

REPORT HIGHLIGHTS

Building an Evidence-Based System for Teacher Preparation

by

Teacher Preparation Analytics:

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for

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A Satisfactory Preparation Program Evaluation System

Skepticism about the quality of teacher education in the U.S. has a long history. Indeed, 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. Even leading voices within the teacher education profession itself – including the agency (NCATE) that was until recently the main national accreditor – 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.

These critiques and innovations in teacher preparation have added fuel to a nagging – and basic – 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?

Providing a satisfactory response to this question is precisely the goal of the present 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 that could be operationalized by approximately 2020. Such a framework would 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 evaluation would be annual, publicly available, and 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.

Until recently, most efforts to develop a framework for the assessment of teacher preparation programs have fallen short of the mark. The most prominent framework, the federal reporting requirements in Title II of the Higher Education Act, produces valuable data for gaining a broad overview of the number, content focus, and demographic makeup of U.S. teacher preparation programs. But the Title II report data overlook important program outcomes, are not always comparable between states, and are of little value to program improvement efforts. Over the last several years, however, the Council for the Accreditation of Education Preparation (CAEP) has developed a number of annual, outcomes-focused reporting measures required for program accreditation. And a number of individual states – sometimes in response to the CAEP requirements – are developing their own program evaluation and accountability systems that are very promising.

The Key Effectiveness Indicators (KEI) summarized in Table A on page 2 below represents the authors’ attempt to produce an adequate uniform program assessment framework. 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 preparation program effectiveness.

Table A. Teacher Preparation Program 2020 Key Effectiveness Indicators

Assessment Categories	Key Indicators	Measures
I Candidate Selection Profile	Academic Strength	<p>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.</p> <p>—(2) For Post-Baccalaureate Programs: Mean and range of candidates’ college GPA percentile and mean and tercile distribution of GRE scores</p> <p>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</p>
	Teaching Promise	<p>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</p>
	Candidate/Completer Diversity	<p>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</p>
II Knowledge and Skills for Teaching	Content Knowledge	<p>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</p>
	Pedagogical Content Knowledge	<p>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</p>
	Teaching Skill	<p>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</p>
	Completer Rating of Program	<p>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</p>
III Performance as Classroom Teachers	Impact on K-12 Student Learning	<p>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</p>
	Demonstrated Teaching Skill	<p>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</p>
	K-12 Student Perceptions	<p>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</p>
IV Contribution to State Needs	Entry and Persistence in Teaching	<p>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</p> <p>—(2) Percent of completers attaining a second stage teaching license in states with multi-tiered licensure</p>
	Placement/Persistence in High-Need Subjects/Schools	<p>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</p>

The indicators and measures included are suggested on the basis of significant research evidence and prior preparation program evaluation efforts by researchers, teacher educators, and state officials. They have been reviewed and refined in consultation with many experts in the field. And all of the indicators have been used and implemented using various measures, though not always for the purpose of preparation program assessment and not always with measures that are adequate to the task.

The authors believe that the variety of the indicators and measures proposed in the KEI is a strength. It facilitates the “triangulation” of the different indicators and thus can provide a richer and more reliable program assessment than any single indicator or score. Every indicator in the KEI can reveal important information about program effectiveness, so all should be seriously considered in an overall assessment.

The State of the States

A number of states have independently developed or begun to develop new measures of the performance of their educator preparation programs. The states include some implementing 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 chosen randomly and do not include all states developing new program effectiveness reporting measures. The selected states do, however, reflect differences in approaches and in their level of progress.

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 evaluate program effectiveness compare 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 are addressed principally by three tables below. Tables B and C provide answers to Questions 1 and 2 respectively, and Table D addresses Question 3. All tables were developed on the basis of detailed information gathered from documents and interviews with officials in the sample states and verified by those officials for accuracy. That information, which represents the status of each state as of May 31, 2014, can be found in Appendix A of the full report.

Table B (p. 4 below) uses Harvey Ball icons to symbolize the extent of similarity between a state’s currently implemented performance measures (i.e., as of May 31, 2014) and those of the KEI. The Harvey Ball designations are not intended to indicate either outstanding or poor performance on the part of the states but, rather, to be only descriptive. States have put themselves under no obligation to adopt the indicators and measures suggested by the KEI, though the authors of the report would certainly encourage them to consider that course of action.

Table B. 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															

The complete definitions of the four different Harvey Balls are as follows:

- = 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 B 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 C (on pp. 6-7) is a schematic tabular presentation of the detailed 15-state information contained in Appendix A of the full report. Appendix A of the report summarizes both current and emerging features of the program performance assessment systems that many of the 15 sample states are in the process of developing, and Table C attempts to reflect that. It provides much more explicit information than Tables B or D and yields a more fluid and complex picture. Table C identifies which states are developing new preparation program performance reports and the extent of those efforts where they are underway. It notes (a) the primary purposes of the annual data that states require their programs to collect, including accountability implications; (b) the levels of analysis the state data reporting system allows; (c) the developmental status and scope of the data system; and (d) the extent of current public access to the data. In addition, Table C notes the extent to which each state's ongoing efforts are moving it toward the development or adoption of program performance indicators that are similar to those of the KEI.

Table B 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 would have farther to go than others should they aspire to adopt the KEI. But Table B does not illustrate the whole story. As Table C 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 C. 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 Imprvmt •Public Info	•Accountability •Progr Imprvmt •Public Info	Public Info	•Accountability •Progr Imprvmt •Public Info	•Accountability •Progr Imprvmt •Public Info	•Accountability •Progr Imprvmt •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 <u>not included</u> 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 Classroom Teachers	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 C. 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		<ul style="list-style-type: none"> Accountability Progr Imprvmt Public Info 	<ul style="list-style-type: none"> Accountability Public Info 	<ul style="list-style-type: none"> Accountability Public Info 	<ul style="list-style-type: none"> Accountability Progr Imprvmt Public Info 	<ul style="list-style-type: none"> Accountability Progr Imprvmt Public Info 	<ul style="list-style-type: none"> Accountability Progr Imprvmt Public info 	<ul style="list-style-type: none"> Accountability Progr Imprvmt Public Info
Accountability Implications Basis for State Action or Advisory Information		State Action	Advisory	<ul style="list-style-type: none"> Advisory State Action 	Advisory	Advisory	<ul style="list-style-type: none"> Advisory State Action 	Advisory
Aggregation Level of Data Specific Program/Field, Institutional Provider, or State		<ul style="list-style-type: none"> Program Provider State 	<ul style="list-style-type: none"> Program Provider State 	<ul style="list-style-type: none"> Program Provider State 	<ul style="list-style-type: none"> Program Provider State 	<ul style="list-style-type: none"> Program Provider State 	<ul style="list-style-type: none"> Program Provider State 	<ul style="list-style-type: none"> 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 <u>not included</u> in the 12 Key Effectiveness Indicators)						
Candidate Selection Profile	Academic Strength	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Implemented In Development 	From Title 2	In Development
	Completer Rating of Program	Implemented	None	Implemented	Implemented	None	Implemented	None
Performance as Classroom Teachers	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)

Table D, on p. 9, 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 in Table D reflects the states' Harvey Ball assignment in Table B, but using black Harvey Balls for all state-enacted indicators (whether via Title II or the state's own assessment system).

Table D shows anticipated movement by the states between now and 2016-17, with some states making progress in the direction of the KEI on a number of indicators. 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.

Moving Towards the Preparation Program Assessment System We Need

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 among key stakeholders
- Focus on program performance measures that are compelling and relevant for program improvement
- Willingness to invest performance measures with real consequences for programs

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 (a) difficulties inherent in the various measures themselves, (b) limited understanding of the requirements for their adequate development, or (c) lack of awareness of their potential importance and efficacy. The full report summarizes these requirements and challenges in greater detail.

Fueling optimism about the possibility of meeting these challenges are a number of promising developments in the field, which the authors refer to as "points of light." Summarized individually in the full report, these include:

- New, more rigorous assessments of teachers' skill and candidates' teaching promise
- Effective implementation and use of value-added assessment as an aid to preparation program improvement
- Beginning efforts to enable the interstate exchange of data about teachers so that programs can track the placement and trajectory of virtually all of their completers
- Sophisticated preparation program assessment systems that are already in place or under development in a number of states.

Table D: 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														

A Call to Action

In the end, the concerted commitment and action of stakeholders across the U.S. will be required in order to develop the kinds of preparation program effectiveness measures and reporting systems that are needed:

- State Policymakers, to provide policy and fiscal support
- State Officials, to work collaboratively to improve the quality and sharing of data
- Teacher Educators, to ensure the relevance and efficacy of program reports
- Higher Education Leaders, to support educator preparation programs in strengthening their program data and creating a culture of continuous program improvement
- Researchers and Developers, to develop 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
- Foundation Officers, to support the needed R&D, the development of preparation programs report cards, and multi-state initiatives that create synergy and facilitate interstate comparability
- Federal Policymakers and Government Officials, to provide funding and policy support for the development of stronger assessments and of state preparation program report cards; and to revise the educator preparation program reporting requirements under Title II of the Higher Education Act to support state-level development of 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.

The full report can be downloaded from the CAEP website at

<http://caepnet.org/resources/building-an-evidence-based-system-for-teacher-preparation/>