

BRIEF



BUILDING A BETTER DATA SYSTEM FOR TEACHER SUPPLY, DEMAND, AND PREPARATION: A STRATEGY FOR ADDRESSING WEST VIRGINIA'S TEACHER SHORTAGE

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Building a Better Data System for Teacher Supply, Demand, and Preparation: A Strategy for Addressing West Virginia's Teacher Shortage

Region 5 Comprehensive Center

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Introduction

West Virginia, like many other regions and states across the country, has experienced an ongoing teacher shortage over the past decade (Education Preparation Task Force 2021). Several recent reports have suggested that improving West Virginia's data systems for collecting and reporting information on educator supply and demand, and on the production and performance of the state's 19 educator preparation programs (EPPs), is an important step for doing so. The purpose of this report is to summarize and synthesize the research literature on the types of data that states collect on their teacher workforce and for reviewing the performance of their EPPs. The first section of this report presents a brief summary of West Virginia's current standing in terms of its teacher data collections and reporting. This section is followed by a review of the literature with a particular focus on several reports that examine the current data practices of those states whose educator data systems are considered among the best in the country. The final section presents three examples of these states' data measures and reporting.

West Virginia Context

Persistent teacher shortages across the country have pressed states to develop better data systems for monitoring state, regional, and local teacher supply and demand. State data systems must also collect data from state EPPs to monitor whether they are producing enough new teachers to meet demand, as well as enough teachers in the licensure areas needed to address critical shortage areas.

This new reality is placing strains on state educator workforce data systems that were not designed for this purpose. In some cases, states are not collecting all of the necessary data. In others, the data are not linked in meaningful ways to allow for a comprehensive understanding of state and local teacher labor markets (Saenz-Armstrong 2022).

This concern is echoed in the final report of West Virginia's Education Preparation Task Force (2021). Formed in 2020, the Education Preparation Task Force set out to "... clearly define and identify mechanisms to address the multifaceted challenges that face teacher recruitment and preparation in West Virginia" (p. 3). Listed as one of five challenges West Virginia faces for addressing teacher shortages is the lack of "... a comprehensive, single-platform source of data on teacher preparation, recruitment, and retention" (p. 2). The Task Force found that West Virginia lacked a comprehensive data system, based on multiple sources of data, for consistently monitoring teacher supply and demand at the state and local levels. It recommended that the West Virginia Department of Education (WVDE), in partnership with the West Virginia Higher Education Policy Commission (WVHEPC), EPPs, and school districts, conduct an annual teacher supply-and-demand report to identify and address critical teacher shortage areas. It further recommended the state develop an online dashboard for reporting data on teacher supply and demand and EPP performance (Education Preparation Task Force 2021).



A 2021 review of the state's EPP approval systems by the Learning Policy Institute also found shortcomings in the collection and reporting of West Virginia's teacher preparation data (Saunders 2021). The study found there was no central data system for housing preparation data for all 18 of the state's EPPs, and that the state's teacher preparation and evaluation systems were not aligned in a way to allow for combining and comparing data from both systems. On the other hand, the report found that a substantial amount of relevant data is currently being collected by WVDE, WVHEPC, and EPPs, but not being shared or utilized in a way to inform state policymakers or agency administrators, or to guide program improvement within EPPs. As a result, opportunities exist to design a state data system capable of effectively monitoring teacher supply and demand and EPP performance.

The state is beginning to make progress on some of these opportunities. For example, WVDE expects to begin collecting and sharing with EPPs the number of teachers working out of certification area or working on a temporary or provisional license. The Department is also working on sharing student achievement data with teachers' EPPs as a measure of EPP completion effectiveness. The Department is also beginning to explore designing an online dashboard for publishing more of the data currently being collected but not widely published or shared. Generally, WVDE views data collection and use as a key component of its efforts to improve teacher quality and address shortages (WVDE, personal communication, December 15, 2022).

A Review of the Research Literature and State Practices

States collect data on their EPPs, including teacher residencies, for a variety of reasons. Among the most common reasons are to evaluate programs' compliance with state regulations and assess their effectiveness for program approval purposes, supply EPPs with performance data for program improvement, and provide the public with comparative data on EPPs' program characteristics and performance (Council of Chief State School Officers 2018; Feuer et al. 2013).

The types of data states collect may vary depending on the purpose of the data collection. However, the literature on EPP data systems suggests that certain data elements provide useful information for multiple purposes. Available studies of the states' data collections also show commonalities of the types of measures and data states look to collect (Allen, Coble, and Crowe 2014; Council of Chief State School Officers 2018; Feuer et al. 2013).

Studies looking closely at teacher preparation program data typically list the program areas for which data are collected along with a set of measures for each of these program areas (Allen et al. 2014; Data Quality Campaign 2017; Feuer et al. 2013). The term "measures" refers to the type of data collected as evidence for reviewing each program area. Measures may also be categorized into program inputs and outputs. Inputs refer to the resources invested in providing the program and maintaining a certain level of quality. These may include the quality of the program's faculty; the number and types of courses required; and the quality, or selectivity, of the teacher candidates admitted into the program. Outputs refer to the quantity and quality of the teacher candidates



completing the program. These measures may include counts of program completers disaggregated by race/ethnicity, gender, and certification area; performance on certification assessments; and effectiveness as teachers as measured by their students' academic performance or surveys of their principals (Feuer et al. 2013).

Common program areas for which states may collect data on EPPs include:

- » Candidate recruitment and admissions;
- » Quality of instructional program;
- » Knowledge and skills of teacher candidates;
- » Completers' effectiveness as teachers; and
- » Candidates' placement and retention as teachers (Allen et al. 2014; Data Quality Campaign 2017; Feuer et al. 2013, National Council on Teacher Quality 2021a; Silva et al. 2014).

The first two program areas, candidate recruitment and admissions and quality of instructional program, both represent inputs for producing the program. The first assesses the quality of the candidates admitted to the program, and the second assesses the quality of other resources invested in the program such as faculty, coursework requirements, instructional materials, and clinical experiences. The final three program areas all address outcomes of the program. These include the knowledge and skills candidates acquire by completing the preparation program's course of instruction, how effective program completers are as teachers, and how many completers are hired as teachers and are retained in the teaching profession.

Table 1 summarizes the types of measures the literature shows are typically collected as evidence for assessing each of the five major program areas.

An examination of the measures for the candidate recruitment and admissions program area provides an example of how these measures may be used to inform an evaluation of the quality of a preparation program. Candidate selectivity may be considered an indicator of program quality based on the assumption that a program attracting and serving academically high-performing candidates will be of higher quality in other program areas, such as instructional program (faculty, curriculum, fieldwork) or candidate placement and retention (Feuer et al. 2013). Measures such as GPA or performance on college entrance examinations are often used as an indicator of candidate selectivity because research suggests that students who perform well on these academic measures become more effective teachers (Allen et al. 2014; Feuer et al. 2013). These measures also have the advantage of being easy to collect and quantify (Feuer et al. 2013).



Table 1. Common EPP program areas and associated measures

| Program area | Input/output | Typical measures |
|---|--------------|---|
| Candidate recruitment and admissions | Input | <ul style="list-style-type: none"> ■ GPA, ■ SAT, ACT, GRE ■ Dispositions ■ Scores on basic skills Praxis ■ Percent admitted who are racial/ethnic minority ■ Number admitted in high-need subject areas |
| Quality of instructional program | Input | <ul style="list-style-type: none"> ■ Faculty: Percent with advanced degrees, percent who are full-time, part-time, or adjunct ■ Coursework: Course offerings and hours, syllabi, assignments, texts ■ Clinical experience: Policies, mentor qualifications, clinical supervisor student load |
| Knowledge and skills of teacher candidates | Output | <ul style="list-style-type: none"> ■ Scores on content and pedagogical content assessments ■ Pass rates on licensure tests (first time and all) ■ Clinical mentor observation reports |
| Completers’ Effectiveness as teachers | Output | <ul style="list-style-type: none"> ■ Surveys of principals/employers ■ Student surveys ■ Teacher evaluation observations ■ Student/classroom value-added scores |
| Candidates’ placement and retention as teachers | Output | <ul style="list-style-type: none"> ■ Overall hiring/job placements of completers ■ Percent of completers placed in hard to staff schools or subjects ■ Retention data |

Source: Authors’ compilation.

When selecting measures for whichever purpose, states should make selections based on the program characteristics the research literature suggests are related to preparing effective teachers. That is, they should measure what matters to the extent possible. The literature also suggests states should rely on multiple measures of program characteristics to compensate for the field’s somewhat limited understanding of what makes teacher preparation programs effective (Feuer et al. 2013).

Because the knowledge base on the relationship between EPP practices and the effectiveness of their graduates is incomplete and evolving, identifying the program practices that matter is no simple task. Research shows there is substantially more variation in the instructional effectiveness of graduates within EPPs than between EPPs (Goldhaber, Krieg, and Theobald 2016). Consequently, it may be argued these measures may currently be more useful for comparing effectiveness between programs within EPPs than across EPPs.

Each of the measures listed in Table 1 can provide valuable information for the different purposes for which the data are collected (e.g., evaluation, program improvement, and public reporting on program performance). For example, the input measures for the program area of candidate



recruitment and admissions may provide information not only for supporting evaluation or program approval, but also for informing the general public and potential candidates about this area of the program. This information could include comparative data on program performance across different EPPs, requirements for admission to the program, and the quality of faculty and coursework. The data on candidate demographics may offer the public insight into EPPs' values and efforts to promote diversity. Data on candidates recruited into high-need content areas may be used to show how well programs are responding to the hiring needs of school districts, while providing potential students with information about which licensure areas are in high demand, potentially leading to greater job opportunities. Finally, EPPs may use these same data to assess how well they are performing in attracting high-quality candidates, meeting goals for candidate diversity, and meeting the needs of their partner school systems. Once EPPs have identified measures that are not meeting program goals, they can then take steps to improve program performance in those areas.

The remainder of this review focuses on three studies that have looked systematically at educator data systems over the past decade. These three studies were conducted from a state policy perspective—that is, to help states design and use evidence-based EPP performance review systems that are accurate, valid, and administratively manageable. Each makes specific recommendations, along with supporting rationales, for the type of data states should collect and how it should be used.

The first is a report by Teacher Preparation Analytics (TPA) (Allen et al. 2014). The Council for the Accreditation of Educator Preparation and Pearson Teacher Education contracted with TPA to develop a framework for analyzing the quality of state teacher preparation assessment and accountability systems. The study reviewed the practices of 15 states comprising the Network for Transforming Educator Preparation (NTEP). These states, recruited by the Council of Chief State School Officers (CCSSO), had all committed to “... taking policy action to ensure teachers are “learner-ready” from their first day in the classroom” (CCSSO 2017, p. 2)

The second report (CCSSO 2018) built upon the findings of the 2014 TPA study by identifying data sources and systems for providing valid measures for each of the 12 key indicators developed in the earlier TPA study (Allen et al. 2014). This study utilized the NTEP Data Systems Action Group, a subgroup of six of the 15 NTEP states, to identify best practices in place, or being proposed, in these states, all of which were considered to be at the “leading edge” (p. 27) of developing high-quality, evidence-based data systems for teacher preparation.

The third featured report is from the National Council on Teacher Quality (NCTQ). For the purposes of this report, two related state policy reviews from the NCTQ's *State Teacher Policy Database* were examined. The first is from their *Teacher Preparation Program Performance Measures* review (NCTQ 2021a). The second is from their best practices for *Teacher Shortages and Surpluses* (NCTQ 2021b). These two areas of review were considered in tandem to highlight how data addressing both teacher preparation performance and teacher supply and demand are necessary to effectively



manage a state's teacher workforce. These NCTQ reviews provide a more concise framework of standards and best practices related to teacher preparation, supply, and demand by establishing a relatively short list of key data system standards for statewide educator data system.

Teacher Preparation Analytics

The Council for the Accreditation of Educator Preparation (CAEP) and Pearson Teacher Education, an education publishing company, commissioned a study by TPA to develop a framework for analyzing the condition of teacher preparation assessment and accountability practices. The study undertook a review of the practices in 15 states¹ to identify best practices and identify gaps and weaknesses in state and EPP data collections and data systems (Allen et al. 2014). The study was guided by the belief that educator preparation data serves three primary purposes:

1. Provide the public with an understanding of how well programs are preparing teacher candidates who have the necessary knowledge and skills to effectively educate students to high standards.
2. Support state and federal oversight and accountability regimes, to highlight high performance and intervene when programs fail to meet standards.
3. Facilitate and guide programs' continuous improvement.

The study resulted in the development of a set of key indicators and associated measures organized within the four domains or assessment categories of:

- » Candidate selection profile
- » Knowledge and skills for teaching
- » Performance as classroom teachers
- » Program productivity and alignment to state needs

TPA's assessment categories and key indicators are designed to assess the performance of EPPs throughout the preparation process, from the time candidates are recruited and enrolled in a program to their placement and performance as early career teachers in schools. Table 2 presents the four assessment categories along with their associated key indicators and performance measures, each of which is described below (Allen et al. 2014).

¹ The 15 states consist of California, Connecticut, Florida, Georgia, Idaho, Kentucky, Louisiana, Massachusetts, Missouri, New York, North Carolina, Ohio, Tennessee, Texas, and Washington.



Table 2. TPA Teacher Preparation Program 2020 Key Effectiveness Indicators

| Assessment Categories | Key Indicators | Measures |
|--|--|--|
| 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 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. |
| 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. |
| Performance as Classroom Teachers | Impact on K-12 Students | TEACHER ASSESSMENTS BASED ON STUDENT LEARNING —Assessment of program completers or alternate route candidates during their first 3 years of full-time teaching using valid and rigorous student learning measures, including value-added and other statewide comparative evident 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 3 years of full-time classroom teaching, using valid, reliable, and rigorous statewide instruments and protocols. |
| | K-12 Student Perceptions | STUDENT SRUVEYS ON TEACHING PRACTICE —K-12 student surveys about completers’ or alternate route candidates’ teaching practice during first 3 years of full-time teaching, using valid and reliable statewide instruments. |
| Program Productivity, Alignment 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/School | 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. |

Source: Allen, Coble, and Crowe 2014.

The Candidate Selection Profile assessment category is used to assess the quality, selectivity, and diversity of teacher candidates recruited into preparation programs. Three key indicators were identified for this assessment category, including candidates':

1. Academic strength: This indicator is measured primarily via prior post-secondary achievement.
2. Teaching promise: An assessment of candidates' dispositions and attitudes related to teaching.
3. Demographic diversity: Includes the monitoring programs' progress toward meeting diversity goals and producing a more diverse teacher workforce.

The Knowledge and Skills for Teaching assessment category assesses the demonstrated knowledge and skills of program graduates. The four key indicators used in this category are:

1. Academic content knowledge: A measure of how well candidates know the subject or subjects they will be teaching.
2. Pedagogical content knowledge: A measure of how well candidates know how to effectively teach their subject or subjects.
3. Teaching skill: A measure of the teaching skills demonstrated by candidates through classroom observation and other performance assessments.
4. Completer rating of program: A collection of data on how satisfied program graduates and their employers are with graduates' level of preparation. These data are typically collected via surveys.

The Performance of Classroom Teachers assessment category measures how well programs' graduates perform in their first years of teaching. The three key indicators for this assessment category are:

1. Impact on K-12 students: This key indicator typically consists of a measure of the academic achievement of teachers' students, such as academic growth.
2. Demonstrated teaching skill: This key indicator consists of the ratings teachers receive through classroom observations by their principal or other district evaluator.
3. K-12 student perceptions: A rating of teachers' classroom effectiveness through surveys of her or his students.



Finally, the ***Program Productivity and Alignment to State Needs*** assessment category measures how well preparation programs are meeting the teacher workforce needs of their states in terms of producing teachers in sufficient numbers to meet district needs across all certification areas. The two key indicators for this assessment category are:

1. **Entry and persistence in teaching:** This key indicator measures the retention of program graduates over their first 5 years of teaching.
2. **Placement and persistence in high-need subjects and schools:** Assesses the number of graduates who get jobs in high-need subjects or schools and the rate at which they are retained over their first 5 years of teaching.

Council of Chief State School Officers

CCSSO, working through its Network for Transforming Educator Preparation (NTEP), created a Data Systems Action Group of six states to identify best practices for selecting and using key indicators for reviewing and reporting on the performance of EPPs. These six participating states are California, Delaware, Louisiana, Massachusetts, Missouri, and Tennessee (CCSSO 2017). This CCSSO work adopted the key indicators model developed by TPA described above. The study was also guided by a view of the purpose of program performance measures and reporting similar to that of the TPA study. CCSSO found that performance data systems for EPPs should be designed to support:

- » The review of EPP performance for accountability and program approval or renewal purposes;
- » The information provided to EPPs for continuous improvement purposes; and
- » Increased transparency of EPP performance through public reporting.

The approach taken by the Data Systems Action Group was to review the practices of the six member states, all of which were recognized at the time for implementing strong EPP performance data systems, to address four objectives (CCSSO 2017, p. 5):

1. To surface the indicators and measures on EPPs, aligned to a research-based framework, that the participating states were collecting evidence on.
2. To identify the key themes underlying states' rationale for their measures, including their reasoning for not using certain measures, as well as their calculation methods.
3. To develop guidance to help other states strategically define which measures they will use as well as how they will use them to review and/or report on EPPs.
4. To offer recommendations to support other states with implementation and further study of measures that states frequently use to review and/or report on EPPs.

An analysis of the performance measurement and data systems across the six states revealed two overarching themes shared by all six state systems. The first was the use of multiple measures for



collecting evidence on numerous indicators of EPP performance. The second was how each participating state developed its EPP performance measurement and data system through ongoing and formalized collection and analysis of stakeholder feedback (CCSSO 2017).

Table 3 below summarizes the observations and guidance developed by the NTEP Data Systems Action Group for each of the four assessment domains and key indicators. For each indicator, the Data System Action Group's analysis identified commonly used measures; described practices and issues around using the measures; and defined other issues and challenges they experienced concerning data collection, handling, reliability, and validity. Several of the indicators recommended in the TPA study had not been adopted by any of the six participating states due to concerns about data privacy, issues with accessing and collecting the data, or lack of valid and reliable data collection instruments. Clearly, even in these six high-capacity states, their performance measures and data systems are still evolving as administrators continue to explore valid and reliable measures that may be collected efficiently while ensuring that all EPPs are assessed fairly and accurately.



Table 3. Summary of NTEP data systems action group guidance

| Domain | Indicator(s) | Common measures | Issues using measure | Other issues and challenges |
|--|---|---|---|--|
| Candidate Selection and Completion (Called Candidate Selection Profile in the TPA Study) | Academic strength | GPA, Praxis Core, ACT, and SAT | How well does it predict subsequent teacher quality following program completion? | <ul style="list-style-type: none"> There is evidence that measures of academic performance may be biased, reducing diversity. |
| | Teaching promise | None to date | NA | <ul style="list-style-type: none"> Concerns about validity and reliability of instruments measuring dispositions. Should states use a common instrument across all EPPs? Support for EPPs to use effectively for program improvement. |
| | Candidate and completer diversity | Percent of candidates and completers by race and ethnicity and percent of candidates and completers by gender | NA | <ul style="list-style-type: none"> Should collect data at multiple points in program. Should collect longitudinal data to spot trends and progress over time. Are there alternatives to self-reported data to improve data validity? |
| Knowledge and Skills for Teaching | <ul style="list-style-type: none"> Knowledge of the subject Pedagogical knowledge Teaching skill Completer Ratings of Program | Teacher performance assessments, national or locally developed | Assessments may have high pass rates, limiting their effectiveness as a meaningful measure of teaching skill. | <ul style="list-style-type: none"> Use national or homegrown assessment? How predictive are teacher performance assessments of teacher effectiveness? Are there better ways to measure completer teaching skill? |

Table 3. Summary of NTEP data systems action group guidance—continued

| Domain | Indicator(s) | Common measures | Issues using measure | Other issues and challenges |
|--|--|---|---|--|
| Performance as Classroom Teachers | <ul style="list-style-type: none"> ■ Teachers’ impact on student learning ■ Teachers’ demonstrated ability to teach ■ Student perceptions of their teachers | <p>Value-added and student growth scores</p> <p>No state currently uses student surveys</p> | <p>Are there other reliable and valid measures of teachers’ impact on student learning?</p> | <ul style="list-style-type: none"> ■ Value-added data limited to certain subjects and grades. ■ How many years should data be collected on completers? ■ How should completers teaching out of licensure be handled? ■ Protecting teacher and student privacy. ■ Are there alternatives to standardized assessment data for measuring impact on student learning? |
| Contribution to State Workforce Needs | Entry and persistence in teaching | Percentage of completers employed by an in-state public school and retention of completers by an in-state public school beyond their first year of teaching | Should states also collect data on longer-term persistence of completers in in-state districts? | <ul style="list-style-type: none"> ■ How to handle placement effects beyond control of EPP, such as location in area with high numbers of private schools, or placement in other states? ■ Is there reasonable access to employment data? ■ Adjust employment and retention measures for economic downturns? |
| | Placement/persistence in high-need subjects and schools | Number of completers who earn an endorsement in high-need subject areas and placement of teachers/ residents in high-need schools | NA | <ul style="list-style-type: none"> ■ Complexity of measuring job entry and persistence given lack of reliable data on out-of-state placements. ■ Better alternatives to measuring how well programs prepare candidates to work in high-need schools. |

Source: Council of Chief State School Officers 2017.

National Council on Teacher Quality

NCTQ’s national database of state educator policies establishes standards for state polices, along with ratings of how well states meet these standards, for two topic areas pertinent to this report. The first is for state program performance measures for EPPs (NCTQ 2021a) and the second is for teacher shortages and surpluses (NCTQ 2021b). Both of these policy areas are included in this study because together they represent essential data collections for states to track, manage, and project the condition of their teacher workforce.

More generally, NCTQ (2021a) recommends that states’ measures of teacher preparation program performance incorporate the following three characteristics:

1. The use of multiple measures for assessing each program area;
2. Data systems capable of linking EPPs to the instructional effectiveness of their graduates; and
3. Data on teacher performance, which should be included as a central component of states’ program approval process.

Table 4 summarizes NCTQ’s state data standards for collecting and reporting data on EPP performance and the tracking of teacher supply and demand.

Table 4. NCTQ state data collection and reporting standards for teacher preparation performance and teacher supply and demand

| Policy area | Standard or measure |
|--|---|
| Teacher Preparation Program Performance Measures | First-time pass rates for all test takers |
| | Final (best attempt) pass rates for all test takers |
| | Data connecting teachers’ student growth data to their preparation programs |
| Teacher Shortages and Surpluses | Alignment of teacher supply and demand data |
| | Teacher mobility data collected and reported at the district level |

Source: National Council on Teacher Quality 2021a and 2021b.

EPP Performance Measures

NCTQ’s standard for EPP performance measures consists of three key indicators (NCTQ 2021a). These are:

1. First-time pass rates for all test takers;
2. Final (best attempt) pass rates for all test takers; and
3. Data connecting teachers’ student growth data to their preparation programs.



First-time pass rates refer to the percentage of all candidates passing their state's licensure test on their first attempt. NCTQ (2021a) further breaks this measure down by whether data are collected and reported by program level (for example, elementary, secondary, or special education certification), institutional level, or state level. The rationale for this distinction is that by disaggregating these data at multiple levels, policymakers, EPP administrators, and the public will be able to make a more comprehensive appraisal of how well individual EPPs perform across program areas, how EPPs compare by program area and as a whole, and where the state across all of its EPPs stands.

Understanding pass rates also provides insights into how well teachers are being prepared and whether candidates will go on to become teachers (Putman 2021). A NCTQ review of 15 studies of the relationship between candidate performance on licensure tests and subsequent teacher effectiveness found that 11 of these studies found a statistically significant positive relationship between the two (Putman 2021). Another NCTQ analysis found that fewer than half of first-time licensure test takers were prepared well enough to pass the test. This percentage is lower for teacher candidates of color. This low pass rate has implications not only for teacher quality but for quantity as well. The NCTQ analysis also found that a quarter of those candidates who did not pass their licensure test on the first attempt did not retake the test, but instead leave the profession. This percentage increases to 34 percent for teacher candidates of color (Putman 2021). This highlights the utility of reporting test pass rate data down to the program and institution levels so that EPPs and state policymakers are able to identify in which programs and institutions first-time pass rates are concerning. NCTQ also recommends, but does not include as part of its performance standards, that these licensure test pass rates should be disaggregated by the race/ethnicity of the test takers as well.

Final (best attempt) pass rates refers to the percentage of all teacher candidates who ultimately pass their state's licensure test. This measure represents the percentage of all teacher candidates who persist in taking the test until they pass and are eligible for licensure, as opposed to giving up on becoming a teacher (NCTQ 2021a).

Based on 2021 data, no state currently collects program level data on first-time licensure test pass rates. One state, Virginia, collects pass rates at the program level for final (best attempt) test administrations. Two states (Florida and Wisconsin) collect first-time pass rates at the institutional level and six states do so at the state level. Six states (Arkansas, California, Florida, Indiana, Massachusetts, and Nebraska) collect final (best attempt) pass rates at the institutional level while three states collect these data at the state level. The remaining states do not report these data for all test takers at any level (NCTQ 2021a).

As of 2021, only 11 states (Colorado, Delaware, Florida, Illinois, Louisiana, Massachusetts, New Jersey, Ohio, Rhode Island, Tennessee, and Virginia) met NCTQ's third standard, collecting and reporting teacher student growth scores linked to their preparation program. Four additional



states collect and link these data but do not report them publicly (NCTQ 2021a). Linking EPPs to the student growth scores of their graduates provides a more direct measure of the performance of their graduates than other measures such as licensure test pass rates.

Measures of Teacher Shortages and Surpluses

NCTQ (2021b) established two standards for state data systems on tracking the supply and demand of teachers. These are:

1. Alignment of teacher supply and demand data; and
2. Teacher mobility data collected and reported at the district level.

By aligning data on teacher supply and demand, states are better able to identify shortage areas and work with EPPs to adjust recruitment and completion strategies to address shortages and avoid overproduction in other certification areas. This alignment also enables states to be more efficient in their preparation of new teachers by better balancing the preparation of candidates by certification area with the staffing needs of its school districts (NCTQ 2021b).

State collection of teacher mobility data at the school district level allows states to track the movement of teachers between districts, allowing them to identify districts or regions of the state that face challenges with retaining effective teachers and supporting them in developing strategies for addressing retention—for example, by identifying issues with pay, working conditions, or geographic desirability (Saenz-Armstrong 2021).

As of 2021, few states fully met either of these standards (NCTQ 2021b). Only one state, Illinois, collected and linked teacher demand and supply data, while 33 others collected partial demand and/or supply data but did not link them. Seventeen states met the second standard by collecting and publicly reporting teacher mobility data at the district level. Two other states have reported these data but do not do so on a regular basis (NCTQ 2021b).

State Examples

This section features the program performance measures and reporting systems of three states, Virginia, Illinois, and Colorado, highlighted in the NCTQ state policy review (NCTQ 2021a; NCTQ 2021b). Examples from these states’ reports are presented in Appendices A through D.

Virginia

Virginia was the top-rated state on NCTQ’s evaluation of state teacher preparation program performance measures and the only state to meet its overall goal for state teacher preparation program performance measures data systems (NCTQ 2021a). The state’s performance measure system consists of seven accountability measures adopted by the Virginia Board of Education for evaluating the quality of its 36 teacher preparation programs. The programs are reviewed



biennially and all of the measures are reported at the program level within EPPs. The results are presented in a Biennial Report prepared by the Virginia Department of Education (VDOE). The most recent Biennial Report was released in November 2022 for the time period of September 1, 2019, through August 31, 2021 (VDOE 2022). The regulations governing the review and approval of EPPs are found in Title 8, Chapter 543 of the Regulations of the Virginia Administrative Code (VAC 2018).

The seven accountability measures include:

1. Candidate progress and performance on prescribed licensure assessments.
2. Candidate progress and performance on licensure assessments of basic skills for individuals seeking entry into an approved education preparation program.
3. Structured and integrated field experiences to include student teaching requirements.
4. Evidence of opportunities for candidates to participate in diverse school settings that include racial, economic, linguistic, and ethnic diversity throughout the program experiences.
5. Evidence of contributions to preK–12 student achievement by candidates completing the program.
6. Evidence of employer job satisfaction with candidates completing the program.
7. Partnerships and collaborations based on preK–12 school needs.

For each biennial reporting period, EPPs must submit the required data for each performance measure at the education program level to the VDOE. A sample of an institutional performance report for EPPs is provided in Appendix A. Table 5 shows the data reported by EPPs for each program performance measure.



Table 5. Performance measures and supporting data/evidence for Virginia preparation program accountability

| Performance measure | Data reported by EPPs |
|---|--|
| Candidate progress and performance on prescribed licensure assessments | <ul style="list-style-type: none"> ■ Number of program completers and number of program exiters for current reporting period. ■ For programs with 10 or more completers/exiters, the number of candidates who passed, did not pass, who did not take, and who were not required to take the applicable licensure assessment. |
| Candidate progress and performance on licensure assessments of basic skills for individuals seeking entry into an approved education preparation program | <ul style="list-style-type: none"> ■ Results of prescribed entry-level assessments. ■ Documentation that candidates who did not pass the assessment had the opportunity to address any deficiencies. ■ Programs must report whether they MET or DID NOT MEET the standard. |
| Structured and integrated field experiences to include student teaching requirements | <ul style="list-style-type: none"> ■ Evidence that candidates received a quality structured and integrated field experience that prepared them to work in diverse educational communities. ■ Evidence that candidates completed at least 300 clock hours of field experiences for initial programs, including at least 150 clock hours of directed student teaching. <p>Programs must report whether they MET or DID NOT MEET the standard.</p> |
| Evidence of opportunities for candidates to participate in diverse school settings that include racial, economic, linguistic, and ethnic diversity throughout the program experiences | <ul style="list-style-type: none"> ■ Evidence of opportunities throughout the program experiences for candidates to participate in diverse school settings, including racial, economic, linguistic, and ethnic diversity. <p>Programs must report whether they MET or DID NOT MEET the standard.</p> |
| Evidence of contributions to preK–12 student achievement by candidates completing the program | <ul style="list-style-type: none"> ■ Evidence showing candidates know about, create, and use appropriate and effective assessments in teaching that provide dependable information about student achievement. ■ Evidence that faculty made provisions for evaluating the effects candidates had on student learning in the context of teaching as they design unit assessment systems and assessments for each program. ■ Evidence the program assesses candidates’ mastery of exit criteria and performance proficiencies, including the ability to affect student learning through the use of multiple sources of data, including culminating experiences, portfolios, interviews, videotaped and observed classroom performance, standardized tests, and course grades. <p>Programs must report whether they MET or DID NOT MEET the standard.</p> |



Table 5. Performance measures and supporting data/evidence for Virginia preparation program accountability—continued

| Performance measure | Data reported by EPPs |
|--|--|
| <p>Evidence of employer job satisfaction with candidates completing the program</p> | <ul style="list-style-type: none"> ■ Indicators of achievement of this standard must include documentation that the program has 2 years of evidence regarding candidate performance based on employer surveys. <p>Programs must report whether they MET or DID NOT MEET the standard.</p> |
| <p>Partnerships and collaborations based on preK–12 school needs</p> | <ul style="list-style-type: none"> ■ Documented evidence the program has established partnerships reflecting collaboratively designed program descriptions based on identified needs of the preK–12 community. ■ Documented evidence that the administration and supervision program collaborate with partnering schools to identify and select candidates for school leadership programs who meet local needs, demonstrate potential for and interest in leadership, and meet the qualifications for admission to advanced programs. <p>Programs must report whether they MET or DID NOT MEET the standard.</p> |

Source: Virginia Department of Education 2022.

Illinois

Illinois is one of three states rated as Nearly Meets Goal by NCTQ² (NCTQ 2021a). The centerpiece of Illinois’ performance measurement and reporting system is the Illinois Educator Preparation Profile (IEPP) (Illinois State Board of Education 2022). Illinois is one of the states that have adopted the Key Effectiveness Indicators domains developed by CCSSO discussed above. These consist of:

1. Candidate selection and completion;
2. Knowledge and skills for teaching;
3. Performance as classroom teachers; and
4. Contribution to state needs.

The State Board of Education’s IEPP website (Illinois State Board of Education 2022) states the purpose of the performance measures system is to provide “... a critical connection between the state and teacher preparation programs to facilitate program improvement and provide valuable information to programs, prospective teachers, potential employers, and the general public.”

² The other two states are Florida and Massachusetts.



The IEPP³ displays data at the institution/program level for 743 teacher preparation programs at 53 institutions of higher education in Illinois. Each program profile includes a web page providing general information about the program, summarizing performance in each domain area, and showing a program score card for each indicator under each domain. Programs are scored on a 4-point scale for each domain and overall. The four rating levels are: 1) Needs Improvement, 2) Developing, 3) Commendable, and 4) Exemplary. Each of the four domains may be awarded up to 25 points for a maximum program score of 100 points. The indicators within each domain are weighted according to their contribution to the domain’s total score. For example, in the Candidate Selection and Completion domain, the Candidate Entry GPA and Diverse Completers indicators each constitute 40 percent of the domain’s total score, while the Candidate Race/Ethnicity indicator constitutes 20 percent. Exemplary programs must earn at least 75 percent of available points, Commendable programs must earn between 50 percent and 74.99 percent of available points, Developing programs must earn between 25 percent and 49.99 percent of available points, and Needs Improvement programs have earned less than 25 percent of the available points.

The IEPP is tailored to provide information for different audiences, including summary information by institution and program for users who are recruiting and hiring teachers, for those who are looking for a preparation program in which to enroll, and for those who are looking for information on a specific program (Illinois State Board of Education 2022). Appendix B shows an example of an IEPP report for a specific teacher preparation program.

Table 6 summarizes the domain areas, indicators, and performance measures used for rating programs in the IEPP. Illinois is one of 11 states that link and publicly report student growth data to teachers’ preparation programs. It also reports first-time pass rates and final pass rates for all licensure test takers at the state level (NCTQ 2021a).

Table 6. IEPP domains, indicators, and performance measures

| Domain | Indicator | Performance measure |
|------------------------------------|--------------------------|--|
| Candidate selection and completion | Candidate entry GPA | The percentage of candidates who had a GPA of 3.0 or higher prior to entering the institution. |
| | Candidate Race/Ethnicity | The percentage of candidates who identify as a person of color. |
| | Diverse Completers | The percentage of candidates enrolled in a preparation program that identify as a member of a diverse group (by racial/ethnic, socioeconomic, and/or first-generation status) and complete the program within the standard program length. |

³ The IEPP may be accessed at <https://www.isbe.net/iepp>.

Table 6. IEPP domains, indicators, and performance measures—continued

| Domain | Indicator | Performance measure |
|-----------------------------------|---|---|
| Knowledge and skills for teaching | Mastery of Teaching Subjects | The percentage of candidates who passed the content area exam on any attempt. |
| | General Teaching Skill | The percentage of candidates who passed the edTPA exam on any attempt. |
| | Completer Survey | An index score that measures how well completers believe that their program has prepared them as educators. |
| Performance as classroom teachers | Demonstrated Teaching Skill | The percentage of completers scoring “proficient” or “excellent” on their overall performance evaluations. |
| Contribution to state needs | Placement in Teaching | The percentage of completers who begin working as a full-time teacher in an Illinois public school, nonpublic school, or early learning setting within 2 years of completing the program. |
| | Placement in Teaching in High-Needs Schools | The percentage of completers who begin working as a full-time teacher in a high-needs Illinois public school within 2 years of completing the program. |
| | Persistence in Teaching | The percentage of completers who continue working in an Illinois public school for 3 or more consecutive years. |
| | Persistence in Teaching in High-Needs Schools | The percentage of completers who continue working in a high-needs Illinois public school for 3 or more consecutive years. |

Note: For more detail on the performance domains, indicators, and measures and how they are calculated, see the Illinois Educator Preparation Profile. Continuous Improvement and Accountability System: 2021 Technical Specifications Guide at <https://www.isbe.net/Documents/2021-IEPP-Tech-Guide.pdf>.

Source: Illinois State Board of Education 2021.

Colorado

Colorado is one of seven states that partially meet NCTQ’s goal for EPP performance measurement. According to NCTQ, Colorado does not require EPPs to publish either first-time or final pass rates for all test takers on content assessments. However, it is one of only 11 states to link and report teachers’ student growth data to their EPPs (NCTQ 2021a). NCTQ’s review of Colorado’s educator-related data systems highlights its dashboards for teacher preparation accountability and for teacher supply and shortages, noting the state reports data on retention rates of both new hires and all teachers (Saenz-Armstrong 2021).

Colorado’s Education Preparation Report Dashboard provides a range of information on the state’s teacher preparation programs. In addition to presenting measures of program size and quality, the



dashboard also summarizes key teacher supply data, from EPP enrollment to the classroom, at the program and endorsement levels, and further disaggregated by teacher demographic and quality variables (Colorado Department of Education 2022a). The dashboard consists of the following seven program measures:

1. Program enrollment data disaggregated by candidate gender and race/ethnicity and by endorsement area, providing an overview of candidates in the state’s teacher pipeline.
2. Completion data disaggregated by the same candidate characteristics as enrollment.
3. First and final pass rates on licensure tests by EPP and endorsement area, disaggregated by race/ethnicity.
4. New teacher employment of EPPs’ graduates, measured by the in-state placement rate and disaggregated by gender, race/ethnicity, grade level, and endorsement area.
5. New teacher context of employment, showing the demographic characteristics of the schools employing these new graduates (including the percentage of English-language learners, minority students, and students living in poverty), and the quality of their employing districts as measured by the districts’ accreditation ratings.
6. New teacher performance shows the annual evaluation ratings of new teachers disaggregated by EPP, endorsement area, and teaching quality standard.
7. New teacher retention, mobility and attrition shows the percentage of new teachers by EPP and endorsement area who are retained by their school, district, and state, and those leaving the teaching profession.

Appendix C contains examples of the dashboard pages for completion, licensure test pass rates, employment, performance, and retention.

For the other side of the teacher supply and demand equation, Colorado developed their Educator Shortage Survey Results Dashboard. The Colorado Department of Education administers an annual survey to the state’s school districts to collect data on open teacher, principal, student services personnel, and paraprofessional positions (Colorado Department of Education 2022b). The dashboard presents counts related to educator shortages, which may be disaggregated by endorsement area and district geographic designation (Non-Rural, Rural, Small Rural, BOCES,⁴ and Other). The counts are categorized as:

- » Open positions at the beginning of the year;
- » Positions filled by long-term substitutes;
- » Positions filled by retired educators;
- » Positions filled by alternative candidates;

⁴ BOCES is the acronym for Boards of Cooperative Educational Services, a network of 21 regional education service centers in the state.



- » Positions filled by emergency candidates; and
- » Unfilled positions.

The dashboard also includes an interactive map for displaying shortage data by school district. Appendix D presents an example of the Educator Shortage Survey Results Dashboard.

Conclusion

While several recent studies have raised concerns about West Virginia’s system for collecting and reporting teacher labor market and EPP performance data, they also issued several recommendations for improving the system that the state is taking seriously. As it moves forward with this work, the WVDE should take advantage of the expertise and experiences of states recognized for the quality of their data systems, such as the six states participating in CCSSO’s Data Systems Action Group. Access to more and better data is an important building block in the state’s efforts to address teacher shortages and improve teacher effectiveness.



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Appendix A. Sample Virginia EPP Accountability Report

Standards for Biennial Approval of Education Programs (8VAC20-542-40.1) Certification of Standard 1 - Assessment Passing Rates

Biennial Reporting Period: September 1, 2017, through August 31, 2019
Name of Institution: SAMPLE UNIVERSITY

| Std. # | Description of Standard | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---------------------------|-----------------------------------|---------------------------|------------------------------|---------------|---|----|----|----|-------------------------------|---|----|----|----|----------------|---|----|----|----|---------------|---|----|-----|--|
| 1. | Candidate Progress and Performance on Prescribed Board of Education Licensure Assessments. Candidate passing rates, reported by percentages, shall not fall below 80% biennially for individuals completing and exiting the program. Candidates completing a program shall have successfully completed all coursework, required assessments, including those prescribed by the Board of Education, and supervised student teaching or internship. Candidates exiting a program shall have successfully completed all coursework, regardless of whether the individuals attempted, passed, or failed required assessments, including those prescribed by the Board of Education, and/or who may not have completed supervised student teaching or required internship. | | | | | | | | | | | | | | | | | | | | | | | | |
| Ref. | Description of Assessments | | | | | | | | | | | | | | | | | | | | | | | | |
| A | Academic Skills Assessment: The prescribed test is the <i>Virginia Communication and Literacy Assessment (VCLA)</i> . This assessment is applicable to individuals seeking an initial teaching license. The VCLA is not required for add-on endorsements or for Administration and Supervision PreK-12, School Counselor PreK-12, School Psychology, or School Social Worker endorsements. | | | | | | | | | | | | | | | | | | | | | | | | |
| B | Content Assessment: The prescribed test is the <i>Praxis Subject Assessment</i> . This assessment is applicable to the following subject area endorsements only: Business and Information Technology; Early/Primary Education PreK-3; Elementary Education PreK-6; English; English as a Second Language PreK-12; French; German; Family and Consumer Sciences; Health and Physical Education; History and Social Sciences; Marketing Education; Mathematics; Middle Education 6-8; Music Education-Instrumental; Music Education-Vocal/Choral; Science-Biology; Science-Chemistry; Science-Earth Science; Science-Physics; Spanish; Technology Education; and Visual Arts. Also, a Braille assessment is prescribed for the Special Education - Blindness/Visual Impairments PreK-12 endorsement. | | | | | | | | | | | | | | | | | | | | | | | | |
| C | Virginia Reading Assessment: The prescribed test for individuals seeking an initial teaching license with endorsements in Early/Primary Education PreK-3, Elementary Education PreK-6, Special Education-General Curriculum, Special Education-Deaf and Hard of Hearing PreK-12, or Special Education-Blindness/Visual Impairments PreK-12 is either the <i>Virginia Reading Assessment for Elementary and Special Education Teachers (VRA)</i> or the <i>Reading for Virginia Educators: Elementary and Special Education (RVE)</i> . The prescribed test for the Reading Specialist endorsement is the <i>Virginia Reading Assessment for Reading Specialist</i> or the <i>Reading for Virginia Educators: Reading Specialist</i> . | | | | | | | | | | | | | | | | | | | | | | | | |
| D | School Leadership Assessment: The prescribed test, applicable to the Administration and Supervision PreK-12 endorsement only, is the <i>School Leadership Licensure Assessment (SLLA)</i> . | | | | | | | | | | | | | | | | | | | | | | | | |
| Key | | | | | | | | | | | | | | | | | | | | | | | | | |
| P = Passed; NP = Not Passed; NT = Not Taken; NR = Not Required (because the candidate is seeking an added endorsement to an existing Virginia teaching license). | | | | | | | | | | | | | | | | | | | | | | | | | |
| Not Applicable (N/A) = The licensure assessment is not prescribed for the respective approved education program. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Instructions | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please note that if an approved education program had less than ten completers and exiters reported in the prior biennial reporting period, then those completers and exiters are displayed in the table below under the "Rollover Only from Prior Biennial Reporting Period" column and will automatically be summed together with the current biennial reporting period completers and exiters for that education program. | | | | | | | | | | | | | | | | | | | | | | | | | |
| For each approved education program listed below, complete the following information as it pertains to the Current Biennial Reporting Period, i.e., September 1, 2017, through August 31, 2019: | | | | | | | | | | | | | | | | | | | | | | | | | |
| Step 1 Enter the number of program completers for the current biennial reporting period. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Step 2 Enter the number of program exiters for the current biennial reporting period. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Note, the spreadsheet will automatically calculate the "Total Completers and Exiters" for each approved education program based on the sum of the "Rollover" completers and exiters and of your current period entries in Step 1 and Step 2. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Step 3 If there are ten or more "Total Completers and Exiters" , then proceed to enter in each of the designated columns the number (i.e., zero or higher) of candidates who passed (P), who did not pass (NP), who did not take (NT), and who were not required to take (NR) the applicable licensure assessments for that approved program. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Step 4 If there are less than ten "Total Completers and Exiters" for an approved education program, then do NOT enter candidate results for the respective licensure assessments for that approved education program. These candidates will be rolled over, i.e., added into the pool used for the next biennial report. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Note, the "Pass Rate (%)" will automatically be calculated by the spreadsheet for each respective licensure assessment for each approved education program. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Approved Education Program | Rollover Only from Prior Biennial Reporting Period | | Current Biennial Reporting Period | | Total Completers and Exiters | VCLA (A) | | | | | PRAXIS SUBJECT ASSESSMENT (B) | | | | | VRA or RVE (C) | | | | | SLLA (D) | | | | |
| | Number of Program Completers | Number of Program Exiters | Number of Program Completers | Number of Program Exiters | | Pass Rate (%) | P | NP | NT | NR | Pass Rate (%) | P | NP | NT | NR | Pass Rate (%) | P | NP | NT | NR | Pass Rate (%) | P | NP | NT | |
| Elementary Education PreK-6 | | | | | 0 | | | | | | | | | | | | | | | | | | | | |
| Math Specialist for Elementary/Middle Ed. | | | | | 0 | | | | | | | | | | | | | | | | | | | | |
| Reading Specialist | | | | | 0 | | | | | | | | | | | | | | | | | | | N/A | |
| School Counselor PreK-12 | | | | | 0 | | | | | | | | | | | | | | | | | | | | |
| School Psychology | | | | | 0 | | | | | | | | | | | | | | | | | | | | |



| Approved Education Program | Rollover Only from Prior Biennial Reporting Period | | Current Biennial Reporting Period | | Total Completers and Exitters | VCLA (A) | | | | | PRAXIS SUBJECT ASSESSMENT (B) | | | | | VRA or RVE (C) | | | | | SLLA (D) | | | | | | |
|--|--|----------------------------|-----------------------------------|----------------------------|-------------------------------|----------------|---|----|----|----------------|-------------------------------|---|----|----|----------------|----------------|---|----|----|----------------|----------------|---|----|----|--|--|--|
| | Number of Program Completers | Number of Program Exitters | Number of Program Completers | Number of Program Exitters | | Pass Rate (%) | P | NP | NT | NR | Pass Rate (%) | P | NP | NT | NR | Pass Rate (%) | P | NP | NT | NR | Pass Rate (%) | P | NP | NT | | | |
| German PreK-12 | | | | | 0 | | | | | | | | | | | | | | | | | | | | | | |
| Dance Arts PreK-12 | | | | | 0 | | | | | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | | | |
| English | | | | | 0 | | | | | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | | | |
| History and Social Sciences | | | | | 0 | | | | | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | | | |
| Mathematics | | | | | 0 | | | | | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | | | |
| Science - Biology | | | | | 0 | | | | | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | | | |
| Science - Chemistry | | | | | 0 | | | | | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | | | |
| Science - Earth Science | | | | | 0 | | | | | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | | | |
| Science - Physics | | | | | 0 | | | | | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | | | |
| Special Education - Early Childhood | | | | | 0 | | | | | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | | | |
| Special Education - General Curriculum K-12 | | | | | 0 | | | | | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | | | |
| Driver Education (Add-on) | | | | | 0 | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | | |
| Mathematics - Algebra I (Add-on) | | | | | 0 | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | | |
| Administration and Supervision PreK-12 | | | | | 0 | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | | | | | | | |
| Administration and Supervision PreK-12 (central office only) | | | | | 0 | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | Not applicable | | | | | | |

NOTE: An individual who has taken the SLLA, regardless of whether they pass or fail, must be reported under the full Administration and Supervision PreK-12 program. Only individuals who have NOT taken the SLLA and are seeking the Administration and Supervision PreK-12 (central office only) endorsement may be reported under the Administration and Supervision (central office only) program.

Source: [Biennial Report: 2019-2021 Approved Teacher Education Programs Compliance - Accountability Measurements 1 through 7.](#)



**Standards for Biennial Approval of Education Programs (8VAC20-542-40.2-7)
Certification of Standards 2 through 7**

Biennial Reporting Period: September 1, 2017, through August 31, 2019

Name of Institution: SAMPLE UNIVERSITY

| Std. # | Description of Standard | | | | | |
|--|--|-------------|-------------|-------------|-------------|-------------|
| 2. | Candidate progress and performance on an assessment of basic skills as prescribed by the Board of Education for individuals seeking entry into an approved education preparation program. Indicators of the achievement of this standard shall include: <ul style="list-style-type: none"> a. Results on Board of Education prescribed entry-level assessments; and b. Documentation that candidates enrolled in the program who fail to achieve a minimum score established by the Board of Education have the opportunity to address any deficiencies. | | | | | |
| 3. | Structured and integrated field experiences to include student teaching requirements. Indicators of the achievement of this standard shall include the following: <ul style="list-style-type: none"> a. Evidence that candidates receive quality structured and integrated field experiences that prepare them to work in diverse educational environments; and b. Evidence that at least 300 clock hours of field experiences for initial programs (including early exposure to preK-12 classroom experiences) to include a minimum of 150 clock hours of directed student teaching requirements are provided. Programs in administration and supervision shall provide field experiences with a minimum of 320 clock hours as part of a deliberately structured internship over the duration of a preparation program. The majority of the school level supervised experience shall take place during the school day in concentrated blocks of time when preK-12 students are present. [*Note: Reading Specialist endorsement programs must provide evidence | | | | | |
| 4. | Evidence of opportunities for candidates to participate in diverse school settings that provide experiences with populations that include racial, economic, linguistic, and ethnic diversity throughout the program experiences. The indicator of the achievement of this standard shall include evidence that the professional education programs provide opportunities for candidates to have program experiences in diverse school settings that provide experiences with populations that include racial, economic, linguistic, and ethnic diversity within each biennial period. | | | | | |
| 5. | Evidence of contributions to preK-12 student achievement by candidates completing the program. Indicators of the achievement of this standard shall include the following: <ul style="list-style-type: none"> a. Evidence to show that candidates know about, create, and use appropriate and effective measurements in teaching that shall provide dependable information about student achievement; b. Evidence to document faculty have made provisions for evaluating effects that candidates have on preK-12 student learning in the context of teaching as they design unit assessment systems and assessments for each program; and c. Evidence that the education program assesses candidates' mastery of exit criteria and performance proficiencies, including the ability to affect student learning, through the use of multiple sources of data such as culminating experience, portfolios, interviews, videotaped and observed performance in schools and standardized tests, and course grades. | | | | | |
| 6. | Evidence of employer job satisfaction with candidates completing the program. The indicator of the achievement of this standard shall include documentation that the education program has two years of evidence regarding candidate performance based on employer surveys. | | | | | |
| 7. | Partnerships and collaborations based on preK-12 school needs. Indicators of the achievement of this standard shall include the following: <ul style="list-style-type: none"> a. Documented evidence that the education program has established partnerships reflecting collaboratively designed program descriptions based on identified needs of the preK-12 community. b. Documented evidence that the administration and supervision program collaborates with partnering schools to identify and select candidates for school leadership programs who meet local needs, demonstrate both potential for and interest in school leadership, and meet the qualifications for admission to advanced programs. | | | | | |
| NOTE | Documentation of the evidence of Standards 2 through 7 above must be maintained at the IHE and made available for audit upon request by VDOE. | | | | | |
| Instructions | | | | | | |
| For the current biennial reporting period, i.e., September 1, 2017, through August 31, 2019, please complete the following information: | | | | | | |
| 1) For each approved education program listed below that received approval prior to September 1, 2017 , and for which you had at least one program completer or program exiter during the current biennial reporting period , indicate if you met the standards (as defined above) by selecting either "MET" or "NOT MET" from the dropdown box for each standard. | | | | | | |
| 2) For each approved education program listed below that received approval prior to September 1, 2017 , for which you had a total of zero program completers and program exiters for the current biennial reporting period , select "INACTIVE" from the dropdown box for each standard. | | | | | | |
| 3) For each approved education program listed below that received approval on or after September 1, 2017 , select "NEW" from the dropdown box for each standard. | | | | | | |
| Approved Education Program | Standard #2 | Standard #3 | Standard #4 | Standard #5 | Standard #6 | Standard #7 |
| Elementary Education PreK-6 | | | | | | |
| Math Specialist for Elementary/Middle Ed. | | | | | | |
| Reading Specialist | | | | | | |
| School Counselor PreK-12 | Not applicable | | | | | |
| School Psychology | Not applicable | | | | | |
| German PreK-12 | | | | | | |

Source: [Biennial Report: 2019-2021 Approved Teacher Education Programs Compliance - Accountability Measurements 1 through 7.](#)



Building a Better Data System for Teacher Supply, Demand, and Preparation: A Strategy for Addressing West Virginia’s Teacher Shortage

| Approved Education Program | Standard #2 | Standard #3 | Standard #4 | Standard #5 | Standard #6 | Standard #7 |
|--|----------------|-------------|-------------|-------------|-------------|-------------|
| Dance Arts PreK-12 | | | | | | |
| English | | | | | | |
| History and Social Sciences | | | | | | |
| Science - Physics | | | | | | |
| Science - Chemistry | | | | | | |
| Science - Chemistry | | | | | | |
| Science - Earth Science | | | | | | |
| Science - Physics | | | | | | |
| Special Education - Early Childhood | | | | | | |
| Special Education - General Curriculum K-12 | | | | | | |
| Driver Education (Add-on) | Not applicable | | | | | |
| Mathematics - Algebra I (Add-on) | Not applicable | | | | | |
| Administration and Supervision PreK-12 | Not applicable | | | | | |
| Administration and Supervision PreK-12 (central office only) | Not applicable | | | | | |

Source: [Biennial Report: 2019-2021 Approved Teacher Education Programs Compliance - Accountability Measurements 1 through 7.](#)



Appendix B. Examples of Illinois Report

About Tab

Mathematics
DePaul University

About
Performance
Score Card

About This Program

What Makes Us Special

- DePaul's Secondary Education program prepares teachers who are committed to creating equitable, compassionate, intellectually rich, and socially just learning environments. As part of a Vincentian university, our College cultivates the social conscience, knowledge and practices necessary to address social inequities within classrooms and school communities. Our mission also calls us to support high need sites beyond public schools throughout Chicago and the state. We are proud of this service to Illinois.
- In DePaul's Secondary Education program, teacher candidates are prepared to earn licensure in grades 5-12 and also complete the requirements to gain a certificate in Teaching and Learning from the International Baccalaureate (IB) Organization.
- Secondary Education teacher candidates have deep content expertise and learn to translate this expertise into engaging, equitable practice through two content methods courses and a focus on professionalizing teaching and growing socio-emotional skills within students.

Our Student Teaching & Clinical Experiences

Our program's students observe in classrooms and work with youth in field experiences early and often. Each student gradually takes on more teaching responsibility with each course, culminating in a final quarter of full-time student teaching. DePaul's Student Teaching and Field Experience Office facilitates placements in schools and other sites working with youth. Students provide input into where they are placed and have opportunities to work in multiple school settings (public and private) within Chicago and in neighboring communities. Our College maintains extensive connections throughout Chicagoland and with alumni teaching in the region. This broad network enables DePaul to secure field experience placements in a broad range of schools, giving students a rich array of teaching opportunities.

How We Prepare for the Classroom

DePaul's Secondary Education program students to work with culturally, racially, and linguistically diverse youth throughout its coursework, as well as through specific courses that focus on educational and cultural foundations of education, working with English Language Learners, and teaching students with exceptionalities. It also prepares critical, creative practitioners who continually inquire and reflect on educational and professional practices. Our coursework integrates concrete, practical tools for the classroom with theory that provides reasons for using different teaching approaches. Opportunities to work with schools are paired with and integrated into coursework throughout the program, enabling students to apply the principles they are learning into classroom practice.

Additional Context for Reauthorization Status

Contact Us

Website
<https://education.depaul.edu/academics/teacher-education/Pages/default.aspx>

Contact
 Graduate Admissions
 edgradadmissions@depaul.edu
 (773) 925-4405

Address
 1 E Jackson Blvd,
 Chicago IL 60604-2287

Details

Program Type(s) ⓘ

Traditional
 Alternative
 Residency
 Non Residency

Program Level(s) ⓘ

Undergraduate
 Graduate

Program Length(s) ⓘ

8 Semesters
 Undergraduate,
 4 Semesters
 Graduate.

Program Size ⓘ

0-25

Institution Type(s) ⓘ

Public
 Private

Data Snapshots

| Gender | Percentage |
|--------|------------|
| Female | 43.8% |
| Male | 56.2% |

2022 Candidate Demographics

What does this mean?
 The percentage or number of candidates that enter the preparation program by gender, race/ethnicity, socio-economic and first generation subgroups.

Why is it included?
 It is important that programs recruit and train a strong, diverse cohort of candidates.

| Year | Enrollment | Completers |
|------|------------|------------|
| 2017 | 12 | 5 |
| 2018 | 7 | 8 |
| 2019 | 7 | 8 |
| 2020 | 10 | 10 |
| 2021 | 11 | 6 |

Enrollment/Completers over Time

What does this mean?
 The number of individuals that enroll and complete the program in the last five years.

Why is it included?
 It is important to understand the number of individuals that enroll in a preparation program and the number of individuals that complete a program in a given year.

Source: [Illinois Educator Preparation Profile webpage](#).



Performance Tab

Mathematics

DePaul University

About
Performance
Score Card

ISBE calculates the program's **Overall** score based on 11 indicators organized into 4 domains over 5 years. The possible designations are:

Exemplary
Commendable
Developing
Needs Improvement
or
No Score

[Watch a video about the IEPP's goals](#)

Candidate Selection and Completion ⓘ ▶

Is this program recruiting and completing academically accomplished, diverse teachers? This domain is scored on 3 indicators.

Commendable

Knowledge and Skills for Teaching ⓘ ▶

Is this program equipping candidates with the subject expertise, teaching experience, and skills needed to be successful with students? This domain is scored on 3 indicators.

Note: On the 2021 and 2022 scorecards, full points were awarded to all programs for the General Teaching Skill and Completer Survey indicators. See the Scorecard tab for more information.

Exemplary

Performance as Classroom Teachers ⓘ ▶

How well are program completers performing as teachers in their own classrooms? This domain is scored on 1 indicator.

Commendable

Contribution to State Needs ⓘ ▶

Is this program producing teachers that help meet the state's high needs subjects? This domain is scored on 5 indicators.

Exemplary

Overall ▶

Is this program preparing strong, learner-ready teachers for classrooms? This is scored on 11 indicators organized into 4 data domains.

Commendable

Why is this important?

The IEPP overall performance designation is important in the reauthorization of preparation programs. The overall designation a program receives in the reports released in 2020 and 2021 is for **information only**. Starting in 2022, the IEPP reports will have formal regulatory consequences for the renewal and continued approval of teacher preparation programs. These consequences are explained in the Educator Preparation Program Reauthorization Guide, which is located under the "Resources" section of this page.

[Watch a video about the IEPP's goals](#)

What do scores mean?

Programs receive an overall performance designation and a designation for each domain. The performance designations are based on the percentage of points that a program earns.

| | |
|--------------------------|---------------------|
| Exemplary | 75 - 100% of points |
| Commendable | 50 < 75% of points |
| Developing | 25 < 50% of points |
| Needs Improvement | 0 < 25% of points |
| No Score | Not enough data ⓘ |

[See how scores are calculated](#) ▶

How does this program compare?

| | | |
|-------------------|--|-----|
| Exemplary | <div style="background-color: #004a7c; height: 10px; width: 63%;"></div> | 63% |
| Commendable | <div style="background-color: #2e8b57; height: 10px; width: 27%;"></div> | 27% |
| Developing | <div style="background-color: #ff8c00; height: 10px; width: 10%;"></div> | 10% |
| Needs Improvement | <div style="background-color: #800040; height: 10px; width: 0%;"></div> | 0% |
| No Score | <div style="background-color: #666; height: 10px; width: 0%;"></div> | 0% |

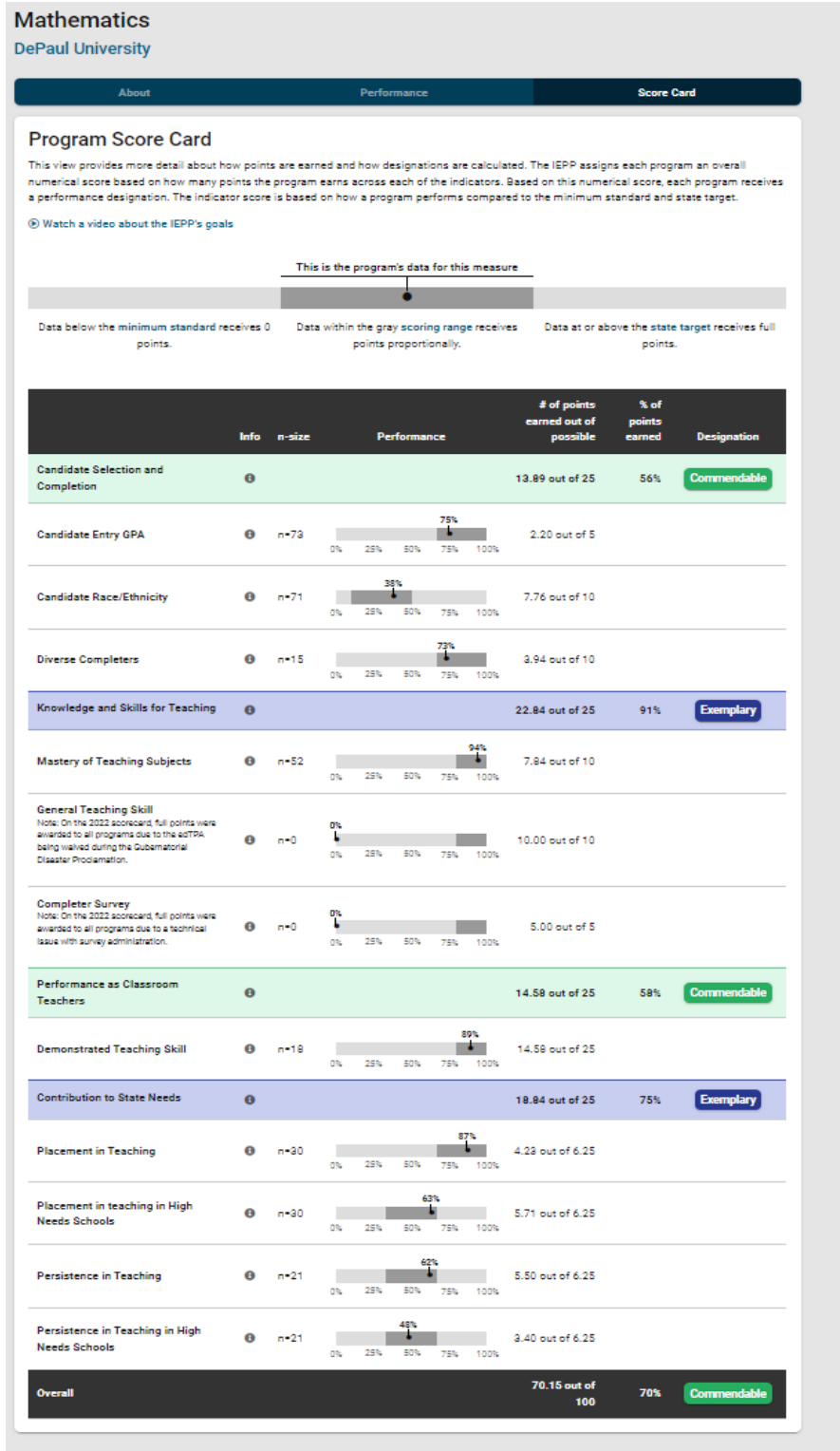
27% of all **Mathematics** programs in Illinois received the same **Overall** designation of Commendable

[Visit the state report](#) ⓘ

Source: [Illinois Educator Preparation Profile webpage](#).



Score Card Tab



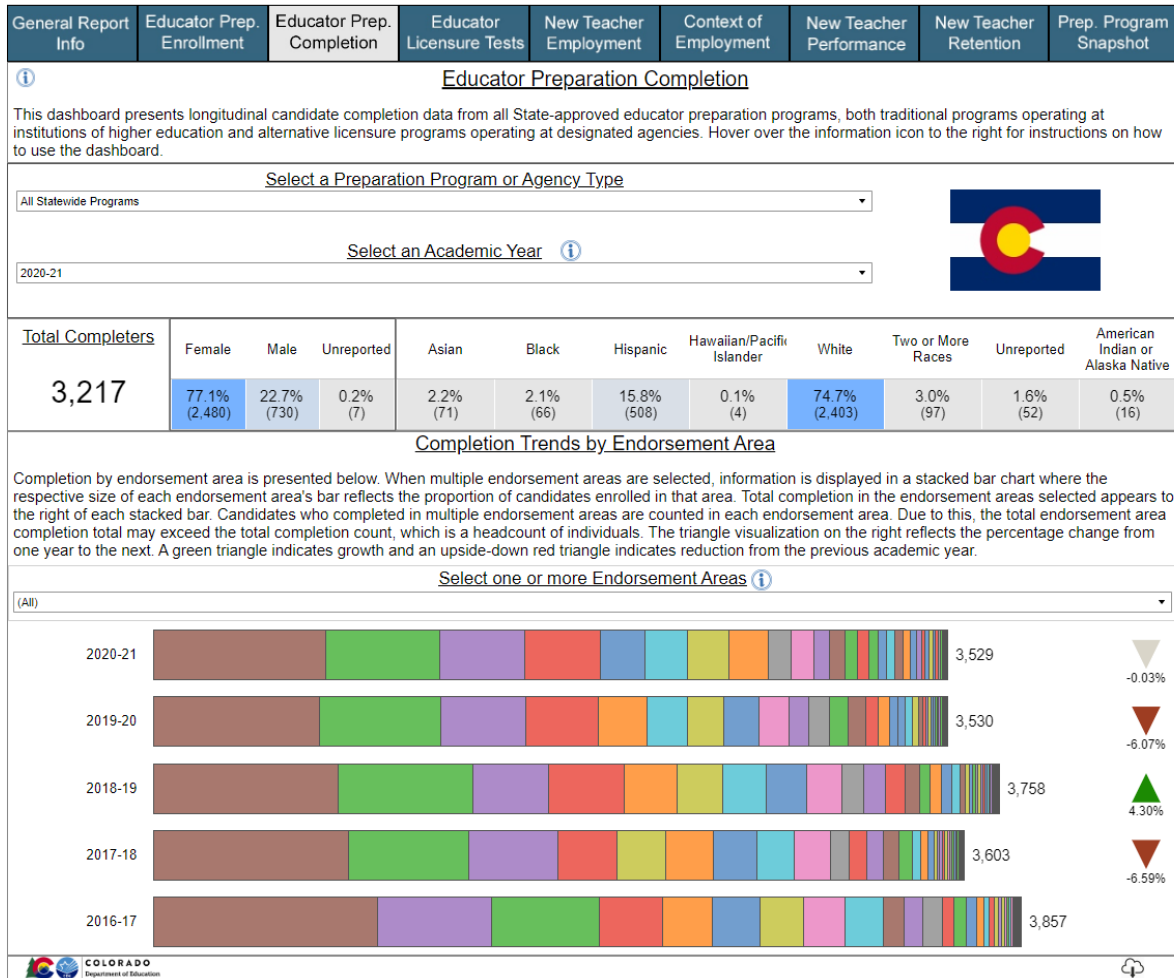
Source: [Illinois Educator Preparation Profile Program Scorecard webpage.](#)



Appendix C. Colorado Educator Preparation (Supply) Report Dashboard

Completion

Educator Preparation Program Report Dashboard

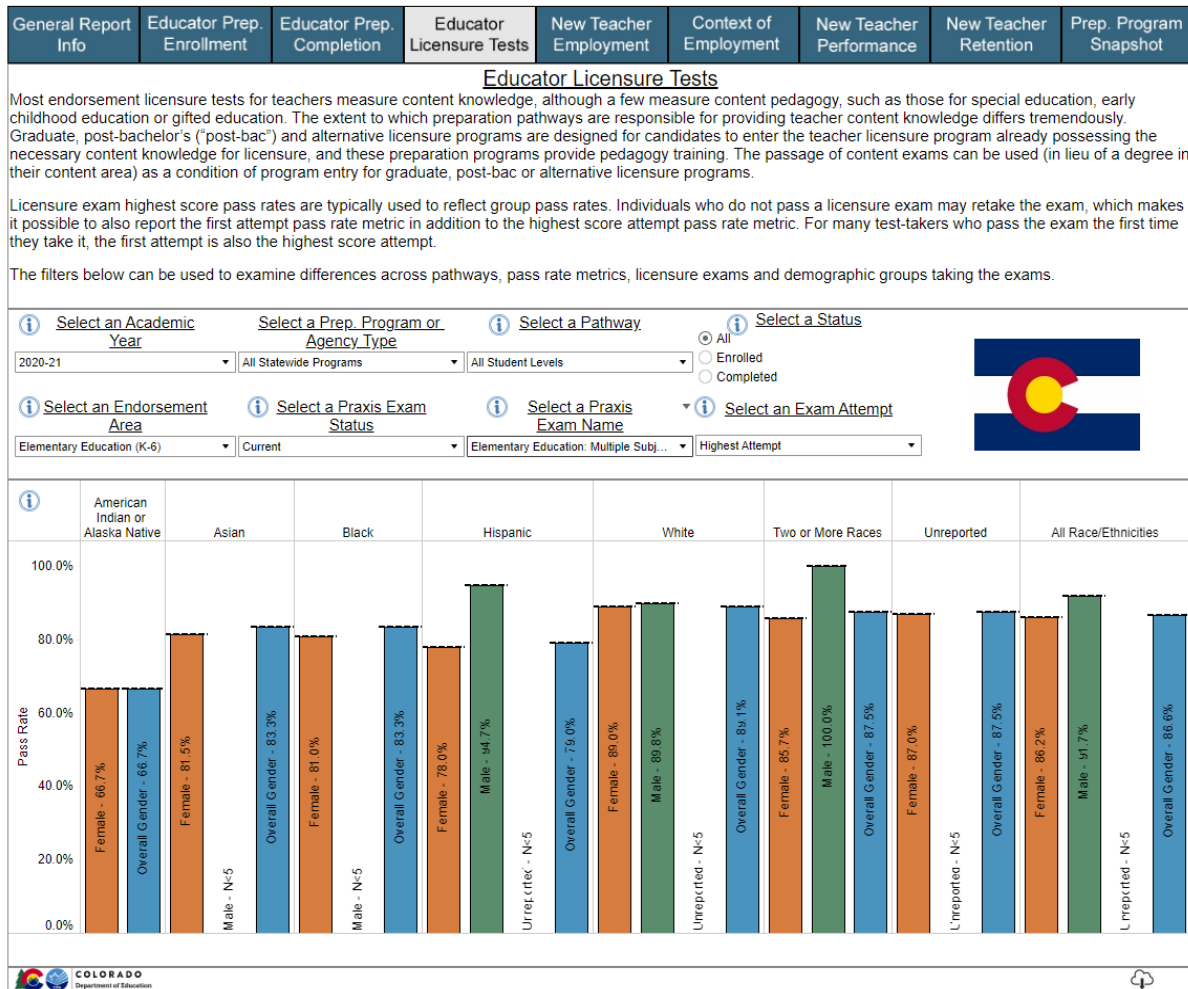


Source: [Colorado Department of Education Educator Preparation Program Report Dashboard webpage.](https://www.colorado.gov/education/education-reporting/educator-preparation-program-report)



Educator Licensure Tests

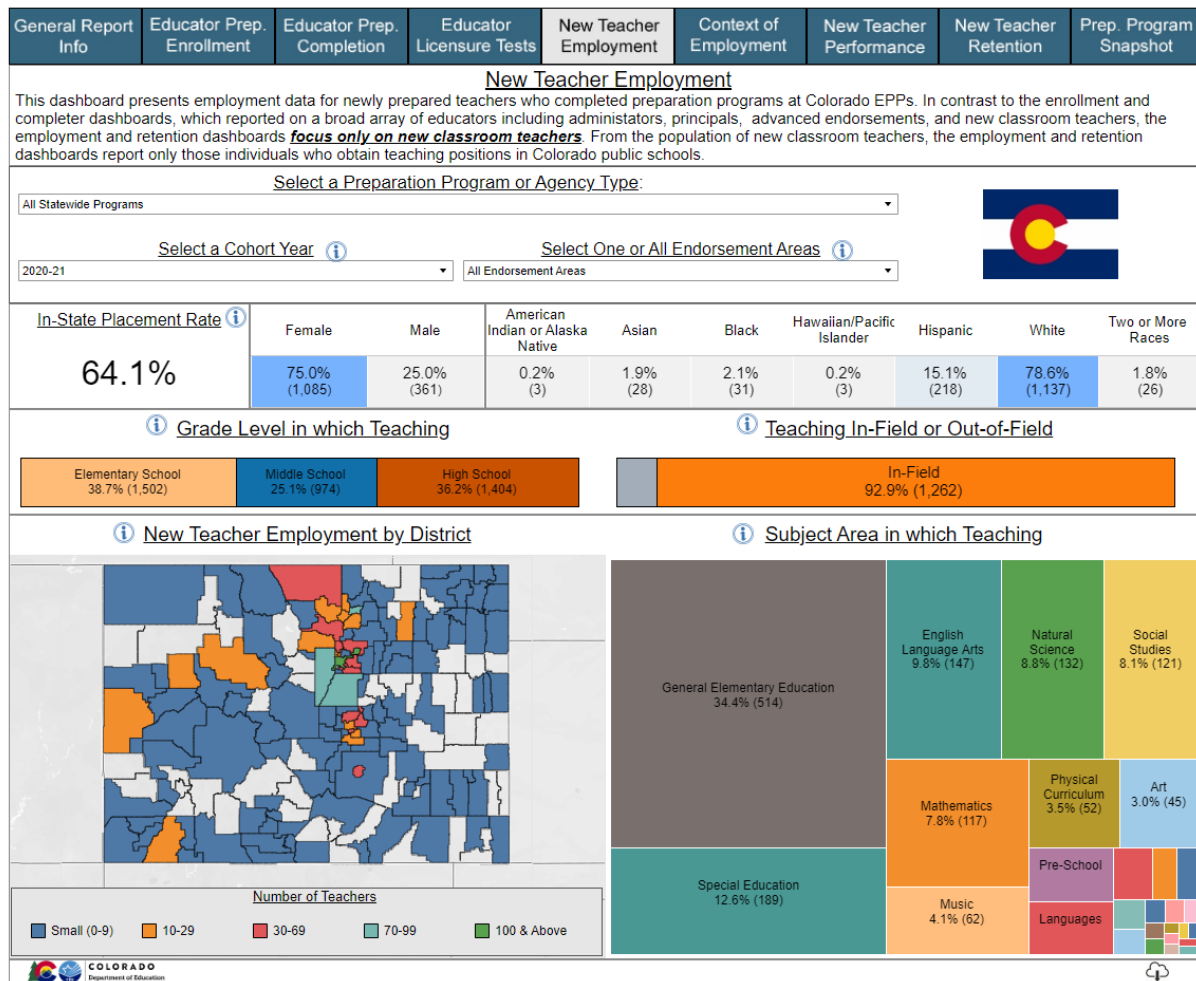
Educator Preparation Program Report Dashboard



Source: [Colorado Department of Education Educator Preparation Program Report Dashboard webpage.](https://www.colorado.gov/department-of-education/educator-preparation-program-report-dashboard)

New Teacher Employment

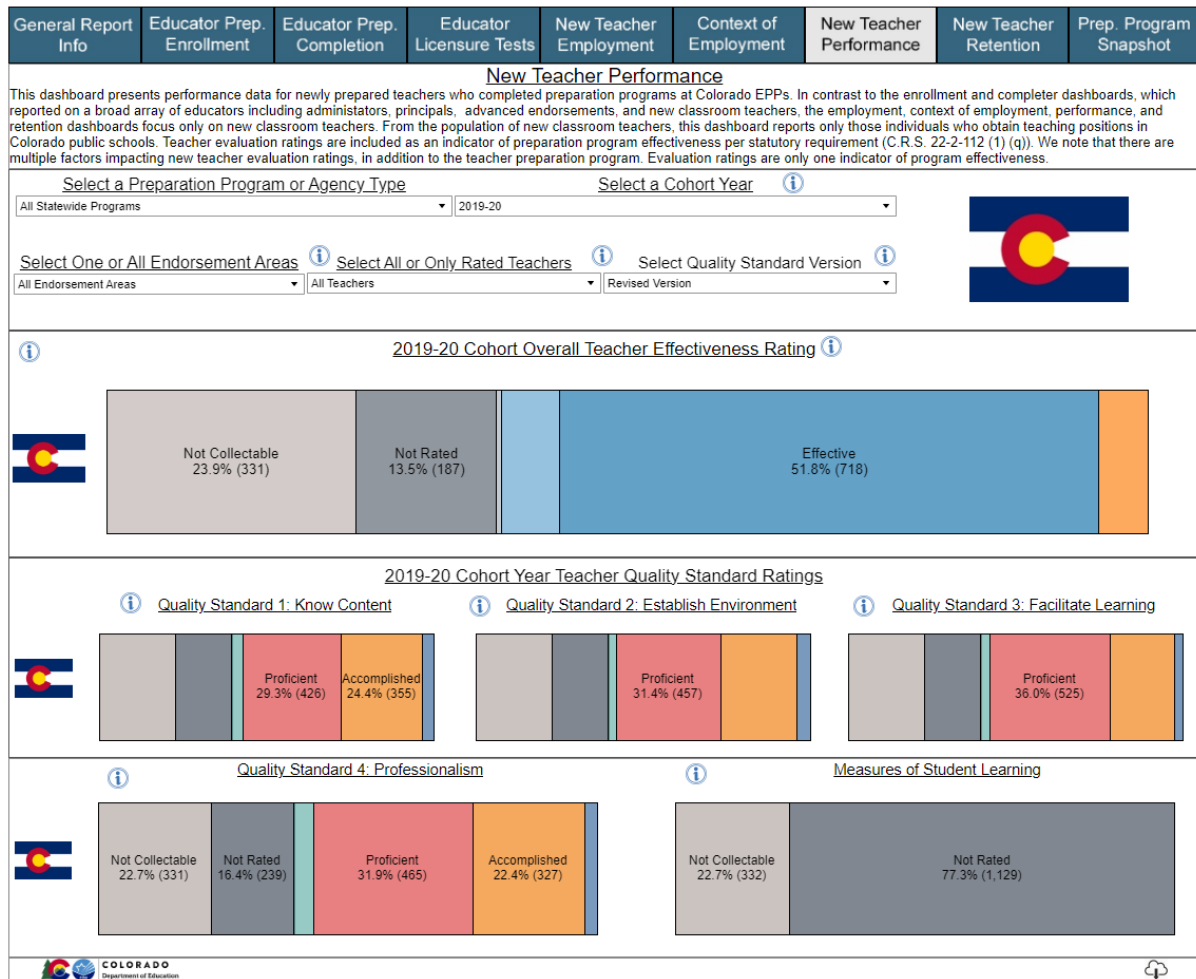
Educator Preparation Program Report Dashboard



Source: [Colorado Department of Education Educator Preparation Program Report Dashboard webpage.](#)

New Teacher Performance

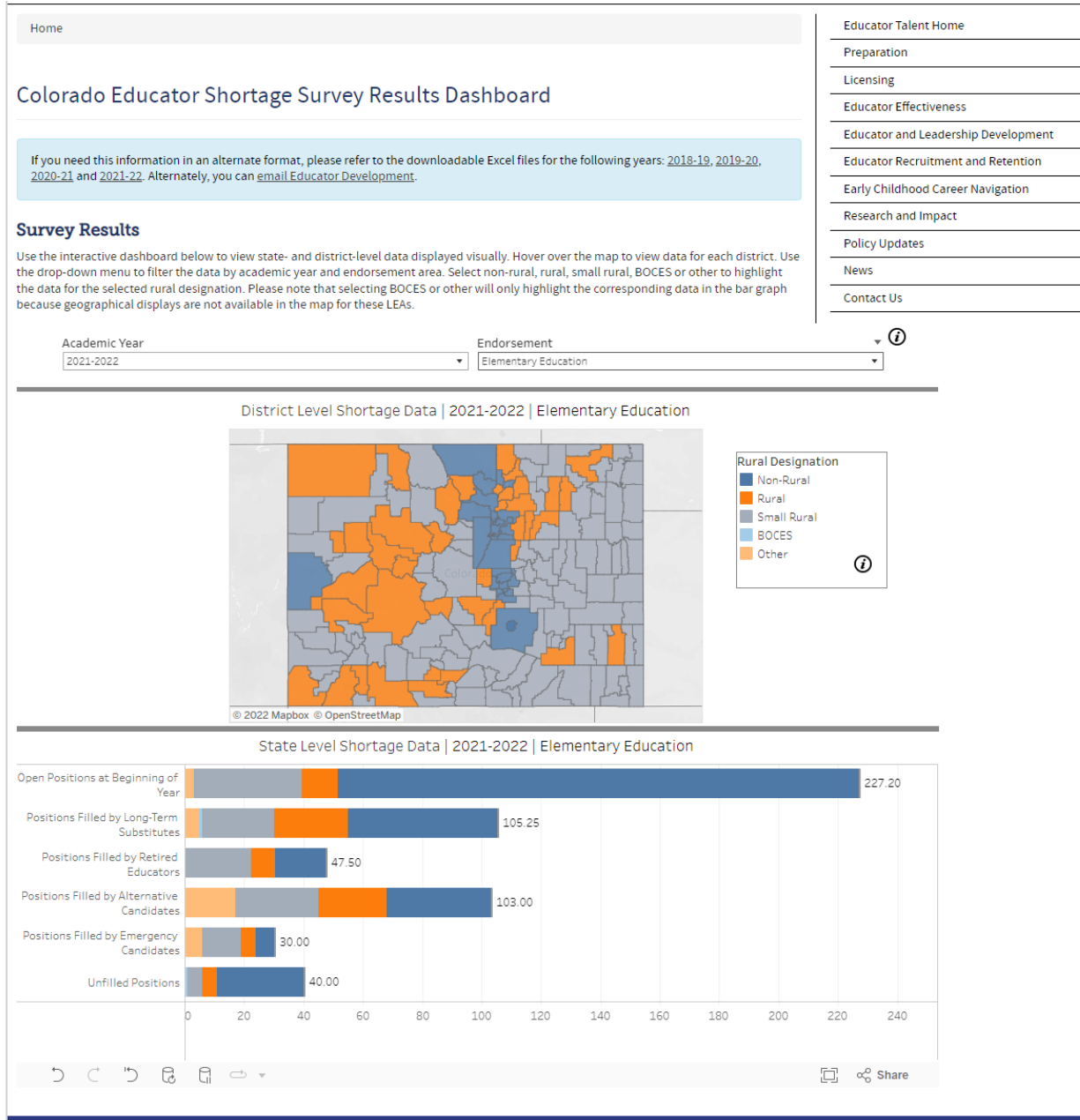
Educator Preparation Program Report Dashboard



Source: [Colorado Department of Education Educator Preparation Program Report Dashboard webpage.](#)

Appendix D. Colorado Educator Shortage Dashboard

Elementary Education



Source: [Colorado Department of Education Colorado Educator Shortage Survey Results Dashboard webpage](#).