Appendix C:
Background and Methodology for Alternative Certification Pilot

Background

A first stage in NCTQ's evaluation of alternative certification

In this part of *Teacher Prep Review 2014* we report on a pilot study of new standards for assessing the quality of alternative certification programs. In a first iteration, our scope is limited. We evaluate only the most "alternative" of the alternative certification programs: only those programs not managed by institutions of higher education that also offer traditional certification.[1] Our sample includes only secondary preparation programs, not programs offered by alternative certification providers that prepare elementary or special education teachers, both of which in our view require too much specialized professional trainin g in advance of teaching to serve as practical options for alternate route entry into the profession. In spite of the parameters we have imposed on ourselves for this pilot study, the standards applied here should prove useful for examining any alternative certification program, whether associated with a higher education institution or not. In later iterations, we will expand the scope of our evaluation to all types of alternative certification programs.

What is alternative certification?

Roughly 30 years after the first "alternate route" into teaching was established in New Jersey, all states at least claim to offer prospective teachers some form of alternate routes into the classroom. These routes are "alternative" to traditional preparation in the sense that they generally have the teacher candidate serve in an "internship" as the teacher of record *before* obtaining initial certification.[2]

The term "teacher of record" may seem bureaucratic, but it has flesh-and-blood implications. It means that the candidate can be the only adult in a roomful of students, just as certified teachers in neighboring classrooms are on their own. Unless the support provided by both the supervisor assigned by the alternative certification provider and an assigned mentor rise to the level of co-teaching (which is very rare), the candidate is left largely to his or her own devices except for periodic observations and coaching. Needless to say, given the difficulty of the first year of teaching, this is a daunting challenge for teacher candidates, and the potential for students to lose days, weeks, or even months of ground academically is a real risk.

At the inception of alternative certification, there was clear consensus about how it should differ from traditional preparation: Alternative certification would be a responsible way to get smart, content-proficient individuals — especially individuals with content knowledge in areas of teacher shortages, such as secondary math and science, and foreign languages — into the classroom with necessary training and coaching, but without requiring that they earn another degree or its equivalent. For example, a chemical engineer could make a career change and become a chemistry teacher, or an accountant could become a math teacher. We note the important distinguishing features of ideal alternate routes:

- *They attract very capable individuals*, which implies relatively high admission standards.
- *Their candidates already "know their stuff,"* which implies that they can demonstrate their content knowledge prior to entry.
- *Candidates get sufficient on-the-job training and coaching*, which implies that experienced teachers mentor candidates intensively and program supervisors closely monitor their teaching.

Alternative certification programs and programs that actually deliver the services laid out in an alternate route can be categorized into two basic types:

- Autonomous, freestanding providers that offer certification or supply teachers to schools under their own authority.[3] To the extent that these freestanding providers offer coursework, however, it may be at one or more IHEs. Providers may be school districts,[4] private non-profits, or (in **Texas**[5]) private for-profits. We call these providers "non-IHE managed."
- Programs managed by IHEs that also offer traditional preparation. Often the requirements of these programs are identical to those for candidates in the IHE's traditional preparation programs, with only the order of fulfillment of requirements differing.[6]

Alternate routes account for about 20 percent of the 214,000 new teachers produced nationally each year.[7] Because of the large production from non-IHE managed providers in Texas and, to a lesser extent, California, this production is split evenly between the two categories of non-IHE managed providers and IHE managed programs.

NCTQ pilot study of alt cert standards

For this pilot study, our evaluation focuses on providers of the first, non-IHE managed type. We note that we plan to evaluate IHE managed programs in the future *using the same standards*. Our sample includes providers that produced significant numbers of candidates of all program types (elementary, secondary, special education and so on) over the period 2009-2012, as well as providers in as many states as possible. A total of 23 states and the District of Columbia are represented in the sample.[8] (Those states that approve only IHE managed alternative certification providers obviously cannot be represented in this sample.)

The sample does not include "teacher residency programs." Because teacher candidates in residencies are trained in classrooms but are not teachers of record, the providers offering residencies are not categorized as "alternative certification" providers.[9]

The production of approximately 11,900 teacher candidates by providers in the sample represents just over half (56 percent) of the total production of the *non-IHE managed* sector, meaning that each year they produce about 5.6 percent of the nation's new teachers.[10]

A disproportionate share of the providers in the sample (45 percent) is located in Texas because about 40 percent of the state's teachers are produced by alternate routes, with for-profit providers dominating the market.[11] Fig. B1 of the methodology appendix illustrates the total production of the nation's teachers included in NCTQ's evaluation of teacher preparation in *Teacher Prep Review 2014* in: 1) this sample of non-IHE managed alternative certification providers, 2) the non-IHE managed alternative certification providers not in the sample, 3) IHE managed alternative certification providers, and 4) the large body of institutions housing traditional teacher preparation programs.

Because the terminology used to describe fundamental program components varies across states and contexts, we define various terms here:

- Some programs involve **fieldwork**, which we define as time spent in classrooms to observe or carry out some relatively low-level instructional task, such as tutoring.
- In contrast, in **clinical practice** a teacher candidate is responsible for full class instruction for at least a short period of time for training purposes, but is not the teacher of record. Clinical practice can be as short as several weeks or as long as 12-15 weeks, in which case it is analogous to student teaching in traditional teacher preparation programs.
- A teacher candidate who receives the majority of training as the teacher of record is in an **internship**.
- Teachers who provide training and support to teacher candidates in clinical practice are **cooperating teachers** and in internships are **mentor teachers**.
- **Program supervisors** (often retired teachers and administrators) provide additional training and coaching and conduct observations and evaluations. Sometimes school district personnel also conduct observations of interns.
- A **formal observation** is an observation that concludes with the teacher candidate receiving written feedback.

In a minority of alternative certification programs, the clinical practice period is sufficiently long to provide all necessary training, allowing candidates to enter the classroom as the teacher of record, rather than in an intern status. However, in most other cases, alternative certification teacher candidates serve as interns who are paid employees of the school district in which they teach. This is one of the reasons that alternative certification is a popular choice for those hard-pressed to take time off to get a teaching certificate through a degree-granting program.

Across and sometimes within states, non-IHE managed providers' programs vary considerably in their combinations of the components described above, especially because some programs combine clinical practice and internships. In fact, the variations in structure found among the programs in the sample motivated us to include in their rating sheets a graphic that provides information on preparation components.

See page 17 for graphics showing how these program features fit together in different program models.

Teach For America – The Great Disrupter

Considering alternate routes' rejection of the need for professional coursework and their insistence that on-the-job training is the best means to prepare teachers, there has always been understandable tension between champions of alternate routes and IHEs. Quietly co-existed with alternative certification had it not been for the 1990 advent of **Teach For America (TFA)**.

TFA recruits graduates of the most elite IHEs in the county with a mission to ensure that disadvantaged students get an excellent education. Although it technically did not begin as an "alternative *certification* provider,"[12] **TFA** has catapulted to national attention as the most high-profile provider in any alternate route. Because of its emphasis on "smarts" and candidates who are "mission driven" over preservice preparation as the key to better teaching, it has posed a very public challenge to traditional programs. This is especially true in light of the findings (discussed below) that in some grades and subjects its highly capable but skimpily trained teachers do surpass all others in effectiveness.

This year 11,000 **TFA** teachers are working in 3,200 schools nationwide. The 5,500 teachers produced annually represent 13 percent of the annual production of alternative certification providers and about 2.6 percent of the nation's total teacher production.

Effectiveness of teachers prepared by alternate routes

One of the first questions commonly asked about alternative certification programs is whether the teachers they produce are better or worse than those produced by traditional preparation programs. Unfortunately, because the programs offered in alternate routes are so variable, there is no one answer. Teasing out the impact of alternative certification on effectiveness is made more difficult by the fact that studies tend to combine graduates of both non-IHE managed programs and IHE managed programs despite the fact that there is enormous variation among them, particularly in terms of coursework taken and the nature of supervision and support.

It is questionable whether it is possible to fairly summarize the research findings, as there appears to be little publicly available evidence of effectiveness on the vast majority of alternative certification programs. What evidence there is on selected programs from both state reports and research indicates that: (1) alternatively trained teachers are generally equally effective or more effective when compared to traditionally trained teachers, with teachers from some programs performing substantially better in some grade levels and subjects;[13] and (2) the differences in effectiveness *among* graduates in any given preparation program are greater than the average differences across programs.[14]

More on effectiveness research on Teach For America

TFA is by far the most prominent and heavily researched alternative certification provider. To date, a number of studies have compared the effectiveness of TFA teachers with that of teachers holding traditional certification and found mixed results. Some studies, such as a heavily critiqued study led by Linda Darling-Hammond, found that TFA had no positive impact on students or that TFA corps members were less effective than their traditionally prepared counterparts.[15] However, the majority of studies find that K-8 TFA teachers have a significantly positive effect on students' math achievement. In K-8 reading, the effect is less consistent, but overall TFA teachers' influence ranges from no significant difference to a slightly positive effect when compared with traditionally certified peers.[16]

TFA high school teachers have been the subject of several major studies to date. One found that the effect differential of TFA teachers was two to three times that of traditionally certified peers. These results were particularly strong in math and science, but were still significant in English.[17] More recently, a study comparing TFA with traditionally prepared teachers found that in secondary math, TFA teachers were more effective—to the point of adding an equivalent of roughly 2.6 months of additional school time.[18] Several other studies found that high school TFA teachers were more effective than traditionally prepared secondary teachers across a range of subject areas, most strongly in math and science.[19] Notably, several of these studies found that these positive results held true even when comparing novice TFA teachers with veteran traditionally prepared teachers.[20]

NCTQ's standards for assessing alternative certification

In crafting our alternative certification standards for secondary programs, we considered the essential features of alternative certification (capable and content-knowledgeable candidates who are then trained in the classroom) mentioned earlier. With appropriate modifications for supervised practice, we have also made the standards as parallel as possible to the key standards applicable to all traditional graduate secondary preparation programs, the traditional programs to which secondary alternative certification programs are most analogous. We have also included a standard on "evidence of effectiveness," which is analogous to a standard for traditional secondary teacher preparation programs, but cannot be a key standard because the data on which it is evaluated is so scant that it available for virtually no traditional secondary programs evaluated in the *NCTQ Teacher Prep Review*.

The full text of the alternative certification standards is found on our website, with a slightly abbreviated version below that compares them to NCTQ's standards for traditional secondary programs.

Comparison of NCTQ's Traditional and Alt Cert Standards and Indicators

Traditional Graduate Secondary Teacher Preparation Standards and Indicators	Alt Cert Secondary Teacher Preparation Standards and Indicators
Standard: Selection Criteria	
Indicators: ■ GPA of 3.0 or higher. OR ■ Average GPA for the most recent incoming class of program candidates 3.3 or higher. AND ■ Scores on one of the standardized tests used commonly for graduate admissions (e.g., the GRE). OR ■ An audition process.	Indicators: ■ GPA of 3.0 or higher. OR ■ Average GPA of all applicants accepted for training the previous year 3.3 or higher. OR ■ A score on the SAT or GRE that places the applicant in the top 50% of the college-going population. AND ■ An audition process.
Standard: Subject Area Expertise	
Indicators: Each pathway to certification requires: ■ A passing score on a subject-specific test in every subject a teacher candidate will be qualified to teach. OR ■ If no such test is required, the candidate must have a 30-SCH major (single-subject certifications) or two 15-SCH minors (multiple-subject certifications).	Indicators: Prior to entering the classroom as the teacher of record, the content proficiency of teacher candidates in every subject is demonstrated either by: ■ Passing scores on appropriate subject-specific standardized assessments. OR ■ Transcript reviews that ascertain that the candidate had a 30-SCH major (single-subject certifications) or two 15-SCH minors (multiple-subject certifications).
Standard: Student Teaching	**Standard: Supervised Practice**
Indicators: ■ The student teacher is formally observed 5 or more times at regular intervals during the placement. ■ The programs communicates that cooperating teachers must be capable mentors and effective instructors (as measured by student learning). ■ The program plays an active role in selecting cooperating teachers with the two characteristics listed above.	Indicators: ■ The program requires a minimum of 8 weeks of classroom-based clinical practice with: a) at least 3 weeks engaged in full classroom instruction, and b) at least 5 formal observations. OR ■ The program requires a co-teaching arrangement for the first 6 weeks of the internship, and at least 5 formal observations in the first 12 weeks of the internship. OR ■ The program combines features of both options described above. AND ■ The program requires that cooperating/mentor teachers must be capable mentors and effective instructors (as measured by student learning).
Standard: Evidence of Effectiveness	**Standard: Evidence of Effectiveness**
Indicator: ■ The state's own criteria for evaluating programs will determine the rating under this standard.	Indicator: ■ The state's own criteria for evaluating programs will determine the rating under this standard.

Scientific research about teacher preparation is frustratingly meager. We have tapped what solid research findings do exist and used them to formulate the standards and indicators we use to evaluate traditional teacher preparation. Since the standards for traditional secondary preparation have as strong a research base as we have been able to build, best practices in teacher preparation are "baked into" the alternative certification standards—allowing reasonable assumptions about the parallelism between many features of traditional and alternative preparation.

Supporting research and rationales

A. Selection criteria

We look for one of three measures of the academic aptitude of applicants to alternative certification programs: individuals demonstrate a minimum GPA of at least 3.0 or adequate scores on a test such as the ACT, SAT or GRE. Alternatively, the average GPA of the program's candidates is at least 3.3.

Research indicates that higher teacher selectivity as measured by factors such as SAT scores and, to a lesser degree an IHE's general competitiveness, is correlated with increased student achievement. Additional research spanning six decades supports higher academic admissions standards for entry into teacher training programs, including studies showing: (1) a strong correlation between teacher "verbal ability" (frequently measured by SAT, ACT or other vocabulary tests) and student achievement, and (2) a similarly strong correlation between the selectivity of the teacher's college and student achievement. In countries whose students outperform our own, studies show a clear pattern of teacher preparation programs recruiting and admitting the most academically capable young adults into the profession.

For more information on this research, see the rationales and research inventories in the standard book for Standard 1: Selection Criteria for traditional teacher preparation.

We also look for evidence that the program requires a teaching audition of each applicant.

In contrast to traditional preparation (in which "practica" involving short teaching episodes precede student teaching), an absence of any high-stakes audition in alternative certification makes clinical practice and/or the internship the first opportunity for detecting qualities that would make the candidate less attractive as a prospective teacher. At that point, it may be too late to do anything about the revelation. The requirement of an audition is therefore evaluated slightly differently in our selection criteria standards for traditional and alternative certification preparation: In the former, it is an option for graduate programs to fully satisfy the standard, whereas in the latter, it is *necessary*.

Teachers should be recruited from the top of each graduating class.

– 10th year math teacher
Respondent to NCTQ survey

More physics focus, less general focus.

-10th year physics teacher
Respondent to NCTQ survey

Also, a study of **TFA's** selection criteria finds that teachers' academic achievement, leadership, and perseverance are positively associated with student math gains;[21] producing teachers with these characteristics is fostered by rigorous and competitive selection processes — including auditions — that actually attract rather than dissuade talented and determined individuals.

Supporting research and rationales

B. Subject Area Expertise

We look for evidence that the program has ensured that no candidate enters the classroom as the teacher of record without having demonstrated content knowledge in every subject they will be certified to teach. Testing and/or transcript reviews ensure this content knowledge.

There is no dispute that teachers need to know their subject matter. What is not clear is how to measure that the teacher has sufficient knowledge. Strong research conducted in the United States found that students of teachers with a bachelor's or master's degree in mathematics achieved better results in math than did students of teachers with other majors (although the same did not hold true for science). In Germany, researchers found that while content knowledge in a subject was not sufficient for a teacher to effectively teach a subject, having that content knowledge enables the development of pedagogical content knowledge (e.g., specific methods to communicate content or identify students' misunderstandings), which was critical for effective teaching. Additional research studies have demonstrated the positive impact of teacher content knowledge on student achievement. Teacher content preparation in math and science had a positive effect on how much math and science high school students learn. One study found that high school teachers' content coursework had a higher payoff for less experienced teachers, and another found that when hiring novice teachers, selecting those who excelled academically can make up for their lack of teaching experience.

One of the legacies of the federal No Child Left Behind legislation's requirements that secondary teachers be "highly qualified" in their subject area is that certification standards now require that those seeking to teach in single-subject certification areas such as English or math must take a considerable amount of coursework in their subject and/or pass a subject-specific licensing test. Unfortunately, these requirements do not have the same implications in the case for multiple-subject certifications, such as "science." In this type of certification, in many states a teacher candidate can have a biology major, for example, pass a test that covers

all of the sciences without providing separate cut scores in each subject, and be certified to teach every science discipline included in the umbrella certification. An economics major can similarly obtain a social science certification.

For more information on this research, see the rationales and research inventories in the standard book for Standard 8: High School Content for traditional teacher preparation.

Supporting research and rationales

C. Supervised Practice

We look for evidence that the teacher candidate is adequately supported by examining the nature of classroom training and coaching before entering the classroom as the teacher of record, immediately after entering, or in the rest of the first year of teaching — or in a combination of these.

If a program uses a clinical placement model, a placement of a minimum of eight weeks can be aligned either with summer school programs or classes held during the normal academic year, ensuring that there is ample opportunity for the teacher candidate to have full class teaching responsibilities for the same amount of time (three weeks) as student teachers.

If a program uses a co-teaching model, six weeks of co-teaching is a reasonable time to allow for a trained mentor to team full time with the new teacher for the critical first several weeks of school and then gradually reduce support over the course of the subsequent month. We note that NCTQ has endorsed co-teaching arrangements in alternative certification internships since the first edition (2007) of our *State Teacher Policy Yearbook*.[22]

Programs may also combine in a hybrid model a period of clinical practice shorter than eight weeks but still allowing time for at least some full class teaching and a period of several weeks of intense support at the beginning of an internship.

We look for evidence that the teacher candidate is formally observed at least five times, preferably condensed in the time period in which the candidate first engages in full class instruction.

A study of the impact of teacher preparation elements on teacher effectiveness found that student achievement improved for first-year teachers who graduated from teacher preparation programs that provided oversight of their student teaching experience. One component of this oversight is that the institutions required a minimum of five supervisor observations during student teaching. The importance of multiple supervisor observations is supported by a meta-analysis of 49 studies on the effects of preservice and in-service training on practical classroom teaching behaviors and skills that found stronger effects for classroom practice with performance feedback.

We look for evidence that cooperating/mentor teachers are both capable mentors (or have had mentor training) and that they are effective instructors, as measured by student learning.

There is no research basis that we can identify to support the common sense proposition that new professionals benefit from the wisdom of seasoned professionals, particularly those who are good at mentoring adults and are themselves effective instructors. Nevertheless, we are confident that this element of professional training should be a feature of any good program.

For more information on this research see the rationales and research inventories in the standard book for Standard 14: Student Teaching for traditional teacher preparation.

Supporting research and rationales

D. Evidence of Effectiveness

We look for evidence that the program's graduates have a positive impact on student learning.

Despite the fact that there is currently only one piece of value-added data by which to evaluate the programs in this sample, we include this standard as a placeholder until more such data is available. As in the case of evaluation of traditional teacher preparation programs, the only public reports available are those issued by Louisiana, North Carolina, Tennessee and Ohio, and these reports provide information on effectiveness for only one of the programs in the sample: **TEACH Tennessee**. In the case of the five other programs, secondary program data is combined to produce institutional-level or institution-wide results.[23]

For more information on this research see the rationales and research inventories in the standard book for Standard 18: Evidence of Effectiveness for traditional teacher preparation.

There is no strong research that identifies features specific to alternative certification on which to base any modifications or elaborations of these standards. However, seven case studies of the characteristics of successful alternative certification programs assert that the more effective programs do align with some of the characteristics for which we are evaluating programs: processes to select individuals who are well-educated or who have strong content knowledge and use of trained mentors.[24]

What topics are not addressed by the standards and why?

Previous career experience

This standard does not evaluate admission criteria pertaining to professional qualifications. As a route into the classroom that is designed to attract individuals with some professional experience, that experience might seem to have merit. However, there is no evidence regarding the type of professional experience that might increase teacher effectiveness. In fact, there is some evidence that career changers (via both traditional and alternate routes) yield no greater benefits in English/language arts and actually produce lower outcomes in math; these outcomes were particularly negative for career-changers who came through traditional preparation programs.[25]

Given that there is no evidence that professional experience compensates for other candidate attributes that may be lacking, any blanket justification of low admission standards that relies on the fact that applicants may have relevant previous career experiences is in our view unwarranted.

Professional coursework

As mentioned earlier, the standards do not evaluate professional coursework offered by programs, which varies from conventional courses available at selected IHEs (some face-to-face, some online), or self-designed modules (again, some face-to-face, some online).[26] The value of this coursework has not been well researched.[27] However, whatever its merit may be, our focus in this first study of alternative certification is only on the fundamental features that can be evaluated in a manner parallel to the evaluation of the fundamental features of traditional secondary preparation programs.

Methodology for Alternative Certification Program Evaluation

The methodology for the pilot study of alternative certification programs precedes the findings because terminology and categorizations of programs used in the findings are defined in this section.

Data sources:

Evaluation of secondary alternative certification programs uses the following data:

- Title II reports
- Information programs make publicly available
  - admissions requirements regarding minimum GPAs and standardized testing;
  - licensing test requirements and deadlines for the completion of tests;
  - transcript review policies;
  - the features of fieldwork, clinical placements and internships;
  - the nature of supervision and support provided by program staff and mentor teachers during clinical practice and internships; and
  - professional qualifications of program staff and mentor teachers.
- Responses to phone and/or email inquiries to clarify or amplify on information collected from websites
- Confirmations by providers of statements NCTQ sent by letter regarding program characteristics
- Public documents available online or produced by open records requests to public providers and state education agencies, particularly audit reports by and provider self-reports to the Texas Education Agency (TEA)
- State reports on the findings of teacher preparation student performance data models

Scope of overall analysis:

Selection of the sample:

Title II reports were used to identify the alternative certification providers nationwide that are autonomous and not directly managed by any IHE.[28] We do not distinguish between the majority of these providers that actually offer certification themselves, and the minority — such as some TFA regions — that deliver teachers to classrooms and have no direct role in any certification process that may be required by state regulations. We are agnostic on this categorization because the relevant state authorities themselves deemed these regulatory differences meaningless when they recognized that these providers could supply teachers to public schools.

We then selected the providers that generally produced the greatest number of teachers in all of their programs, including their secondary programs,[29] in 2011-2012 (the most recent year for which production data is available). In some cases, however, we included programs without regard to the most recent production figures for the following reasons: (1) to include in the sample a provider in as many states as possible; (2) to include a provider whose production was relatively low, but whose enrollment was significantly higher, suggesting there was considerable fall-off of candidates after they had enrolled; (3) to include a provider whose enrollment and/or production had been much higher in previous years than in the most recent year; (4) to include a provider whose programs are specifically cited by name in state regulations, such as **TFA** and the American Board for the Certification of Teacher Excellence or **ABCTE**; and/or (5) to include program respondents to a small exploratory survey we conducted in early 2013.[30]

Methodologically speaking, this method of provider selection cannot be relied upon to produce a precisely representative sample of all non-IHE managed alternative certification providers. However, given that the sample includes large producing providers, providers in about half of the states, providers who range from school districts to non-profits to for-profits,

and providers from three of the alternative certification provider "franchises" (**TFA**, **ABCTE** and the **Teaching Fellows**, the latter managed by the national organization formerly known as **The New Teacher Project** but now renamed as **TNTP**), we think that the picture it paints of this sector is clear and undistorted.

Our analysis began with a thorough search of each program's website, where we gathered information relevant to our evaluation on selection criteria, content preparation and supervised practice.[31] We then drafted a letter to confirm information necessary for our evaluation. When necessary to clarify details sufficiently to frame a letter to programs, analysts emailed or called provider staff.[32]

In our letter to providers, we indicated that in the absence of a response, we would take our understanding of policies or practices to be confirmed. This approach minimized for providers the burden of responding, while still providing us the assurance that the information used in evaluations was accurate. If the provider did not confirm the statement but provided new information, we accepted the new information without requiring additional documentation.[33]

All of the providers in the sample received a query letter from us; if a response was not received within one month after sending the initial letter, we sent a second request by certified mail to private programs, and either an open records request or certified letter to public programs. Responses to letters were ultimately received from 45 providers, just over half (53 percent) of the total sample.

In the event that a response was never received, we proceeded to evaluate the program with data available. For the 45 percent of the sample represented by Texas programs, public information was also amply available from "compliance reports" on audits conducted by the TEA and posted on the TEA website, and "self-reports" filed by programs that were obtained by open records requests.[34] We used these reports only when website data or data from the provider was unavailable, however.

The elements of our queries to the programs are so generally uniform that they can easily be summarized:

- **Selection criteria:** Because it is of critical importance to potential applicants, information on admissions standards on provider websites (minimum GPAs and standardized tests that must be taken) was almost always clearly labeled and did not usually require that we seek further clarification. However, the vast majority of providers failed to include any information about the secondary program's track record on academic expectations, making it necessary to seek information on the average GPA of the most recent cohort of secondary candidates.[35] Our letters simply asked for confirmation that the average GPA of the provider's most recent cohort of secondary candidates was below 3.3.[36]
- **Content proficiency:** Again, because of the critical importance to potential applicants, information on their criteria for determining content proficiency — involving either or both state licensing tests and transcript reviews — is readily found on provider websites. However, the information is not as consistently complete as information on selection criteria.[37]

  Our queries on how the programs determine the content proficiency of each candidate generally concerned whatever testing requirements the provider had in addition to those mandated by state regulations for any multiple-subject certifications advertised as available. For some programs this query produced a response that because of the absence of district needs, the provider had not for many years certified or placed teachers in one or more of the multiple-subject teaching areas for which they are approved; we included that information in our evaluation.[38]

- **Supervised practice:** With regard to supervised practice, we sought to confirm information about internships — overwhelmingly preferred over clinical practice by candidates for alternative certification because they allow a candidate to keep earning a paycheck — unless clinical practice placements were listed as the only form of supervised practice offered by the provider.

  Although some programs provided on their website extensive information about the nature of their supervisory practices — from the credentials of every type of person involved in the preparation process to their responsibilities — others provided only very general language about program characteristics (e.g., "A first year teacher development and certification program, [provider name] provides rigorous and relevant training and individualized support that increases the path of development for new teachers.").

  We derived what information we could to formulate what appeared to be the structure of classroom-based experiences in terms of their nature and length, the qualifications of and nature of coaching provided by cooperating/mentor teachers, and the nature of supervision by program supervisors. In our query to providers, we asked if our interpretation was accurate.

  For example, if the mentor teacher was described in provider materials as a "teacher with at least three years of experience," we then confirmed with the program that there were no other unstated required characteristics pertaining to mentoring ability and effectiveness.

  As another example, if a provider indicated that teacher candidates were observed, but did not state the number of times, our letter to the provider asked if the program required "fewer than five observations with written feedback in the first year of the internship." We framed the statement in this way for two reasons: first, because five formal observations is a critical threshold for evaluation, and second, this threshold seemed safely above the number of formal observations required by state regulations (in Texas, only three are required).

Evaluating the Selection Criteria Standard:

Minimum GPAs.

In general, the provider's requirements of a minimum GPA are clear-cut. We noted that programs, including those in Texas, are often allowed to exempt up to 10 percent of applicants from such requirements, but we did not discount GPA requirements due to the possibility of limited exemptions. Only in the case of the **Vermont Peer Review Program** did we determine that the potential for exemptions was so open-ended as to vitiate the indicator: The requirement of a "B average" (3.0 GPA) could be waived for any number of applicants if

Training new teachers could be improved by actually advising teachers who do not have content background to obtain it before they step into a classroom to teach it. If they do not, they will not be of service to their students.

-5th year secondary science teacher
Respondent to NCTQ survey

each showed "evidence of intellectual competency by providing adequate evidence in their portfolios, including PRAXIS II scores" or submitted "written certification of intellectual competence by an academic dean from their degree granting institution."

Standardized testing.

Normed tests of the general population — such as the SAT, ACT, GRE, or the Texas Higher Education Assessment, or THEA)—can satisfy our indicator if the program sets cut scores at a level to ensure that applicants are in the top half of the college-going population.[39] There are three categories of tests that do not satisfy our indicator. First, placement tests such as the COMPASS or ACCUPLACER are not relevant to evaluating overall academic aptitude and are not considered. Second, tests normed only to the teacher candidate population, such as PRAXIS I tests, do not satisfy the indicator.[40] Finally, "critical thinking skills" tests (which are not used by IHEs as normed assessments of an applicant's general level of academic aptitude) do not satisfy the indicator.

Even when we were able to determine that an appropriate test was required, that determination was nullified if we also found that the provider allowed a test that did not meet the indicator (as described above) as an alternative. For example, if an applicant is given the option of providing scores on the SAT, GRE or Praxis I, the indicator is not satisfied, since while the former two tests are appropriate to the task, the Praxis I is not.

Average GPAs.

Programs can meet our indicator by documenting that the most recent cohort of candidates had an average GPA of 3.3 or above. The documentation that we require is the signature of a registrar or institutional official of similar stature. The GPA can be based on the most recently acquired degrees of the applicants, not just on the applicants' undergraduate degrees.[41]

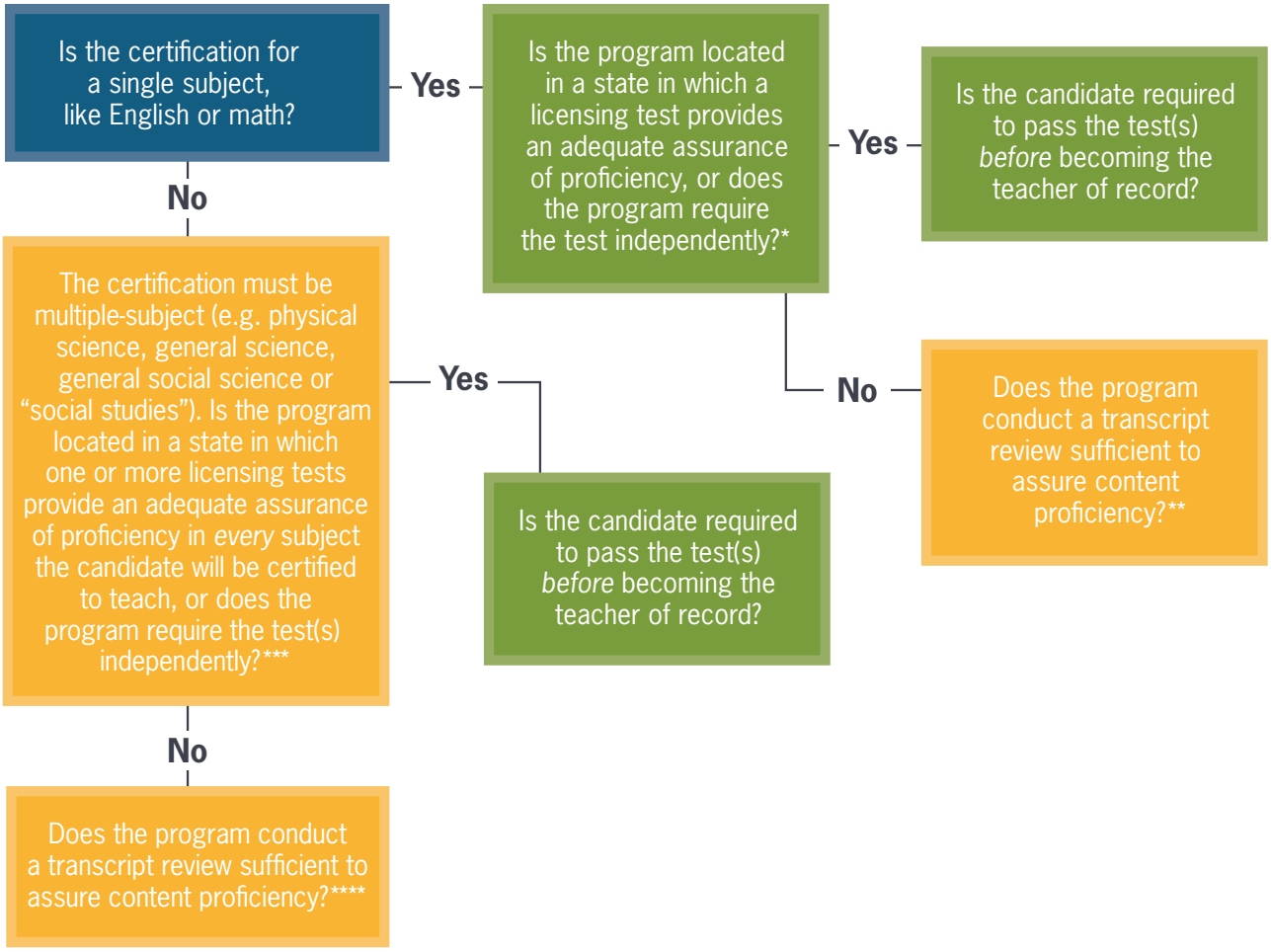
Auditions.

As in our evaluation of traditional teacher preparation programs, we look for evidence that a program gains some understanding of a candidate's ability to teach a lesson. Generally this evidence is obtained by means of a high-stakes audition in which the applicant presents a short lesson to peers or students. Neither interviews nor dispositional surveys qualify as an audition.[42] However, for alternative certification programs, we also accept "teaching episodes" in which the candidate's instructional performance is evaluated on an specific rubric and is used by the provider as a means to screen candidates after they have been admitted, but before they are allowed to begin teaching.[43]

Evaluating the Subject Area Expertise Standard:

A paramount goal of this standard is to determine if the program requires candidates to demonstrate content proficiency *before* they enter the classroom as the teacher of record. This is a complicated process that depends on consideration of state testing topics and/or timing, as well as the transcript review processes. We undertake a review similar to that used to evaluate traditional graduate secondary programs:

Fig. C1 How NCTQ evaluates whether teacher candidates will "know their stuff" in *every* subject they'll be able to teach



* Such test have sufficiently rigorous content (as determined by cut scores above the 5th percentile) and provide separate scores for each subject covered. These tests are available commercially. The following states have adequate single-subject tests: Alabama, Arizona, Connecticut, Delaware, District of Columbia, Florida, Idaho, Iowa, Kansas, Kentucky, Maine, Michigan, Minnesota, Missouri, New Hampshire, New York, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia. Other states require adequate testing in English and mathematics, but in either the sciences or social sciences offer at least one single-subject certification that requires a general licensing test, fail to require any test for initial certification, or offer a certification that is single subject in name only since it allows teaching assignments in multiple subjects.

** For single subjects, this entails requiring 30 or more semester credits hours (SCHs) of coursework in the subject.

*** Such test have sufficiently rigorous content (as determined by cut scores above the 5th percentile) and provide separate scores for each subject covered. These tests are available commercially. The following states have adequate testing for multiple-subjectcertifications: Indiana (Physical Science), Minnesota (Social Studies), New Jersey (Physical Science), Ohio (All six two-subject combination certifications), Oklahoma (Physical Science), and West Virginia (Physical Science and General Science).

**** In physical science, two minors (15 SCHs) in physics and chemistry; in general science, two minors in either biology, physics, chemistry, or earth science; and in general social science, either a major in history or two minors, one in history and one in political science/government, economics, geography or psychology.

All decisions regarding state licensing tests are based on information NCTQ offers in this infographic.

The most helpful part of my teacher training was an outstanding academic preparation in mathematics so I had a good understanding of what I was teaching and why.

–Retired math teacher with 42 classroom years
Respondent to NCTQ survey

Two examples will help to explain our evaluation process:

Texas licensing requirements specify that candidates in both alternative and traditional preparation programs may be certified to teach both physics and chemistry, after having passed one general licensing test that addresses both subjects but that does not provide a separate score on each. Therefore, the answer to the question above regarding whether or not the state requires an appropriate test is "no" because the adequacy of both physics and chemistry knowledge may not be tested on the physical science test: A candidate could score very poorly on the physics portion of such a test but compensate for that low score with a high score on the chemistry portion.

Accordingly, we then had to ascertain if Texas programs offering physical science certifications then compensate for the state's own flawed testing procedure and independently require that candidates pass a licensing test in both physics and chemistry *before* entering the classroom. If the answer to this question was "no," we then ascertained if the provider undertakes a proper transcript review to determine if the applicant has at least 15 SCH-minors in both physics and chemistry.[44]

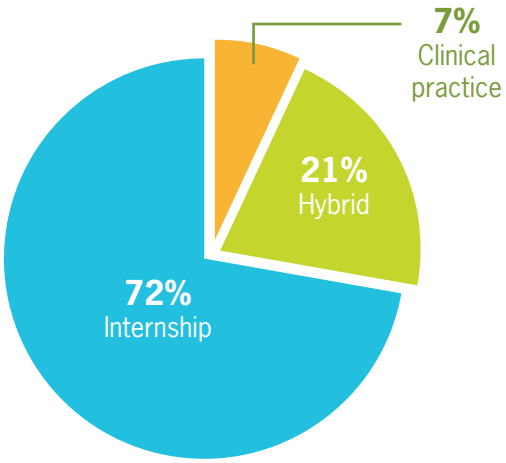
In **California**, on the other hand, all secondary licensing tests are appropriate. All of the state's licensing tests evaluate teacher candidates' content mastery in every subject they will be certified to teach, whether single or multiple subject. Therefore, for any programs we examined in California, we only had to determine if the testing was required *before* the candidate entered the classroom.[45]

Evaluating the Supervised Practice Standard:

Supervised practice model.

The student teaching component of traditional teacher preparation is relatively consistent from institution to institution. In contrast, there are considerable variations in the ways that alternative certification programs design opportunities for practice or supervised early teaching. We identify three general types of supervised practice: internships, clinical practice and a "hybrid" that combines elements of the first two models.[46] The graphic below indicates the share of each model in our sample:

Fig. C2 Alt Cert models in sample



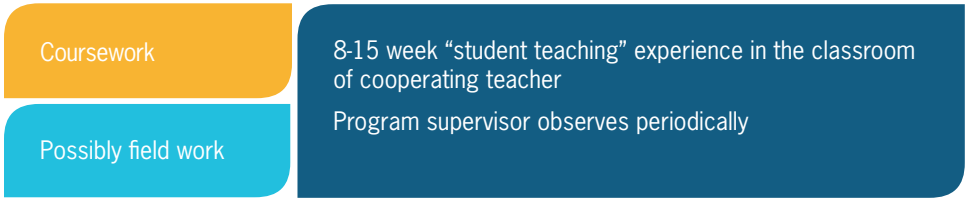
Nearly three-quarters (72%) of the programs in the sample offer preparation through an internship.

Each of these three models has several broad features:[47]

Those of the **clinical practice model** can be very similar to those of traditional student teaching. Both include:

- a clinical placement taking place over a significant period, with responsibility for a variety of classroom activities, including some period of full responsibility for instruction;
- formal observations by a program supervisor; and
- informal supervision by a cooperating teacher.

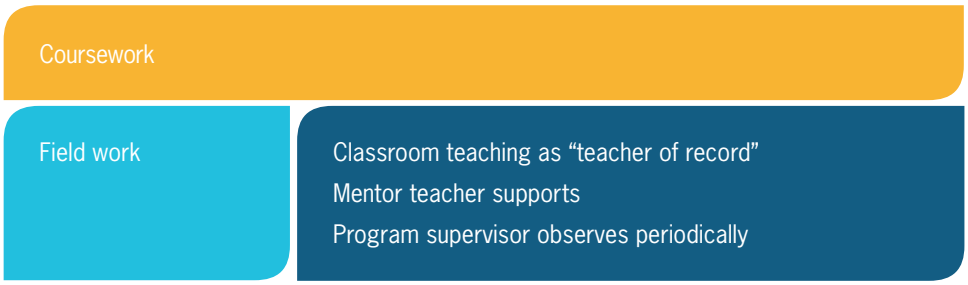
Fig. C3 Clinical practice model



The broad features of an **internship model** include:

- a brief period of field work before entering the classroom as the teacher of record;
- formal observations by a program supervisor while teaching; and
- varying levels and types of support from a teacher-colleague serving as a mentor, with support in some cases that is sufficiently intensive to constitute a co-teaching arrangement.

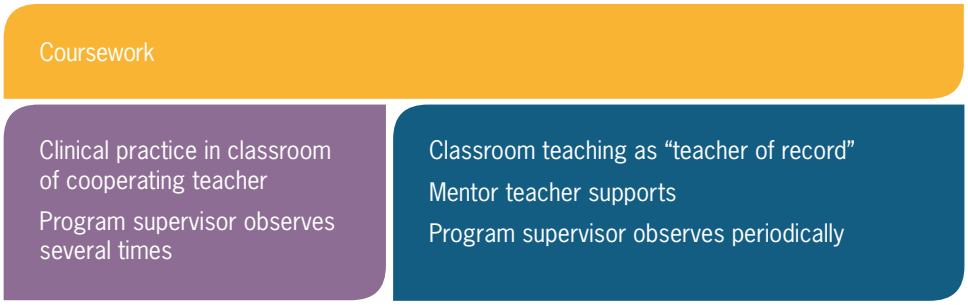
Fig. C4 Internship model



The broad features of a **hybrid model** include:[48]

- a limited clinical placement;
- formal observations by program supervisors during both the clinical placement and the internship; and
- varying levels and types of support from teachers, one serving as a cooperating teacher during the clinical placement and another serving as a mentor during the internship (in the latter case, the support may be sufficiently intensive as to constitute a co-teaching arrangement).

Fig. C5 Hybrid model



Observations.

Programs hold the prime responsibility for guiding teacher candidates' professional growth, with formal observations one of the most important vehicles for doing so. Although cooperating/mentor teachers may provide formal observations, programs can only meet this portion of the standard through formal observations by program supervisors.

Some programs advertise the number of formal observations they *might* conduct under some circumstances, but programs were scored on the basis of the minimum number they *require* each supervisor to conduct.[49]

We note that in the absence of evidence of other critical features of training and coaching (e.g. a significant amount of clinical practice and/or extensive mentor support, such as some period of co-teaching) satisfying even a small part of the standard requires providing formal observations at least as frequently as twice a month.

A program could earn up to half of the total credit for the **Supervised Practice Standard** on the basis of the program features described above. Some compensatory scoring was possible to accommodate the many possible iterations of practice teaching. For example, if a provider's supervisor made at least five formal observations during the first year of an internship, rather than the first 12 weeks, and a mentor provided co-teaching support only during

the first month, rather than the first six weeks, but the provider offered a short period of clinical practice prior to the internship that allowed for some days of full class instruction, the full half of the total credit for the standard could be awarded.

Characteristics of the cooperating/mentor teacher.

Although the evaluation of the required characteristics of cooperating teachers and mentor teachers is very similar to our evaluation of traditional teacher preparation programs, it differs on the issue of communication of those required characteristics. For traditional programs, we only accept requirements that are formally communicated to school districts, but our evaluation of alternate programs is somewhat less stringent, accepting what programs publicly post as the required attributes.

We believe that posted information on the characteristics of an alternative certification program's cooperating/mentor teachers is a valid source of data: Since such information is salient to applicants to alternative certification programs, they are likely to have certain expectations for the quality of support a provider has pledged to provide and therefore hold the provider accountable.

Capable mentor.

We concluded that an alternative certification program requires a cooperating/mentor teacher to be a capable mentor if the program indicates that candidates for the role must either (1) possess demonstrated mentorship skills (which may be stated generally, or specifically as skills in at least two of the following areas: observing, providing feedback, holding professional conversations and working collaboratively), or (2) take a substantial mentorship course prior to or while serving in the role.[50] Listings of *responsibilities* of the cooperating/mentor teacher that, for example, include "mentoring the intern," do not suffice as selection criteria.[51]

Effective instructor.

General requirements that allude to professional competence (e.g., the nominee is a "master teacher") do not suffice. The provider must require that individuals possess effective instructional skills that are evidenced by information on the teacher's positive impact on student learning.[52]

We note that because national board certification is not based on either capacity to mentor or effectiveness as an instructor as measured by student learning, in our evaluations of traditional and alternative certification programs we do not credit use of national board certified teachers as cooperating/mentor teachers as satisfying either of the above requirements.

Imputed scoring of the Supervised Practice Standard.

In the case of seven programs (8 percent of the sample), the implied confirmation of information in our correspondence to which we received no response, coupled with the general nature of program features and — in most cases — an understanding of state regulations, gave us the capacity to impute scores.

For example, if a Texas provider's public postings indicated that it only follows minimal state regulations in terms of admission and content preparation, and we were not able, using any of the methods described above, to find additional information about the number of observations provided to interns or the support provided by mentors, we assumed that the provider merely satisfied Texas regulations on both. We then rated the provider on the **Supervised Practice Standard** accordingly. In such cases, we indicate the method by which the score was derived: "meets a small part of standard — imputed."

Evaluating the Evidence of Effectiveness Standard:

This standard is evaluated in the process described in the scoring methodology for **Standard 18: Evidence of Effectiveness** for traditional teacher preparation programs. The only alternative certification program that satisfied the evaluation criterion for that its state's teacher preparation student performance data model provides program specific results is the **Tennessee Department of Education's Teach Tennessee** program. However, even in the case of this program we are unable to include the model's results in our evaluation of this standard since the **Teach Tennessee** does not have statistically significant results for two consecutive years.[53]

Grading:

The **Selection Criteria** and **High School Content Standards** are scored on a three-part scale, and the **Supervised Practice** and **Evidence of Effectiveness Standards** are scored on a five-part scale. The scores of the three standards that correspond to the key standards for traditional programs are used in a weighted average to produce a program grade. The weight assigned to each score is exactly the same weight that is applied to the analogous key standard in traditional secondary programs when those scores are used to produce the program's "base program ranking." (For more on these weights, see Appendix B.) The score on the **Evidence of Effectiveness Standard** is not included in the calculation of a program grade. Given that the sample leaves out such a substantial share of alternative certification providers — many non-IHE managed and all IHE managed programs — we do not provide rankings.

Appeals of ratings:

NCTQ's public Forum for traditional preparation programs to appeal their scores is also available for alternative certification programs. Programs that did not provide information in response to our several requests will still be able to do so during the Forum, regardless of whether the information will materially affect a score on any standard.

Endnotes

1 This decision was not based on production; institutions of higher education produce about half of the teachers entering the classroom by alternate routes.

2 However, variations among both alternate and traditional routes blur distinctions. Some alternative certification programs offer student teaching (an apprenticeship in the classroom of another teacher who continues to serve as the teacher of record) rather than or in addition to internships, whereas some traditional teacher preparation programs offer both student teaching and internships.

3 Some states do not allow programs of this type and require that alternative certification programs be offered through IHEs.

4 Directly, or under the auspices of state offices.

5 This report mentions Texas frequently; as a result, from this point forward we will not be repeatedly presenting it in bold format, as we do with other states.

6 NCTQ's 2007 report on alternative certification programs highlighted how little distinction there is between traditional and alternative preparation programs offered by IHEs, with admissions requirements and coursework virtually the same. The only difference may be that in the former, teacher candidates enter the classroom only after completing coursework, whereas in the latter, they do so while enrolled in coursework.

7 Production data supplied from Title II, 2012 available at title2.ed.gov.

8 **Arkansas**, **California**, **Colorado**, **Connecticut**, **District of Columbia**, **Florida**, **Georgia**, **Idaho**, **Louisiana**, **Massachusetts**, **Maryland**, **Mississippi**, **Missouri**, **New Hampshire**, **New Jersey**, **North Carolina**, **Pennsylvania**, **South Carolina**, **Tennessee**, **Texas**, **Utah**, **Virginia**, **Vermont** and **Wisconsin**.

9 Even if we had categorized them as such, however, only one (the **Boston Residency Program**) produces a large enough number of teachers to have been included in the sample of secondary programs considering the production of other programs in **Massachusetts**.

10 Given the way that production is reported, it is impossible to isolate secondary program production information.

11 Smith, M. & Pandolfo, N. (2011, November 26). For-Profit Certification for Teachers Is Booming. *The New York Times*. Retrieved from http://www.nytimes.com/2011/11/27/us/for-profit-certification-for-teachers-in-texas-is-booming.html?pagewanted=all&_r=0

12 **TFA** is not categorized as such because it did not initially offer certification. Now **TFA** offers certification in some regions due to the requirement in federal No Child Left Behind legislation that alternate route teachers be enrolled in an alternate route program in order to be considered "highly qualified teachers."

13 For example, a 2011 study found that the performance of ABCTE teachers in teaching math was substantially better, on average, than for traditional preparation program graduates. In reading, their performance was not much better. Sass, T.R. (2011) Certification requirements and teacher quality: A comparison of alternative routes to teaching. National Center for Analysis of Longitudinal Data in Education Research, Working Paper 64.

14 Kane, T. J., Rockoff, J. E., & Staiger, D. O. (2008). What does certification tell us about teacher effectiveness? Evidence from New York City. *Economics of Education Review, 27*(6), 615-631.

15 Darling-Hammond, L., Holtzman, D. J., Gatlin, S. J., & Heilig, J. V. (2005). Does teacher preparation matter? Evidence about teacher certification, Teach for America, and teacher effectiveness. *Education Policy Analysis Archives, 13*(42). Retrieved from http://epaa.asu.edu/epaa/v13n42/.

16 Raymond, M., Fletcher, S., & Luque, J. (2001). *Teach For America: An Evaluation of teacher differences and student outcomes in Houston, Texas*. Stanford, CA: The Hoover Institute, Center for Research on Education Outcomes (CREDO); Glazerman, S., Mayer, D. P., & Decker, P. T. (2004). *The effects of Teach For America on students: Findings from a National Evaluation*. Washington, D.C.: Mathematica Policy Research, Inc.; Kane, T. J., Rockoff, J. E., & Staiger, D. O. (2006). *What does certification tell us about teacher effectiveness? Evidence from New York City*. NBER Working Paper Series. Cambridge, MA; National Bureau of Economic Research; Boyd, D., Grossman, P., Lankford, H., Loeb, S., & Wyckoff, J. (2008). *Teacher preparation and student achievement*. NBER Working Paper Series. Cambridge, MA: National Bureau of Economic Research; Noell, G. H., & Gansle, K. A. (2009). *Teach For America teachers' contribution to student achievement in Louisiana in Grades 4-9: 2004-2005 to 2006-2007*. Baton Rouge, LA: Louisiana State University; Glazerman, S., Mayer, D., & Decker, P. (2006). Alternative routes to teaching: The impacts of Teach for America on student achievement and other outcomes. *Journal of Policy Analysis and Management, 25*(1), 75-96.

17 Xu, Z., Hannaway, J., & Taylor, C. (2007). *Making a difference? The effects of Teach For America in high school*. Washington, DC: National Center for Analysis of Longitudinal Data in Education Research.

18 Clark, M., Chiang, H., McConnell, S., Silva, T., Sonnenfeld, K., Erbe, A., & Puma, M. (2013). *The Effectiveness of Secondary Math Teachers from Teach For America and the Teaching Fellows Programs* (No. 7890). Mathematica Policy Research.

19 Xu, Z., Hannaway, J., & Taylor, C. (2011). Making a difference? The effects of Teach for America in high school. *Journal of Policy Analysis and Management, 30*(3), 447-469; Henry, G. T., Purtell, K. M., Bastian, K. C., Fortner, C. K., Thompson, C. L., Campbell, S. L., & Patterson, K. M. (2014). The Effects of Teacher Entry Portals on Student Achievement. *Journal of Teacher Education, 65*(1), 7-23.

20 Clark, M., Chiang, H., McConnell, S., Silva, T., Sonnenfeld, K., Erbe, A., & Puma, M. (2013). *The Effectiveness of Secondary Math Teachers from Teach For America and the Teaching Fellows Programs* (No. 7890). Mathematica Policy Research.; Xu, Z., Hannaway, J., & Taylor, C. (2011). Making a difference? The effects of Teach for America in high school. *Journal of Policy Analysis and Management,30*(3), 447-469.

21 Dobbie, W. (2011, July). Teacher characteristics and student achievement: Evidence from Teach For America. Cambridge, MA: Harvard University.

22 See Area 2: Expanding the Pool of Teachers, Goal B - Alternate Route Preparation. We have suggested that teachers who want to retire from full-time teaching positions but who are willing to mentor a new teacher for a short period in the fall could provide the staff needed to offer co-teaching mentors to teacher candidates in internships.

23 The **Louisiana Resource Center for Educators'** elementary and middle school teachers outperform the average new teacher in social studies, math, language arts and reading, but do worse in science; aggregate data that includes data for the four **North Carolina Regional Alternative Licensing Centers** indicate that their overall performance is below average, with most of the less effective ratings in high school, where their graduates are most heavily concentrated.

24 Humphrey, D., Wechsler, M., & Hough, H. (2008). Characteristics of effective alternative teacher certification programs. *The Teachers College Record, 110*(1), 1-63. Placement in schools with strong leadership was also deemed to positively impact candidates.

25 Boyd, D., Grossman, P., Lankford, H., Loeb, S., O'Brien, R., & Wyckoff, J. (2011). The effectiveness and retention of teachers with prior career experience. *Economics of Education Review, 30*(6), 1229-1241. This study also found that the retention rate of career changers in the teaching profession was no different from those who had not had a previous career, although career changers were more likely to leave their original school at the end of the school year.

26 We should note that alternative certification was premised on candidates taking courses during their internship. However, in keeping with the variation found in the field, a considerable amount of coursework often precedes the internship. In Texas, for example, programs are required to offer at least 80 hours of coursework before the internship, but many programs offer considerably more.

27 At best there is only a set of case studies to suggest that there are positive effects of professional coursework in alternative certification. See Humphrey, D., Wechsler, M., & Hough, H. (2008). Characteristics of effective alternative teacher certification programs. *The Teachers College Record, 110*(1), 1-63. Several studies have found that requiring alternative certification teacher candidates to take too many courses during the school year, especially when those candidates are already struggling with their classroom responsibilities, can be detrimental. See Humphrey, D., Wechsler, M., & Hough, H. (2008). Characteristics of effective alternative teacher certification programs. *The Teachers College Record, 110*(1), 1-63; Constantine, J., Player, D., Silva, T., Hallgren, K., Grider, M., & Deke, J. (2009). Clark, M., Chiang, H., McConnell, S., Silva, T., Sonnenfeld, K., Erbe, A., & Puma, M. (2013). *The Effectiveness of Secondary Math Teachers from Teach For America and the Teaching Fellows Programs* (No. 7890). Washington, DC: Mathematica Policy Research, Inc.

28 Several community colleges are included in the sample because they are not IHEs that traditionally have provided teacher preparation, making them more akin to freestanding alternative programs than to IHEs, which supplement a traditional program with an alternative one—as hundreds of IHEs have done. The sample also includes two state-organized routes (in **New Hampshire** and **Vermont**) in which preparation is executed directly by school districts. We eliminated from the sample one public program in **Delaware** and one in **South Dakota** because candidates' coursework was so clearly connected to one IHE in each case that the programs could easily be misperceived as under the auspices of the IHE.

29 Depending on the certification grade spans in a state, secondary certification may address only the high school grades, or the full secondary range. In Texas, the state in which 45 percent of the programs in the sample are located, secondary certifications cover grades 8-12. Information on certification grade spans in each state can be found here. No preparation programs specifically designed for middle school certification were included in the evaluation, although the programs included in the sample often offer such programs in addition to the secondary program evaluated.

30 If the provider offers a secondary program with both a clinical practice option and an internship option, we evaluated the internship option. In the absence of information from Title II reports that would allow us to select the option most often chosen, we relied on the presumption that a paid internship is the grounds on which most candidates choose alternative certification in the first place, a presumption confirmed by information from staff at the TEA that internships are by far the more popular option in the many Texas alternative certification programs.

31 On the basis of website information, we included the **Texas Institute for Teacher Education** in the sample. Website information regarding its 8-12 Math and Science certification programs was used for evaluation. It was not until shortly before the release of this report that we were informed by the provider that these programs are approved but will not be operational until fall 2015, making our evaluation prospective.

32 The letter did not address any areas for which we already had strong evidence for a policy or practice. Our first batches of letters confirmed data on up to four programs, if offered: elementary and secondary programs, and for each, the option of clinical practice, if offered, and the option of internships. Our study then narrowed to address only secondary programs and the provider's internship option (if the provider offered both options). Five providers overseeing 12 programs in the sample had responded to a survey NCTQ conducted in winter 2013 that served as a feasibility study for this report. Our data collection began with their responses, although we confirmed that the information could be used for evaluation purposes since it had not been collected with that intention.

33 Except to say that they parallel our standards for traditional teacher preparation, we gave no provider the statements of our standards while we were gathering information.

34 We also submitted open records requests to the 22 state agencies and the agency for the **District of Columbia** that may have a role in regulating programs in the other states in the sample. The responses from the **Texas Education Agency** and the **Vermont Agency of Education** were very helpful, and we also obtained relevant materials from state agencies in **Arkansas**, **California**, **Connecticut**, **Florida**, **Georgia**, **New Jersey**, and **Virginia**.

35 Beyond the **TFA** providers, for whom posted press releases indicate the average GPA of applicants, in only one other instance did we find that a provider (in this case, **Training via E-Learning: An Alternative Certification Hybrid – T.E.A.C.H.**, a Texas provider) publicly posts any information about the *average* GPAs of candidates.

36 Because no state requires alternate route candidates to have a GPA higher than 3.0 (and only a few states require a GPA even that high) we were comfortable making the negative assertion.

37 Of the eight **TFA** regions included in the sample, only the **Mississippi** and **Arkansas** regions offer certification directly, but since the other regions supply teachers who staff schools in the same manner as providers who directly certify teachers, for example, supplying a "Science" teacher if "General Science" is a type of certification, our discussion of certification issues relevant to content preparation is relevant to **TFA** as well.

38 We confirmed the subjects for which the provider was approved for certification or placements using public postings on websites, presumably kept current because they are of critical importance to prospective applicants. Our willingness to restrict the scope of our evaluation of content preparation has no analogue in our evaluations of traditional teacher preparation programs, but reflects our cognizance that one of the rationales for alternative certification is a responsiveness to district human capital priorities.

39 For the THEA, that level is just above the state-established minimum scores.

40 NCTQ does not endorse the use of the PRAXIS I for any purpose in teacher preparation; designed for undergraduates, it is especially inappropriate for use in a post-collegiate program. Even the ETS indicates that the PRAXIS I is not an appropriate measure of basic skills for anyone with a bachelor's degree.

41 In the future, the average GPA of the most recent cohort of candidates must be based only on GPAs indicated in their undergraduate transcripts.

42 Given the dispositional survey's unreliability and demonstrated lack of utility to predict teacher effectiveness, we are happy to note that only one provider (the **Massachusetts Collaborative for Educational Services**) highlighted use of this instrument.

43 These post-admission but pre-classroom teaching episodes were given credit as auditions in the case of four programs: **Baltimore City Teaching Residency (BCTR)**, **DC Teaching Fellows**, **Region 13 Education Service Center: Educator Certification Program (ECP)**, and **South Carolina State Department of Education: Program of Alternative Certification for Educators (PACE)**.

44 This is the same type of evaluation of coursework requirement we apply in our review of the preparation of candidates in traditional graduate secondary programs who are seeking "physical science" certification.

45 While the state of **California** specifies that graduation from a state-approved undergraduate content major (known as a

"2042 program") qualifies an applicant in terms of content preparation and makes any testing unnecessary, we considered it unlikely that any applicant to an alternative certification provider would have completed a 2042 program. This means that such testing is necessary for all alternative certification candidates at some point during training.

46 Note that in no instance do we evaluate training and/or coaching provided to teacher candidates in the second (or third) year of a program, should it last that long. Although novice teachers from any route deserve to have "induction" support of decreasing intensity for some years, no NCTQ evaluation includes evaluation of induction.

47 Variations can be seen in the program graphics on rating sheets.

48 **Training via E-Learning: An Alternative Certification Hybrid (TEACH)** is not a hybrid in this sense although "hybrid" is in its full name.

49 The program rating sheets' comments for the Supervised Practice Standard state that this minimum is the number provided to the candidate because this may indeed be so.

50 A one session "orientation" that covers many topics, including mentoring, is not considered equivalent to a mentoring course. Because Texas requires that mentor teachers have training, and this is a topic on which the state focuses in audits, we credited all Texas programs with offering trained mentors.

51 The evaluation approach parallels the one used to evaluate traditional teacher preparation programs on the analogous indicator in **Standard 14: Student Teaching**.

52 This positive impact may be determined by any means, including—but not restricted to—standardized test scores.

53 The program had statistically negative results in "EOC Composite" and Algebra II in a 2013 state report card, but did not in a 2012 report card. *2012 Report Card on the Effectiveness of Teacher Training Programs Tennessee*, Higher Education Commission State Board of Education, November 1, 2012 and *2013 Report Card on the Effectiveness of Teacher Training Programs Tennessee*, Higher Education Commission State Board of Education, November 1, 2013.