
Placement/Persistence in High-Need Subjects/Schools	Production of program completers in statewide critical teacher shortage areas as identified in Section 1012.07, Florida Statutes, which include: Middle and High School Mathematics, Middle and High School Sciences; Middle and High School English/Language Arts, Foreign Languages; Reading, K-12; Exceptional Student Education, K-12; and English for Speakers of Other Languages (ESOL).	Implemented	
Other State-Requested Data			

GEORGIA

General Features of EPP Reporting System

Data System Features	Specific Features	Notes
Data System Purpose	• Public information • Accountability • Program improvement	Programs rated consistently low on EPP effectiveness measures may be closed. Exemplary programs will be rewarded
Aggregation Level of Data	• Individual institutional reports • Program level reports by field and preparation level • Statewide aggregated report	
Scope of Report	• All programs leading to initial licensure in teaching fields (and educator leadership) that are approved by the state – both traditional and non-traditional, public and private • Measures of completers in teaching reflect only those in GA public or public charter schools	
Data System Status	Currently in multi-year pilot, with full implementation scheduled for 2017-18.	Measures and procedures for data collection and reporting are being evaluated during the pilot phase, and will continue to be reviewed continuously and revised as necessary after full implementation.
Data Accessibility	Aggregated program level data will be available to the public, educator preparation programs, and state education agencies. EPPs and state education agencies will have access to restricted data.	
Reporting Vehicle and Frequency	Annually updated dashboard report available through a website, with a secure web portal for EPP and state education agency access to restricted data.	Induction and retention data involve two 3-year collection periods by cohort

GEORGIA

General Features of EPP Reporting System

Data System Features	Specific Features	Notes
Program Rating or Scoring System	The overall teacher preparation program effectiveness measure is comprised of four components, each weighted as follows: • 50%-Teacher Effectiveness Measure (K-12 student growth, mastery of teaching performance standards, and K-12 pupil surveys of teacher practice) • 30%-Content Knowledge (includes state content assessment and state-adopted pedagogical content assessment (the edTPA)) • 10%-Teachers' successful completion of the three year Induction phase • 10%-Program Performance (includes completion rates, yield (placement in the field of preparation), retention in the field of preparation, completer survey, and employer survey)	Completers' teacher effectiveness measures will be ranked on a 1-4 scale. All other measures will be ranked on a 1-5 scale. Each program will be placed in one of four performance levels: Exemplary, Effective, At-risk of Low Performing, or Low Performing. Placement in the performance levels will be determined annually.
Relationship of Annual Report to State Program Approval Process	Annual performance data will, over time, determine approval status and will be used in conjunction with the approval review process during regularly scheduled approval reviews (every seven years for approved programs)	

GEORGIA

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Candidate Selection Profile			
Academic Strength	• Required minimum GPA for program admission and completion • Median GPA of admitted candidates and completers • Whether SAT or ACT minimum score required for program entry • Whether basic skills test minimum score required for program admission or completion	Implemented for Title II	• These data not included in the state's new program effectiveness measures • All traditional, but not alternate route, programs have required GPA for entry and completion • Passing scores on a program admission assessment or adequate SAT, ACT, or GRE scores are required for admission to traditional programs
Teaching Promise	NA (Not Addressed)		
Gender/Ethnic Diversity	Gender and ethnic composition of program entrants	Implemented for Title II	These data not included in the state's new program effectiveness measures
Other State-Requested Data			
Knowledge and Skills for Teaching			
Content Knowledge	State content knowledge assessment (GACE)	Implemented	Measured as completer cohort mean scale score from 0-2 denoting failure or proficiency level on exam

GEORGIA

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Knowledge and Skills for Teaching (cont.)			
Pedagogical Content Knowledge	edTPA	Being piloted, with full implementation in 2015-16	
Teaching Skill	edTPA		
Completer Rating of Preparedness	Statewide surveys of program completers, by cohort, during first year of teaching in the state's public or public charter schools	Implemented	A survey of candidates given upon program completion is not included in performance measures
Other State-Requested Data			
Performance as Classroom Teachers			
Impact on K-12 Students	Annual assessment of teachers based on statewide student growth percentile for tested subjects and on extent of student attainment of district-developed learning objectives in non-tested subjects	Being piloted	• A program's score on all three indicators in this section will be based on an annual (summative) performance rating given to teachers that is an aggregate of their performance on all assessments noted here • All program completer effectiveness measures are based on performance only of teachers in GA public or public charter schools
Demonstrated Teaching Skill	• Annual assessment of teachers based on state teacher performance standards • Statewide survey of employers of program completers after first year of teaching	Being piloted	
K-12 Student Satisfaction	Annual surveys of teachers' instructional practice by pupils in grades 3-12	Being piloted	
Other State-Requested Data			

GEORGIA

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Program Productivity, Alignment to State Needs			
Entry and Persistence in Teaching	• Number, percent of completers hired by GA public schools in field of preparation • Percent of completer cohort reaching second stage licensure (requires 3-4 years in teaching)	Being piloted, along with data on candidate completion rate	All program completer placement and retention measures based on performance only of those teaching in GA public/public charter schools in the field of preparation
Placement/Persistence in High-Need Schools/Subjects	• Number of program completers prepared in each credential area • Confirmation whether program responds to identified state or district teacher needs • Confirmation whether program prepares completers to teach to a diverse student population, and in urban or rural schools	Reported for Title II	• Data self-reported by program provider • Not included in the state's new program effectiveness measures
Other State-Requested Data			

IDAHO

General Features of State EPP Quality Reporting System

Data System Features	Specific Features	Notes
Data System Purpose	Public Information	• The only annual preparation program measures on which Idaho current reports publicly are for Title II. The state is planning to revise its annual program reporting requirements over the next several years. • **All Specific Features noted here refer to the Title II report.** • The information in the Indicators and Measures section below is taken from Idaho's 2013 Title II report.
Aggregation Level of Data	Some data at program level Other data aggregated to provider and state level	
Scope of Report	All public and private institutions in the state approved to prepare teachers for licensure	
Data System Status	No public, annually-reported data at present other than Title II	
Data Accessibility	Link to Title II reports from State Department of Education website: http://www.sde.idaho.gov/site/teacher_certification/accredited.htm	
Reporting Vehicle and Frequency	Annual state Title II report to the U.S. Department of Education	
Program Rating or Scoring System	None under Title II	
Relationship of Annual Report to State Program Approval Process	None	

IDAHO

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Candidate Selection Profile			
Academic Strength	• Required minimum GPA for program admission and completion • Median GPA of admitted candidates and completers • Whether SAT or ACT minimum score required for program entry • Whether basic skills test minimum score required for program admission or completion	Reported for Title II	• GPA required varies by program provider
Teaching Promise	Not Addressed (NA)		
Candidate/Completer Diversity	Percent of enrolled candidates by gender and race/ethnicity	Reported for Title II	
Other State-Requested Data			
Knowledge and Skills for Teaching			
Content Knowledge	Pass rate and average scale score compared to state averages on content area licensure examination (Praxis II)	Reported for Title II	
Pedagogical Content Knowledge	NA		
Teaching Skill	Pass rate on Praxis Principles of Learning and Teaching examination	Reported for Title II	Required only for Elementary Education candidates
Completer Rating of Program	NA		

IDAHO

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Knowledge and Skills for Teaching (cont.)			
Other State-Requested Data	• Average number of required hours for student teaching and other clinical experience and number of full-time and adjunct faculty assigned to these • Confirmation that special education teachers are prepared in core academic subjects	Reported for Title II	Self-reported data by program provider
Performance as Classroom Teachers			
Impact on K-12 Students	NA		
Demonstrated Teaching Skill	NA		
K-12 Student Perceptions	NA		
Other State-Requested Data			

IDAHO

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Program Productivity, Alignment to State Needs			
Entry and Persistence in Teaching	NA		
Placement/Persistence in High-Need Subjects/Schools	• Number of program completers prepared in each credential area • Confirmation whether program responds to identified state or district teacher needs • Confirmation whether program prepares completers to teach to a diverse student population, and in urban or rural schools	Reported for Title II	Data self-reported by program provider
Other State-Requested Data			

KENTUCKY

General Features of State EPP Reporting System

Data System Features	Specific Features	Notes
Data System Purpose	▪ Public information ▪ Program improvement ▪ State accountability	The **Teacher Preparation Dashboard** EPSB Dashboard is managed by the KY Education Professional Standards Board (EPSB) provides statistics about Kentucky Initial Teacher Preparation Programs. Additional information regarding KY's preparation programs may be found on the Kentucky Educator Preparation Program (KEPP) Report Card found at this link: https://wd.kyepsb.net/EPSB.WebApps/KEPPReportCard/Public/. Work is underway to move all data within the KEPP Report Card to the EPSB Data Dashboard. The **EPSB Annual Report** contains individual EPP data and state comparisons (and much more) on a wide range of teacher quality and student performance data. More information and research reports published may be found at this link: http://kentuckyp20.ky.gov/
Aggregation Level of Data	▪ Individual institutional reports ▪ Statewide aggregated report ▪ Some program reports	
Scope of Report	All approved teacher preparation programs, including Teach for America and summed for the state	Program enrollment and completion, admission requirements, first time pass rates, Title II program completer assessments and pass rates, beginning teacher, principal, and cooperating teachers assessments of candidate (as a beginning teacher) preparation to teach, completer retention in teaching, local educator assignment data and program accreditation status
Data System Status	The Teacher Preparation Dashboard is operational, but some dashboard categories are under development.	

KENTUCKY

General Features of State EPP Reporting System

Data System Features	Specific Features	Notes
Data Accessibility	Available to K-12 educators, EPPs, state policymakers and other decision makers, and to the public at is EPSB Dashboard	
Reporting Vehicle and Frequency	EPSB Dashboard website and EPSB Annual Report	Certain sections of the Teacher Dashboard are real time data (e.g., program enrollment) and updated as new data becomes available.
Program Rating or Scoring System	EPSB does not have state ratings on the Dashboard site..	More performance information will become available upon completion on a proportional accountability model
Relationship of Annual Report to State Program Approval Process	Praxis II results have direct consequences for continuing program approval if the results were consistently below KY state standards.	The accountability implications of other metrics in the Dashboard and EPSB Annual Report are unclear. The link that identifies the state program approval process is http://www.lrc.state.ky.us/kar/016/005/010.htm

KENTUCKY

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Candidate Selection Profile			
Academic Strength	▪ Average GPA by institution (and by endorsement field) compared to KY state average; ▪ Mean scores on Praxis Pre-Professional Skills Test in Reading, Writing, and Mathematics by institution (and by licensure level and endorsement field) compared to state average	Implemented	Data available on all indicators for initial bachelor's and graduate traditional and alternate route programs In accordance with KY law, each teacher education institution must develop and publish a plan of selection and admission of teacher candidates for the teacher education program.
Teaching Promise	NA		New admission requirements for educator prep that became effective 4-6-2012 include requirements for institutional documentation that applicants demonstrate critical thinking, communication, creativity, and collaboration and that applicants understands professional dispositions expected of professional educators. None of this is publicly reported, however. http://www.lrc.state.ky.us/kar/016/005/020.htm
Candidate/Completer Diversity	Reports data on the number of candidates and completers by cohort and by gender, race, and ethnicity for all EPPs by certification program and state totals. Teacher Preparation Dashboard	Partially Implemented	Currently the data is restricted to initial certification enrollees, but will be expanded to include graduate programs as well.
Other State-Requested Data			A "continuous assessment model" being discussed with EPSB (PARC Committee) See link : September Board meeting: Information Item C Draft templates were also shared to describe

KENTUCKY

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
			what this reporting would entail.
Knowledge and Skills for Teaching			
Content Knowledge	State licensure exam performance: • State passing score and completer pass rate by number and percentage compared to state average for institution and licensure programs • First-time pass rate: number, percentage • Percent scoring at each percentile level (10-25-50-75-90) on content & content pedagogy parts of exam compared to state averages	Partially Implemented	• Data reported only when N≥10 • Completer pass rate by cohort • First-time pass rate by 3-year cohorts and percentile level by 3-year cohort average
Pedagogical Content Knowledge	See above	Partially Implemented	See above
Teaching Skill	Kentucky currently uses the Teacher Performance Assessments (TPA) developed for the Kentucky Teacher Internship Program (KTIP). KY has used the TPA since 2003 All tasks related to the TPA may be found at KTIP Forms and Resource Information	Implemented, but considering new assessments	Currently reviewing KTIP TPA to merge with the Danielson model being used by the KY Department of Education for the Professional Growth and Effectiveness System The EPSB is in communication with ETS/TeachingWorks concerning possible pilot of that model developed by the University of Michigan under the direction of Debra Ball.

KENTUCKY

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Knowledge and Skills for Teaching (cont.)			
Completer Rating of Program	Survey is submitted in the fall and spring of each school year to student teachers, cooperating teachers, interns, and mentors to gather perception data from teacher candidates and first-year teachers of their level of preparedness teaching. .	Implemented	The survey is based on the Kentucky Teacher Standards as well as information needed for Title II reporting purposes. The link to all surveys since 2001 by institution may be found at http://www.kyepsb.net/TestingResearch/Statistics/StateRptCard/. The Kentucky New Teacher Survey data from 2001 are also available from the EPSB's Data Dashboard. Additionally, the Kentucky Department of Education administers the TELL KY survey which also captures data from new teachers 1 – 3 years. For 2013, data were provided for 1st year teachers in some categories. The TELL Survey results that separate first year teachers' perception may be found at http://www.tellkentucky.org/uploads/File/KY13_comparisons%20brief_2013.7.24_final%20to%20post.pdf. All data related to the TELL Survey may be found at www.tellkentucky.org
Other State-Requested Data	• NCATE Accreditation Status • State Accreditation Status		

KENTUCKY

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Performance as Classroom Teachers			
Impact on K-12 Students	NA		A new accountability model is currently being discussed by the EPSB**.** It may include aggregate teaching performance measures using all of these indicators
Demonstrated Teaching Skill	NA		
K-12 Student Perceptions	NA		
Other State-Requested Data			
Program Productivity, Alignment to State Needs			
Entry and Persistence in Teaching	• Number, and percent of program completers by institution and statewide (disaggregated by endorsement area) who have received:(1) a statement of eligibility (passed assessments but not yet employed); (2) first-level (Provisional) certification; or (3) second-level (Professional) certification (granted upon successful completion of the first, "internship" year of teaching • Number of program completers by cohort and endorsement area, and percentage employed for up to four years after program completion. • Job placement in KY counties, by institution (in the aggregate) and year.	Implemented	Data based on average of 3-year cohorts for initial bachelor's and graduate level program completers. Our current dashboard will be expanded to publicly report three-year cohorts from 2006-2013 Teacher Reports are available on the KCEWS website. An example of such reports may be found at http://kentuckyp20.ky.gov/Reports/TeacherRetention09.pdf

KENTUCKY

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
	(No out-of-state tracking)		
Program Productivity, Alignment to State Needs (cont.)			
Placement/Persistence in High-Need Subjects/Schools	• Number of program completers prepared in each credential area • Confirmation whether program responds to identified state or district teacher needs • Confirmation whether program prepares completers to teach to a diverse student population, and in urban or rural schools	Reported for Title II only	Data self-reported by program provider
Other State-Requested Data			

LOUISIANA

General Features of EPP Quality Reporting System

Data System Features	Specific Features	Notes
Data System Purpose)	• Public information • Program improvement • Accountability (basis for state action)	Louisiana is in transition to a new teacher preparation accountability system. The transition involves the implementation of a new value-added assessment system developed by the Louisiana Department of Education and a new classroom teacher performance evaluation system (Compass). The state is uncertain about what specific data the new program accountability system will employ but plans to implement the new system by 2015.
Aggregation Level of Data	• State reports summarizing institutional data • Individual institutional reports • Select value-added reports for individual subject field programs that prepare teachers for grades 4-9	
Scope of Report	• All state institutions approved to prepare teachers: public universities (14), private universities (5), and non-university providers (2). Includes undergraduate and alternate (post-baccalaureate) programs • Reports only on those completers teaching in public schools in the state	One additional private university and two additional non-university providers will be added soon

LOUISIANA

General Features of EPP Quality Reporting System

Data System Features	Specific Features	Notes
Value-Added Model Details	Louisiana's Value-Added Model calculates the expected growth of an individual student based on the historical growth of students with similar characteristics, including similar test scores over the last 1-3 years. The extent to which a student exceeds or fails to meet his/her expected growth is the basis for calculating the teacher's value-added contribution. In addition, the Louisiana model attempts to compensate for the effects that specific classroom characteristics might have on students' value-added scores in order to ensure that teachers are not penalized or privileged by such factors. Also, both because of peculiarities associated with teaching in individual content areas and because some teachers teach multiple areas, teachers' value-added scores were normed to their specific content area(s).	• Teachers are rated in four groups, from Ineffective to Highly Effective, based on their percentile ranking (1-10, 11-49, 50-79, 80-99) • Value-added data available only for public school teachers of 3rd grade language arts and mathematics; grade 4-8 science, social studies, mathematics, language arts, and reading; and grade 9-10 algebra and geometry • Content area report requires 25 or more teacher scores
Data System Status	The new preparation program data and reporting system is scheduled to be operational by 2015. The only accountability measure currently implemented is the pass rate of program completers on the state teacher licensure assessment, although value-added and Title II measures are publicly reported	
Data Accessibility	Public and restricted	• Access to Title II data: https://title2.ed.gov • Value-added annual report accessible at http://www.louisianabelieves.com/resources/library/teaching • Board of Regents most recent annual report: http://regents.louisiana.gov/wp-content/uploads/2013/05/FINAL-TEACHER-PREPARATION-ANNUAL-REPORT5.22.13.pdf

LOUISIANA

General Features of EPP Quality Reporting System

Data System Features	Specific Features	Notes
		•
Reporting Vehicle and Frequency	Annual Report (public) and Data Base with drill down data for program improvement (restricted)	
Program Rating or Scoring System	To be determined. The intent is to implement a new program accountability system based on the selected indicators that will, if necessary, designate poor-performing programs for state intervention.	The previous accountability system rated programs from 1-5 based on the value-added scores of their completers as classroom teachers. Programs receiving a 4 or 5 were marked for intervention.
Relationship of Annual Report to State Program Approval Process	To be determined.	In the previous system, programs that did not correct poor performance identified on the basis of their annual reports could be forced into programmatic intervention and ultimately lose state approval if problems weren't resolved.

LOUISIANA

Specific Indicators and Measures of State EPP Reporting

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Candidate Selection Profile			
Academic Strength	• Required minimum GPA for program admission and completion • Median GPA of admitted candidates and completers • Whether SAT or ACT minimum score required for program entry • Whether basic skills test minimum score required for program admission or completion	Reported for Title II	
Teaching Promise	NA		
Gender/Ethnic Diversity	• Number of racial minority program completers each year • Number of male completers who take licensure examination each year in Early Childhood or Elementary Education	Reported for Title II	Information Included in previous accountability system, but status uncertain for future system
Other State-Requested Data			
Knowledge and Skills for Teaching			
Content Knowledge	Percentage of program completers who pass Praxis II initial licensure examination.	Reported for Title II	
Pedagogical Content Knowledge	NA		

LOUISIANA

Specific Indicators and Measures of State EPP Reporting

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Knowledge and Skills for Teaching (cont.)			
Teaching Skill	Pass rate on Praxis Principles of Learning and Teaching	Reported for Title II	Required for all grade levels but reported only if n≥10
Completer Rating of Program	NA		Teacher candidate survey results included in previous accountability system, but status uncertain for future system
Other State-Requested Data	National and regional accreditation status	Implemented	Reported for Title II and Regents' Annual Report
	Time required and spent in student teaching and other clinical experience	Reported for Title II	State has required minimum number of hours
Performance as Classroom Teachers			
Impact on K-12 Students	• Mean and percentile distribution of completers' value-added scores in first and second year of teaching, based on growth scores students. • Number and percentage of new teachers obtaining value-added scores based upon percentile ranges and labels	Partially Implemented for grades 4-9	Data are publicly reported but not yet used for program accountability Source: Annual Value-Added Report

LOUISIANA

Specific Indicators and Measures of State EPP Reporting

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Performance as Classroom Teachers (cont.)			
Demonstrated Teaching Skill	NA	State has developed annual teacher evaluation system, but application for evaluation of preparation programs is uncertain	Decision to be made about inclusion of these measures in future accountability system: • Survey by school supervisor of first-year teachers • Mean scores and number/ percentage of teachers scoring at each level on state teacher evaluation
K-12 Student Satisfaction	NA		
Other State-Requested Data			

LOUISIANA

Specific Indicators and Measures of State EPP Reporting

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Program Productivity/Alignment to State Needs			
Entry and Persistence in Teaching	• Number/percentage of program completers meeting all state licensing requirements • Number/percentage of program completers obtaining license within one year after completion • Number/percentage of completers hired in public schools • Percentage of completers hired in positions for which prepared • Percentage of completers retained after three years in teaching	Possible reporting of all measures in 2014	Status of measures uncertain for future accountability system. Currently, state reports program completion rate by cohort as part of its Regents Annual Report, but the future status of this measure is also uncertain.
Placement/Persistence in High-Need Schools/Subjects	• Number of program completers prepared in each credential area • Confirmation whether program responds to identified state or district teacher needs • Confirmation whether program prepares completers to teach to a diverse student population, and in urban or rural schools	Reported for Title II	Data self-reported by program provider
Other State-Requested Data	Student loan default rate	In development	Data to be collected for CAEP requirements

MASSACHUSETTS

General Features of State EPP Reporting System

Data System Features	Specific Features	Notes
Data System Purpose	• State accountability • Public information • Program improvement	Federal Race to the Top funds ($5M) are being used, in part, to create a data system that will create (among other things) the ability to track EPP completer's impacts on student achievement and to track retention in teaching. Attached is the timeline for the Profile Elements. The "Profile Elements" system is in place, but MA is collecting another year of data before reporting.
Aggregation Level of Data	• Provider or institution • State	Profiles of preparation programs were released in June 2013. See the following link to the Educator Preparation Program Profiles: http://profiles.doe.mass.edu/.
Scope of Report	• All institutions approved by the Commissioner of Elem & Sec Education to prepare teachers: public universities, private universities, and other providers. • By summer 2014, there also will be an annual performance review report for individuals who enter teaching through an alternate route in districts that do not have a state-approve preparation program.	Entry/exit data, disaggregated by race/ethnicity/gender; Qualifying exam scores; Employment and retention data; Completer assessments of programs; Teacher evaluations of completers for up to 5 years and more. Data on completers as teachers restricted to employment in MA public schools.
Data System Status	The system is in place and Mass has built the new reporting system structures and data integration requirements. MA published Educator Preparation Profiles in June 2013.	.
Data Accessibility	Some information is public, and some information is restricted to institutions or state officials.	Internal data reports are available to preparation programs, state officials, and on a limited basis to the public.

MASSACHUSETTS

General Features of State EPP Reporting System

Data System Features	Specific Features	Notes
Reporting Vehicle and Frequency	The data will updated on the Profile Elements in June and December every year and the data in the MA Edwin reports is refreshed weekly.	Some data – both restricted and public – is available through the states' Edwin Analytics website: http://www.doe.mass.edu/edwin/analytics/. In addition, some institutional profiles are reported publicly through the state department website: http://profiles.doe.mass.edu/
Program Rating or Scoring System	Mass has no program rating or scoring system at present.	
Relationship of Annual Report to State Program Approval Process	Mass has the authority to use data from annual reporting to trigger an interim review of a program	See Regulations 603 CMR 7.03 (6) (b): http://www.doe.mass.edu/lawsregs/603cmr7.html?section=03. Also see the state's Program Approval Guidelines at the following link: www.doe.mass.edu/edprep/ProgramApproval.pdf. Mass Department of Elementary and Secondary Education has not yet conducted an interim review based on data from the Annual Report.

MASSACHUSETTS

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Candidate Selection Profile			
Academic Strength	There is not a state mandated minimum GPA entry or exit requirement or a specific ACT/SAT requirement. EPP admissions standards are variable across the state, but they must be reported and are considered in program approval decisions.	Implemented, but in further development.	Massachusetts basically uses data reported for Title II to satisfy this indicator, but it reports it not only for Title II but as part of its state-developed preparation program reporting system. One of the state's program standards (Standard C) calls for robust and rigorous admission standards and processes.
Teaching Promise	NA		
Candidate/Completer Diversity	The data on candidates and completers are disaggregated by race/ethnicity and gender and reported by provider.	Implemented	
Other State-Requested Data			
Knowledge and Skills for Teaching			
Content Knowledge	Program completer pass rate on state licensure examination are reported by individual program/subject, but only for programs producing more than 10 completers. It is reported by institution and by licensure areas and includes state summaries and mean scores.	Implemented, but new requirements and assessments are planned	• MA is in the process of reviewing subject matter knowledge Requirements to ensure alignment to the new Curriculum Frameworks (incl. Common Core), and proposed revisions are expected to go to the Board of Education in the Fall 2014. • The N>10 requirement for reporting pass rates leaves numerous licensure programs unreported.

MASSACHUSETTS

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Knowledge and Skills for Teaching (cont.)			
Pedagogical Content Knowledge	NA		A state pre-service performance assessment in place for over 10 years includes some assessment of pedagogical and pedagogical content knowledge. The use and implementation is required for all program completers, but has not been tested for validity and reliability. See the following link: http://www.doe.mass.edu/edprep/ppa/guidelines.pdf. The state has convened a Task Force to make recommendations about a new valid and reliable performance assessment. The adoption of edTPA is one option under consideration
Teaching Skill	NA		
Completer Rating of Preparedness	Survey of program completers.	MA piloted a program completer survey in August 2013. The survey will be administered in summer 2014 and then publicly reported.	Additional surveys of the hiring principal, supervising practitioner, and employed and 1-year completers will be piloted later in 2014.

MASSACHUSETTS

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Knowledge and Skills for Teaching (cont.)			
Other State-Requested Data	1. Annual Improvement Goals 2. List of Provider Partner K-12 Schools 3. EPP Faculty in by Race/Ethnicity and Gender 4. Faculty/Student Ratio		Up to three goals and progress towards them may be reported annually to the state Department of Elementary and Secondary Education.
Performance as Classroom Teachers			
Impact on K-12 Students	Teachers' impact on student achievement will be based on a student growth percentile that describes the relative growth a student makes compared to other students with the same achievement history	In Development. Will be publicly reported in fall 2015	
Demonstrated Teaching Skill	Aggregate completer scores on some parts of the annual state teacher performance evaluation scores of program completers are reported out by provider	Will be implemented and results publicly reported in the fall of 2014.	The source of data for this is the state's five-step teacher evaluation system that has now been implemented across the state.
K-12 Student Perceptions	NA		The state's new teacher performance assessment system, may include in the future a modified version of the newly piloted student feedback survey. See the following link: http://www.doe.mass.edu/edeval/feedback/
Other State Requested Data			

MASSACHUSETTS

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Program Productivity, Alignment to State Needs			
Entry and Persistence in Teaching	• Percent employed in a Mass public school within three years • Percent employed who stay for at least two and three years	Data being collected beginning in 2013 and will continue to be collected in 2014 and persistence data will be reported in 2015.	As part of the Edwin Analytics data base, users can track time to completion, employment and retention data, student growth percentiles. etc. by institution and by program.
Placement/Persistence in High-Need Subjects/Schools	• Number of program completers prepared in each credential area • Confirmation whether program responds to identified state or district teacher needs • Confirmation whether program prepares completers to teach to a diverse student population, and in urban or rural schools	Reported for Title II	
Other State-Requested Data			

MISSOURI

General Features of State EPP Quality Reporting System

Data System Features	Specific Features	Notes
Data System Purpose	• Program improvement • Public information • State accountability	
Aggregation Level of Data	• By certification area and/or grade level cluster • By institution or program provider • Comparison of specific program results to statewide benchmarks and averages	Aggregated statistics at the statewide level under consideration for future reports
Scope of Report	• All 13 public and 26 private institutions and program providers in MO • Traditional and alternate route programs • Most K-12 student and teacher data available only for in-state teachers in public schools	
Data System Status	Under development, with initial public release of annual program performance report scheduled for February 2015	
Data Accessibility	Will be publicly accessible via the Comprehensive Data System Portal of the Missouri Department of Elementary and Secondary Education	Data that might reveal identities of individual candidates (e.g., a report on a group of fewer than 30 subjects) will be restricted to program officials
Reporting Vehicle and Frequency	Online report updated and released annually	The annual target date for the release is February
Program Rating or Scoring System	Missouri does not rank or compare programs, but expects them to meet indicator benchmarks set by MDESE	
Relationship of Annual Report to State Program Approval Process	The annual program performance reports will replace the 7-year state review process for state approval decisions. For programs that are seeking national accreditation, annual reports will be part of the evidence considered for state approval.	Programs with a poor annual report will be put under review, and programs with consistently poor reports will be sanctioned and subject to state intervention

MISSOURI
Specific Indicators and Measures of State EPP Quality Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Candidate Selection Profile			
Academic Strength	• State currently requires a cumulative 2.5 GPA for program entry • A general knowledge assessment is required for program admission, but scores are used for admissions decisions and are not public or part of a program's performance report	Current metric to be replaced with new metric	• By 2017, 85% of program completers must have a 3.0 GPA in content courses and select preparation program courses in order to be recommended for certification
Teaching Promise	NA		All program applicants and candidates for student teaching will be given a diagnostic assessment of how their skills and attitudes match those of successful teachers. But results will not be public and will not be part of a program's annual performance report.
Candidate/Completer Diversity	Percent of enrolled candidates by gender and r race/ethnicity	Implemented for Title II	These data are not used in the state's new EPP reporting system
Other State-Requested Data			
Knowledge and Skills for Teaching			
Content Knowledge	Program completer pass rate on content knowledge portion of state licensure examination on first or second try. 80% program pass rate required.	Implemented, but more rigorous assessment to be used beginning in 2014	• Pass rate will be averaged over most recent 3 program cohorts • Also included will be institutional trends individual program trends involving at least 30 completers • Programs are also compared to state averages

MISSOURI
Specific Indicators and Measures of State EPP Quality Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Knowledge and Skills for Teaching (cont.)			
Pedagogical Content Knowledge	NA		
Teaching Skill	Summative performance assessment for program completion and licensure involving classroom observation	Assessment to be implemented in 2014 w/o metric	• Ultimately will require a candidate pass rate at a specific benchmark • Assessment will be content neutral
Completer Rating of Program	State-administered program completer survey responses at end of first year of classroom teaching. 90% of a program's completers are expected to report "fair" or better preparation.	Implemented	Response rate must be 60% for indicator to be considered valid. (Programs not held responsible for low response rates)
Other State-Requested Data	Evaluation instrument for student teaching	Assessment to be implemented in 2014 w/o metric	Instrument is aligned with the Missouri Educator Evaluation System for K-12 teachers
Performance as Classroom Teachers			
Impact on K-12 Students	NA	Under Consideration	
Demonstrated Teaching Skill	Principal survey responses at end of completers' first year of teaching that will rate new teachers' level of preparation in various areas. Benchmark is 90% of principals reporting "fair" or better preparation.	Implemented	Response rate must be 60% for indicator to be considered valid (Programs not held responsible for low response rates)
K-12 Student Perceptions	Surveys by students of completers in their 1st year of teaching	In pilot phase with one EPP	Student surveys are encouraged as part of the standards-based annual performance assessment the state is developing with ETS.
Other State-Requested Data	NA		

MISSOURI
Specific Indicators and Measures of State EPP Quality Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Program Productivity, Alignment to State Needs			
Entry and Persistence in Teaching	NA		• The state does not use job entry, placement, or retention of program completers as a measure of program quality because many of the state's completers take jobs out of state and cannot be tracked. • Data self-reported by program provider
Placement/Persistence in High-Need Subjects/Schools	• Number of program completers prepared in each credential area • Confirmation whether program responds to identified state or district teacher needs • Confirmation whether program prepares completers to teach to a diverse student population, and in urban or rural schools	Reported for Title II	
Other State-Requested Data			

NEW YORK

General Features of State EPP Quality Reporting System

Data System Features	Specific Features	Notes
Data System Purpose	• Public Information • Limited Accountability based on reviews by state university systems	• New York hopes to implement a new accountability system and new assessments. See http://www.highered.nysed.gov/pdf/feebackrpt082012.pdf However, the state has had recent setbacks with implementation efforts, however, including efforts to implement edTPA. At the moment, the only publicly reported measures of teacher preparation program quality are for the state's Title II report. • **All Specific Features noted here refer to the Title II report.**
Aggregation Level of Data Specific Program	Some data at program level Other data aggregated at provider and state level	
Scope of Report	All traditional and alternative preparation programs in the state	The information in the Indicators and Measures section below is taken from New York's 2013 Title II report.
Data System Status	No public, annually-reported data at present other than Title II	
Data Accessibility	Link to Title II reports from title2.ed.gov website.	No link from the state department of education or board of regents websites.
Reporting Vehicle and Frequency	Annual state Title II report to the U.S. Department of Education	
Program Rating or Scoring System	None under Title II	
Relationship of Annual Report to State Program Approval Process	None	

NEW YORK

Specific Indicators and Measures of State EPP Reporting System

Program Quality Indicators	State Indicators and Measures	Development Status	Notes
Candidate Selection Profile			
Academic Strength	• Required minimum GPA for program admission and completion • Median GPA of admitted candidates and completers • Whether SAT or ACT minimum score required for program entry • Whether basic skills test minimum score required for program admission or completion	Reported for Title II	Post- baccalaureate programs require a minimum of a 2.5 Undergraduate GPA
Teaching Promise	NA		
Candidate/Completer Diversity	Percent of enrolled candidates by gender and race/ethnicity	Reported for Title II	
Other State-Requested Data			
Knowledge and Skills for Teaching			
Content Knowledge	Pass rate and average scale score compared to state averages on content area licensure examination	Reported for Title II	State uses the Revised Content Specialty Test in the area of the certificate (CST), from Pearson
Pedagogical Content Knowledge	NA		
Teaching Skill	Pass rate on Assessment of Teaching Skills-Written	Reported for Title II	The edTPA was to have replaced the Assessment of Teaching Skills-Written (ATS-W) test, but that replacement is on hold

NEW YORK

Specific Indicators and Measures of State EPP Reporting System

Program Quality Indicators	State Indicators and Measures	Development Status	Notes
Knowledge and Skills for Teaching (cont.)			
Completer Rating of Preparedness	NA		
Other State-Requested Data	• Average number of required hours for student teaching and other clinical experience and number of full-time and adjunct faculty assigned to these • Confirmation that special education teachers are prepared in core academic subjects	Reported for Title II	Self-reported data by program provider
Performance as Classroom Teachers			
Impact on K-12 Students	NA		State considering future implementation of assessment of teachers' impact on student learning
Demonstrated Teaching Skill	NA		The state's Annual Professional Performance Review process for teachers does not now include a report back to EPP for teachers in years 1-3 of teaching, but such reporting is anticipated eventually.
K-12 Student Satisfaction	NA		
Other State-Requested Data			

NEW YORK

Specific Indicators and Measures of State EPP Reporting System

Program Quality Indicators	State Indicators and Measures	Development Status	Notes
Program Productivity, Alignment to State Needs			
Completer Entry and Persistence in Teaching	NA		The state tracks this data, but it is not currently released publicly
Completer Placement/Persistence in High-Need Subjects/Schools	• Number of program completers prepared in each credential area • Confirmation whether program responds to identified state or district teacher needs • Confirmation whether program prepares completers to teach to a diverse student population, and in urban or rural schools	Reported for Title II	Data self-reported by program provider
Other State-Requested Data			

NORTH CAROLINA

General Features of State EPP Reporting System

Data System Features	Specific Features	Notes
Data System Purpose	Public Information State accountability	In 2008, the NC State Board of Education (SBE) approved a new program approval process that impacted incoming cohorts in 2010 and in 2013 published the NC IHE EPP Report Card for the first time, based on data collected through the NC Educator Evaluation System. NC has a separate program approval process for alternative EPPs and it is not clear that they are held as publically accountable as the IHE approved programs are. Recent work on the State Board of Education's Strategic Plan has resulted in discussions on requiring lateral entry providers to be held accountable via the IHE report card. Tentatively, the expectation is that all EPPs will be included in this reporting by 2015-16.
Aggregation Level of Data	Provider (institutional) reports Statewide aggregated report Individual program reports	
Scope of Report	All programs within public and private institutions of higher education in the state	No data on alternate route programs are reported publicly
Data System Status	All items required by law, with the exception of effectiveness of program graduates, have been in place since 1998-99.	Teaching effectiveness of program completers, as value-added results, has been reported for 2 years (2011-12 & 2012-13 by researchers, but it is not integrated into the state's formal program accountability system?
Data Accessibility	Annual IHE program reports are public information, accessible in part via the state department of education website.	Not all data collected for Title II are included in the state's annual performance report.

NORTH CAROLINA

General Features of State EPP Reporting System

Data System Features	Specific Features	Notes
Reporting Vehicle and Frequency	Program data are compiled into annual reports by the state department of education, with additional written reports to the Joint Education Oversight Committee of the state General Assembly.	
Program Rating or Scoring System	Ratings on measures listed in the annual reports show institutional or program comparisons where appropriate, but no summative program or institutional rating is generated	
Relationship of Annual Report to State Program Approval Process	Undergraduate Programs must: • Maintain a passing rate of at least 70% on Praxis II exams; • Receive annually positive ratings (3-4) from at least 70% of graduates and employers responding to surveys • Exhibit direct and ongoing involvement with the public schools. Institutions deemed to be Low Performing must submit improvement plans, and their failure to do so or to show improvements in the measures above could risk program approval.	

NORTH CAROLINA

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Candidate Selection Profile			
Academic Strength	• Required minimum GPA for program admission and completion • Median GPA of admitted candidates and completers • Whether SAT or ACT minimum score required for program entry • Whether basic skills test minimum score required for program admission or completion	Reported for Title II	Praxis I (ETS, PPST or CBT) minimum cut scores are established for all public and private institutions; Candidates scoring at or above 1100 on the SAT or at or above 24 on the ACT are exempt from the Praxis I testing requirement
Teaching Promise	NA		
Candidate/Completer Diversity	Percent of enrolled candidates by gender and race/ethnicity	Reported for Title II	
Other State-Requested Data			
Knowledge and Skills for Teaching			
Content Knowledge	Pass rate and average scale score compared to state averages on content area licensure examination.	Reported for Title II	On July 1, 2014, Praxis II will be required for middle & secondary licensure areas (per 2013 legislation). On Oct. 1, 2014 Elementary & Special Education General Curriculum will begin requiring Pearson's Foundations of Reading & General Curriculum licensure exams. (These are based on Massachusetts Test for Educator Licensure.)

NORTH CAROLINA

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Knowledge and Skills for Teaching (cont.)			
Pedagogical Content Knowledge	NA		
Teaching Skill	Praxis PLT average score reported for all elementary and secondary program completers, but not for middle grades licensure	Partially Implemented	State also piloting edTPA
Completer Rating of Program	Survey administered to program completers in their first year of teaching. Results report completers' mean score on each item asking how well their preparation program prepared them to implement the various state teaching standards.	An updated completer survey will be administered in 2013-14.	These data are reported by program provider but not by specific licensure program areas.
Other State-Requested Data			
Performance as Classroom Teachers			
Impact on K-12 Students	NA		The UNC (System) General Administration supports the UNC Teacher Quality Research on Teacher Preparation Program Effectiveness, which uses value-added results and teacher persistence by portal of entry in NC. While the annual UNC report is shared with DPI it is not part of any formal review system by the SBE.

NORTH CAROLINA

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Performance as Classroom Teachers (cont.)			
Demonstrated Teaching Skill	Data on teachers who hold a standard license and are in their first 3 years of teaching is collected through the North Carolina Educator Evaluation System (NCEES) for beginning teachers prepared by IHEs in NC. School administrators rate teachers on six evaluation standards for the knowledge, skills, and dispositions expected of teachers. These data are reported out by each IHE and scores are compared to the state average for each standard.		. The state formerly had an annual principal survey of graduates, but that has been discontinued and essentially replaced by the NCEES system.
K-12 Student Perceptions	NA		
Other State-Requested Data			
Program Productivity, Alignment to State Needs			
Entry and Persistence in Teaching	Enrollment and completion totals, top 10 employing school districts for each EPP, time to completion, % of cohort completers and employed	Implemented	
Placement/Persistence in High-Need Subjects/Schools	• Number of program completers prepared in each credential area • Confirmation whether program responds to identified state or district teacher needs • Confirmation whether program prepares completers to teach to a diverse student population, and in urban or rural schools	Reported for Title II	These data, while collected, are not reported out specifically by high need subjects and schools.
Other State-Requested Data			

OHIO

General Features of State EPP Reporting System

Data System Features	Specific Features	Notes
Data System Purpose	▪ Public information ▪ Program Improvement ▪ Accountability	
Aggregation Level of Data Specific Program	▪ Individual institutional reports covering all programs offered (51 reports) ▪ Reports (over 500) for each institution by teaching grade level and subject ▪ Statewide aggregated report	
Scope of Report	▪ All public institutions (13) and private institutions (38) that offer teacher preparation programs in the state ▪ Does not include all non-traditional programs (e.g., Teach for America) ▪ Post-completion data available only for teachers in public schools.	
Value-Added Model Details	▪ Value-added data available currently for 68% of Ohio 4th-8th grade public school reading and mathematics teachers – approximately 1,200 teachers ▪ The state's value-added system includes teachers licensed from 2008 on ▪ Only institution-level and aggregated state-level value-data available – not individual program-level data ▪ Individual teachers' value-added estimates are centered on the state average and then compared to a statewide expectation of growth derived from a base year	Teacher value-added estimates reflect the effectiveness of teachers relative to student gains. Estimates of the influence of individual schools and districts on those gains are included in the model.
Data System Status	Fully implemented but plan to add additional program quality indicators	
Data Accessibility	All report card information for 2013 publicly available at https://www.ohiohighered.org/2013_ohio_educator_performance_reports	
Reporting Vehicle and Frequency	Reports are updated annually and posted online on the Ohio Board of Regents website on or before December 31 each year	Report data also publicly available in spreadsheet format upon request
Program Rating or Scoring System	State does not rank or rate institutions. Comparison between institutions and programs is possible by viewing individual institution reports and comparing on each metric.	
Relationship of Annual Report to State Program Approval Process	The annual report results inform the program approval determinations of the Chancellor of the Ohio Board of Regents	

OHIO

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Candidate Selection Profile			
Academic Strength	• ACT, SAT, GRE Scores, required and average • High school, transfer, or final college GPA, required and average • Program admission GPA, required and average • Praxis I scores, required and average • Miller Analogies Test, required and average	Implemented	• IHE-reported data • Distinguishes scores of admitted program candidates and completers, with score range given for completers • Data also available at individual program level is N>10 • No data reported for Miller Analogies Test
Teaching Promise	Not Addressed (NA)		
Candidate/Completer Diversity	Percent of enrolled candidates by gender and race/ethnicity	Implemented for Title II	Not part of Ohio's EPP performance report system
Other State-Requested Data			
Knowledge and Skills for Teaching			
Content Knowledge	• Teacher initial licensure exam pass rate, given as number of completers tested and percentage passing • At the individual program level, additional licensure test information is provided where N>10: state test score range and cut score, program average score and pass rate, and state average score and pass rate	Implemented	
Pedagogical Content Knowledge	edTPA Scores	Planned	

OHIO

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Knowledge and Skills for Teaching (cont.)			
Teaching Skill	edTPA Scores	Planned	
Completer Rating of Program	Survey results of completers finishing student teaching	Implemented	• Statewide surveys administered by Board of Regents • Compares institutional average to state mean on 49 questions • Data available at institutional and individual program level if N>10.
	Survey results of program alumni completing their fourth year of full-time teaching	Implemented	
Other State-Requested Data	National Accreditation Status, accrediting agency, year of last review	Implemented	
	Required hours/weeks for field and clinical experiences, including student teaching	Implemented	IHE reported
	Excellence and innovation initiatives	Implemented	Institutions can describe up to three innovative initiatives intended to improve the preparation programs
Performance as Classroom Teachers			
K-12 Student Impact	Notes combined number and percentage of teachers from all programs who fall into one of five value-added score categories, from "most effective" to "least effective"	Implemented	• Includes teachers licensed from 2008 on • 2013 report included three years of data from 2009-2012
Demonstrated Teaching Skill	• Survey of mentors of completers in teaching • Survey of employers of completers in teaching	Planned	
K-12 Student Perceptions	NA		

OHIO

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Performance as Classroom Teachers (cont.)			
Other State-Requested Data	State annual teacher evaluation results based on the Ohio Teacher Evaluation; these evaluation systems include value-added measures, observation-based assessments, and professional growth plan	Planned	
Program Productivity, Alignment to State Needs			
Entry and Persistence in Teaching	The number of completers receiving the state's second-stage Professional Educator License after teaching for four years under a first-stage Resident Educator License	Implemented	Reported statewide, by institution, and by program. Also includes the number of admitted program candidates and completers
Placement/Persistence in High-Need Subjects/Schools	Percent of completers placed in schools by school performance, minority percentage, poverty status	Implemented	Data only available for teachers with value-added scores and licensed from 2008 on
Other State-Requested Data			

TENNESSEE

General Features of EPP Effectiveness Reporting System

Data System Features	Specific Features	Notes
Data System Purpose	• Public information • Program improvement • State accountability	State officials draw public and media attention to exemplary and low-scoring programs
Aggregation Level of Data	• Individual institutional reports • Individual program reports by grade level and subject • Statewide aggregated report	The annual report includes trend data over the last 3 years, which allows for the tracking of program effectiveness over time
Scope of Report	• All institutions approved by the TN State Board of Education to prepare teachers: public universities (9), private universities (30), and non-university providers (5) • Data on completers as teachers restricted to employment in TN public schools	• Report provides data on traditional and alternate route programs separately and aggregated • Uses data on the most recent 3 completer cohorts and tracks completer performance in the classroom for their first 3 years in teaching
Value-Added Model Details	• Mean teacher effect value for a program is based on a single year of value-added data from the most recent 3 cohorts of teachers from each program (with 1-3 years' experience) • Value-added data are available only for TN public school teachers in 4th-8th grade reading, science, mathematics, and social studies, and for high school teachers via end-of-course tests in algebra, biology, English and U.S. history – roughly 40% of program completers	Teacher value-added estimates reflect the effectiveness of teachers relative to student gains. Because individual programs do not have an equal distribution of teacher across the state, teachers are not assigned randomly, and average teacher effectiveness differs from district to district, individual teachers' value-added estimates are centered on the district average. Then they are compared to statewide averages for the comparison group. Mean teacher-effect value is calculated for each district based on the overall effectiveness of all beginning teachers (1-3 years of experience) in that

TENNESSEE

General Features of EPP Effectiveness Reporting System

Data System Features	Specific Features	Notes
		district.
Data System Status	• In full use • Plans are underway for additional indicators to be added in the future	The state plans to add data from its new annual teacher evaluation system beginning in 2015
Data Accessibility	All data publicly accessible on TN Higher Education Commission's First to the Top web page, at http://www.state.tn.us/thec/Divisions/fttt/fttt.html	Multi-year reports available under Accountability and Reporting tab
Reporting Vehicle and Frequency	Online report released on November 1 annually	Past reports are also posted online
Program Rating or Scoring System	State does not rate or rank institutions, but statewide summary provides comparative data on all institutions. These include institutional pass rates on licensure examinations and statistically significant value-added results (if any). The statewide summary notes institutions that have consistently positive and negative effects (by grade level and teaching subject). And it provides complete value-added summary profiles of every institution in summary tables, as well as trends over time.	
Relationship of Annual Report to State Program Approval Process	TN Department of Education plans to incorporate the annual report card into program approval	

TENNESSEE

Specific Indicators and Measures of EPP Effectiveness Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Candidate Selection Profile			
Academic Strength	• Praxis I scores of accepted candidates • Completer mean/range for college GPA, GPA in major, and high school GPA compared to statewide completer mean • Completer mean/range for ACT & SAT compared to statewide completer mean • Completer mean/range on GRE & MAT compared to statewide completer mean	• Praxis I to be added in 2015 • The other academic strength measures here are currently implemented	• Candidates with strong SAT or ACT scores need not take the Praxis I • ACT scores reported by institutions on about 72% of completers • Candidates with strong GRE scores need not take MAT
Teaching Promise	NA (Not Addressed)		
Gender/Ethnic Diversity	Percentage of program completers by race-ethnicity-gender	Implemented	
Other State-Requested Data			
Knowledge and Skills for Teaching			
Content Knowledge	Number and percentage of program completers who passed Praxis II initial licensure examination	Implemented	Praxis II content knowledge scores reported only at state level, not institution level
Pedagogical Content Knowledge	NA	Currently piloting edTPA	
Teaching Skill	Number and percentage of program completers who passed Praxis PLT licensure examination	• Implemented • Currently piloting edTPA	All Praxis II Learning and Teaching scores reported at state and institution levels
Completer Rating of Program	NA		
Other State-Requested Data	• National accreditation status • Regional accreditation status	Implemented	

TENNESSEE

Specific Indicators and Measures of EPP Effectiveness Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Performance as Classroom Teachers			
Impact on K-12 Students	▪ Mean of value-added scores of program completers with 1-3 years of teaching experience compared to averages for veteran teachers (4+ yrs.) and beginning teachers (1-3 yrs.) across the state ▪ Percentage of program completers in years 1-3 of teaching who place in highest or lowest value-added quintile among all beginning teachers (1-3 yrs.) in the state	Fully implemented in grades and subjects with state tests	▪ Additional subjects expected to be added in future years ▪ Data only available on teachers in the state's public schools
Demonstrated Teaching Skill	Performance data from new state teacher evaluation system. Will include an observation-based assessment of completers as teachers	Planned for inclusion in 2015	Based on either rubric for new state teacher evaluation system or approved district alternative
K-12 Satisfaction	NA		
Other State-Requested Data			

TENNESSEE

Specific Indicators and Measures of EPP Effectiveness Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Program Productivity, Alignment to State Needs			
Entry and Persistence in Teaching	Percentage completers, by cohort, teaching in each year 1 -4 after completion and teaching 3 of 4 years	Implemented	Data from state DOE personnel Information system via district data. Only captures those completers teaching in Tennessee public schools. Also includes the percentage of program completers by race-ethnicity-gender
Placement/Persistence in High-Need Schools/Subjects	Number of completers teaching in each of the state's school districts in the year following program completion.	Implemented	Statewide education database of personnel reports from districts Data available only for completers teaching in TN public schools
Other State-Requested Data	Top-producing endorsement areas in institution	Implemented	

TEXAS

General Features of State EPP Reporting System

Data System Features	Specific Features	Notes
Data System Purpose	• State Accountability (primarily) • Public Information (secondarily) • Program Improvement (institutional responsibility)	
Aggregation Level of Data	• Statewide aggregated reports of all of the approximately 150 EPPs in Texas • Data available is largely at the institutional level and disaggregated to the program level by Title II categories where appropriate	
Scope of Report	• All EPPs in Texas: public colleges and universities; private universities and college: community colleges: regional education service centers, school district programs, and private alternative providers. • Data on completers as teachers restricted to employment in TX public schools in years 1-3	The revised Accountability System will be built on four standards: Standard I: The results of certification examinations; Standard II: Beginning teacher performance Standard III: Improvement in achievement of students taught by teachers in their first three years: Standard IV: Frequency, duration, and quality of field supervision of first year teachers. ..
Data System Status	In development..	TX is currently reporting data only on Standards II and IV. It is anticipated that 2015-16 will be the first time that Standard I, III, and IV will be utilized to determine accountability status
Data Accessibility	Significant data on accountability data can be found on the TEA website, but there is no **overall** EPP performance report that amalgamates the data above and there is no reporting of disaggregated demographic data at entry or at completion or performance on entry/exit licensure exams, nor impact on K-12 students	Discrete reports available on the TEA website. TEA is undergoing a website redesign which will make it easier to locate information. The Results of the Certification Examinations (Program Certification Test Pass Rates) website currently does not generate a report because of the ongoing redesign.

TEXAS

General Features of State EPP Reporting System

Data System Features	Specific Features	Notes
Reporting Vehicle and Frequency	• Data are collected annually and are due to the TEA for compilation by August 31. • See immediately above for information on reporting vehicle	
Program Rating or Scoring System	Varies by data category	
Relationship of Annual Report to State Program Approval Process	EPP success on Standard I is currently used to determine accreditation status.	Five levels of accountability status have been established: Not rated; Accredited; Accredited-warned; Accredited-probation; Not accredited-revoked. The last three mentioned have defined consequences by TEA

TEXAS

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Candidate Selection Profile			
Academic Strength	• Average candidate GRE, SAT, ACT, or Texas Higher Education Assessment score • Minimum high school GPA, SAT, ACT, or GRE score required for program admission • Average overall college GPA of candidates. • Average GPA of candidates in specific teaching fields by EPP, but not required by the State • Minimum overall college GPA, GPA in content courses	Implemented at the program provider level, but not required information for specific programs	
Teaching Promise	NA		
Candidate/Completer Diversity	Number of program applicants, candidates, and completers disaggregated by race/ethnicity and gender.	Implemented, but does not cover many of the state's alternate route programs.	Reporting categories are Admitted, Accepted, Retained and Completed. "Retained" refers to candidates who are still in the process of coursework or student teaching; internship; or clinical teaching.
Other State-Requested Data			
Knowledge and Skills for Teaching			
Content Knowledge	• A pass rate of at least 80% of a program's reported completers is required. • Pass rates must be disaggregated by race/ethnicity and gender, with the expectation that each group will have a pass rate of 80% or higher.	Implemented	Candidates required to pass a content knowledge test in order to be certified in the state. Results reported in Standard I.

TEXAS

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Knowledge and Skills for Teaching (cont.)			
Pedagogical Content Knowledge	NA		
Teaching Skill	Program completers' pass rate and average scale score by program on the state's Pedagogy and Professional Responsibilities Test	Reported publicly for Title II	
Completer Rating of Program	Exit surveys of program completers are collected when the candidate applies for standard certification.		Program completers rate their programs, but the data are available to each individual program only.
Other State-Requested Data	Evidence of improved training of clinical supervisors as required by Standard IV (see above)		
Performance as Classroom Teachers			
Impact on K-12 Students	Beginning teachers' value-added impact on K-12 student achievement for teachers' first three years in the classroom.	In Development	This is one of the state's four principle indicators of EPP performance. Currently targeted for implementation in 2014-15, it may be delayed further due to problems encountered in piloting and a recent switch in contractors.
Demonstrated Teaching Skill	Surveys of school administrators on the quality of recent program completers employed in their schools. A threshold of 10 beginning teachers employed and rated by principals in Texas is necessary to achieve a rating.	In Development	This is one of the state's four principal indicators of preparation program performance. The evaluation takes place during completers' first year of teaching. The rating is currently reported to educator preparation programs only.

TEXAS

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Performance as Classroom Teachers (cont.)			
K-12 Student Satisfaction	NA		
Other State-Requested Data			
Program Productivity, Alignment to State Needs			
Entry and Persistence in Teaching	• Number of program completers employed. • Number of candidates retained in the profession.	Implemented	Data based on average of three-year cohorts who remain in the profession in Texas for at least three years after certification.
Placement/Persistence in High-Need Subjects/Schools	• Number of program completers prepared in each credential area • Confirmation whether program responds to identified state or district teacher needs • Confirmation whether program prepares completers to teach to a diverse student population, and in urban or rural schools	Reported for Title II	Data self-reported by program provider
Other State-Requested Data			

WASHINGTON STATE

General Features of State EPP Quality Reporting System

Data System Features	Specific Features	Notes
Data System Purpose	• Public information • Program Improvement • Limited state accountability	
Aggregation Level of Data	• Specific program/endorsement • Institution • Statewide profile	Includes statewide pass rates and averages for assessments
Scope of Report	All public and private programs (traditional and alternate route) that are approved by the Professional Educator Standards Board (PESB) to prepare K-12 teachers in Washington State	
Data System Status	Operational, with some measures still to be implemented	It is anticipated that all measures will be in place between 2017-2020
Data Accessibility	All annual report data by provider are displayed through the PESB website at http://data.pesb.wa.gov	Reports of state level aggregated data can be requested from PESB
Reporting Vehicle and Frequency	Publicly accessible annual report and restricted database	Annual report updates may vary depending upon state PESB information needs
Program Rating or Scoring System	Programs are not rated or scored	
Relationship of Annual Report to State Program Approval Process	Data on licensure assessment in content are a factor in current program approval process	When data system has matured, data will be used to determine whether a program is adequately meeting accreditation standards or whether an onsite review of the program is necessary

WASHINGTON STATE

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Candidate Selection Profile			
Academic Strength	• Required minimum GPA for program admission and completion • Median GPA of admitted candidates and completers • Whether SAT or ACT minimum score required for program entry • Whether basic skills test minimum score required for program admission or completion	Implemented for Title II	• Actual minimums set by institution • State requires passing score on the WEST-B basic skills test or acceptable score on ACT, SAT, or other acceptable test • Scores on program entry assessments are not part of the state's annual program reporting system.
Teaching Promise	NA (Not Addressed)		
Candidate/Completer Diversity	• Number of candidates enrolled by gender and race/ethnicity during reporting year • Number of program completers by gender and race/ethnicity, credential type, endorsement, and degree type during reporting year	Implemented	Both of these metrics are reported by individual program and institution
Other State-Requested Data			
Knowledge and Skills for Teaching			
Content Knowledge	Pass rates and average composite and domain scaled scores of program completers on state's content knowledge assessment for licensure (WEST-E, ACTFL)	Implemented	Reported by program, institution, and assessment.

WASHINGTON STATE

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Pedagogical Content Knowledge	edTPA	Under development	Metric for reporting results still under development
Knowledge and Skills for Teaching (cont.)			
Teaching Skill	edTPA	Under development	Metric for reporting results still under development
Completer Rating of Program	NA		
Other State-Requested Data	All candidates' required field experiences during the reporting year, diversity index of those field experiences, number of candidates in field experiences, number of hours of each experience (less than or greater than 450), candidates' outcome scores on field experiences, and school district in which each experience took place	Implemented	What will be reported is the number of candidates with outcome scores at each of four performance levels for student teaching experience
Performance as Classroom Teachers			
Impact on K-12 Students	NA		
Demonstrated Teaching Skill	NA		
K-12 Student Perceptions	NA		
Other State-Requested Data			

WASHINGTON STATE

Specific Indicators and Measures of State EPP Reporting System

Program Effectiveness Indicators	State Indicators and Measures	Development Status	Notes
Program Productivity, Alignment to State Needs			
Entry and Persistence in Teaching	Number of completers in past five years currently teaching in Washington state public schools and in private schools as available	Implemented	Reported at the program provider (university) level. Also includes the number of program completers by gender and race/ethnicity, credential type, endorsement, and degree type during reporting year. In development is tracking information about candidates who do not complete programs.
Placement/Persistence in High-Need Subjects/Schools	• Number of program completers prepared in each credential area • Confirmation whether program responds to identified state or district teacher needs • Confirmation whether program prepares completers to teach to a diverse student population, and in urban or rural schools	Implemented for Title II	Data self-reported by program provider
Other State-Requested Data			

Appendix B

15 State Contacts

Listed below are the individuals who graciously helped to provide TPA with information about the EPP data reporting and accountability systems in each of the 15 states reviewed for this report and who verified the information presented in Appendix A.

California
Beth Graybill
Chief Deputy Director
Commission on Teacher Credentialing

Teri Clark
Director, Professional Services Division
Commission on Teacher Credentialing

Connecticut
Katie Moirs
Program Approval Coordinator
Connecticut State Department of Education

Georgette Nemr
Consultant, Bureau of Educator Standards & Certification
Connecticut State Department of Education

Florida
Eileen L. McDaniel
Chief, Bureau of Educator Recruitment, Development & Retention
Florida Department of Education

Georgia
Penney McRoy
Assistant Division Director, Educator Preparation
Educator Preparation and Certification Division
Georgia Professional Standards Commission

Idaho
Tracie Bent
Chief Planning and Policy Officer
Idaho State Board of Education

Kentucky
Robert L. Brown
Executive Director
Education Professional Standards Board

Louisiana
Jeanne Burns
Associate Commissioner of Teacher and Leadership Initiatives
Louisiana Board of Regents

Massachusetts
Elizabeth C. Losee
Assistant Director
Office of Educator Policy, Preparation and Leadership
MA Department of Elementary and Secondary Education

Missouri
Gale (Hap) Hairston
Director, Educator Preparation
Office of Educator Quality
Missouri Department of Elementary and Secondary Education

Tim Whitman
Director of Educator Accountability
Office of Educator Quality
Missouri Department of Elementary and Secondary Education

New York
Mildred (Millie) Savidge
Data Liaison for the Office of Higher Education
Office of Higher Education
New York State Education Department

Rebecca Valenchis
Project Assistant
Office of Higher Education
New York State Education Department

North Carolina
Rachel McBroom
Director, Educator Preparation
North Carolina Department of Public Instruction
Educator Effectiveness Division

Ohio
Rebecca L. Watts, Ph.D.
Associate Vice Chancellor of P-16 Initiatives
Ohio Board of Regents

Tennessee
Victoria Harpool
First to the Top Program Coordinator
Tennessee Higher Education Commission

Texas
Sandra Jo Nix
Program Specialist
Texas Education Agency

Washington
Jennifer Wallace
Executive Director
Professional Education Standards Board

Joseph Koski
Data Director
Professional Education Standards Board

Appendix C

Literature Review: Data for Improving Teacher Preparation Program Quality

I. Data and Data Systems

Collecting, organizing, and reporting the information needed to understand the quality of teacher preparation programs are not easy tasks. Despite some progress over the last five years in improved state data systems, data collection (and use of data) about teacher preparation programs and graduates is quite fragmented and incomplete in 2013. One consequence is the absence of systematic and reliable information about the knowledge, skills, and effectiveness of program graduates outside of a few states (Louisiana, Texas, Florida, Tennessee), a small number of universities that invested their own resources in this work (e.g., New York University, Virginia), and research projects making effective use of access to state datasets (CALDER and Pathways are the best known of these)[1].

Where they exist at all most indicators other than student achievement are proxies for the concepts, knowledge, and behaviors they claim to measure. And measures of teacher effectiveness are available today for only about one-third of all teachers. Challenges related to the availability and quality of data encompass almost everything about teacher preparation: the characteristics of entering students, their experiences and performance in preparation programs, outcomes such as teaching performance, pupil learning, persistence in teaching, and how teaching context may or may not affect these and other outcomes.

This state of affairs is in some ways a reflection of the field itself, where there is still too little agreement on the knowledge and skills that graduates should have and be able to demonstrate in the classroom. Where agreement can be found—on "standards," "competencies," and "dispositions"—it exists mostly at a level of abstraction where the concept is so general as to be often non-observable and not measurable in reliable and valid ways. These problems have consequences for accreditation policies and practices, for research about teacher education, for state oversight of preparation programs, for systematic and consistent reporting about preparation programs, and for the efforts of programs to assess their own effectiveness. These issues are compounded by the lack of strong data systems able to collect and share results *within* states, much less across state lines.

What's Needed Now: An Overview of Data System Requirements

Data collection systems useful for capturing information about outcomes and available for sophisticated analyses can be developed and tapped for program assessment, policy analysis, and continuous improvement. This kind of system can also help to build an evidence base for what works in teacher preparation. For all this to occur, however, a robust data collection system must be in place (such as those that Race to the Top states are building or adapting) to generate mainly aggregate measures of preparation program outcomes from individual-level data, or from datasets with links between files containing information about students, teachers, schools, and preparation programs. Data elements, data collection protocols, and management of the system(s) by multiple parties[2] have to be configured to produce accurate data.

[1] In 2013 the Data Quality Campaign reports that seventeen states now link student performance data to preparation programs. Using the data for reporting still appears to occur in just a handful of states.

[2] Such as universities and university systems, state agencies, schools and school districts, and the federal government (IPEDS, Core of Common Data, other NCES resources).

To understand measures of program quality as well as outcomes-focused teacher preparation, these are the data system linkages that matter most:

- School link to teachers
- School link to pupils
- Classroom-level data: classes, teachers, and pupils
- Pupil individual identifier
- Pupil demographics
- Pupil test data
- Pupil link to teachers
- Pupil link to classes
- State certification data for teachers
- Teacher employment records
- Teacher individual identifiers linked to schools, pupils, and EPP candidate identifiers (such as university IDs or SSNs)

As just one example, information on individual schools and employed teachers is necessary to calculate persistence rates in teaching for program graduates. The National Commission on Teaching and America's Future (NCTAF) described three types of teacher turnover.[3] It is not easy to determine whether a specific individual teacher has left teaching entirely, but data about teacher employment at school and district levels are needed to calculate and report the most widely used measures of persistence and turnover.

Given the wide range of information needed on teachers, students, and schools, a system that meets these conditions will probably be a compatible set of independent databases maintained by different parties and linked through common identifiers. Examples already exist, such as the one developed through North Carolina's Education Research Data Center (http://childandfamilypolicy.duke.edu/project/longitudinal-data-for-education-reform-critical-role-for-north-carolina-education-research-data-center/). The Data Quality Campaign's "Essential Elements" and "10 state actions to ensure effective data use" provide an overview of how comprehensive data systems need to work if they are to be useful (see http://www.dataqualitycampaign.org/build/elements and http://www.dataqualitycampaign.com/your-states-progress/10-state-actions).

Given how teacher preparation programs actually work in practice, the best system configuration for teacher education would use interstate data system linkages to cope with mobility of teacher candidates and program graduates across state lines. As Secretary Duncan reported to Congress in the 2013 Secretary's Annual Report, 19 percent of initial teaching licenses granted in the U.S. in 2009-10 went to new teachers prepared for the classroom in a different state from the one granting the license.

[3] NCTAF defined teacher turnover in terms of (1) ***Leavers,*** or teachers employed in a classroom-teaching role in a school in Year 1 and not employed as classroom teachers *in any district* in Year 2; (2) ***Within-District Movers,*** teachers employed in a classroom teaching role in a school in Year 1 who are employed as classroom teachers at a different school *in the same district* in Year 2, or "cross-school, within-district movers"; and (3) ***Cross-District Movers,*** who are teachers employed in a classroom teaching role in a school in Year 1 who are employed as classroom teachers at a different school *and in a different district* in Year 2.

In eight states and the District of Columbia, programs in other states prepared 40% or more of initially certified teachers.[4]

The optimal system—a comprehensive data system at the national level—is highly unlikely ever to be available. Efforts to construct such a system in the last decade were blocked in Congress, but there is renewed support for a unit-record data system that would have comparable data from all states. Within specific states, universities, or school systems, missing pieces include large chunks of relevant data, ability to link datasets with common identifiers, barriers constructed at every level in the name of "privacy," and technical problems with hardware, software, or staffing capacity. Even so, individual states can develop and implement high quality longitudinal data systems, and the states can work together to find ways of sharing data in compatible formats so that graduates from programs in one state can be located in data systems of others states where they are employed as teachers.[5]

Gaps in data system components and dataset linkages are gradually being bridged. But they still exist. In spite of these challenges, some information needed for solid answers about preparation program outcomes already exists. Examples include the Pathways Project, AIR's Center for the Analysis of Longitudinal Data for Education Research (CALDER), the Texas CREATE initiative, the California State University system,[6] and the data systems behind publications on preparation program effectiveness from states like Louisiana, Florida, North Carolina, Tennessee, and Texas.

II. Candidate Selectivity

Academic Strength of Students Admitted to Preparation Programs

Available measures of academic ability include high school and college grade point averages, high school rank in class, and standardized test scores on the ACT and SAT (and the GRE for graduate programs). State preparation program regulations usually set minimum GPA scores for students admitted to preparation programs, generally ranging from 2.5 to 3.0, with most state minimum requirements clustered nearer 2.5.[7] The new CAEP standards will require an average of 3.0 GPA for each admitted cohort. CAEP standards further provide that the average ACT, SAT, or GRE of a program's "accepted cohort" must be in the top half of the national test score distribution by 2016-17, in the highest 40% of all test-takers by 2018-19, and in the top third by 2020.[8]

In practice some preparation programs exceed their state minimum GPA or test score requirements for some or all accepted teacher candidates. Many programs also grant exceptions to the minimum grade or test score requirements for a fixed proportion of admitted students, usually between 10% and 20% of an entering cohort. The CAEP standards would seem to permit these

[4] See U.S. Department of Education. (2013). *Preparing and Credentialing the Nation's Teachers: The Secretary's Ninth Report on Teacher Quality*, pp. 43-50. Retrieved 6-12-14 from https://title2.ed.gov/TitleIIReport13.pdf

[5] The 2013 Data Quality Campaign suggests that progress is being made within states. See http://www.dataqualitycampaign.org/. And the National Association of State Directors of Teacher Education and Certification (NASDTEC) has initiated a data-sharing pilot project between several states called the Interstate Teachers Tracking System. See http://www.nasdtec.net/?page=InterstateDataShare.

[6] While the CSU system has developed and published numerous studies and reports over the past decade or so, there is no evidence that this information has been used to improve programs or close weak programs.

[7] As with grading practices in higher education, there also is research evidence for grade inflation and widely inconsistent grading practices in high school.

[8] As examples of what this will mean in practice, the ACT test has a score range of 1-36. For the 2011-13 national cohorts of ACT test-takers, a composite score of 2 was at the 49th percentile, a score of 22 was at the 62nd percentile, and a score of 23 was at the 68th percentile. See http://www.act.org/aap/pdf/Norms.pdf

exceptions by setting average standards for groups of admitted students, allowing for variation within the group.

Research evidence on the relationship between high school and college GPA and academic ability or performance is mixed. A recent study on the reliability of ACT and SAT examinations in predicting college success found that high school grades were a much better predictor.[9] On the other hand, there is a large body of research that questions the reliability of grading practices in the U.S. Inconsistencies in grading across schools or colleges is one source of this problem, and grade inflation is widespread in secondary and postsecondary education. One study, for example, found that 43% of all letter grades at a large sample of public and private higher education institutions are A's. The analysis also found that 73% of grades at public colleges and universities were A's and B's, as were 86% of grades awarded at private institutions.[10]

Studies of teacher preparation that explore the impact of selection factors like grades and test scores on program outcomes find very few statistically significant connections. Recent studies find no significant relationship between teaching effectiveness and SAT math or verbal scores.[11] College GPA was also found to be not significant as a predictor of teaching effectiveness.[12] On the other hand a study of teachers in New York City reported that teachers with strong background preparation in content areas, higher grades in their content courses, higher scores on ACT or SAT tests, and undergraduate degrees from more selective universities were more likely to be effective at promoting student achievement.[13] More recently, Koedel and his colleagues, in a statewide study of preparation program effectiveness in Missouri, reported no relationship between teacher effectiveness and teacher candidate ACT scores.[14] The 2010 report on teacher preparation by the National Research Council found some evidence for the positive impact on outcomes of program selectivity, citing studies done in Florida, New York, and North Carolina.[15]

In the international context, a McKinsey consulting report found that the highest performing national school systems in the world recruited teachers from the top-third of the college graduating class. This study further claimed that 23% of new teachers in the United States come from the top third.[16]

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[9] Hiss, W. C., & Franks, V. W. (2014). Defining Promise: Optional Standardized Testing Policies in American College and University Admissions Offices. Retrieved 6-12-14 from http://www.nacacnet.org/research/research-data/nacac-research/Documents/DefiningPromise.pdf

[10] Rojstaczer, S., & Healy, C. (2012). "Where A is Ordinary: The Evolution of American College and University Grading, 1949-2009." *Teachers College Record 114* (7), 1-23.

[11] Kane, T. J., Rockoff, J. E., & Staiger, D. O. (2008). "What Does Certification Tell Us about Teacher Effectiveness? Evidence from New York City." *Economics of Education Review 27*, 615-631; Rockoff, J. E., Jacob, B. A., Kane, T. J., & Staiger, D. O. (2008). "Can You Recognize an Effective Teacher When You Recruit One?" (NBER Working Paper No. 14485). National Bureau of Economic Research.

[12] Kane et al., 2008.

[13] Boyd, D., Grossman, P., Lankford, H., Loeb, S., & Wyckoff, J. (2006). "How Changes in Entry Requirements Alter the Teacher Workforce and Affect Student Achievement." *Education Finance and Policy 1* (2): 176-216.

[14] Koedel, C., Parsons, E., Podgursky, M., & Ehlert, M. (2012). Teacher Preparation Programs and Teacher Quality: Are There Real Differences Across Programs? Retrieved 6-12-14 from http://economics.missouri.edu/working-papers/2012/WP1204_koedel_et_al.pdf

[15] National Research Council. (2010). *Preparing Teachers: Building Evidence for Sound Policy*. Washington, DC: National Academies Press, pp. 58-9.

[16] August, B., Kihn, P., & Miller, M. (2010). *Closing the Talent Gap: Attracting and Retaining Top-Third Graduates to Careers in Teaching*. Washington, DC: McKinsey & Company. The report defines the top-third of

Whether or not the research literature finds plausible relationships between entering student or teacher candidate academic profiles and teaching effectiveness, measures of these traits are built into state program oversight policies, national accrediting standards, program admission requirements, and—sometimes—preparation program progression standards.[17] While research may not find causal or correlational links between these measures and teaching effectiveness, increasingly fewer educators and policy makers advocate lowering academic performance standards as entry requirements into teacher education programs. Sources of data on program requirements include state reports and databases as well as individual program websites. In addition, the national teacher preparation program review conducted by the National Council on Teacher Quality (NCTQ) collected and reported information about the selection criteria for admission to more than 1100 preparation programs across the United States.[18] NCTQ also publishes an annual "policy yearbook" that includes data on admission into preparation programs.[19]

Potential for Teaching

Preparation programs, school districts, and national organizations like Teach for America (TFA) all seek to measure individual attitudes and values that may predict suitability for and success in teaching. These attributes are also known as "dispositions" in the teacher education world, but there is little research evidence linking beliefs or values to measures of teaching quality or teacher effectiveness. Where solid evidence does exist, the findings hold some promise for pre-screening applicants to preparation programs as is done routinely in other professional fields and employment recruitment.

Some preparation programs as part of the admissions screening process use the "teacher perceiver" instrument developed by Gallup and now known as Gallup Insight. It is used more widely by school districts for their hiring practices. Gallup may have internal evidence for the reliability and validity of this instrument, and school districts using its latest iteration (Insight) may also believe it predicts successful teaching. There is no independent evidence for these linkages, however. A second instrument with similar intent is the Haberman "STAR teacher pre-screener," sold through the Haberman Foundation and also used by programs and districts for its claimed predictive value.[20] Apart from studies and papers published by the test developer, however, there is no independent evidence for the reliability or predictive validity of this instrument.

Despite the largely missing research base for the value of instruments like Gallup Insight and the Haberman pre-screener, there is reason to believe that programs could make effective use of protocols that seek to determine "goodness of fit" between an applicant seeking admission and the career that she or he hopes to join. In recent years, Angela Duckworth and her colleagues at the University of Pennsylvania have developed, tested, and made wide use of the "Grit Scale" to gauge potential for success in teaching and other fields. Duckworth describes grit as "the tendency to sustain

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US college students in terms of ACT, SAT, and GPA (p. 10). Retrieved 6-12-14 at http://mckinseyonsociety.com/closing-the-talent-gap/

[17] Here for instance, students already enrolled in a teacher preparation program may have to earn a certain GPA to be admitted to student teaching and may need to earn a minimum grade to be recommended for state certification by the program.

[18] Individual institutional reports with this information can be accessed through NCTQ at http://www.nctq.org/teacherPrep/findings/.

[19] The most recent (2013) edition of the NCTQ policy yearbook is available at http://www.nctq.org/dmsStage/2013_State_Teacher_Policy_Yearbook_National_Summary_NCTQ_Report.

[20] For more information, see http://www.habermanfoundation.org/starteacherprescreener.aspx.

interest in and effort toward very long-term goals." [21] Research studies have found a link between individual-level measures of "grit" and outcomes for teachers who are prepared through Teach for America.[22]

Teach for America (TFA) screens applicants for a number of traits and attitudinal characteristics that it argues are associated with effective teaching.[23] During its highly competitive and multi-stage recruitment process, TFA screens applicants for the following traits: demonstrated previous achievement; perseverance through challenges; critical thinking skills; capacity to motivate and influence other people; the applicant's organizational ability; how well applicants understand and strongly support the TFA vision for high quality teaching; and evidence for respect of students and families in low-income communities. The organization argues that its measures of these characteristics predict successful teaching and persistence in very challenging school settings. Unfortunately for the development of national indicators of these traits, TFA's measures and research about their usefulness are not in the public domain.

All teacher candidates in teacher preparation programs in Missouri are required to take the state's Missouri Educator Profile assessment at entry to the program and prior to student teaching. The assessment measures work-relevant attitudes and behaviors that contribute to or impede job performance in a school setting, and it is based on observed traits of teachers with demonstrated success in the classroom. Test completers are given their scores in a guide to help them, their supervisors, and mentors interpret the scores and develop a personal development plan for promoting growth in areas in need improvement. The tool, developed by NCS Pearson, Inc., is used to provide information about candidates to preparation program staff and faculty and not as a requirement for program admission or as a program evaluation metric.[24]

Recently the American Psychological Association (APA) convened a task force of education and measurement experts to examine issues associated with indicators and measures of teacher education program quality.[25] Among other areas, the APA task force examined research literature on "early-stage selection or screening tools in development that have shown preliminary evidence of validity for predicting candidates' competence in classroom interactions." In reviewing the current state of knowledge about prospective instruments and their uses, the task force wrote that "There are few if any systematic uses of such instruments in teacher preparation, however, and very little, if any, validity data that predict competence in the classroom or are useful for making selection decisions."[26]

While it is not difficult to imagine preparation programs being encouraged to screen applicants with an instrument such as the Duckworth team's Grit Scale (see the 8-item version at https://upenn.app.box.com/8itemgrit), it is hard to envision programs reporting results of the screening for individual candidates or for cohorts of applicants/admitted students in a way that

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[21] More information at https://sites.sas.upenn.edu/duckworth/pages/research-statement.

[22] Duckworth, A. L., Quinn, P. D., & Seligman, M. E. P. (2009). Positive Predictors of Teacher Effectiveness. *Journal of Positive Psychology*, *19*, 540-547.

[23] A general description of the TFA selection process and what it claims to screen for can be found at http://www.teachforamerica.org/why-teach-for-america/who-we-look-for.

[24] See http://www.mo.nesinc.com/

[25] *Assessing and Evaluating Teacher Preparation Programs*. Washington, DC: American Psychological Association, 2013. Discussion of issues related to selection measures and their use is on pages 8-9 of the report's working draft.

[26] Ibid, p.8. The APA group cited the work of Jamil et al. as having potential promise. See Jamil, F., Hamre, B., Pianta, R., & Sabol, T. (2012). Assessing Teachers' Skills in Detecting and Identifying Effective Interactions in Classrooms. Manuscript submitted for publication.

supports easy-to-use comparisons across programs or states. CAEP will require programs to report what they use to measure "attributes and dispositions beyond academic ability that candidates must demonstrate at admissions and during the program," and the accreditor has plans to develop reliability and validity standards for all data sources used by programs seeking and obtaining accreditation. Given the current state of measurement development and data quality, perhaps it would suffice for meaningful comparisons if a report card or accountability system indicated whether or not a program uses an instrument that has known reliability and validity qualities.

Diversity of Admitted Candidates and Program Completers

Policy leaders and teacher educators support the idea that the teaching force should be diverse, not only to provide opportunities for talented individuals but also because of the increasing diversity of the K-12 student population in the United States. Currently, about 84% of US K-12 teachers are white, 7% are African-American, and 6% are Hispanic. Men comprise 16% of the K-12 teaching population.[27] The demographic composition of the K-12 student population is far more diverse than that of the teacher workforce.

Most preparation programs collect information about the demographic composition of applicants, admitted students, and program graduates. This data—particularly any comparisons between demographics of admitted students and completers—is not widely shared outside the program. Through annual reporting to the U.S. Department of Education, states provide information that facilitates construction of comparison tables like this one, which reports on California in the 2009-10 academic year:

California Racial/Ethnic Distribution				
Ethnic Group	**Enrollees** (TTPs)	**Students** (host IHEs)	**K-12 Students** (state)	**K-12 students** (national)
Amer Indian/Alaska Native	0.7%	0.7%	0.7%	1.3%
Asian or Pacific Islander	10.0%	24.5%	11.6%	5.0%
Black or African American	6.0%	6.1%	6.9%	16.6%
White	57.1%	44.8%	27.0%	53.4%
Hispanic/Latino, any race	21.9%	23.8%	50.4%	23.0%
Two or more races	4.2%	0.1%	3.4%	0.7%

The states themselves could also report information about the demographic composition of newly licensed teachers; across the country, however, large percentages of newly licensed teachers in some states were prepared through teacher education programs in other states.

There is little evidence from research showing empirical relationships between teacher demographics and K-12 student outcomes, although the "race and ethnicity of teachers is related to race and ethnicity of students."[28] One study found a positive relationship between teacher ethnicity

[27] See Feistritzer, C. E. (2011). *Profile of Teachers in the U.S., 2011*. Washington, DC: National Center for Education Information. This private organization collates information from various governmental and professional agencies.

[28] Zumwalt, K., & Craig, E. (2005). "Teachers' Characteristics: Research on the Demographic Profile." In Marilyn Cochran-Smith and Kenneth Zeichner (Eds.), *Studying Teacher Education*. Washington, DC: AERA.

and pupil outcomes in mathematics, but other analyses reported no or negative linkages.[29] Nonetheless, charting and reporting on the demographic composition of entering and exiting preparation program candidates is a policy concern in every state. Current data and reporting resources are not adequate to support universal and reliable indicators on this subject, but given the diverse composition of US school enrollment and of the adult population, we think it is reasonable to include demographic measures of those admitted to and graduating from every preparation program. One particularly important use of this information is ensure that the needs of diverse candidates, and especially minority and low-income students, are met by their preparation programs and that they graduate at a rate comparable to that of their more advantaged peers.

III. Quality of Preparation

Content and Pedagogical Content Knowledge

Preparation program accreditation and accountability reflect efforts to improve the quality of information about the content knowledge and professional knowledge of teacher candidates and program graduates. The problem is finding measures in both areas that are strong, credible, and useful indicators. Praxis and similar tests have been used by the states for many years, but few outside the profession see these tests—in their current incarnations (paper-and-pencil, non-performance based)—as credible indicators of candidate or new teacher knowledge. Many inside the profession share these doubts.

Indicators of content and pedagogical content (content knowledge for teaching) knowledge can be built up to program-level measures by aggregating or averaging the scores earned by individuals. Since 1998's Title II of the Higher Education Amendments (HEA), program-passing rates on various tests provide another window into the quality of preparation. The current problem with these indicators is three-fold:

- Test content: tests now in use do not adequately measure the knowledge and skills that can be tied to important teaching outcomes.
- Passing scores: the test score threshold for success is established by states and is generally set for political (or supply-demand) reasons unrelated to teaching ability or effectiveness.
- Interstate comparisons: unlike other professions, virtually every state uses its own set of teacher knowledge and skills tests; where two states do use the same test(s), passing scores are often set at different points.

A recent report noted that more than 1100 teacher tests are in use across the fifty states, with over 800 content knowledge tests alone. Even when two or more states employ the same test of content or professional knowledge, the states set different passing scores.[30] According to the U.S. Department of Education, 96% of all test-takers in the United States get passing scores on the current panoply of teacher tests.[31]

These are serious problems for quality control and consistent reporting by accreditors, states, and others trying to understand the quality of preparation programs and their graduates. The current testing system for teacher candidates and program graduates has three significant flaws:

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[29] Aaronson, D., Barrow, L., & Sander, W. (2007). "Teachers and Student Achievement in the Chicago Public High Schools." *Journal of Labor Economics*, *25*(1), 95-135.

[30] Crowe, E. (2010). *Measuring What Matters: A Stronger Accountability Model for Teacher Education*. Washington, DC: Center for American Progress, p. 8.

[31] U.S. Department of Education (2013), p. 63.

- There are too many tests being used to support a coherent structure of candidate/teacher knowledge assessment and quality control of programs as well as teachers.
- Passing scores for these tests are set too low to ensure that those who pass have the content and professional knowledge to be effective classroom teachers.
- The tests themselves have little demonstrable relationship to the knowledge, skills, and teaching performance required in today's schools.

Relevant to the latter point, the expert panel convened by the National Research Council reported in *Testing Teaching Candidates: The Role of Licensure Tests in Improving Teacher Quality* (Washington, DC: National Academies Press, 2001):

> Teacher licensure tests focus on the knowledge and skills identified by panels of educators as critical for entry into the profession. They cover the material considered to be *minimally* necessary for beginning teaching. Teacher licensure tests are not designed to distinguish moderately qualified teachers from highly qualified teachers. They are not constructed to predict the degree of teaching success a beginning teacher will demonstrate. (p. 47)

Other researchers report "little evidence that…a relationship exists between teachers' scores on such tests and their teaching success."[32] Candidates who cannot pass these tests probably should not have been admitted to a program in the first place, and programs with low pass rates should be closed. But other than using teacher test data to set a much higher quality floor than is currently the case in any state, the licensing tests now in use do not measure outcomes relevant to the academic success of K-12 students or their schools.

Better tests—linked more adequately to vital teaching knowledge and K-12 learning outcomes—would make a significant contribution to understanding the outcomes of preparation programs. Such tests ought to measure college-level content knowledge with passing scores set to ensure that all candidates have a solid grasp of their subject. With Common Core State Standards now being implemented in the majority of states across the nation, these measures of college level content knowledge ought to be pegged to the CCSS content standards. Moreover, if teacher education followed the example of some other professions a battery of high-quality tests of teacher knowledge, skills, and abilities could be adopted by every state using the same passing score criteria. This step would create a standard, easily grasped framework for program accountability. This is already done in fields like nursing, engineering, accountancy, and medicine without infringing on state autonomy, or breaching the principle of federalism.

Making headway on this challenge would be a significant contribution to teaching quality in the United States *and* would help to enhance the professional status of teachers and the programs that produce them. A recent report from the Council of Chief State School Officers (CCSSO) shows that states may be ready for real reform in this regard. The report, written by a broad task force representing numerous states and national organizations, calls for a multi-state effort to develop "innovative licensure assessments" that include evidence about teacher impact on student achievement. It also argues for state program approval standards that address a program's ability to

[32] Wilson, S., & Youngs, P. (2005). "Research on Accountability Processes in Teacher Education." In M. Cochran-Smith & K. Zeichner (Eds.), *Studying Teacher Education*. Washington, DC: AERA.

produce graduates who positively affect student learning and for improved state data systems to facilitate these efforts.[33]

The CCSSO report proposes a range of indicators to measure teaching and program quality—including observation data, pupil achievement measures, surveys of graduates and school leaders, program retention rates, and placement into hard to staff teaching positions. Perhaps of equal importance, the report calls for state data on preparation programs, disaggregated in various ways, to be provided to accreditors.

To be useful as program indicators of candidate knowledge and skills—and of graduate knowledge and skills—uniform reporting means that the same tests should be used for every program, no matter what state it is located in, accompanied by uniformly high passing cut scores applied nationally, no matter what an individual state might establish as its own passing score.[34]
Building a better system of content and pedagogical content knowledge measures can draw from the experience of other professions when it comes to tests of content knowledge and professional knowledge. Engineering, accountancy, nursing, and medicine operate with uniform state accountability standards and requirements. In nursing, for instance, the NCLEX-RN is accepted by every state as the single licensure test that determines whether or not a program graduate is granted a license to practice nursing. Every state uses the same passing standard, and pass rates are tied to program accountability for more than 1200 professional nursing programs in the United States (https://www.ncsbn.org/nclex.htm).

There is a similar story in engineering. All states employ the same battery of tests for would-be engineers, and every state employs the same passing score (see http://www.ncees.org/Exams.php).

Medical licensure standards in the United States can be summarized in one chart because there is agreement across the states and within the profession about the standards for entry into the profession and about standards of quality for medical preparation programs (see http://www.fsmb.org/usmle_eliinitial.html). The profession of accountancy follows a similar pattern, with all states using the same four-part Uniform CPA Examination and passing scores (see http://www.bls.gov/oco/ocos001.htm#training).

Nursing and the professional preparation of nurses have many similarities to teacher education, given its focus on clinical practice, so program oversight practices may be particularly relevant to consider. Like teaching, nursing is a predominantly female profession with multiple preparation pathways (e.g., hospitals, community colleges, universities) and more than one thousand different *providers* of nursing education. Nursing has a rapidly growing knowledge base. Nurses, doctors, and health care institutions now are grappling with the implications of "evidence-based medicine" for their practice and for the education of would-be practitioners. The academic quality of entrants into the nursing profession is similar to that of teaching.

Data Quality and Access Issues

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[33] CCSSO Task Force on Transforming Educator Preparation and Entry into the Profession. (2012). *Our Responsibility, Our Promise: Transforming Educator Preparation and Entry into the Profession.* Washington, DC: Council of Chief State School Officers. Retrieved 6-12-14 from http://www.ccsso.org/Documents/2012/Our%20Responsibility%20Our%20Promise_2012.pdf

[34] A 2012 report from the American Federation of Teachers, *Raising the Bar: Aligning and Elevating Teacher Preparation and the Teaching Profession*, calls for a "universal assessment process for entry" but says nothing about passing standards or establishing a common passing score across all states. See http://www.aft.org/pdfs/highered/raisingthebar2012.pdf.

In terms of access to data about test results, the current situation is that, in one way or another, most states have information about the licensure test scores of candidates and teachers collected by test area and at the individual level. Federal Title II report card requirements have led to improved data collection in this area. However, this information sheds little light on program outcomes because of test quality and testing practices. Until better tests and more robust state policies are in place, national reporting on knowledge and skills for candidates and graduates can move the dial in a significant way even within the current testing system.[35]

Most importantly for the quality and credibility of any reporting system, pass rate data and their calculation must be made transparent to the public, ending the practice of reporting pass rates only for "program completers." Currently, the Title II reporting system is the only national source of pass rate data that measures the knowledge and skills of teacher candidates.[36] For the reasons described above, this information is far less useful than it could be.

Demonstrated Teaching Skills for Candidates and Graduates

The classroom teaching performance of candidates and program graduates is a key outcome to use as a quality measure.[37] For graduates, it also may be useful (and cost effective) to explore ways to collect multiple measures of teacher performance from employers and mentor teachers on the performance of beginning teachers. That is to say, as more districts do better evaluation of their teachers, these school- or district-based data may be good sources of information for programs about graduate's performance as teachers – if the district will share with the program their findings about graduates of the program who teach in the district. While the value of this information would be affected by the quality of district-based evaluation mechanisms, it might be worth looking into as a source of data. Similarly, as states implement statewide annual teacher performance evaluation systems that include measures of teaching ability and student learning, these data could serve as indicators of teaching skills.

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[35] Regardless of whether the state where a program is located takes these steps, more robust indicators can be based on these policies for accepting teacher tests as measures of content or professional knowledge: Use a standard score on the national percentile distribution of a teacher test to gauge candidate and graduate quality. One possibility is to use passing cut scores set at the 75th percentile for all test takers in the nation. Setting a high bar at this level would ensure that programs would get credit for producing only the strongest candidates. An alternative to the 75th percentile is to set passing cut scores one standard deviation above the mean for all national test-takers. For a normal distribution of test score values, this would be about the 68th percentile. In effect, the 68th percentile standard means that candidates would have to score in the top third of all test-takers. For determining a program's pass rate in a national reporting system, for instance, results would be based on the proportion of candidates or graduates performed at or above a certain score on the national distribution of test scores. Within a particular state, someone might "pass" the test with a lower score that satisfies state policy mandates, but national reports would rely on a standard—and probably higher—test score that evens the playing field. As a policy to ensure quality, it would be reasonable to require that a significant percentage of all program graduates would have to pass all relevant tests at this 75th percentile passing score, or at the cut score established through procedures discussed above.

[36] For information about the reporting system as well as annual reports to Congress from the Secretary of Education, individual state reports, and data about specific preparation programs, see https://title2.ed.gov/Public/Home.aspx.

[37] Currently measures of teaching skills can be more easily collected from a larger number of candidates and teachers (or from representative samples of candidates and program graduates across the grades and subject areas). Data on student performance are less widely available because most teachers are assigned to untested subjects and grades.

There are several challenges associated with use of statewide teacher evaluation measures for a national reporting system: the first, of course, is that each state will have its own system which limits cross-state comparability for graduates of different programs. However, results within a state could be standardized (mean of zero, standard deviation of one) so that individual teachers have, in effect, a percentile score within the array of all teacher evaluation scores for their state. It would then be possible to construct interstate comparisons. The second problem with state-level teacher evaluations is that each state is giving different weights to measures within the overall evaluation score. This is particularly the case with the weight assigned to student learning outcomes.

Classroom observation and assessment of on-the-job teaching should be regarded as a key measure of quality because no single measure tells us all we need to know about a program or its graduates. Some programs now employ classroom observation to gauge development of requisite knowledge and teaching skills by their teacher candidates, suggesting there might really be two performance-related measures here for outcomes-focused teacher education programs: performance of candidates *during* the program and their performance as teachers of record *after completion* of the program. The Key Quality Indicators framework developed by Teacher Preparation Analytics includes both uses of this measure.

Such data would help the program faculty and administrators identify knowledge and skill sets that make a difference in the professional practice of their candidates and graduates. Classroom assessment results can highlight areas for individual candidate improvement, and for preparation programs that provide induction support to new teachers, teaching assessment findings can flag areas where continued development of teaching skills would improve a graduate's overall effectiveness in the classroom and persistence in teaching.[38] Widespread implementation of a classroom teaching performance outcome measure would be a major step in providing robust and relevant evidence about the connection between teacher preparation and student achievement.

It is important to bear in mind, however, that a system of quality classroom observation must support fair judgments based on reliable and valid findings for individual teachers and for groups of teachers.[39] Not all classroom teaching observation protocols are the same. It appears as though few of those now used by teacher education programs (including most of those mandated by state regulations) meet standards of rigor. Candidates, graduates, programs, and the public deserve "validated, standardized observational assessments of teachers' classroom instruction and interactions."[40]

The edTPA instrument being placed into use by a number of states may be one way to measure the teaching skills of candidates. Within a state that uses edTPA for all candidates, results are comparable for completers for all programs in that state. Across states, however, edTPA may have less value because states are adopting different passing scores. If actual scores from test-takers were accessible, it would be possible to construct a fully comparable cross-state measure.

Other measures of classroom teaching performance have been implemented and tested far more extensively than the edTPA. These include the CLASS instrument developed at the University of Virginia and the Danielson Framework for Teaching (FFT). Both instruments[41] were core components

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[38] Henry, G.T., Fortner, C. K., & Bastian, K.C. (2012) The Effects of Experience and Attrition for Novice High School Science and Mathematics Teachers. *Science*, *335*(6072), 1118-1121.

[39] Goe, L., Bell, C., & Little, O. (2008). *Approaches to Evaluating Teacher Effectiveness: A Research Synthesis*. Washington, DC: National Comprehensive Center for Teacher Quality.

[40] Pianta, R., & Hamre, B. (2009). Conceptualization, Measurement, and Improvement of Classroom Processes: Standardized Observation Can Leverage Capacity. *Educational Researcher, 38* (2), p.109.

[41] Other instruments also were employed in the study include PLATO and MQI.

of the large scale Measures of Effective Teaching (MET) project that collected multiple sources of information about thousands of teachers across the United States.[42]

Data Quality and Access Issues

Fortunately, there are a growing number of quality classroom observation instruments available.[43] National studies and pilot projects are building a foundation of knowledge for using classroom observation as a program outcome. Two large studies have produced relevant findings by examining links between observation instruments and pupil learning gains through videotaped observations of many teachers.[44] Similarly, the edTPA initiative conducted pilots in 21 states with 7,000 teacher candidates from cooperating university preparation programs, with the focus on teaching skills while candidates are still in their programs.[45] Advocates of edTPA hope it will be a reliable and valid source of performance information, but edTPA results need to be reported publicly by program and performance measures for program graduates are still needed.

To be useful as program quality indicators, observational findings for individual program graduates have to be aggregated and summarized for all the graduates of a specific program in order to constitute a program outcome indicator. An alternative strategy would require large enough samples of graduates to produce reliable findings. Some programs do this on their own, using the evidence to guide candidate development and for program improvement. MET and other efforts can provide useful lessons, especially as states and districts implement higher quality teacher evaluation systems. Tapping these state and district datasets for program purposes (not to evaluate individual graduates) can be a productive focus supporting development of strong program quality measures.

Employer and Graduate Satisfaction with Preparation Programs

Employer and graduate satisfaction with teacher preparation programs offer two outcome measures that are already being used by a growing number of programs. By themselves, these measures would clearly not be enough to capture the performance or impact of a program. Combined with indicators of student achievement, classroom teaching, and persistence in the profession, however, the feedback of graduates and those who hire them offers a comprehensive picture. APA's 2013 task force on teacher preparation program improvement and accountability also cited the potential utility of surveys: "Given their established utility with in-service teachers, surveys can be very useful as a program evaluation tool with former teacher candidates within a year of graduation and several years after graduation."[46]

Where these surveys are used, graduates are contacted to find out how well their program prepared them to teach, and some programs solicit similar feedback from principals or other district-based employers of their graduates. Many who talk with schools or school district about teacher hiring hear anecdotes about the graduates of various programs. Some report that a particular provider's graduates are so good in the classroom that they would hire every one of them. Other HR offices or principals are less positive, saying they would never hire someone from such-and-such a program.

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[42] For more on the MET project, see http://www.metproject.org/reports.php.

[43] Discussion of these issues can be found in Pianta and Hamre (2009), p. 111 and Goe, Bell, and Little (2008), p. 22.

[44] The Understanding Teacher Quality initiative examines six instruments through videotaped observations of 450 teachers, while the Measures of Effective Teaching (MET) project has videotapes for about 3700 teachers. For more information about the Understanding Teacher Quality project see http://www.utqstudy.org/index.html.

[45] See http://edtpa.aacte.org/about-edtpa .

[46] APA task force, p. 29.

Districts and schools act on these feelings, but they do not constitute systematic feedback about program or teacher quality.

Data Quality and Access Issues

Surveys and their response rates must meet standards of quality to yield reliable results. In addition to survey quality and adequate response rates, few programs have the ability (or the will) to track their graduates into employment. This is another area where better state data systems—and cross-state collaboration—would be beneficial. Besides the efforts of individual programs to survey graduates and their employers, there are multi-program or statewide feedback surveys that can be tapped as models. Since 2001, the California State University system has conducted regular surveys of program graduates and their employers, with a common instrument (see http://tinyurl.com/yetuw85). Since 1998, the North Carolina State Board of Education has produced an annual IHE Performance Report on program graduates and employer assessment of all state and private teacher preparation programs, with results made available to the public on-line at: http://www.ncpublicschools.org/ihe/reports/ .

In New York, the Pathways Project implemented follow-up surveys of preparation program graduates and of first- and second-year teachers who had completed programs in the Pathways research initiative (see http://cepa.stanford.edu/tpr/teacher-pathway-project#quicktabs-pathway_project=1). The Pathways survey findings has contributed rich contextual information about program features, the organization of clinical practice in a variety of preparation programs, and the extent to which preparation of teachers was "coherent" in ways that strengthened the capacity of program graduates to be successful teachers.[47] Ohio is the only Race to the Top state that plans to implement feedback surveys.

Instruments and survey findings are online for Pathways and the CSU work. In Chicago the Consortium on Chicago School Research conducted surveys of Chicago Public School (CPS) teachers prepared by multiple programs in the area (http://tinyurl.com/yeabgel. These surveys were not envisioned as ends in themselves, but as useful sources of information to support research and program improvement. A reliable set of outcomes measures that include survey findings requires data systems that allow all programs to locate their graduates in the districts and schools where they are employed as teachers. It is certainly more feasible for states to collect and disseminate than for 1400 individual programs to develop their own surveys and go off in search of employment data. Moreover, survey quality and response rates must be high enough to allow programs, states, and accreditors to be confident about inferences made from the responses. For feedback measures to be useful to programs, employers, and others the surveys ought to be conducted annually or no less frequently than every other year. Longer intervals between surveys mean that findings will be "stale" as an indicator of program performance and as a program improvement tool.

In recent years a number of states have begun to design or implement statewide program graduate and employer surveys. These include state Race to the Top grantees as well as states like Colorado (see http://www.tellcolorado.org/faq), Texas (http://www.tea.state.tx.us/index2.aspx?id=2147484163&menu_id=2147483671&menu_id2=794), and other states. Response rates at the program level are often small and while state education agency staff reviews findings from the surveys with responsibility for preparation program oversight, the results are not yet made public in most places.

K-12 Student Perceptions of Their Teachers

[47] Research reports and published studies using this information can be accessed at http://cepa.stanford.edu/tpr/teacher-pathway-project.

Student surveys as an indicator of teaching quality provide another way to measure program performance through its impact on K-12 schools. The Measures of Effective Teaching (MET) project reported in 2010 that student perceptions about instruction were related to teaching effectiveness.[48] For example, MET reported that "student perceptions of a given teacher's strengths and weaknesses are consistent across the groups of students they teach. Moreover, students seem to know effective teaching when they experience it: student perceptions in one class are related to the achievement gains in other classes taught by the same teacher."[49] MET reports that the strongest student perceptions as explanations for learning outcomes are a "teacher's ability to control a classroom and to challenge students with rigorous work." School administrators concerned about the classroom management skills of new teachers, as well as parents worried that too many teachers have low expectations for their children, would understand the meaning of these findings.

MET argues that student perceptions are an "inexpensive way" to construct a teaching quality indicator that can supplement other measures. Of course, the quality of this indicator depends on the instrument used to capture student attitudes. MET employed a survey developed by Ronald Ferguson and his colleagues at the Tripod Project for School Improvement. There are seven dimensions to this instrument: Care, Control, Clarify (teacher explanations, student understanding), Challenge, Captivate (student interest), Confer (teacher questioning), and Consolidate (teacher feedback). A sample item shows the flavor of the survey: "In this class, the teacher expects nothing less than our full effort." This MET report found statistically significant relationships between some Tripod student responses and teacher value added scores in ELA and mathematics.[50]

Here again, the 2013 APA task force had insights into the quality and use of student surveys in connection with preparation program improvement and accountability:

> Student surveys of teacher effectiveness have considerable support in the empirical literature. Scores of constructs based on observable behaviors are internally consistent and stable, are related to achievement outcomes in both college and K-12 students, are more highly correlated with student achievement than are teacher self-ratings and ratings by principals, and distinguish between more and less effective teachers identified using other metrics. Moreover, student surveys can be particularly useful in formative evaluation contexts because the scores can isolate areas in which teachers need to improve.[51]

Data Quality and Access Issues

Implementing a student perceptions survey as an indicator of program quality will require an instrument that meets standards of rigor. Programs may use locally developed instruments for internal purposes, but an approved tool with known properties will be required for national reporting. Obtaining survey results will require the cooperation of schools and districts, and there are precedents for this. New York City and the Chicago Public Schools are among the districts that already conduct student surveys on a regular basis. The MET project had the cooperation of six school districts: Charlotte-Mecklenburg, Dallas ISD, Denver, Hillsborough County (Tampa), Memphis, and New York City.

Distributing, collecting, and analyzing student surveys would be a large logistical task. State data systems could be used to aggregate the data from different schools and link findings to the graduates of specific preparation programs, just as they will have to do for other outcomes measures. The state

[48] Kane, T.J., & Cantrell, S. (2010). *Learning about Teaching: Initial Findings from the Measures of Effective Teaching Project*. Seattle: Bill and Melinda Gates Foundation.
[49] Ibid., p. 9.
[50] Ibid., p. 25-27.
[51] APA task force, p. 27.

systems or consortia like the Texas-based CREATE could perform these tasks as well as managing a reporting platform for public dissemination of findings.[52]

IV. Program Completer Effectiveness

Impact on K-12 Students

To many, the most important preparation program outcome is teacher effectiveness—defined as the extent to which program graduates help their K-12 students to learn. Since high quality instruction is the main in-school driver for student achievement, it makes sense that teacher effectiveness measures ought to be a central outcome. Today, however, only a few states have elevated teacher effectiveness as a core expectation or outcome for preparation programs. Louisiana uses value-added analyses of student academic performance to make decisions about the quality of every public or private "traditional" or other pathway into teaching.[53] A few years ago, Florida began measuring and ranking its teacher education programs according to the learning gains demonstrated by K-12 students taught by program graduates.[54] And Texas has announced a program accountability policy that, like Florida and Louisiana, includes program graduate impact on K-12 learning as a core indicator.[55] Tennessee and North Carolina have published studies linking prep programs to student achievement results but neither state uses the information for accountability or program improvement.[56]

Louisiana has had the longest track record as a state in using teaching effectiveness as a required preparation program outcome. It is still unclear how Florida and Texas will implement their policy focus on this outcome, and the work of the Race to the Top states (including Florida) with student achievement as a program outcome has not yet produced any publicly accessible reports of program performance.[57] Aside from preparation program outcomes, however, many more states are building or implementing teacher evaluation systems in which student achievement has a central role. These evaluation policies and practices require sophisticated district-level data systems, but they also can tap state-level data systems that are fed from the districts. Indiana, Michigan, Missouri, Ohio, and Washington State are among the states with some experience at the state level linking teachers with their pupils to calculate "value-added" results. To date, none of these states has published any results from this work, but researchers have been able to use the data for studies of preparation program or program graduate effectiveness.[58]

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[52] CREATE is a unique Texas-based organization that works with university-based teacher preparation programs across the state. See http://www.createtx.org/content.php?p=6.

[53] For more information on Louisiana's system as well as the policies and research behind its development, see State of Louisiana, Board of Regents, "Teacher Education Initiatives," available at http://regents.louisiana.gov/academic-affairs/teacher-education-initiatives/.

[54] More on Florida's efforts can be found at http://tinyurl.com/yjwd8md.

[55] Details on the Texas approach come from Senate Bill 174 and Chapter 229 of the Texas Administrative Code, both adopted in 2009. See http://www.tea.state.tx.us/index2.aspx?id=5887&menu_id=2147483671&menu_id2=794.

[56] By this we mean that neither state's education agency has yet found a way to incorporate the results of these analyses into their program approval processes or into decisions about which programs should be authorized to remain open.

[57] Tennessee began producing its annual performance reports and posting them on a website before receiving its Race to the Top grant. It's not clear whether the state will actually do anything with this information other than release them to the press and the public.

[58] For examples of this work, see the state partners and research papers available through the Center for Analysis of Longitudinal Data in Education Research (CALDER). State partners are at http://www.caldercenter.org/, and a

Data Quality and Access Issues

States have relatively little experience with implementation of teacher effectiveness as a preparation program outcome, but at least 20 states have taken steps in this direction (19 Race to the Top states, including Louisiana in Round 3, plus Texas). Whether or not program faculty and administrators share this state goal, analyses and judgments will be made about programs in these states based on their performance on this indicator. This poses opportunities as well as challenges: improved state data systems are needed to link teacher and student data; effective confidentiality and privacy policies are crucial; and analysis of K-12 testing data must be careful to use appropriate statistical models.[59]

There is also a robust literature on the use of value-added measures. Studies address methodological challenges associated with estimating teacher effectiveness, appropriate use of findings for accountability and program improvement, limitations of this approach to measuring teaching quality, and strategies for improving VAM research and reports.[60]

Many preparation program graduates in these states and across the country teach grades and subject areas that are not tested by the states; one estimate is that about two-thirds of teachers fall into this category. A major challenge, therefore, is to develop learning outcomes for students of teachers in these untested subjects and grades. CAEP and others interested in this problem can tap work underway by Race to the Top states that face the same problem and are trying to address it.

With respect to data systems needed to collect and analyze teacher effectiveness information, most states can link student and teacher data in their K-12 system, but they are not able to tie employed classroom teachers back to their in-state preparation programs. This will need to be worked out for accreditation and accountability, and it's also needed for programs themselves to acquire, use, and report information on the teacher effectiveness of their graduates.

Despite the challenges, value-added analyses and growth model calculations of student learning are becoming more common as states and districts work out ways of measuring student outcomes in order to improve them. Expanded use of these analytical strategies has stimulated efforts to improve the student tests that function as dependent variables, and it seems safe to say that the nation will see further work to refine the analytical methods used to determine the impact of teachers on the academic achievement of their pupils.

<u>Meeting State and District Needs for Teachers</u>

Production of new teachers in high demand fields is a program outcome also highly relevant to the needs and interests of schools and their students – and to those of policymakers whose job it is to ensure that all students in the states and districts have capable teachers. Florida and New York include production of teachers in high-need fields as an explicit focus of Race to the Top. Employment as an outcome measure is part of the Race to the Top strategy for Florida, Massachusetts, New York, Ohio,

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sample of papers about teacher effectiveness can be accessed at http://www.caldercenter.org/publications/publications-teachers-and-principals.cfm.

[59] Goe, Bell, and Little (2008).

[60] Good sources that summarize the issues and challenges include Daniel Goldhaber's recent paper for the Carnegie Knowledge Network (http://www.carnegieknowledgenetwork.org/briefs/teacher_prep/?utm_source=CKN+Mailing+List&utm_campaign=65770f834b-CKN_brief_12_announcement11_12_2013&utm_medium=email&utm_term=0_f984de343e-65770f834b-26066545); and numerous studies or reports from CALDER.

Rhode Island, and Tennessee.[61] It's important to note here that Massachusetts, New York, and Rhode Island plan to use these production and employment numbers as part of beefed-up accountability systems. The other states simply report on them.

Data quality and access issues

As measurable program outcomes, production and employment outcomes require comprehensive state-level data about program graduates. The state data systems needed for measuring teacher effectiveness as a program outcome—linking K-12 students, their teachers and schools to the programs producing these teachers—would also be necessary to capture information on the production of new teachers in demand fields such as STEM subjects, special education, and ESL.[62]

Program Completion and Teacher Retention and Employment

Two outcomes related to the impact of preparation programs on K-12 schools are: how long graduates persist in teaching and where they are employed as teachers.[63] Similarly it is reasonable to track program completion rates to gauge the proportion of entering teacher candidates who complete their course of study and obtain certification to be a classroom teacher. It also makes sense to disaggregate these program completer statistics by gender, ethnicity, and subject area. Obtaining accurate reports of program graduates who enter teaching is very difficult. Few programs follow their graduates once a degree has been awarded or certification is recommended to the state. In some states a significant proportion of preparation program graduates seek and find employment in other states.

Studies and reports over the last decade have documented the impact of teacher turnover on schools and students.[64] As the Consortium on Chicago School Research noted in 2009, "High turnover rates produce a range of organizational problems for schools…thwart efforts to develop a professional learning community among teachers and make it difficult to develop sustained partnerships with the local community."[65]

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[61] For Florida, this means the production of new teachers in science, mathematics and other STEM subjects employed in difficult to staff subjects and schools; New York targets—but doesn't define—"shortage" subject areas. And all the states with program graduate employment indicators focus their attention on high need schools.

[62] As an example, to address teacher needs in Georgia, the University System of Georgia (USG) created a structure for identifying historical and anticipated teacher needs, by licensure area, in all Georgia districts. This was data that USG institutions were encouraged to reference in considering campus teacher education productivity goals.

[63] Through their Race to the Top work, some states have added an indicator for the subject areas taught by program graduates, hoping to create incentives and pressure on programs to concentrate output in fields like special education, ESL, and STEM, while reducing chronic overproduction in a field like elementary education.

[64] Studies and reports on teacher turnover include work by NCTAF in *No Dream Denied* (2003) and *The Cost of Teacher Turnover in Five School Districts: A Pilot Study* (2007) (see http://nctaf.org/research/publications/); work by Smith, T. M., & Ingersoll, R. M. (2004). What Are The Effects of Induction and Mentoring on Beginning Teacher Turnover? *American Educational Research Journal*, *41* (3), 681-714; and a study by De Angelis, K. J., & Presley, J. B. (2007). Leaving Schools or Leaving the Profession: Setting Illinois' Record Straight on New Teacher Attrition. Illinois Education Research Council. More recently, the Consortium on Chicago School Research provided a very detailed analysis of teacher turnover and its impact of particular schools and students. See Allensworth, E., Ponisciak, S., & Mazzeo, C. (2009). *The Schools Teachers Leave: Teacher Mobility in Chicago Public Schools*. Chicago: Consortium on Chicago School Research, University of Chicago.

[65] Allensworth et al., 2009.

It has been widely reported that teacher turnover is a serious problem in low-achieving schools that have high proportions of poor and minority students. Teacher effectiveness studies show, however, that positive teacher impact on student achievement grows as teachers gain experience (up to a point), which mean that teacher turnover thwarts student academic performance. Research also indicates that preparation matters when it comes to teacher effectiveness.[66] It is particularly important where candidates obtain their clinical experience during preparation, and it matters how a program's clinical component is organized and supported by faculty so that graduates become effective teachers.[67]

Nevertheless, high rates of teacher turnover persist despite the claims of many teacher preparation programs that their graduates are specifically prepared for challenging schools.[68] K-12 schools are already held accountable for the consequences of teacher turnover: high rates of turnover lead to weaker student academic gains than would otherwise occur. Preparation programs are not solely responsible for turnover or for its solution, but given the causes and consequences of teacher turnover, persistence in teaching is a program outcome that can help to align the interests of producers and employers.[69]

Why should persistence rates matter as a program outcome? How can preparation programs address teacher persistence rates? At least five states are working through Race to the Top on teacher persistence as a preparation program indicator. CAEP has argued strongly for the "clinical residency" model of teacher preparation, for programs "that are fully grounded in clinical practice and interwoven with academic content and professional courses."[70] Programs that take (or have taken) significant steps to implement a well-designed clinical residency model are likely to produce graduates whose experiences in a really rigorous clinical approach to preparation will provide them with the knowledge, skills, and teaching experience to survive school environments that are less than ideal. Better teacher preparation along these lines plus improved school working conditions are probably the keys to teacher retention.

Given the pervasive problem of teacher turnover, particular in schools that serve low income or low achieving students, a sustained focus on improving teacher persistence is long overdue. Put bluntly, preparation programs can help to solve the turnover problem by preparing their graduates to be better teachers. They can train teacher candidates in the kinds of schools where they are likely to teach once they graduate and obtain employment.

Another program-level step is supporting graduates once they leave: effective induction programs

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[66] Boyd, D. J., Grossman, P. L., Lankford, H., Loeb, S., & Wyckoff, J. (2009). "Teacher Preparation and Student Achievement." *Educational Evaluation and Policy Analysis 31* (4), 416-440; Harris, D.N., and Sass, T.R. (2011). "Teacher Training, Teacher Quality and Student Achievement." *Journal of Public Economics 95* (7-8), 798-812; and Goldhaber, D., & Hannaway, J. (Eds.). (2010). *Creating a New Teaching Profession*. Washington, DC: The Urban Institute Press.

[67] Grossman, P., Hammerless, K. M., McDonald, M., & Ronfeldt, M. (2008). "Constructing Coherence: Structural Predictors of Perceptions of Coherence in NYC Teacher Education Programs." *Journal of Teacher Education 59***;** Boyd et al. (2009); and Ronfeldt, M. (2012). "Where Should Student Teachers Learn to Teach? Effects of Field Placement School Characteristics on Teacher Retention and Effectiveness." *Education Evaluation and Policy Analysis, 34* (1).

[68] Many programs don't know very much about whether their graduates become teachers or how long they stay in the profession. And few know whether their graduates teach in the kinds of schools the program believes it has trained them for.

[69] See the discussion in Henry, Fortner, and Bastian (2012).

[70] National Council for Accreditation of Teacher Education. (2010). *Transforming Teacher Education Through Clinical Practice: A National Strategy to Prepare Effective Teachers*. Washington, DC: NCATE, p. ii.

to support program graduates in their first few years of teaching would also help to reduce teacher turnover. A recent paper published by APLU argued, "Like all other beginning professionals, novice teachers are not expert. To become expert they need nurturing and support in their beginning years of teaching. The teacher preparation programs where they initially developed their skills and where trusting relationships were built should be a part of that support structure for novice teachers."[71]

An extension of this philosophy is for programs to work with their graduates in "high impact schools" where they have a critical mass of program graduates in teaching and in school administration. These high impact settings are schools where it might be possible to test, refine, and extend other student outcomes measures like progression and graduation rates, the proportion of students "on track" to graduation, and postsecondary participation rates.

Data Quality and Access Issues

Some programs do track the persistence rates of their own graduates. But a reliable strategy to acquire data on persistence as a program outcome requires data systems that enable all programs to locate their graduates in the schools and districts where they teach. Thanks to the federally funded State Longitudinal Data System (SLDS) initiative, such systems are becoming more common in the states. Data system availability and functionality, however, doesn't mean that states or programs actually track their graduates and analyze persistence rates.

Making persistence rates a strong operational outcomes indicator will require programs and states to work together to gather and share the data. One of the rare comprehensive efforts to do this has been developed by the Texas-based CREATE Center.[72] Obtaining access to the big state databases on licensure and employment—as CREATE does with its member universities—is one approach. For other universities, it might make sense for state agencies to collect and disseminate persistence rate data for preparation programs. And for the many programs that produce a small number of annual graduates, it might be necessary to pool persistence rate results across several years to smooth distortions caused by having a small number of graduates in a single cohort.[73]

It is worth saying again here that the use of persistence rates as a program outcome does not mean that preparation programs are solely responsible for teacher turnover. But turnover rates will not improve until producers and employers have incentives to focus on the problem. It seems likely that public confidence in teacher education will be improved when programs take public ownership of this issue.

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[71] Presley, J., and Coble, C. (2012). *Seeking Consensus on the Essential Attributes of Quality Mathematics and Science Teacher Preparation Programs*. Washington, DC: Association of Public and Land-Grant Universities.

[72] See http://createtx.org/content.php?p=36.

[73] Teachers who "stop out" complicate the calculation of teacher persistence rates. When the Illinois Education Research Council looked at five-year persistence rates for programs across that state, it found that about one-third of those who left the profession in their first few years later returned to teaching. Program persistence rates that build a five-year cumulative record for a program cohort (for example, what proportion of 2007 graduates are teaching in 2012) would help to deal with this issue. A dip in persistence rates in the second or third year would be offset later when these graduates return to the classroom four or five years after completing their program.