EVALUATING AND IMPROVING TEACHER PREPARATION PROGRAMS

EXECUTIVE SUMMARY

NATIONAL ACADEMY *of* EDUCATION

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INTRODUCTION

The *Evaluating and Improving Teacher Preparation Programs* consensus report provides critical, evidence-based recommendations for teacher preparation program (TPP) evaluation and improvement and the systemic changes necessary to improve teaching as a profession. The report documents the extensive research that supports four groups of recommendations: (1) improving TPP approval and accreditation, (2) enhancing TPP self-study, (3) providing system supports for TPP evaluation, and (4) creating system supports for teacher preparation and teaching. The first two groups of recommendations directly address the primary functions of TPP evaluation—supporting program improvement; holding programs accountable to various constituencies; and providing consumer information for multiple constituencies, including prospective TPP candidates, their potential future employers, and policymakers. The last two groups of recommendations address the current state of teacher preparation and teaching in the United States and should be considered along with evaluative practice and program improvement.

THE CRITICAL ROLE OF TEACHER PREPARATION

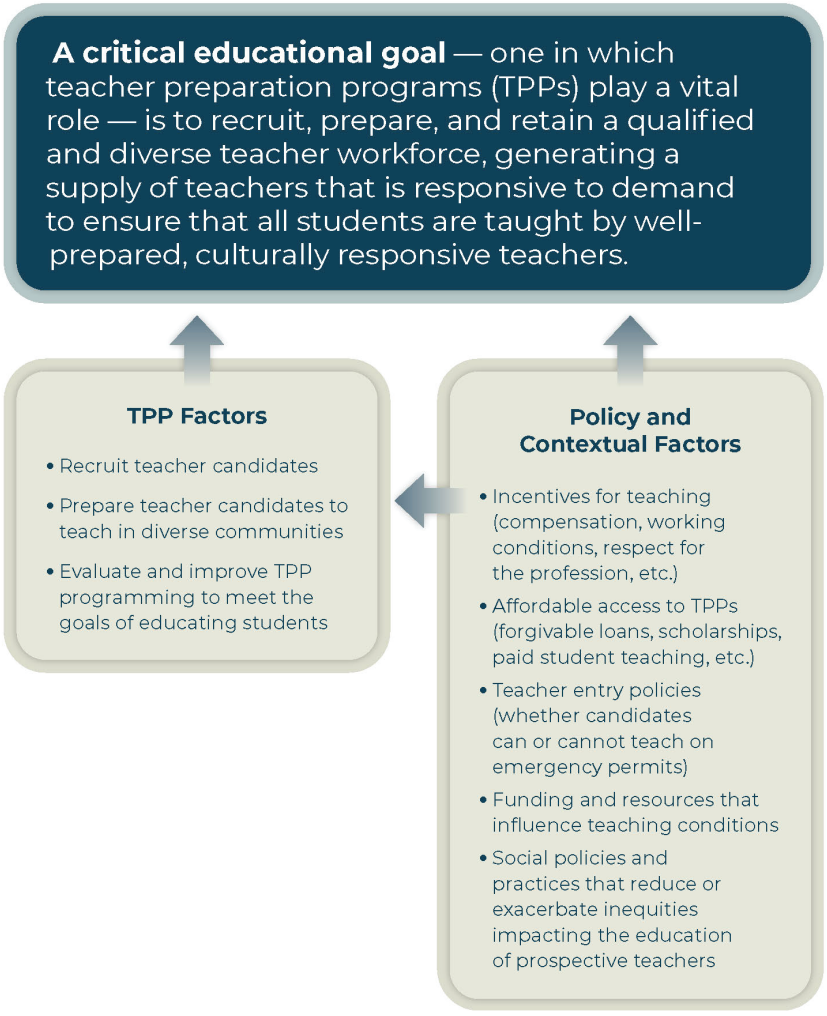
Highly qualified teachers prepared to educate a diverse student population are one of the most necessary components for well-functioning public education.[1,2] Too many students, however, do not have access to a steady succession of qualified, well-prepared teachers across primary and secondary school, and historically marginalized students have the least access to these teachers.[3] Relatedly, too few teachers have benefited from enrollment in a high-quality preparation program and subsequent support for their continued professional growth.[4] Thus, the challenge is to prepare all teachers to teach a culturally and linguistically diverse community of students and adapt curriculum and instruction to include and teach all students.

TPPs can play a key role in the critical educational goal of recruiting diverse cadres of teacher candidates and preparing them to teach in diverse and complex classrooms. However, many contextual and social factors influence both TPPs and public education and undermine this critical goal (see Figure 1 for the conceptual framework guiding the consensus report). For example, financial constraints—including the cost of attending TPPs and the teachers' "wage penalty" (i.e., educators being paid less than other professions requiring similar education)[5,6,7]—undermine teacher recruitment and retention, resulting in significant teacher attrition and shortages.

Unequal school funding creates further disincentives for teachers to work in low-wealth communities.[8] The lack of sufficient school funding generally translates to low teacher salaries, subpar working conditions, and a lack of resources and professional development opportunities—all of which also drive high teacher attrition rates.[9] To make matters worse, state legislatures often address these shortages by lowering credentialing standards rather than increasing incentives.[10,11] The teaching profession also faces attacks on the ability to teach and recognize the histories—and individual and group identities—of historically marginalized students. When compared to other high-performing countries, the lack of respect for and investment in the teaching profession in the United States further undermines recruitment. Therefore, enhancing the enterprise of teacher education needs to address the interconnectedness between the role of TPPs to recruit and prepare high-quality teachers and the necessary policy and contextual supports to ensure that the nation meets this critical goal.

Grounded in the critical education goal of recruiting, preparing, and retaining a qualified and diverse teacher workforce (see Figure 1), improving the quality of teacher preparation needs to address not only (1) what individual TPPs and the agencies that evaluate them can do, but also (2) how the enterprise of teacher education as a field-wide function can be improved by supporting policy development and public and private investment decisions.

FIGURE 1: Conceptual Framework: Policy, Contextual, and TPP Factors Supporting the Critical Goal of Education

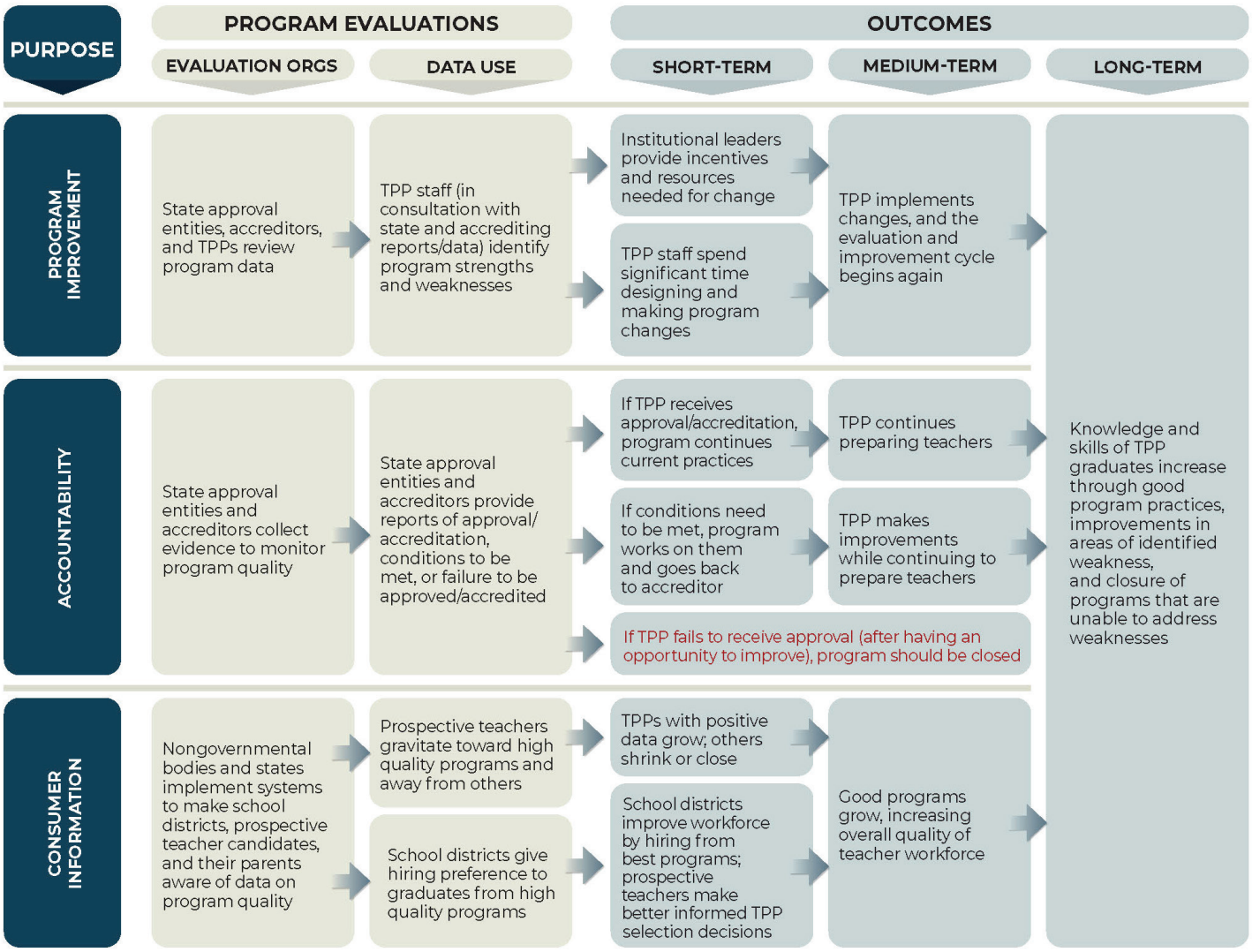


PURPOSES OF TEACHER PREPARATION EVALUATION

TPP evaluations serve different purposes for different audiences. The three primary purposes of program evaluation are (1) supporting program improvement; (2) holding programs accountable to various constituencies; and (3) providing consumer information for multiple constituencies, including prospective TPP candidates, their potential future employers, and policymakers. These purposes are at times overlapping. For example, state program approval, which is often categorized as an accountability tool, can lead to program improvement (see Figure 2). Data collected to inform potential teacher candidates can also support state program approval.[12] And internal self-study evaluation data can also provide relevant information for potential prospective teachers to choose among TPP programs and to help future employers with hiring decisions.[13]

Ideally, data collected from evaluations could inform and address all three purposes. However, evaluative entities generally focus on a narrower set of targets given various capacity limits, local needs, and data access and validity concerns. While evaluations primarily used for one purpose may also prove influential for other purposes, Figure 2 illustrates how TPP evaluation for different purposes can lead to program improvement and help ensure an adequate supply of well-qualified and diverse teachers.

FIGURE 2: Logic Model for Evaluating and Improving TPPs



CONTEXTS AND CHARACTERISTICS OF TEACHER PREPARATION PROGRAMS

To examine the evaluation of TPPs, it is crucial to understand the complex systems in which these appraisals occur, as both TPPs and teacher candidates vary widely. TPPs follow many different formats—from traditional pre-service programs to a variety of alternative routes that are both institution- and non-institution-based. Moreover, programs differ not only between program formats but within program formats. Therefore, evaluation is challenging because there is no singular approach to teacher education.

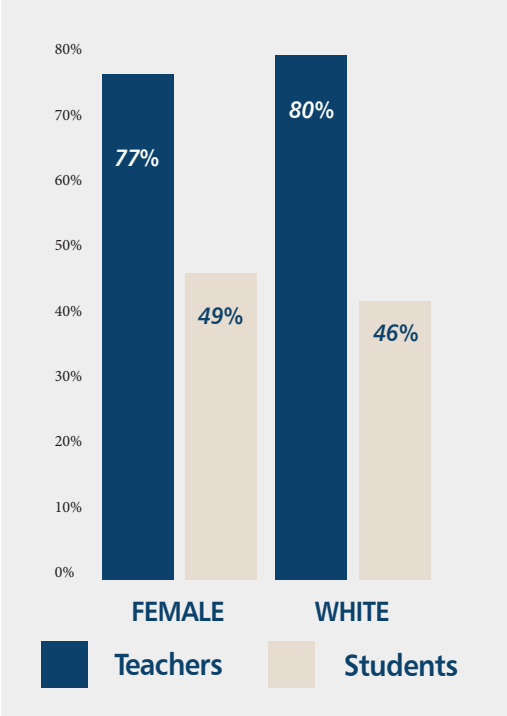
The Teaching Workforce

There are approximately 4 million teachers in the United States, and the overwhelming majority (87 percent) teach in public schools.[14] While the teaching workforce should be representative of our large, diverse nation, Black, Indigenous, Asian, Pacific Islanders, and Latiné individuals continue to be significantly underrepresented when compared to both the general and K–12 student populations (see Figure 3). In 2020–2021, 79.9 percent of public school teachers were White, 6.1 percent were Black, 9.4 percent were Hispanic, 2.6 percent were Asian and Pacific Islanders, and 0.4 percent were American Indian/Alaska Native.[16] This compares to a K–12 public school student population that was 45.7 percent White, 15 percent Black, 28 percent Hispanic, 5.8 percent Asian/Pacific Islander, and 0.9 percent American Indian/Alaska Native in 2020–2021.[17]

In recent years teacher mobility has also increased, with roughly one-quarter of teachers moving to another state to teach.[18] However, teaching remains a mostly localized profession with teachers remaining in the state where they grew up or received their degrees.[19,20,21] Additionally, state-level regulation makes it difficult for teachers to maintain licenses and benefits in other states.[22]

Finally, in addition to recurring teacher shortages in hard-to-staff subject areas and high-need schools, an alarming 86% of public schools had difficulty hiring teachers for the 2023–2024 academic year.[23]

FIGURE 3: Percentage of Public School Students and Teachers, by Selected Demographic Characteristics in 2020-2021[15]



Teacher Preparation Programs and Pathways

Prospective teachers in the United States may enter the profession through various types of traditional or alternative programs. However, in the face of teacher shortages, prospective teachers may enter the profession with little or no training through alternative routes or on emergency permits.[24]

Types of Teacher Preparation Programs

Traditional Programs (IHEs based)

Traditional IHE-based programs are those in which teacher candidates complete all program coursework and supervised clinical experiences and are awarded a standard, beginning-level teaching certificate—often alongside a bachelor's or master's degree—before serving as a teacher of record in a classroom. This traditional route includes a full complement of pre-service courses a nd clinical experiences as a condition of licensure. While most traditional programs begin at the undergraduate level, a growing number of programs are now also available at the graduate level. In addition, some innovative approaches, such as residency programs, have created post-baccalaureate approaches that are responsive to district and labor market needs.

Alternative Route Programs (IHE- and non-IHE-based)

Alternative route programs are typically postbaccalaureate programs where, after a short introductory program, teacher candidates are appointed as teachers of record in classrooms before they have completed their preparation. These alternative route candidates complete most or all coursework while they are teaching and may receive mentoring while on the job. Alternative route candidates, while serving as teachers of record, are enrolled in a TPP that is either IHE-based (e.g., housed in an IHE) or non-IHE-based (e.g., established by school districts, governmental agencies, private providers, and teachers' unions or associations). There are a variety of features in alternative route programs, and some do include the prominent features of traditional TPPs—like student teaching.

In the approximately 2,000 IHEs that offer teacher preparation in the United States, many house multiple programs—including traditional preservice programs, alternative routes, and institution-based options that include innovative recruitment and retention strategies and promising new practices.[25] Popularized in the 1980s and 1990s, alternative route programs were created to recruit teaching candidates who already had a bachelor's degree, often to address shortages in difficult-to-staff subjects and schools. Alternative pathway programs continue to manifest today (see Figure 4).

FIGURE 4: Sample Alternative Pathways into Teaching

Teacher Residencies

Teacher residencies are innovative, pre-service programs with partnerships between districts and programs (e.g., universities, states, teachers' unions, community-based organizations, and non-profit organizations) who hold shared responsibility for teacher preparation.

Grow-Your-Own Programs

Pipeline" or "grow-your-own" programs seek to capitalize on the local nature of the teacher labor market by recruiting middle and high school students as well as non-traditional candidates (e.g., paraprofessionals, career changers, and local community members) and are sponsored by states, school districts, and community-based organization.

New Graduate Schools of Education (nGSEs)

Beginning in the 2000s, nGSEs emerged as a novel type of teacher education provider, offering both pre-service and in-service routes in non-university-based higher education institutions that grant master's degrees and prepare and certify teachers.

Definition of Terms

Program faculty: *Program faculty* includes all course instructors (tenured, non-tenured, adjunct, etc.), mentor teachers, program-based supervisors, and any others who provide instruction and support to teaching candidates.

Clinical experiences: The term *clinical experiences* has different names across states and programs. In this report, *clinical experiences* refers to any opportunities in schools or communities for teacher candidates to observe and engage in the practice of teaching students and reflect on their impact on student learning. Within this broad term, there are different types of experiences, including early field experiences, practicums, community experiences, and final clinical experiences like student teaching, internships, and residencies.

Community partnerships and community-based programs: *Community partnerships* are generally initiated by programs based in institutions of higher education (IHEs), districts, or nonprofits, whereas *community-based programs* are often initiated by and based in communities. In *community-based programs*, the conceptualization and development of the program are done with the full participation of community members.

Mentor teachers: While the terms *mentor teachers* and *cooperating teachers* vary in use and meaning across TPPs, this report uses *mentor teachers* to refer to teachers supporting the work of teacher candidates in clinical experiences. *Mentor teachers* can model best practices and provide coaching to teacher candidates.

Program-based supervisors: *Program-based supervisors* refers to program-based faculty who work with teacher candidates during clinical experiences but are not teachers in schools. *Program-based supervisors* are also often called *university supervisors* or *coaches*. This report uses the broader term of *program-based* to include supervisors in non-university-based programs who are not teachers in schools.

Teacher Preparation Program Enrollment Trends

Across the United States, teacher shortages continue to pose challenges for schools and districts. For instance, as of 2022, approximately 200,000 U.S. classrooms were either vacant or staffed by substitutes or other instructors who were not certified for their positions.[26] These classrooms are disproportionately located in schools that serve a majority of minoritized students from low-income households. Additionally, shortages in certain subjects appear in nearly all states. For example, in 2021–2022, the U.S. Department of Education reported statewide shortages of:

- **mathematics teachers** in 42 states and the District of Columbia;
- **special education teachers** in 46 states and the District of Columbia;
- **science teachers** in 39 states and the District of Columbia;
- **world languages teachers** in 35 states and the District of Columbia; and
- **career and technical education** and **teachers of English learners** in 30 states and the District of Columbia.[27]

Broader social and economic conditions also influence declines in enrollment and interest in the profession.

For the 2020–2021 academic year, 2,207 teacher preparation providers offered 25,852 state-approved TPPs, enrolling 602,085 students and producing 161,903 program completers (see Figure 5 for a breakdown of program types).[28]

The number of alternative programs and enrollment varies by state. Some states have no alternative route providers (e.g., Maine, Ohio) while others have a significant number. For example, Texas has close to 100 alternative route providers which attract more new entrants each year than traditional programs do.[30]

While teacher preparation candidates, like teachers, tend to be White and female,[31] candidate demographics vary by TPP type (see Figure 6). Teachers prepared through alternative preparation programs tend to be older, more diverse, and are more likely to be career changers than those in traditional IHE-based programs.[32]

FIGURE 5: Percentage of Programs by Type, Academic Year 2020–2021[29]

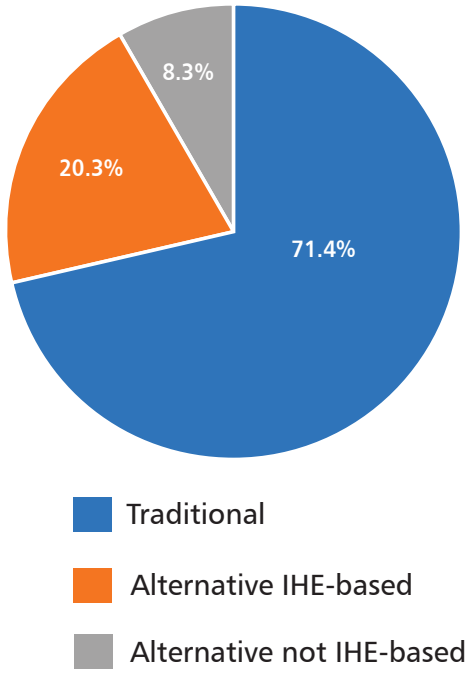
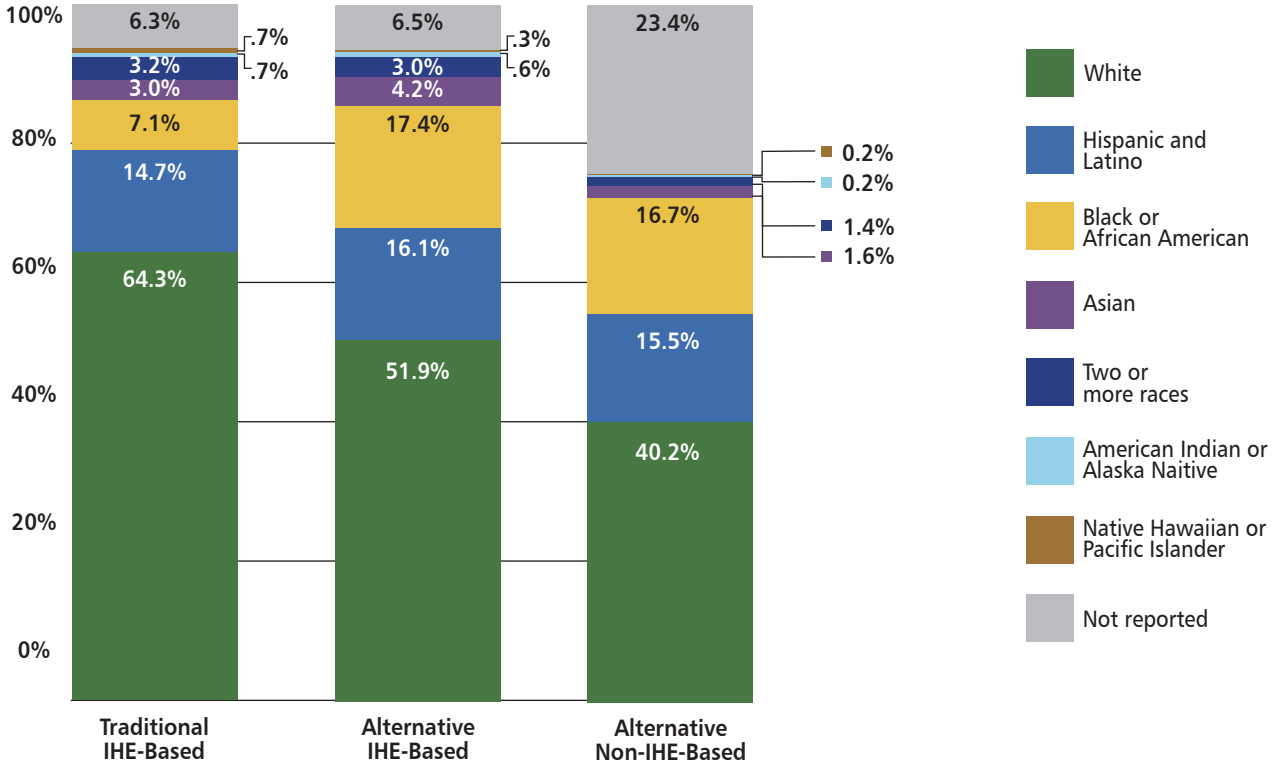


FIGURE 6: Race/Ethnicity of TPP Enrollees by Program Type, Academic Year 2020–2021[33]



In response to teacher shortages, many states have lowered standards for TPPs and allowed the proliferation of fast-tracked alternative pathways to increase teacher supply.[34,35] In 2018, at least a quarter of new teachers were entering the profession as teachers of record without having completed a TPP.[36] Teachers who receive little to no preparation are more likely to leave the profession quickly, creating a vicious cycle of constant teacher shortages and an insufficient pool of qualified teachers.[37] Therefore, ongoing teacher shortages are characterized by both the lack of equal access for teacher candidates to high-quality affordable preparation—particularly for underrepresented teachers of color—and the lack of equal access for students to a steady succession of qualified, well-prepared teachers—particularly for historically marginalized students.

Recruiting and Retaining BIPOC Teachers

Black, Indigenous, and People of Color (BIPOC) teachers are significantly underrepresented within the profession, particularly in comparison to their percentage of the overall population (BIPOC for the purposes of this report includes Black, Indigenous, Asian, Pacific Islander, and Latiné individuals). BIPOC teachers are important to students in that they provide role models and bring an important cultural knowledge base to teaching that benefits all students academically, social-emotionally, and behaviorally.[38, 39, 40]

BIPOC teachers are also often found to support stronger learning in their students. Evidence for this claim is primarily associated with Black teachers teaching Black students—Black student outcomes ranging from achievement to graduation and college-going rates were markedly better when students had Black teachers.[41, 42, 43] In addition, some research has demonstrated that the assignment of a Black teacher to Black students not only increases the Black students' self-efficacy and engagement but also increases test scores and decreases chronic absenteeism for all students.[45, 46, 47, 48, 49, 50]

Economic and financial issues (e.g., student costs, loan debt, undesirable teacher salaries) partially account for the disproportionately low enrollment and completion rates of BIPOC teacher candidates in TPPs and can help explain the appeal of certain alternative route programs that reduce entry costs.[51,52] Some of these alternative routes, however, have significantly higher teacher attrition rates, even after controlling for other factors such as salaries and working conditions.[53,54] Additionally, BIPOC teachers are more likely to be placed in underresourced, high-need schools than their White peers, further influencing these elevated attrition rates.[55]

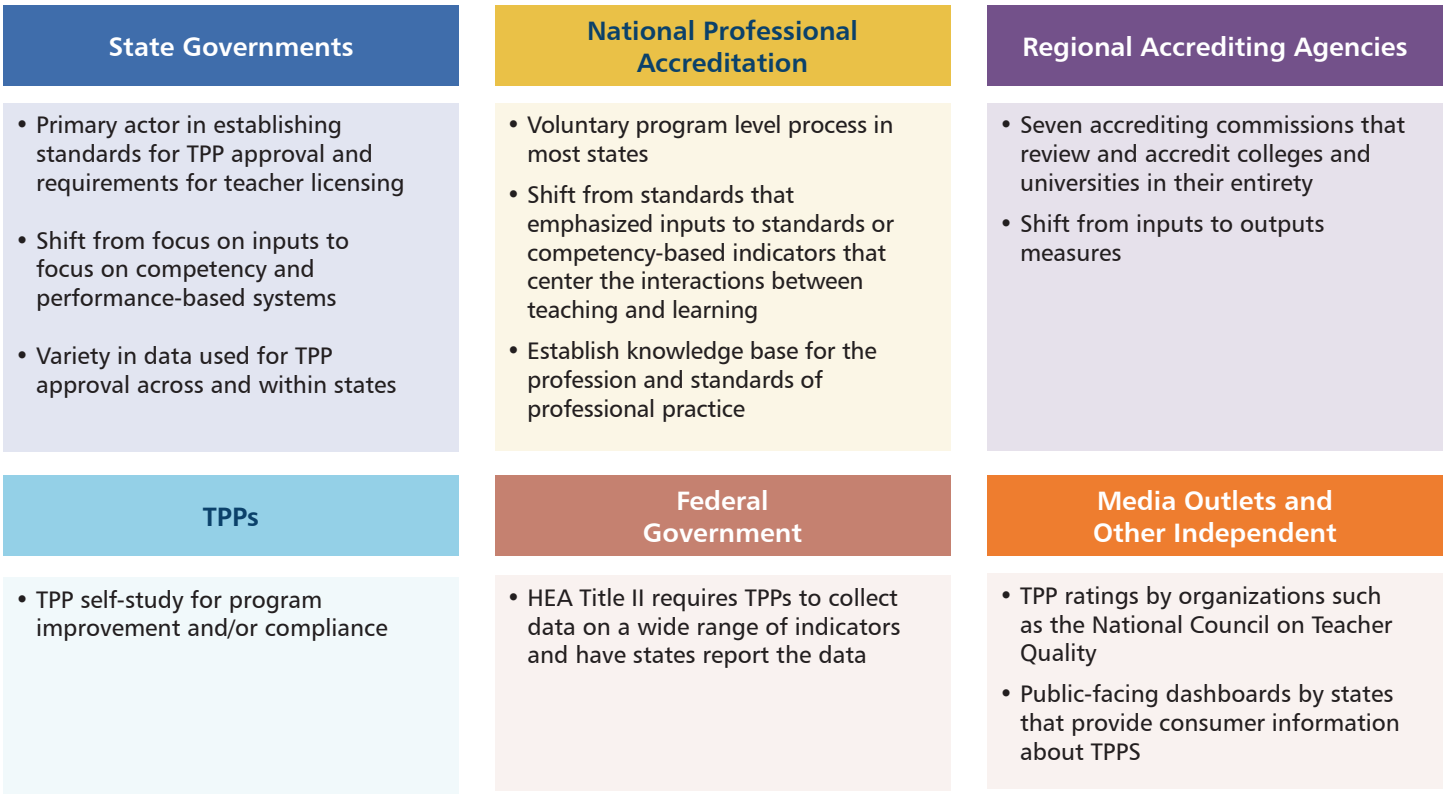
Minority Serving Institutions (MSIs)—which include Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions, Tribal Colleges and Universities, and Asian American and Native American/Pacific Islander-Serving Institutions—continue to be crucial for recruiting and preparing future BIPOC teachers. In 2019–2020, MSIs awarded 20 percent of all education degrees in the United States, and 36 percent of those were awarded to BIPOC candidates.[56]

HOW TEACHER EDUCATION IS CURRENTLY EVALUATED

The decentralized nature of both K–12 and higher education in the United States also characterizes program approval and accreditation of TPPs, as well as teacher licensing. As a result, numerous entities are involved in evaluating TPPs, each with somewhat different objectives and goals. At various points, the same TPP undergoes different types of evaluations, by different institutions, for different purposes, using different data sources and methods, and resulting in different consequences. Although streamlining this system would be desirable, a more practical approach—given the decentralized nature of education and the various purposes served by the different evaluating entities—would be to ensure some common data collection that could reduce the burden on TPPs and allow more energy to be directed to using the data for improvement purposes.

As outlined in Figure 7, the primary entities in teacher preparation evaluation are (1) state agencies that approve programs and allow them to operate and (2) voluntary professional accrediting agencies that provide an additional measure of quality assurance based on standards broadly considered by the profession. These evaluating bodies partially rely on the judgments of regional accrediting agencies that approve universities as a whole (not just TPPs), often as a prerequisite to program approval or accreditation. Additionally, these evaluating bodies require self-study of the processes they manage, and many TPPs also routinely engage in self-study for purposes of improvement. In recent years, the federal government has sought a role in teacher education evaluation, and media outlets and other independent organizations have also rated TPPs in various ways.[57,58]

FIGURE 7: Current Systems for Evaluating and Improving Teacher Preparation Programs



States are the primary entities that set standards and requirements for TPP approval and teacher credentialing—therefore, they contribute to an evaluation landscape that holds TPPs to different standards. For example, some states allow full-time teaching without mentored supervision to count as clinical practice and some states do not.[59] Further, there are differences in how data are collected and applied for traditional TPPs versus alternative route programs within individual states, often allowing for loopholes where alternative programs are not held to the same rigorous standards that traditional programs are.[60,61] For instance, 49 states reported that they reviewed data about traditional TPPs as part of their approval process, while only 43 states reported also reviewing data about alternative programs. Additionally, the pass rate on state licensure assessments was the most utilized metric with 48 states using it to evaluate traditional programs, but only 35 states also use this metric to evaluate alternative programs.[62]

When facing teacher shortages, states sometimes lower their standards and allow teacher candidates to enter the workforce without sufficient preparation. While professional accrediting agencies such as the Council for the Accreditation of Educator Preparation and the Association for Advancing Quality in Educator Preparation seek to elevate the status of the profession as a unified and quality-driven enterprise, national accreditation is still a voluntary process with inconsistent support from teachers and regulators.[63] Students in underresourced, high-need schools are more likely to be taught by underprepared teachers given this variability in approval and accreditation standards.[64]

KNOWLEDGE, SKILLS, AND DISPOSITIONS NEEDED BY EDUCATORS TO SUPPORT STUDENT LEARNING AND DEVELOPMENT

A large body of research—including on how students learn and the cultural foundations of learning and its influences on the learning process, motivation, and mindsets—provides the foundational frameworks for the consensus report and suggests that transformations in teaching and teacher education are needed to ensure that all children experience high-quality education.[65,66,67,68,69,70]

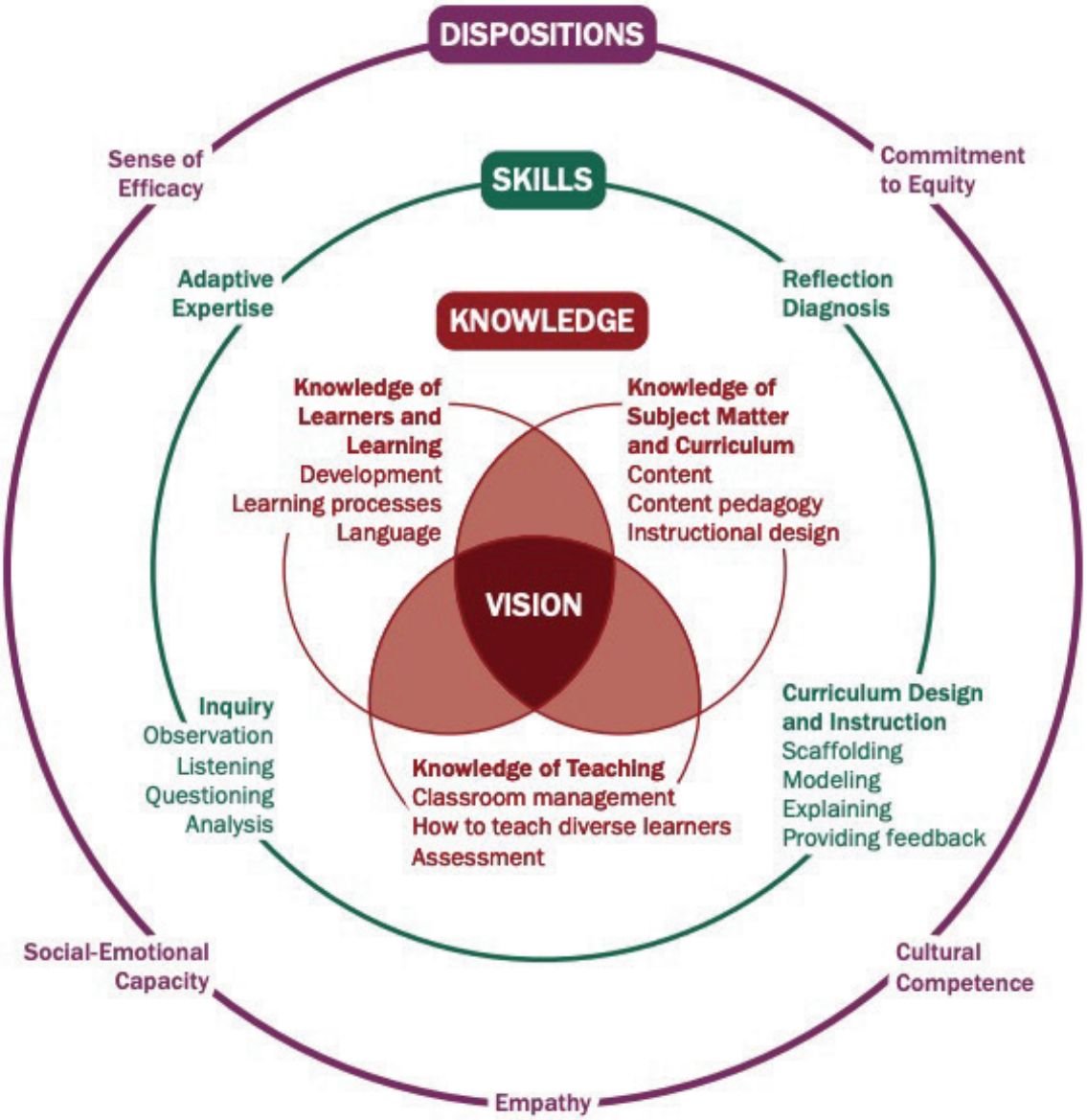
For TPPs to prepare a qualified and diverse workforce, they must identify and impart knowledge, skills, and dispositions to teacher candidates that will prepare them to support student learning and development through high-quality teaching.

As illustrated in Figure 8, high-quality teaching draws on three general areas of ***knowledge***. Teachers need to develop ***knowledge of learners and learning*** and understand that students' development progressions are deeply embedded in sociocultural contexts. This knowledge enables teachers to construct and modify curriculum to attend to students' individual learning styles, prior knowledge, cultural and linguistic traditions, and differing lived experiences. When coupled with deep ***knowledge of subject matter and curriculum***, teachers can organize productive learning processes for a diversity of learners. Teachers also need to develop a strong foundation of the ***knowledge of teaching*** to educate diverse students, conduct assessments for and of learning, and employ classroom management strategies.

These knowledge areas must then be enacted with specific ***skills*** that teachers employ in their work. To meet students' diverse and evolving needs, teachers need to use their ***adaptive expertise*** to tailor their teaching strategies based on non-routine evaluations of students' learning paths and curriculum goals. It is also critical for teachers to make time for ***reflection*** on their practices and ***diagnosis*** of students' learning to keep track of learning progressions and adjust their teaching accordingly. Based on this updated understanding of student progression, teachers should then employ ***curriculum design and instruction*** skills to select materials, develop curriculum plans, and scaffold suitable learning for their students. Equally important are ***inquiry*** skills—including observation, listening, questioning, and analysis—that teachers use to examine the impact of their instruction on students.

Finally, teaching involves not only knowledge and skills but also ***dispositions*** that influence teachers' relationships with students. Given the differing lived experiences of teachers and students, teachers' ***empathy*** and ***social-emotional capacity*** can foster important connections so that students feel respected, nurtured, and safe. Additionally, recognizing that implicit biases can lead to deficit conceptions of students, teachers must also develop dispositions that affirm ***a commitment to equity*** and cultivate ***cultural competence*** so that they are more likely to see students as capable learners. Finally, teachers' ***sense of efficacy*** supports their positive engagement with students and confidence in their own abilities to become more effective teachers.

FIGURE 8: Knowledge, Skills, and Dispositions for Teaching: The "What" of Teacher Education[71]



USING EVIDENCE FOR EVALUATION: ASSESSING TEACHER PREPARATION PROGRAM FEATURES ASSOCIATED WITH TEACHER AND TEACHING QUALITY

Based on the knowledge, skills, and dispositions necessary for effective teaching, the consensus report identifies TPP features associated with high-quality candidate preparation or that have emerging evidence and professional consensus regarding their validity. While there are numerous intervening and mediating factors across different TPPs (e.g., school and district supports, professional development, learning communities) that often make it difficult to directly tie specific program features—or specific data points—to high-quality teaching, research demonstrates that these six features support the knowledge, skills, and dispositions of high-quality teaching:[72]

1. Program Coherence and Alignment
2. Curriculum Content
3. Instructional Methods
4. Clinical Experiences
5. Teacher Candidate Recruitment, Selection, and Support
6. Faculty Recruitment, Selection, and Support

Ensuring that these features are widely and adequately deployed will require TPP leaders to thoughtfully prioritize how to carry out coordinated and sustained efforts to set priorities and consider constraints (such as resources and expertise)—rather than attempt to quickly address all six TPP features. Additionally, TPPs and approval and accreditation agencies need to determine the necessary indicators and information to address the different purposes of evaluation—program improvement, accountability, or consumer information—and measure different program quality features. The metrics used as evidence vary by entity conducting the evaluation or seeking the information. For example, federal Higher Education Act (HEA) reports collect evidence that is easily quantifiable, including admissions criteria and results of teacher licensure assessments.[73] By comparison, accreditation and state government reviews use a broad range of indicators and information on program quality and outcomes. Moreover, even though entities that conduct evaluations may examine the same program characteristics, they may analyze and operationalize different data as supporting evidence.

These six features of high-quality TPP candidate preparation should serve as guiding principles for continuous program improvement. The following boxes describe the program features, outline key questions to consider when designing evaluations to measure each quality feature, and provide potential measures associated with the features.

FEATURE 1

Program Coherence and Alignment

Program coherence and alignment rest within well-defined standards and a strong common understanding of high-quality teaching that is grounded in the knowledge, skills, and dispositions of human learning and development, including the cultural foundations of learning. Coherence is achieved when these standards and understandings are consistently embedded across closely interrelated TPP curriculum, instructional methods, and extended clinical experiences. Consequently, achieving coherence requires program faculty who understand these standards, share a strong and common understanding of high-quality teaching, and can closely collaborate to ensure that the core principles of teaching are reflected in each element of the program.

The following questions provide guidance for designing evaluations to measure the quality of program coherence and alignment:

- How are program objectives and goals reinforced across program components?
- How are coursework and clinical experiences aligned and integrated?
- How are program faculty engaged in program planning and design to ensure learning experience coherence?
- What procedures has the program instituted to monitor the degree of coherence in the program and to steadily improve along this dimension?

Measures:

- Surveys and/or interviews of candidates, recent graduates, and program faculty[a]
- Analytic description of curriculum and clinical components

[a] Denotes measures generally used for program outcomes that also inform attributes of TPP quality.

FEATURE 2

Curriculum Content

TPPs should develop and implement a theory of action that organizes and sequences curriculum content around a vision of teaching that reflects the knowledge, skills, and dispositions teachers need to deliver high-quality teaching and support student learning and development. Curriculum content should reflect the knowledge needed for well-prepared teaching, including knowledge of learners and human learning and development, knowledge of subject matter and curriculum goals, and knowledge of effective teaching practices that support diverse learners. Curriculum content should also develop skills teachers need to be able to adapt expertise; reflect and diagnose challenges; engage in inquiry-oriented practices; engage in curriculum design and instruction that includes scaffolding and modeling; and support dispositions of empathy, social-emotional capacities, cultural competence, commitment to equity, and a sense of self-efficacy for all students.

The following questions provide guidance for designing evaluations to measure the quality of curriculum content:

- How is curriculum content organized and sequenced around a shared vision of teaching among faculty?
- How is contemporary knowledge about learners, learning, and human development represented in the curriculum?
- How does the program support the learning of subject-matter knowledge to support teaching and content pedagogy?
- How is the knowledge of methods for teaching diverse learners reflected in the curriculum?
- How are the necessary teaching skills for adaptive, reflective, diagnostic, inquiry-oriented, and curriculum design and instruction attended to in the curriculum?
- How are dispositions in support of empathy, cultural competence, socio-emotional capacity, self-efficacy, and equity attended to in the curriculum?
- What specific models and strategies for instruction are employed?
- How is teacher candidate learning assessed throughout the program?
- How are candidates prepared for teacher performance assessments (TPAs), either as culminating assessments or for state licensure, taking specific state requirements into account?
- How does the program help candidates learn to plan, instruct, and reflect on their practice?
- How does the program attend to culturally responsive and affirming practices?

Measures:

- Course syllabi
- Lectures and assignments
- Texts and readings
- Course offerings and required hours
- Number of required content courses
- Course evaluations
- Surveys and/or interviews of candidates, recent graduates, and program faculty[a]
- Classroom observations[a]
- Teacher performance or portfolio assessments[a]

[a] Denotes measures generally used for program outcomes that also inform attributes of TPP quality.

FEATURE 3

Instructional Methods

In addition to delivering important information to teacher candidates, how courses are taught and connected to clinical experiences in TPPs is also important. Instructional methods should include explicit modeling of teaching practices and instructional methods that attend to culture and context; assignments and activities that engage teacher candidates as learners with specific instructional approaches and tools; field-based assignments and simulated practices linked to classroom instruction and discussion; and mentoring, feedback, and opportunities to apply the feedback. Given the importance of teachers' connections to their students' families, communities, and cultures, practices focused on learning about the funds of knowledge in these families and communities and integrating such knowledge into classrooms are critical for high-quality teaching.

The following questions provide guidance for designing evaluations to measure the quality of instructional methods:

- What are the primary or widely used instructional methods for promoting effective teaching practices?
- To what degree do instructional methods reinforce shared views of teaching effectiveness?
- How do methods used in the instruction of teacher candidates—in both course-based and clinical contexts—explicitly model ideal teaching methods and reflect the backgrounds of teacher candidates and their future teaching settings?
- How does the program create engagement opportunities and provide feedback and coaching for teacher candidates to practice and adapt instructional methods to learners and to curriculum?
- How is the program studying the effectiveness of its instructional methods? How is the program routinely modifying and improving instructional methods in use?
- How does the program provide community engagement opportunities so that teacher candidates can learn about their students' families and backgrounds and integrate those funds of knowledge into their teaching?

Measures:

- Course syllabi
- Lectures and assignments
- Number of required content courses
- Course evaluations
- Surveys and/or interviews of candidates, recent graduates, and program faculty[a]
- Classroom observations[a]

[a] Denotes measures generally used for program outcomes that also inform attributes of TPP quality.

FEATURE 4

Clinical Experiences

Clinical experiences—where teacher candidates observe mentor teachers modeling effective teaching practices and then engage with students themselves under mentor supervision—are a crucial component of TPPs. When clinical experiences are aligned with coursework and other learning experiences, situated in field placement schools with strong professional learning environments, and paired with modeling and coaching by effective mentor teachers, candidates tend to feel better prepared to apply knowledge and theories in teaching practice. Professional development opportunities for mentor teachers further ensure continuous improvement in coaching practices and, in turn, can improve teacher candidate effectiveness. Additionally, well-planned community experiences, mediated by program and community mentors, provide relevant classroom contexts for candidates to connect coursework with required teaching skills.

The following questions provide guidance for designing evaluations to measure the quality of clinical experiences:

- How does the TPP select and ensure the quality of field sites and mentor teachers?
- How are field sites and mentor teachers selected and supported to serve as ongoing partners in the TPP?
- To what extent do field placement schools provide a strong professional learning environment that instantiates contemporary best practices?
- How are mentor teachers inducted into the program's philosophy and approach, and how are program faculty helped to understand the school and community contexts used as placement sites? What training and support are supplied and/or mandated to mentor teachers?
- How do the clinical portions of the program cohere with other components of the program, such as coursework?
- How effective are the clinical aspects of the program from the perspective of teacher candidates (e.g., the coherence of support and quality of coaching and modeling from supervisors and mentor teachers)?
- How has clinical practice evolved in response to evaluative feedback?

Measures:

- Fieldwork policies, including required hours
- Qualifications of mentor teachers
- Course evaluations
- Surveys and/or interviews of candidates, recent graduates, and program faculty[a]
- Observations of student teaching

[a] Denotes measures generally used for program outcomes that also inform attributes of TPP quality.

FEATURE 5

Teacher Candidate Recruitment, Selection, and Support

TPPs should seek to recruit, select, and support diverse cohorts of teacher candidates with the academic backgrounds, life experiences, and dispositions that suggest they will work effectively with, care for, and support students. In addition to recruiting candidates who demonstrate an ability to cultivate the knowledge, skills, and dispositions needed for high-quality teaching, TPPs should recruit, enroll, and support a diverse group of candidates. Research has indicated a strong link between a diverse teacher workforce and better academic and development outcomes for students.[74] It is also critical to recruit candidates for high-demand teaching fields, to serve in locations where teachers are most needed, and from communities where teachers are underrepresented. Fair and equitable selection strategies should identify specific programmatic needs and provide potential candidates with variable measures to demonstrate their potential to be engaged, empathetic, high-quality teachers. Finally, TPPs should utilize explicit and actionable strategies to support candidates through the program.

The following questions provide guidance for designing evaluations to measure the quality of candidate recruitment, selection, and support:

Recruitment

- What strategies does the program use in its recruitment efforts, including to generate a diverse supply of recruits for high-need fields and contexts?
- How does the program match recruitment goals and priorities to labor market needs?
- What is the program's record with respect to recruitment?

Selection

- What are the program's selection criteria and how do they reflect its goals and priorities?
- How does the applicant pool compare to the pool of selected candidates? How do programs avoid discrimination in their selection procedures and indicators?
- Across preparation programs within an institution (e.g., elementary-secondary education, subject area majors), what are trends in applicant pools and selection by candidate characteristics?

Support

- What forms of support—including academic, social, and economic—do programs provide to candidates?
- How do programs monitor candidate progress and program support as a continuous process, attending to any possible discriminatory impacts? How is ongoing candidate evaluation and progress used in decisions concerning candidate support?
- How do candidates perceive the support provided by the program?
- How effective are the supports provided by the program across the spectrum of candidates?
- How do programs utilize data on recent candidate graduation rates, pass rates on licensure tests, and ratings by graduate employers to improve program support for teacher candidates?

Measures

- Grade point averages (GPAs)
- Entrance exam scores (e.g., SAT, ACT, GRE)
- Additional admissions criteria, including academic content background, prior experience with children, interviews, and performance tasks
- Percentage of BIPOC candidates in incoming class
- Number of candidates admitted in high-need areas and specialties (e.g., science, technology, engineering, and mathematics [STEM]; special education; English language development/bilingual education)

(continued on Page 19)

FEATURE 5

- Average program costs/student debt
- Surveys and/or interviews of candidates, recent graduates, and program faculty[a]
- Teacher performance or portfolio assessments[a]
- Pass rates and/or average scores on licensure tests[a]
- Graduation/completion rates[a]
- Surveys of principals/employers about graduates[a]

[a] Denotes measures generally used for program outcomes that also inform attributes of TPP quality.

FEATURE 6

Faculty Recruitment, Selection, and Support

Faculty recruitment, selection, and support strategies should seek well-prepared, diverse faculty (including mentor teachers) for both program courses and field components with the academic and social backgrounds, life experiences, and dispositions that suggest they will be able to work effectively with teacher candidates and support their success. In addition to expertise in their areas of competence, potential faculty should exhibit adequate preparation to support teacher candidates, including in culturally responsive teaching; a commitment to being part of a collaborative faculty, creating a coherent program, and working on ongoing program improvement; prior experience in teaching (for at least some critical mass of faculty); and willingness to study their own practice and the development of their pedagogy. TPPs also need to support and provide opportunities for faculty to collaborate and address problems of practice in teaching and program design, as well as to engage in professional development.

The following questions provide guidance for designing evaluations to measure the quality of faculty recruitment, selection, and support:

- What are the trends in program faculty (course instructors, mentor teachers, program-based supervisors, and others who provide instruction and support to teaching candidates) characteristics, including demographics, qualifications, and teaching experiences, disaggregated by department and rank?
- What are the trends in program faculty retention, promotion, and advancement by characteristics and department?
- How are program faculty evaluated by students and how well prepared to teach do graduates feel?
- How do graduates evaluate the quality of the supervision and mentoring they have received?

Measures:

- Percentage of faculty with advanced degrees
- Percentage of faculty that are full-time, part-time, or adjunct
- Percentage of BIPOC faculty
- Percentage of faculty with prior K–12 teaching experience
- Number of faculty qualified to provide instruction for high-need areas and specialties (e.g., STEM, special education, English language development/bilingual education)

[a] Denotes measures generally used for program outcomes that also inform attributes of TPP quality.

Outcome Measures of Teacher Preparation Program Performance

In addition to examining TPP features, there has been a significant emphasis in recent years on ***outcome measures*** that attempt to gauge TPP graduates' preparedness, entry, and retention in teaching; ability to engage in effective practice; and influence in raising student achievement (Table 1 provides a list of potential measures associated with program outcome indicators). Traditional measures such as course offerings and evaluations are insufficient indicators of the quality of TPPs, and thus the emphasis on outcome measures can lead to more accurate evaluation of TPP quality. Historically, TPP evaluation has relied on data that is easy to collect—including pass rates on licensure tests and graduation and completion rates—as measures of TPP content mastery. Other practices like ***teacher performance or portfolio assessments*** and survey data are increasingly used to more accurately assess the knowledge, skills, and dispositions imparted by TPPs. While TPAs are costly, complex, and time-consuming to administer and score, a growing body of research supports their predictive validity in demonstrating how candidates plan lessons, instruct students, and evaluate their learning based on real-world teaching activities. ***Surveys***, when implemented with quality measures and representative samples, can also provide programs and states with perspectives on TPP quality and outcomes and can be predictive of future teacher effectiveness. Similarly, well-designed ***classroom observation protocols*** can provide rich data to support supervisors, mentor teachers, and teacher candidates. Data on ***program graduate employment and retention*** also provides constructive insights for TPP quality and improvement. Finally, ***value-added models*** using student achievement data—while problematic at the individual teacher or program level given differentials in school and district contexts—can provide insights when looking across programs and pathways to address system-wide issues.

TABLE 1: Evidence of TPP Outcomes

Program Outcomes	Measures
Mastery of knowledge, skills, and dispositions	• Knowledge-based licensure exam pass rates and/or average scores • Graduation/completion rates • Teacher performance or portfolio assessments • Teacher candidate, completer, and employer surveys
Teacher performance and practices in classrooms	• Value-added model estimates • Teacher candidate, completer, and employer surveys • Ratings of graduates by principals or employers • Teacher performance or portfolio assessments • Classroom observations
Labor market outcomes	• Hiring and retention data • Teacher candidate, completer, and employer surveys

RECOMMENDATIONS FOR TEACHER PREPARATION PROGRAM EVALUATION

The consensus report makes recommendations to support TPP evaluation and improvement by addressing the crucial components identified in the categories of (1) improving TPP approval and accreditation; (2) enhancing TPP self-study; (3) providing system supports for TPP evaluation; and (4) creating system supports for teacher preparation and teaching. Recognizing that teacher preparation is situated in larger societal contexts, these recommendations aim to address the multiple governmental and nongovernmental entities that influence TPP evaluation and improvement at the federal, state, and local levels. Addressing these complex issues also requires funding and resources never before brought to bear in the domains of teacher preparation and public education—but doing so has never been more necessary and consequential.

TPP Approval and Accreditation

The recommendations for improving TPP accreditation and program approval are especially crucial as many states face teacher shortages. Some of these states are responding to this challenge by lowering evaluation expectations for certain teacher pathways and in some instances even abandoning any teacher preparation requirements for entry into the teaching profession. These recommendations underscore the importance of state program approval agencies developing and maintaining high-quality, common expectations for all candidates' opportunities to learn, as well as the evaluation of TPPs in all routes and pathways to teaching. Program approval should enhance the profession of teaching, improve teacher preparation, and ultimately help ensure that all students have access to well-prepared, diverse, and culturally responsive teachers.

Recommendation 1

Program approval and accreditation should maintain common expectations for opportunities to learn for all candidates and for the evaluation of TPPs in all routes and pathways into teaching. State approval agencies and accreditors should collectively define a set of professional standards of practice that hold all candidates, regardless of pathway, to the same high-quality criteria. In many states, alternative route programs are not currently held to the same accreditation or approval standards as traditional route programs. This disparity is exacerbated when states, faced with teacher shortages, allow entrants to become teachers of record with little to no preparation (see Chapter 3; references to chapters are chapters in the consensus report). Funneling underprepared teachers into schools that are already struggling with a lack of high-quality, experienced teachers and high teacher turnover—which also leads to less productive professional communities and lower student achievement—perpetuates harm to students (see Chapter 6). However, universally rigorous program standards might result in further teacher shortages—and reduced access to the profession for historically disadvantaged candidates—unless they are accompanied by policies that broaden access to entry, provide enhanced program supports, increase teaching incentives, and make teacher education affordable (see Chapter 1 and Recommendations 15 and 20).

Recommendation 2

Program approval and accreditation should use measures of learning opportunities and outcomes aligned to professional standards for teaching and teacher preparation and hold programs accountable for providing adequate supports to help candidates achieve these standards. The evidentiary bases for evaluating TPPs (see Chapter 7) should be closely tied to program quality features (see Chapter 6) that reflect teacher preparation learning opportunities meant to develop the established knowledge, skills, and dispositions for high-quality teaching (see Chapter 5). While state standards may reference distinctive curriculum content or student learning standards, commonalities undergird professional standards for teaching, like those established by the National Board for Professional Teaching Standards and the Interstate New Teacher Assessment and Support Consortium, which suggest essential and shared expectations for teacher knowledge, skills, and dispositions (see Chapter 7). For evidence to be useful for program approval or accreditation purposes, the instruments used to gather this evidence must be closely aligned with the standards.

Recommendation 3

Program approval and accreditation should encourage the use of measures that are tailored to distinctive features of particular program types, in addition to those commonly used across programs. While common standards and metrics should be applied across programs and pathways, TPPs should also include additional measures that capture the unique features or goals suited to their contexts, teacher candidates, and the school districts that their students ultimately serve. For example, programs such as residency and grow-your-own programs that work closely with cooperating districts should include evaluative information that addresses those specific contexts. Program approval and accreditation should provide the advantages of standardization but include some responsiveness to distinctive program features.

Recommendation 4

States should work to implement common measures for all programs (such as surveys of candidates, graduates, and employers) and data on key indicators (such as graduation rates and entry to the profession) to inform program approval, accreditation, and local program improvement efforts. Program approval and accreditation face two long-standing problems or complaints: 1) The burdensome requirement to collect large quantities of data while providing little information about program quality and outcomes and little guidance for improvement efforts,[75] and 2) the lack of capacity, especially among smaller programs, to collect adequate data and evidence about perceived strengths and weaknesses. To address these barriers and better serve the multiple purposes of program evaluation, states, as the agencies responsible for approving preparation programs—along with accreditation entities and in consultation with TPPs—should strategically enhance data collection and management capacities and deliver information to TPPs to guide program improvement.

Recommendation 5

In service of continuous program improvement, states and accreditors should encourage and support programs and the profession to develop appropriate strategies for considering evidence of graduates' teaching practices and influences on student learning. Since TPPs are intended to produce teachers who can achieve desired learning results (see Chapter 1), student learning is a relevant source of evidence about TPP quality. States and accreditors should work with TPPs, the field of education, and the research community to develop and refine the evidence base linking high-quality teaching to practices reliably associated with student learning and development across multiple domains. Although teachers are the most important in-school factor impacting student achievement,[76,77]developing key indicators of teaching practices and influences should consider the numerous in- and out-of-school factors that also influence student learning.

TTP Self Study

Many TPPs routinely engage in self-study for purposes of improvement, a promising approach that can provide in-depth, context-specific program appraisals. This group of recommendations highlights the important need for TPPs to have tools and measures to examine candidate learning and practices; graduates' impact on student learning; efforts to recruit, support, and graduate diverse, well-prepared candidates; and efforts to recruit, support, and retain faculty who exhibit similar high-quality characteristics. To support continuous and sustainable TPP self-studies, these recommendations also address issues related to limited program capacity and funding and recommend that TPPs participate in networks that address and support common issues of program improvement.

Recommendation 6

Programs should develop and participate in collaborations and networks that promote work on common program improvement issues. TPPs vary considerably in their capacity (e.g., TPP size, faculty expertise and availability, incentive structures, relevant resources) to mobilize program improvement. A lack of capacity could result in TPPs choosing data sources that are readily available rather than those with genuine utility and validity. Capacity issues could be addressed by joining collaborative networks, which mobilize talent and expertise to develop and study solutions to shared problems, build organizational processes, and foster a culture of continuous improvement and knowledge sharing within the network.[78, 79, 80, 81, 82] In the TPP context, collaborative networks have emerged through the support of foundations, non-profit organizations, unions, TPPs themselves, and federal and state governments, as well as through partnerships between these entities.

Recommendation 7

Programs should assemble a set of tools and measures and establish processes for regularly reflecting on candidates' experiences, learning, practices, and performance throughout their TPP experience, as well as implications for their students' learning. A collection of well-designed tools, measures, and data collection procedures—when integrated into the reflective processes that TPPs use to understand candidate experiences and learning—can contribute to effective TPP evaluation and improvement (see Chapter 7). Currently, many programs use basic input measures (e.g., syllabi reviews and number of hours of clinical experiences) that do not sufficiently provide an accurate reflection of the quality of enacted and received instruction in TPP courses. TPP evaluators should determine the programmatic feature to be measured, balance the strengths and weaknesses of each measure, understand that no single measure can reliably provide a complete picture of TPP quality, and acknowledge that biases can exist in measure design and implementation before choosing one or many to deploy. Because it takes time and program capacity to develop and implement a comprehensive set of measures, accrediting, professional, and/or academic organizations could work to develop a library of TPP measures that meet quality standards and can be shared and adapted to the specific needs of individual programs, ultimately benefit the field of education.

Recommendation 8

Programs should assemble a set of tools and measures to establish and evaluate processes for regularly reflecting on program efforts to recruit, support, and graduate a diverse group of candidates—including in high-need fields—who are well prepared to enter and stay in teaching. It is critical to evaluate the systematic efforts of TPPs to recruit, carefully select, and rigorously and supportively prepare high-quality and diverse teacher candidates (see Chapters 1 and 6). For instance, entry requirements, especially when used as cutoffs for entrance, can hinder the recruitment and selection of candidates who have the dispositions to be high-quality teachers but require appropriate teaching and support. Programs should therefore expand the measures they use to select candidates, allowing for flexibility to admit high-potential candidates at entry while ensuring sufficient support and maintaining rigorous and universal exit standards for all candidates. In addition to recruitment and selection, programs need to meaningfully measure candidate progress and TPP supports provided to address academic, social, economic, or cultural characteristics.

Recommendation 9

Programs should regularly examine their efforts to recruit, support, and retain a diverse, well-prepared program faculty that are committed to building and continually improving a coherent, high-quality, culturally responsive TPP. TPP faculty—broadly defined to include course instructors, mentor teachers, program-based supervisors, and any others who provide instruction and support to teaching candidates (see Chapter 1)—are the backbone of educating the new teaching workforce. Currently, TPPs face the challenge of recruiting and sustaining a high-quality, diverse faculty that can adequately instill the knowledge, skills, and dispositions necessary to teaching (see Chapter 5). In addition to typical measures, programs need to expand their evidentiary basis to ensure that faculty have expertise in content areas and can also build and support a high-quality, culturally responsive program.[83,84] It is also important that faculty are committed to understanding the communities where their candidates are learning in order to teach and adapt their courses to be relevant to these contexts.[85,86,87,88,89] Moreover, it is critical to examine whether faculty understand and share the program's goals to ensure program coherence, a key indicator of TPP quality (see Chapters 6 and 7). However, given funding limitations, the low status of teacher education in some universities, and the increasing percentage of adjunct and temporary faculty with limited compensation providing instruction in TPPs, the goals of faculty engagement can be difficult to achieve without other interventions and supports (see Recommendation 10).

System Supports for TPP Evaluation

Successful TPP improvement efforts are predicated on a shared professional vision among program faculty and sufficient funding and resources to support data collection, analysis, and implementation. When TPPs face reduced funding to support capacity building and mentor teachers, as well as increased numbers of adjunct faculty who have less capacity and fewer incentives to engage in improvement efforts, they are less likely to be able to facilitate meaningful and sustainable program improvement. TPPs thus require systemic support from the institutions that house them, as well as federal, state, and local governments to engage in meaningful, continuous evaluation aimed at program improvement. This includes both institutional-level backing that elevates the value of program evaluation and builds in the necessary time, resources, and incentives for faculty to engage in evaluations, and capacity-building efforts supported by federal and state governments to produce an information infrastructure that streamlines useful information that can be used by and for multiple stakeholders (e.g., states, TPPs, and consumers) and purposes (i.e., program improvement, accountability, and consumer information). Such system supports also enable states to conduct periodic reviews of teacher preparation efforts and develop policies aimed at addressing common inadequacies to strengthen preparation quality.

Recommendation 10

Institutions should support TPP faculty by providing time and resources to build capacity and skills for TPP evaluation. Institutional supports are necessary for developing and implementing well-resourced processes—including training, dedicated time, and incentives—that allow TPPs to gather, interpret, and act on evaluative information for continuous program improvement (see Chapter 1). However, conducting evaluations and utilizing data to enact improvements are often treated as a time-consuming compliance activity and are not formally built into the workload of TPP faculty. Effective institutional support for TPP improvement could include providing professional development for faculty capacity building, engaging members of local communities to inform culturally responsive improvement, ensuring sufficient funding for evaluation efforts, and involving TPP leaders in creating a culture of collaboration and inquiry.[90,91,92,93]

Recommendation 11

States and the federal government should provide capacity-building grants to state agencies to enable them to engage in comprehensive and meaningful program approval processes that will contribute to continuous program improvement. The federal government and states can play a constructive role in supporting continuous TPP improvement (see Chapter 1) by investing in targeted grants to analyze state approval processes which will result in improved state agency capacity. In many states, funding reductions have undercut their ability to implement and monitor program approval processes. This lack of capacity can sometimes translate to compliance-based improvement practices that are both burdensome and ineffective. Dedicated, experienced staff; better information management systems; improved coordination with TPPs; and regularly refreshed program standards that incorporate advances in the teaching and teacher education knowledge base would enhance continuous improvement in program approval processes. Federal funding could also enable states to support and enable necessary agency capacity building to ensure comprehensive, meaningful program evaluation and approval, leading to program improvement.

Recommendation 12

States should work to improve the comparability, utility, and validity of the information they provide to consumers about TPPs. Providing information to consumers—including potential teacher candidates and their families, employers of TPP graduates, and policymakers—is one of the key purposes of TPP evaluation (see Chapters 1 and 2). To help develop and enhance a shared concept of TPP quality for multiple consumer groups, states, in partnership with accreditors, should develop and refine TPP indicators of program approval. In addition to Title II of the HEA requirements for states to gather and share specific information through a "state report card," states should determine what additional information would be useful to consumers. For instance, TPP applicants and their families may find information on convenience, cost, reputation, and local access helpful (see Chapter 3). School districts may want to know about program completion percentages, rates of hiring and retention in districts where graduates teach, pass rates on relevant state assessments, and past program graduate data gathered from employer surveys to inform their recruitment efforts. Policymakers could use similar information to better understand teacher supply and make investments in program quality, design, or expansion. Some states already provide public-facing, user-friendly dashboards for consumer information (see Chapter 4), which could be used to help inform other states.

Recommendation 13

The federal government should work with states to develop and fund an information infrastructure that provides timely and useful information about the teacher labor market and TPPs. Federal-state partnerships can help assemble foundational data, streamline the information infrastructure, and enable effective system-level appraisals like examining teacher supply and demand, common program characteristics, and program graduate profiles. Additionally, high-level data should identify areas of concern for accreditation and program approval agents, support TPPs and school districts in developing programs, and provide greater insights for potential teacher candidates. The federal government can enhance the usability of the current information infrastructure provided by Title II of the HEA[94] by creating a user-friendly system where researchers can link data sets. The federal government can also help develop a coherent, comprehensive data set that encompasses teacher preparation, accountability programs, and competitive grant programs that can be used to drive innovation. Finally, updating and reconstructing information requires the federal government to consider the different uses and users of TPP evaluative information, attend to the validity of this information, invest in efficient and effective data collection procedures, and enhance the dissemination of these data through succinct, modern formats.

Recommendation 14

States should conduct periodic reviews of the system-wide status of teacher preparation in their jurisdictions to inform policy that would strengthen (1) the quality of preparation, (2) access to high-quality preparation for all teachers, and (3) access to well-prepared teachers for all students. Similar to how nations with centralized teacher preparation systems regularly conduct system reviews to detect common weaknesses or shortcomings (see Chapter 8), state-based and system-wide reviews in the United States could identify common inadequacies across programs to serve as priority targets for improvement. For example, a systemic review could highlight inadequacies in inclusion and attention to specific learning needs of populations like English learners; TPPs' responses to significant policy developments or technological changes; which candidates have access to high-quality preparation; whether there is an adequate supply of programs in all fields; and whether existing programs are meeting the needs of communities experiencing teacher shortages. In cases of demonstrated systemic weaknesses in teacher preparation or access to high-quality preparation, responses may be mobilized by public and private sources, state and local agencies, and networks of programs supporting continuous systemic improvement.

System Supports for Teacher Preparation and Teaching

Federal and state governments and philanthropic organizations are critical for implementing the broad education system reforms necessary to ensure equitable access to high-quality teacher preparation to provide diverse, well-prepared teachers for all children. Such field-wide reforms can enhance the profession's overall attractiveness, reduce barriers to TPP entry, improve teacher retention, and enhance teaching practices and effectiveness by investing in clinical teacher education and research and development. Such federal investment should be considered against the backdrop of historic federal investments in other fields, like medicine, and the experiences of other high-achieving nations with well-structured and supported TPPs (see Chapter 8).

Recommendation 15

The federal government, with states, should provide financial support and incentives to ensure that all teacher candidates can affordably complete a comprehensive preparation program before becoming a teacher of record. The federal government, in collaboration with states, can assist in reducing financial barriers to entry that exacerbate teacher shortages and drive candidates—predominantly low-income and minoritized candidates who carry significant amounts of debt—to low-quality but more affordable TPP pathways. These more affordable pathways often omit student teaching and have high teacher attrition rates. Additionally, many grants, loans, and service scholarships for both college and graduate-level preparation (e.g., Pell Grants, Perkins Loans, and Subsidized Stafford Loans) have either dwindled or been discontinued.

Federal and state support for service scholarships, paid apprenticeships, and residency programs that support tuition and stipends can help diversify the teaching force; target high-need student populations and teacher expertise areas; enable teachers to receive strong preparation that will support their retention in the field; and eliminate or reduce college debt, which will also enhance retention by making teaching more financially attractive (see Chapter 3). The federal government has used such strategies to support medical education for more than 60 years, offering substantial financial assistance to candidates tied to service in high-need fields and locations.[95] Moreover, nations like Australia and Canada provide such subsidies for teacher candidates, and teacher education is tuition-free for teachers in Finland and Singapore, where candidates also receive living stipends and/or salaries (see Chapter 8).[96] Finally, such funding should support broad TPP entry standards and incentivize teaching as a career while supporting common, rigorous requirements for program completion and entry into the profession.

Recommendation 16

Federal and state governments should provide capacity-building supports and resources for comprehensive, high-quality clinical teacher preparation. Research demonstrates that comprehensive, high-quality clinical placements in the classrooms of instructionally effective mentor teachers—particularly when tightly and coherently integrated with TPP coursework—are associated with improved learning outcomes for teacher candidates, higher rates of teacher retention, increased feelings of preparedness, and observed teaching effectiveness (see Chapter 6).[97,98] In many locales, however, the supply of integrated and well-resourced field placement schools and the availability of effective mentor teachers—particularly given time and resource constraints—is limited. Given the important role of mentor teachers in clinical experiences, federal and state governments should incentivize or require preparation and ongoing support for mentors. Governments should also provide funding to foster partnerships between TPPs and local schools or districts to develop high-quality clinical placement sites, particularly in high-need fields like bilingual education, special education, and STEM, and in low-income and historically marginalized communities. Funding could also be directed to address capacity and sustainability issues in residency programs, invest in state infrastructure to provide grants to quality programs, support teacher apprenticeships, and finance ongoing research to study and identify the specific elements of clinical placements most tied to improved teaching and retention (see Chapter 3).[99,100,101]

Recommendation 17

The federal government should invest in research and development—and its use—to support ongoing improvement of teaching and teacher preparation. Federal investment in research on high-quality teacher education, teaching-related practices, and their dissemination and integration into TPP coursework and learning experiences should continue to build the knowledge base for teaching and learning to teach, as well as influence approval, accreditation, and evaluation practice. Currently, federal investments in teacher education research pale in comparison to other fields like medicine, engineering, and technology. An enhanced knowledge base for teaching and the practice of preparing teachers could enable evidence-based program improvement, including for MSIs and HBCUs that are graduating a large share of currently practicing teachers of color (see Chapter 3). Additionally, relaunching research centers dedicated to critical topics is another important strategy to build and advance the knowledge necessary to support TPP improvement—and ultimately, advancing teaching.

Recommendation 18

States and the federal government should allocate funding for the development of measures, tools, and protocols for use across the main purposes of teacher preparation evaluation, including program improvement, accountability, and consumer information. Developing measures, tools, and protocols for data collection is costly, time-consuming, and often beyond the scope of individual TPPs. This development—focused on elevating TPP evaluation quality and lessening programmatic burden—should be a field-wide endeavor and requires funding and support from federal and state agencies and input from programs, school districts, professional teaching organizations, and communities. States, professional associations, accreditors, and research centers can play a critical role in the development of common measures, tools, and protocols for use across the main purposes of evaluation (see Chapter 6). To take advantage of economies of scale, regulators and professional organizations—with federal support—could collaborate on building a bank of validated tools to measure one or more program features and serve one or more of the purposes for program evaluation.

Recommendation 19

Philanthropic organizations should continue—and expand— their contributions to TPP evaluations and improvement. Along with key stakeholders like federal and state governments, institutions, and programs, philanthropic organizations can significantly contribute to TPP improvement efforts and the equitable and high-quality preparation of the future teacher workforce.[102] In both regional and national contexts, philanthropic efforts have supported and should continue to fund the development of collaborative networks and school-university partnerships; research addressing the key features of high-quality teacher preparation; research and dissemination about successful TPP initiatives; and advocacy for the policy support needed to expand access to high-quality preparation (see Chapters 5, 6, and 7).

Recommendation 20

Federal, state, and local governments should ensure an adequate supply of well-prepared, culturally responsive, and diverse teachers in all schools by providing competitive and equitable compensation, supportive learning opportunities and working conditions, and investments in preparing effective school leaders. To address educational inequities broadly, TPP evaluation must be coupled with federal, state, and local government action to remove impediments to placing well-prepared, culturally responsive, and diverse teachers in all classrooms (see Chapter 1). Education in the United States includes long-standing inequities that disproportionately affect specific districts, schools, teachers, and students (see Chapters 1 and 3). Federal, state, and local governments should create opportunities to support teacher efficacy and success and address teacher retention issues—a key cause of the current outsized demand for teachers and unprepared teachers entering classrooms.[103] These actions could include raising teacher salaries to be on par with other college-educated workers, reducing the financial burdens of attending high-quality TPPs, and improving working conditions through general school finance reform (e.g., access to school and instructional resources, reduced class size, access to useful professional development and learning opportunities, supportive school environments and leadership, and outreach to families and communities), particularly in underresourced and high-need schools where high turnover rate is a persistent problem and BIPOC teachers are more likely to teach (see Chapter 3).[104, 105] Federal, state, and local governments—through federal funding, state data sharing, and local investments—can also play important roles in building principals' capacity, which is associated with improved teacher retention rates and overall effectiveness.[106]

CONCLUSION

All students should be provided the opportunity to benefit from an equitable, culturally responsive, and high-quality public education. This opportunity can only exist when, in conjunction with sufficient societal supports, TPPs are effectively evaluated to promote continuous improvement and, ultimately, improved education for all teachers and learning for all students.

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