

Demonstration of Educator Minimum Content Knowledge: Review of the Status Quo and Alternative Approaches

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1. Background

In most cases, in order to be initially certified as an educator in Connecticut, a candidate must successfully complete an approved educator preparation program (“EPP”) and attain a minimum passing score in the appropriate content area standardized assessment(s).¹

The Connecticut Educator Preparation and Certification Board (the “Certification Board”) is tasked—by January 31, 2025—with reviewing Connecticut’s current approach to assessing educator minimum content knowledge, and to develop recommendations as to whether alternative approaches should be offered (the “January 2025 Reporting Obligations”).²

2. Review of Connecticut’s Current Approach

¹“Sec. 10-145f. Testing for Prospective Teachers.” *Chapter 166 - Teachers and Superintendents*. https://www.cga.ct.gov/current/pub/chap_166.htm#sec_10-145f; “Study of Content Area Licensure Assessments for Teacher Certification,” *Connecticut State Department of Education*, February 22, 2024, <https://edsight.ct.gov/relatedreports/ContentAreaLicensureAssessmentsStudy.pdf>

² State of Connecticut, “Substitute House Bill No. 5436, Section 13, Public Act 24-41” (2024), <https://www.cga.ct.gov/2024/ACT/PA/PDF/2024PA-00041-R00HB-05436-PA.PDF>

Connecticut uses the Praxis II test (“Praxis II”)³ to assess educator minimum content knowledge for the certification areas of Elementary Education; and Grades 4-12 English, Mathematics, Physics, Chemistry, and Biology (among a number of other certification areas).⁴

Given Praxis II’s prominence in the Connecticut educator certification landscape, any review of the state’s approach to assessing educator minimum content knowledge must involve a review of Praxis II. There are at least two dimensions to such a review:

- a) The first is a review of how Connecticut—in practice—currently uses Praxis II.
- b) The second is a review of what academic research tells us about the efficacy of Praxis II as a test.

a. Praxis II in Connecticut

Praxis II tests—also referred to as the Praxis Subject Assessments—are a series of subject-specific assessments administered by the Educational Testing Service (“ETS”) that evaluate a prospective educator’s content knowledge **and** general and subject-specific teaching skills in a particular content area.⁵

Connecticut requires a passing score on Praxis II for the overwhelming majority of its certification areas.⁶ The state’s minimum passing score for each Praxis II test is determined by the Connecticut State Board of Education (“SBE”) and Connecticut State Department of Education (“CSDE”).

A limited exception to passing Praxis II was introduced by the CSDE in 2024. Taking effect from November 1, 2024, candidates who have attempted any of the subtests within the Praxis Elementary Education: Multiple Subjects (5001) series at least once and have scored within 1 standard error of measurement (“SEM”) of the state passing score are eligible to complete a professional learning module instead of retaking the Praxis II test (the “ETS Alternate Passing Option”).⁷ Although the ETS Alternate Passing Option costs \$50, Connecticut offers two free retests for eligible candidates that can be used for either a full test retake or the ETS Alternate Passing Option.⁸ Upon successful completion of the module, candidates receive a Certificate of Completion and an updated Praxis Score Report that indicates “Alt.Passed” for the specific Praxis II test.⁹

b. Existing Research on Praxis II

³ Elementary Education and Comprehensive Special Education both require the Foundations of Reading test, in addition to Praxis II. World Languages require the ACTFL OPI & WPT. And Remedial Reading requires the Pearson Reading Specialist Test. “Guide to Assessments for Educator Certification in Connecticut.” *Connecticut State Department of Education Bureau of Educator Standards and Certification*. 3-4, April 2019, https://portal.ct.gov/-/media/sde/certification/guides/assess_for_cert.pdf

⁴ “Guide to Assessments for Educator Certification in Connecticut.” *Connecticut State Department of Education Bureau of Educator Standards and Certification*. 3-4, April 2019, https://portal.ct.gov/-/media/sde/certification/guides/assess_for_cert.pdf

⁵ “Praxis II Study Guides & Test Info,” *PraxisExam.org*, Accessed on December 19, 2024, <https://praxisexam.org/praxis-ii/>

⁶ Connecticut’s use of Praxis II for other certification purposes, for example cross-endorsements, is beyond the scope of this memo.

⁷ “Alternate Passing Option – Connecticut, Frequently Asked Questions For Test Takers,” *Praxis*, Accessed on December 4, 2024, <https://portal.ct.gov/sdecertification/-/media/sde/certification/ct-altpass-test-taker-faq.pdf?rev=0aca12b1580f46a2a92efef91b5fcdfd&hash=7B6E339752F65912F52EC610EE6F44A0#:~:text=The%20Alternate%20Passing%20Option%20is,submit%20a%20CT%20Retest%20Certificate>.

⁸ Ibid.

⁹ Ibid.

Academic research on Praxis II as a content area standardized assessment addresses—among other questions—two issues of particular relevance to the Certification Board’s January 2025 Reporting Obligations:

- i. Praxis II’s predictiveness of teaching effectiveness; and
- ii. Praxis II’s implications for educator workforce composition.

The following subsections highlight prominent findings of studies directly examining the two aforementioned issues from a systematic review of the existing literature.

i. Praxis II and Teaching Effectiveness

Although Praxis II is often seen as purely a content knowledge examination, ETS has itself described Praxis II as consisting of components that “measure applications of ... knowledge and skills to the *kinds of decisions and evaluations a teacher must make* [emphasis added] during work with students, curriculum and instruction ... that are critical for teaching.”¹⁰ In other words, Praxis II is not meant to only test for subject matter knowledge, but also specialized knowledge necessary for **effective teaching**. Because possession of content knowledge is key to an educator’s ability to effectively teach¹¹ and content assessments like Praxis II are designed to be accurate measures of that knowledge,¹² academic research has sought to examine the extent to which there is a relationship between licensure test performance and teaching effectiveness (as measured by student achievement)¹³ in aligned subjects.

A number of studies have found that Praxis II’s overall predictiveness of teaching effectiveness is **practically negligible**.¹⁴ For instance, Clotfelter et. al. (2010)—in a North Carolina study—found only a weak positive relationship between Praxis II test scores and student achievement in math;¹⁵ a weaker correlation in biology; and even a negative relationship in English.¹⁶ A 2023 Connecticut study—conducted by Boston University’s Wheelock Educational Policy Center (“WEPC”) in partnership with the CSDE—similarly found a practically negligible relationship between Praxis II test scores and student achievement in English Language Arts (“ELA”) and math.¹⁷

¹⁰ “The PRAXIS® Mathematics Study Companion,” ETS Professional Educator Programs, (2021), <https://praxis.ets.org/on/demandware.static/-/Library-Sites-ets-praxisLibrary/default/dw13354279/pdfs/5165.pdf>

¹¹ For example, Hill et al. (2005) found that educator content knowledge in math is significantly related to student achievement gains in first and third grades. Hill, H. C., Rowan, B., & Ball, D. L., “Effects of Teachers’ Mathematical Knowledge for Teaching on Student Achievement” *American Educational Research Journal*, 42(2), 371-406, January 2005, <https://doi.org/10.3102/00028312042002371>

¹² Orellana, A. & Winters, “M. Licensure Tests and Teacher Supply in Connecticut,” *Wheelock Educational Policy Center*, 4, 2023, <https://wheelockpolicycenter.org/wp-content/uploads/2023/12/WEPC-CT-Licensure-Policy-Brief-November-2023.pdf>

¹³ Student achievement is often measured by test score value-added.

¹⁴ Orellana, A. & Winters, M., “Estimating Relationship Between Licensure Scores and Value Added” Technical Appendix: Licensure Tests and Teacher Supply in Connecticut, *Wheelock Educational Policy Center*, 7, 2023, <https://wheelockpolicycenter.org/wp-content/uploads/2023/12/WEPC-CT-Licensure-Technical-Appendix-November-2023.pdf>

¹⁵ The authors found that a teacher who scored one standard deviation higher on the relevant Praxis II was associated with only a 0.0472 standard deviation increase in student math achievement.

¹⁶ Clotfelter, C., Ladd, H., and Vigdor, J., “Teacher Credentials and Student Achievement in High School: A Cross-Subject Analysis with Student Fixed Effects,” *The Journal of Human Resources* 45, 655–81 (2010), <http://www.jstor.org/stable/25703472>.

¹⁷ Orellana, A. & Winters, M., “Estimating Relationship Between Licensure Scores and Value Added” Technical Appendix: Licensure Tests and Teacher Supply in Connecticut, *Wheelock Educational Policy Center*, 7, 2023, <https://wheelockpolicycenter.org/wp-content/uploads/2023/12/WEPC-CT-Licensure-Technical-Appendix-November-2023.pdf>

A number of studies move beyond an exclusive focus on Praxis II and look at other exams to better understand the relationship between content area standardized assessments in general and teaching effectiveness. For example, another 2023 WEPC study that focused on the relationship between content area standardized assessments and teaching effectiveness compared the efficacy of pandemic-era emergency license holders (“ELHs”) in Massachusetts with that of traditionally certified teachers.¹⁸ Crucially, ELHs were **not** required to pass Massachusetts’ content area standardized assessment (see section 3(c)(i) below on the Massachusetts Tests for Educator Licensure or “MTEL”). Interestingly, the authors found that ELHs—particularly those with prior experience working in schools or prior involvement in the teacher pipeline—are comparable to other newly hired teachers (who **are** required to pass the MTEL) in terms of teacher performance.¹⁹

ii. Praxis II and Educator Workforce Composition

Because Praxis II is required by a number of states as a means of assessing candidates’ content knowledge for purposes of initial certification—either as a mandatory requirement or, increasingly, as part of a menu of options (see section 3 below)—it has a significant impact on the educator workforce composition of those states. Indeed, the aforementioned WEPC study noted that “Connecticut’s current set of licensure test requirements are influential in shaping the composition of the teacher workforce.”²⁰ As such, some studies have sought to examine that impact.

One notable study was conducted by Goldhaber and Hansen in 2010, who found a significant gap between Praxis II test scores by race—with **White candidates outperforming Black candidates on average**.²¹ Recent Connecticut data also indicate that the best pass rate²² for White candidates is considerably higher than that of candidates of color—in the most recent reporting year (2022- 2023), the best pass rate for White candidates was 95.7% compared to 83.2% for candidates of color.

Goldhaber and Hansen thus concluded that Praxis II’s weak correlation with teaching effectiveness (as described in section 2(b)(i) above) coupled with “same race matching effects” (that is, research suggesting that students do better academically when matched with a teacher of the same race)²³ meant that any minor benefit students might receive from a certified teacher (that is, with a passing Praxis II test score) would likely be **outweighed by the negative**

¹⁸ Bacher-Hicks, A., Baloch, S., Chi, O., and Tichnor-Wagner, A., “Teacher Licensure and Workforce Quality: Insights from Emergency Licenses in Massachusetts,” *Wheelock Educational Policy Center*, 2023, <https://wheelockpolicycenter.org/wp-content/uploads/2023/11/Emergency-License-Y2-Report.pdf>

¹⁹ Bacher-Hicks, A., Baloch, S., Chi, O., and Tichnor-Wagner, A., “Teacher Licensure and Workforce Quality: Insights from Emergency Licenses in Massachusetts,” *Wheelock Educational Policy Center*, 4, 2023, <https://wheelockpolicycenter.org/wp-content/uploads/2023/11/Emergency-License-Y2-Report.pdf>

²⁰ Orellana, A. & Winters, “M. Licensure Tests and Teacher Supply in Connecticut,” *Wheelock Educational Policy Center*, 1, 2023, <https://wheelockpolicycenter.org/wp-content/uploads/2023/12/WEPC-CT-Licensure-Policy-Brief-November-2023.pdf>

²¹ Goldhaber, D. & Hansen, M., “Race, Gender, and Teacher Testing: How Informative a Tool Is Teacher Licensure Testing?” *American Educational Research Journal*, 229, (2010), <https://eric.ed.gov/?id=EJ883788>

²² Best pass rate is defined as “Of all program completers who attempted licensure testing, the percent who had any test score in the appropriate subject area assessment that was a passing score.” “Terms/ Definitions,” *Educator Preparation Provider (EPP) Dashboard- Report Notes*, May 23, 2024, 1-11, 7, https://edsight.ct.gov/relatedreports/ReportNotes_EducatorPreparationUpdated.pdf

²³ Dee, T., “Teachers, race and student achievement in a randomized experiment,” *The Review of Economics and Statistics*, 195-210, (2004), <https://cepa.stanford.edu/content/teachers-race-and-student-achievement-randomized-experiment>

impact of a teacher of color being kept out of the classroom because of Praxis II failure—especially for students of the same race as that teacher.²⁴

More generally, the relationship between standardized testing and candidates of color is one that has been explored in research over the years. Some studies indicate that candidates of color may not have benefitted from an adequate K-12 education, and thus lack the requisite knowledge and skills to pass standardized assessments.²⁵ Other studies note that testing events are “based on test construction conventions,”²⁶ and may be culturally biased.²⁷

3. Alternative Approaches to Assessing Educator Minimum Content Knowledge

While a number of states still rely on Praxis II for teacher candidates to demonstrate educator minimum content knowledge for purposes of initial certification, a survey of the approaches of the fifty states and Washington D.C.²⁸ points to a growing movement away from exclusive or predominant reliance on Praxis II (and standardized testing more generally).

a. State-specific Content Assessments

Certain states have replaced Praxis II with **state-developed content area standardized assessments** (either as the only option, or as part of a menu of options, for candidates to demonstrate educator minimum content knowledge).

As one of the earlier states to have adopted this approach, almost two decades ago California replaced Praxis II with the California Subject Examinations for Teachers (“CSET”).²⁹ Over time, other states have followed suit; more recently, as of 2020 Florida also switched to the Florida Teacher Certification Examinations (“FTCE”) Subject Area

²⁴ Goldhaber, D. & Hansen, M., “Race, Gender, and Teacher Testing: How Informative a Tool Is Teacher Licensure Testing,” *American Educational Research Journal*, 245, (2010), <https://eric.ed.gov/?id=EJ883788>

²⁵ Gitomer, D. H., Brown, T. L., & Bonett, J. “Useful signal or unnecessary obstacle? The role of basic skills tests in teacher preparation,” *Journal of Teacher Education*, 62(5), 431–445. (2011). <http://eric.ed.gov/?id=EJ946052>; Nettles, M. T., Scatton, L. H., Steinberg, J. H., & Tyler, L. L., “Performance and passing rate differences of African American and White prospective teachers on Praxis™ examinations (ETS Research Report No. 11-08),” *Princeton, NJ: Educational Testing Service*. (2011). <http://eric.ed.gov/?id=ED523733> quoted in Greenberg Motamedi, J., Leong, M., and Hanson, H., “Potential Testing Barriers for Teacher Candidates of Color,” *Washington State Vibrant Teaching Force Alliance Meeting Materials*, May 2018 <https://ies.ed.gov/ncee/edlabs/regions/northwest/pdf/potential-testing-barriers.pdf>

²⁶ Zeichner, K. M., Darling-Hammond, L., Berman, A. I., Dong, D., Skyes, G., “Evaluating and Improving Teacher Preparation Programs,” *National Academy of Education*, 97, (2024), <https://naeducation.org/wp-content/uploads/2024/04/Evaluating-and-Improving-Teacher-Preparation-Programs.pdf>

²⁷ Bennett, C. I., McWhorter, L. M., & Kuykendall, J. A., “Will I ever teach? Latino and African American students’ perspectives on PRAXIS I,” *American Educational Research Journal*, 43(3), 531–575. (2006). <http://eric.ed.gov/?id=EJ746826>; Memory, D. M., Coleman, C. L., & Watkins, S. D., “Possible tradeoffs in raising basic skills cutoff scores for teacher licensure: A study with implications for participation of African Americans in teaching,” *Journal of Teacher Education*, 54(3), 217–227. (2003) <http://eric.ed.gov/?id=EJ675642>; Petchauer, E., “Teacher licensure exams and Black teacher candidates: Toward new theory and promising practice,” *Journal of Negro Education*, 81(3), 252–267. (2012) <http://eric.ed.gov/?id=EJ998549> cited in Greenberg Motamedi, J., Leong, M., and Hanson, H., “Potential Testing Barriers for Teacher Candidates of Color,” *Regional Educational Laboratory Northwest*, May 2018, <https://ies.ed.gov/ncee/edlabs/regions/northwest/pdf/potential-testing-barriers.pdf>

²⁸ See Appendix 1 to this memo for a catalog of the approaches taken by each state.

²⁹ “CSET,” *California Educator Credentialing Assessments*, Accessed on December 31, 2024, https://www.ctcexams.nesinc.com/PageView.aspx?f=GEN_AboutCSET.html

Examinations.³⁰ Both the CSET and FTCE were developed in partnership with Pearson, an educational publishing and services company.

b. Alternatives for Barely Failing Candidates

Partially in response to the imprecision of testing instruments (like Praxis II examinations), some states have begun to allow candidates to demonstrate educator minimum content knowledge via **alternative means if they fail Praxis II within a specified SEM**.

Following the introduction of the ETS Alternate Passing Option (see section 2(a) above), Connecticut would be an example of one such state with respect to Elementary Education certification.

An example of a state which applied this approach to **all certification areas** would be Alabama. In 2022, the Alabama State Board of Education introduced new flexibilities that allow candidates who barely fail Praxis II to provide other evidence of subject matter competency, on condition that they have satisfied all other requirements for initial certification.³¹ Alabama defines “barely failing” as scoring within one SEM of the required passing score.³² Traditional EPP candidates who barely failed their required Praxis II tests would be eligible for certification if they met an increased Teaching Field GPA requirement of 2.75 (up from 2.50).³³ Alternate certification candidates who barely failed their required Praxis II tests would be eligible for certification if they had completed at least 15 semester hours of coursework with grade B or higher in the relevant content area.³⁴

c. Multiple Measures

Taking it a step further, some states have introduced **alternative options for candidates to demonstrate educator minimum content knowledge alongside Praxis II**. In other words, in these states there is no longer a mandatory requirement to take Praxis II—even once.

One example would be Colorado. In 2023, Colorado introduced “Multiple Measures of Content Competency,” allowing new candidates (regardless of whether they have completed a traditional EPP, an alternative preparation program, or an out-of-state program) to demonstrate subject matter competency via a number of alternatives to Praxis II.³⁵ Depending on certification area, these alternatives now range from obtaining a B- or higher in coursework aligned to endorsement standards, a bachelor's or higher degree in the certification area,³⁶ and/or a

³⁰ “Test Information Guides,” *Florida Teacher Certification Examination Florida Educational Leadership Examination*, Accessed December 31, 2024, https://www.fl.nesinc.com/FL_TIGS.asp

³¹ At the time of introduction, these alternatives were only made available for the 2022-23 and 2023-24 school years. “Resolution To Modify Current Testing Requirements for Educators,” Alabama State Department of Education, July 12, 2022, https://www.alabamaachieves.org/wp-content/uploads/2022/07/SBOE_2022714_Resolution-to-Modify-Current-Testing-Requirements-for-Educators-w-amendment_V1.0.pdf.

³² “Resolution To Modify Current Testing Requirements for Educators,” Alabama State Department of Education, July 12, 2022, https://www.alabamaachieves.org/wp-content/uploads/2022/07/SBOE_2022714_Resolution-to-Modify-Current-Testing-Requirements-for-Educators-w-amendment_V1.0.pdf

³³ Ibid.

³⁴ Ibid.

³⁵ “Multiple Measures of Content Competency,” Colorado Department of Education, <https://www.cde.state.co.us/educatortalent/multiplemeasuresinfo>

³⁶ Note that this option was previously available in Colorado.

portfolio review of evidence.³⁷ The cornerstone of Colorado’s implementation framework is its “Multiple Measures of Content Competency Worksheet”: a subject-specific form which outlines endorsement requirements for initial teacher certification and the content knowledge that must be demonstrated to qualify. Each Worksheet contains (i) a list of categories of topics/competencies related to the subject area, aligned to the state’s teacher preparation standards; and (ii) corresponding sections where candidates can indicate how they wish to demonstrate satisfaction of each category (that is, via Praxis II, coursework, subject degree, or portfolio evidence).³⁸

i. Hybrid Approaches

Within the “multiple measures” category, there is a subset of states that have adopted what can best be characterized as a hybrid approach (that is, combining state-specific assessments and alternatives for barely failing candidates with other options under a broader multiple measures framework).

One such state is Washington. Although Washington uses its own **state-developed** content area standardized assessment (the Washington Educator Skills Tests - Endorsements or “WEST-E”) to assess educator minimum content knowledge, it recently introduced “case-by-case exceptions” designed to allow EPPs to assess their candidates’ content knowledge using **multiple forms of evidence**.³⁹ Candidates **must still take the WEST-E once** in order to be eligible for case-by-case exception.⁴⁰ If the EPP determines that a candidate has the requisite knowledge and skills, it can recommend the candidate for certification. The Washington State Professional Educator Standards Board (“PESB”) provides guidance both on the review process EPPs must undertake, as well as the types of acceptable evidence (for example, coursework and letters of recommendation).⁴¹

Another state which utilizes a similar hybrid approach is Massachusetts. While Massachusetts generally relies on its own **state-developed** content area standardized assessment—the Massachusetts Tests for Educator Licensure (“MTEL”)⁴²—to assess educator minimum content knowledge, in 2020 it introduced a regulatory pilot⁴³ where the Massachusetts Department of Elementary and Secondary Education (“DESE”) can—and has—approved alternative assessments to the MTEL. Currently, there are two main approved alternatives.⁴⁴ The first is **EPP subject matter knowledge attestation**, where EPPs approved by DESE for attestation can attest to a candidate’s subject matter

³⁷ “Multiple Measures of Content Competency,” Colorado Department of Education, <https://www.cde.state.co.us/educatortalent/multiplemeasuresinfo>

³⁸ “Multiple Measures of Content Competency,” Colorado Department of Education, December 4, 2024, <https://www.cde.state.co.us/educatortalent/multiplemeasuresworksheets>

³⁹ “Case-by-case exceptions for content knowledge assessments,” Washington State Professional Educator Standards Board, <https://www.pesb.wa.gov/preparation-programs/standards/assessments/content-knowledge/#:~:text=Case%2Dby%2Dcase%20exceptions%20process&text=Recognizing%20that%20diverse%20teachers%20play.work%20to%20meet%20assessment%20requirements>

⁴⁰ Ibid.

⁴¹ Ibid.

⁴² “Massachusetts Tests for Educator Licensure (MTEL),” *Massachusetts Department of Elementary and Secondary Education*, October 7, 2024, <https://www.doe.mass.edu/mtel/default.html>

⁴³ The Commissioner is required to report to the Board of Elementary and Secondary Education (BESE) at least annually on the number of candidates taking the alternative assessments, evaluative information on these candidates, employment patterns, and feedback from school systems and EPPs. “Pilot of Alternative Assessments to the MTEL,” *Massachusetts Department of Elementary and Secondary Education*, June 14, 2023, <https://www.doe.mass.edu/mtel/alt-assess/default.html>

⁴⁴ “Pilot of Alternative Assessments to the MTEL,” *Massachusetts Department of Elementary and Secondary Education*, June 14, 2023, <https://www.doe.mass.edu/mtel/alt-assess/default.html>

knowledge for purposes of initial licensure.⁴⁵ To be eligible, **candidates need to either have taken and failed the relevant MTEL**, or have met an EPP-designated eligibility requirement approved by DESE.⁴⁶ EPPs may cite multiple sources of evidence in its attestation, including (but not limited to) assignments, essays, and interview or content-defense review.⁴⁷ The second is the “**MTEL-Flex**,” which applies to **candidates failing within one SEM** of the passing score, and requires candidates to “provide an analysis of an MTEL test objective to demonstrate the depth of their subject matter knowledge.”⁴⁸

d. EPP Graduation

Finally—at the far end of this continuum—a few states **no longer require candidates to pass content area standardized assessments** for purposes of certification as long as they have completed a state-approved EPP. Two examples are Minnesota⁴⁹ and Iowa.⁵⁰ In essence, these states rely on graduation from EPPs—the rigor and quality of which are governed by the state program approval process—as the hallmark of a candidate’s subject matter competency.

4. Recommendations

a. Key Considerations

Given the evidence base on the efficacy and implications of using Praxis II as a sole measure of educator minimum content knowledge and the movement to employ alternative means of assessment (as described in sections 2(b) and 3 above respectively), there is value in Connecticut exploring alternatives for candidates to demonstrate educator minimum content knowledge. This does **not** necessarily mean Connecticut should eliminate or replace its Praxis II requirement entirely (like Minnesota or Iowa). What it does call for, however, is an inquiry into whether there are other ways subject matter competency could be meaningfully evidenced, and how to structure the availability of those alternatives within the existing Connecticut framework in a way that capitalizes on policy developments in the last year and that is feasible for the state to implement.

Learnings from other states (particularly those discussed in section 3 above) offer insights on the kinds of factors that should be taken into account when determining which alternatives Connecticut might seek to introduce, and how. In no particular order of significance, they include (but need not be limited to):

- Evidence base;
- Rigor of assessment; and
- Feasibility of implementation (together, the “Design Principles”).

⁴⁵ “Pilot of Alternative Assessments for Licensure: Guidance for Educator Preparation Programs,” *Massachusetts Department of Elementary and Secondary Education*, February 2021, <https://www.doe.mass.edu/edprep/resources/guidelines-advisories/alt-assess-guide.pdf>

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ “MTEL-Flex,” *Massachusetts Department of Elementary and Secondary Education*, March 15, 2024, <https://www.doe.mass.edu/mtel/alt-assess/mtel-flex.html>

⁴⁹ “2023 Legislative Updates: Exemptions to Testing Requirements,” *Minnesota Professional Educator Licensing and Standards Board*, June 12, 2023, <https://mn.gov/pelsb/board/news/?id=1113-581367>

⁵⁰ Reynolds, Kim, “House File 2081,” *Office of the Governor*, June 13, 2022, <https://www.legis.iowa.gov/perma/030220228422>

b. A Proposed Approach

The introduction of the ETS Alternate Passing Option in Connecticut is a promising new development that is consonant with the broader nationwide trend of moving away from exclusive or excessive reliance on Praxis II. As part of its continuing efforts to modernize and improve upon its educator preparation and certification system, Connecticut could look beyond the ETS Alternate Passing Option to one that would affect a broader set of certification areas and more candidates, and consider a **measured** expansion of both (i) the conditions under which the state would recognize alternative means to demonstrate educator minimum content knowledge, and (ii) the types of alternatives it would recognize.

Here we describe one such approach to illustrate how the Certification Board might make use of the evidence base to determine an alternative and to lay out the types of steps the Certification Board might take to effectuate the change. One alternative approach could thus be for Connecticut to still **maintain Praxis II as the default** way for candidates to demonstrate educator minimum content knowledge for purposes of initial certification, but to **generally allow candidates who fail their first attempt to rely on alternative options**. Under this type of approach:

1. All candidates must still attempt the required Praxis II tests for their certification areas at least once.
2. Candidates who satisfy the minimum passing score for their required Praxis II tests in their first attempt will be eligible for initial certification, provided all other requirements for initial certification are met.
3. Candidates who fail their first attempt would have the following options to demonstrate educator minimum content knowledge:
 - a. Retaking their required Praxis II tests (*Existing*);
 - b. Completing the ETS Alternate Passing Option where the relevant certification area is Elementary Education and the candidate falls within 1 SEM of the relevant Praxis II passing score (*Existing*);
 - c. Submitting evidence of possession of a relevant bachelor's or higher degree (the "Subject Degree Option") where the certification area is grade 4-12 Mathematics, Biology, Chemistry, Earth Science, General Science, or Physics (*New*); or
 - d. Submitting a portfolio (the "Portfolio Option") evidencing satisfaction of the content knowledge categories required for the relevant certification area (*New*).

In making the decision of which option to choose, candidates would work with their EPPs to determine the most appropriate course of action for each individual candidate.

ii. Subject Degree Option (New)

The Subject Degree Option would only be available to candidates who are looking to be initially certified in grades 4-12 Mathematics, Biology, Chemistry, Earth Science, General Science, or Physics and have attempted the required Praxis II test at least once.

Candidates proceeding under this option would be required to submit to the CSDE evidence of an earned bachelor's or higher degree in the subject area they wish to be certified in.

iii. Portfolio Option (New)

The Portfolio Option would be available to all candidates who have attempted the required Praxis II tests for their certification areas at least once.

Candidates proceeding under this option would be required to fill out a cover sheet (to be developed by the CSDE)—tailored for each certification area—which (i) states the content categories of the relevant Praxis II test for that certification area;⁵¹ (ii) invites candidates to list the evidence they wish to use to demonstrate proficiency in each content category; and (iii) requests that candidates append their supporting evidence to the cover sheet for submission to the CSDE for review.

c. Application of Design Principles to Alternative Approach

i. Evidence Base

The described approach represents a framework for demonstrating educator minimum content knowledge that is **rooted in research**.

The Subject Degree Option reflects evidence of a **positive correlation between educator possession of subject-specific degrees and student performance in math and sciences**. A 2018 international meta-analysis of 58 studies on teacher characteristics and student test scores (with 49 of those 58 focused on the U.S. context) found that educator possession of bachelor's or master's degrees is positively related to student performance in the fields of math and sciences.⁵² Indeed, several studies have found that teachers who hold degrees in math or sciences have positive effects on student test scores in those subjects;⁵³ and although those effects might be objectively small, they are **stronger than the relationship between Praxis II test scores and student achievement in those same subjects** found in other studies (such as the WEPC study referenced in section 2(b)(i) above).⁵⁴

The Portfolio Option, on the other hand, seeks to address (at least in part) some of the academic criticisms levied against standardized testing. As a general assessment method, portfolios have been described as adding a “rich, qualitative dimension” to evaluation, **capable of assessing a wider range of skills** than standardized tests.⁵⁵

⁵¹ ETS publishes Praxis Study Companions for each Praxis II test which sets out, among other information and guidance, the content categories that the specific test assesses. For example, ETS states that the Praxis Mathematics exam (5165) tests for the following content categories: Number & Quantity and Algebra, Functions and Calculus, Geometry, and Statistics & Probability. “The Praxis Mathematics Study Companion,” ETS Praxis, (2021) <https://praxis.ets.org/on/demandware.static/-/Library-Sites-ets-praxisLibrary/default/pdfs/5165.pdf>.

⁵² Coenen, J., Cornelisz, I., Groot, W., Maassen van den Brink, H., & Van Klaveren, C. “Teacher Characteristics and Their Effects on Student Test Scores: A Systematic Review.” *Journal of Economic Surveys*, 848-877, (2018), https://research.vu.nl/files/74141675/Coenen_et_al_2018_Journal_of_Economic_Surveys.pdf

⁵³ See, for example, Goldhaber, D.D., & Brewer, D.J., “Evaluating the effect of teacher degree level on educational performance,” *Developments in School Finance* (1997): 199-208, <https://nces.ed.gov/pubs97/975351.pdf>; Goldhaber, D.D., & Brewer, D.J., “When should we reward degrees for teachers?” *The Phi Delta Kappa* (October 1998), <https://www.jstor.org/stable/20439382>; Goldhaber, D.D., & Brewer, D.J., “Does teacher certification matter? High school teacher certification status and student achievement,” *Educational Evaluation and Policy Analysis* (2000), <https://doi.org/10.2307/1164392>

⁵⁴ For example, Orellana & Winters “found a weak link between licensure test performance and teacher impacts on student test score growth” in Connecticut specifically, reporting effect sizes much smaller than those associated with math and science degree holders in studies of the association between subject-matter degrees and student achievement. Orellana, A. & Winters, M., “Estimating Relationship Between Licensure Scores and Value Added,” Technical Appendix: Licensure Tests and Teacher Supply in Connecticut, *Wheelock Educational Policy Center*, 7, 2023, <https://wheelockpolicycenter.org/wp-content/uploads/2023/12/WEPC-CT-Licensure-Technical-Appendix-November-2023.pdf>

⁵⁵ English, D., & Lachlan-Haché, L., “Uncommon Measures: Using Teacher Portfolios in Educator Evaluation,” *American*

Furthermore, the approach recognizes that EPPs possess valuable information and contextual knowledge about their candidates—their classroom and clinical experiences, their performances in different kinds of assessments, and their preferences and personal circumstances and therefore recommends that EPPs work with candidates to collaboratively determine the option most suitable for each candidate.

ii. Rigor of Assessment

The described approach reinforces the rigor of Connecticut’s current framework because both the new Subject Degree Option and Portfolio Option still require candidates to demonstrate competency in the **same content categories** for each certification area that the relevant Praxis II test assesses—only in different ways.

For the Subject Degree Option, the CSDE’s process for review and acceptance of academic majors would ideally incorporate an evaluation of whether they sufficiently evidence proficiency in the relevant content categories.

For the Portfolio Option, candidates are required—from the outset—to submit to the CSDE evidence of competency specific to each of the content categories listed on the cover sheet.

iii. Feasibility of Implementation

The described approach would also circumvent many of the practical shortcomings of an expanded approach to demonstration of educator minimum content knowledge.

To begin with, because every candidate has to take the required Praxis II test for the relevant certification area at least once under the described approach, **Praxis II pass rates for all candidates (at least, first time pass rates) would still be readily available** for EPPs to use for institutional reporting purposes. Indeed, one concern of adopting a multiple measures approach is that it might complicate institutional reporting obligations. Connecticut requires its EPPs (including alternate route to certification programs) to be accredited by the Council for Accreditation of Educator Preparation (“CAEP”).⁵⁶ The CAEP accreditation process is based on EPPs demonstrating satisfaction of its standards (“CAEP Standards”), two of which include content knowledge (R1.2) and competency at completion (R3.3). Praxis II test scores have traditionally been relied on by EPPs to demonstrate satisfaction of these components of CAEP Standards.⁵⁷ The introduction of multiple measures for candidates to demonstrate subject matter competency means that EPPs might have to collect, synthesize, and supply to CAEP a non-streamlined data set derived from multiple sources (because it is likely not all candidates would choose to take, and have scores for, Praxis II—some might proceed under the alternative options without having attempted Praxis II at all). The advantage of the described approach is thus that it still preserves the ability of Connecticut EPPs to demonstrate satisfaction of CAEP Standards R1.2 and R3.3 using Praxis II scores.

Institutes for Research, 1, November 2015,

<https://www.air.org/sites/default/files/Uncommon-Measures-Teacher-Portfolios-Nov-2015.pdf>

⁵⁶ “Program Approval,” *Connecticut’s Official State Website*, Accessed on December 16, 2024,

<https://portal.ct.gov/sde/certification/program-approval#:~:text=All%20Connecticut%20EPPs%2C%20including%20alternate,years%20to%20determine%20reaccreditation%20status.>

⁵⁷ CAEP has also published guidance that Praxis test scores are a quality source of evidence. That said, CAEP’s Revised 2022 Standards Workbook sets out a number of **other** acceptable sources, including (but not limited to) EPP-created measures, edTPA rubrics related to content, and student-teaching evaluation instruments that could together (along with Praxis II scores) be used to satisfy its standards. “CAEP Revised 2022 Standards Workbook,” *Council for the Accreditation of Educator Preparation* 13, 33, June 11, 2021,

<https://caepnet.org/~media/Files/caep/accreditation-resources/caep-2022-standards-workbook-final.pdf?la=en>

In terms of implementation, the Subject Degree Option is **relatively easy to administer** for two reasons. First, the pool of candidates who are eligible for this option is limited. The Subject Degree Option only applies to math and science certification areas; and only candidates who fail their first Praxis II attempt, choose not to retake the Praxis II, and possess the required subject degree would be able to proceed under this option. Second, for eligible candidates choosing this option, the CSDE would likely only need to conduct a straightforward review of evidence of earned degrees (that is, evidence in the form of degree certificates and transcripts).

As for the Portfolio Option, whilst it might be burdensome to administer in theory⁵⁸ (considering too that it applies to all certification areas), **in practice** only candidates who (i) fail their first Praxis II attempt; (ii) choose not to retake Praxis II; (iii) are not looking to certify in Elementary Education when failing within one SEM (that is, not looking to utilize the ETS Alternate Passing Option); and (iv) are not looking to certify in math and sciences when in possession of the relevant subject degree will proceed under this option—resulting once again in a limited candidate pool. It is also worth noting that the ETS Alternate Passing Option is currently in its initial phase in Connecticut, with ETS already stating that it plans to extend the option to more certification areas in September 2025.⁵⁹ Assuming the ETS Alternate Passing Option is made available to more certification areas, it is likely eligible candidates would choose it over the Portfolio Option (given it is less burdensome for candidates)⁶⁰—further limiting the candidate pool proceeding under the Portfolio Option.

5. Effectuating Change

Bringing an approach like the one described to life in Connecticut is a multi-staged and iterative process.

a. New Legislative Language

The described approach represents a substantive recommendation which the Certification Board could put forth in satisfaction of its January 2025 Reporting Obligations. It is rooted in research evidence; informed by lessons learned from other states' approaches to assessing educator minimum content knowledge; and seeks to build on the positive momentum of recent policy changes in Connecticut.

As part of its January 2025 Reporting Obligations, the Certification Board is also required to submit

⁵⁸ Colorado's approach to addressing this practical concern is to institute a policy where its Educator Preparation team will only review the first 1000 portfolio submissions each year. The Colorado statute that created the portfolio option also preempts this exact concern by requiring the periodic reporting of the number of reviewers hired to the review panel and the amount of time spent reviewing portfolio applications. "Multiple Measures of Content Competency – FAQs," *Colorado Department of Education*, <https://www.cde.state.co.us/educatortalent/multiplemeasuresfaqs#:~:text=However%2C%20CDE's%20Educator%20Preparation%20team,able%20to%20receive%20their%20license>; "Assessment of professional competencies - multiple measures to assess professional competencies – rules," Colo. Rev. Stat. § 22-60.5-203 (3)(f)(I)–(II), (2024), <https://casetext.com/statute/colorado-revised-statutes/title-22-education/teachers/article-605-colorado-educator-licensing-act/part-2-teachers-and-special-services-providers/section-22-605-203-assessment-of-professional-competencies-multiple-measures-to-assess-professional-competencies-rules>

⁵⁹ "Alternate Passing Option – Connecticut: Frequently Asked Questions," *Praxis*, (2024) <https://portal.ct.gov/sdecertification/-/media/sde/certification/ct-altpass-epp-faq.pdf?rev=e0f5e53256244e6d945a67ba7309d05d&hash=050564E1FECEAE17D5A2454423E365EC>

⁶⁰ That said, it is likely that, even if the ETS Alternate Passing Option were eventually extended to math and sciences, candidates in possession of subject degrees in math and sciences looking to certify in those areas would still prefer the Subject Degree Option, given that remains the most straightforward path to certification for them.

recommendations for legislation. In this regard, the Certification Board could propose legislative language (including any consequential changes needed) replacing Section 10-145f(b)(1) of the Connecticut General Statutes. Section 10-145f(b)(1) currently requires that candidates for initial certification “achieve a satisfactory evaluation on the appropriate State Board of Education approved subject area assessment.”⁶¹ As such, the Certification Board would need to propose new legislative language which would be broad enough to encompass not only Praxis II/content area standardized assessments and the alternatives as envisaged under the updated approach, but also iterations to these alternatives; and ideally, wholly new alternatives that might be introduced in the future as well.

b. Subject Area Standards and Guidance

In order to effectively operationalize alternatives, there would likely be a need to articulate the content competencies each educator teaching a particular subject in Connecticut should possess (potentially leveraging existing content standards),⁶² and how candidates can satisfy these standards via the new options.

For the Subject Degree Option, there should be guidance at least on (i) the higher education institutions which degrees the CSDE would recognize for this purpose; and (ii) the types of academic majors the CSDE would accept for each relevant certification area. For the Portfolio Option, there should be guidance at least on (i) the forms of quality evidence that would be acceptable (which might include live teaching videos, copies of lessons delivered by the candidate, curricular materials developed or used by the candidate, and/or papers written by the candidate);⁶³ and (ii) the criteria/rubric the CSDE will use in making the substantive determination of whether a candidate’s evidence satisfies a particular content category.

c. Ongoing Iteration

To ensure that Connecticut’s framework for assessing educator minimum content knowledge remains evidence-backed, rigorous, and practicable, the updated approach should be subject to ongoing iteration and improvement based on lessons learned from its implementation.

To this end, the Certification Board should consult with the SBE and CSDE to jointly develop a plan to continuously monitor the operationalization and efficacy of the updated approach, including (but not limited to) reviewing the financial and administrative costs of the new options; the implications of the new options for EPP institutional reporting obligations; EPP and candidate feedback on the new options; in-service performance of candidates certified through the new options (and relative to those certified through Praxis II); as well as employment patterns of candidates certified through these new options (and relative to those certified through Praxis II). Naturally, such a process would necessitate collaboration with EPPs and school systems as well.

Based on those findings, the Certification Board, SBE, and CSDE should jointly determine whether—and how—to

⁶¹ “Sec. 10-145f(b)(1). Testing for Prospective Teachers.” *Chapter 166 - Teachers and Superintendents*. https://www.cga.ct.gov/current/pub/chap_166.htm#sec_10-145f

⁶² In terms of the formulation of standards, one possibility—as alluded to in section 4(c)(ii) above—could be to rely on or adapt the content categories/competencies that ETS expressly states each of its Praxis II tests assesses candidates for. Another possibility could be to rely on or adapt the National Board for Professional Teaching Standards (“NBPTS”) certification area standards, or other national content standards.

⁶³ See for example “Multiple Measures of Content Competency” Colorado Department of Education, September 20, 2023, <https://www.cde.state.co.us/educatortalent/multiplemeasuresfaqs>

modify the updated approach, and the legislative amendments and accompanying guidance needed to effectuate that change.

And although not a new option per se, the ETS Alternate Passing Option represents a built-in opportunity for the Certification Board, SBE, and CSDE to work with ETS to shape future policy based on learnings from the current/initial phase (for example, in the determination of which other certification areas to expand the ETS Alternate Passing Option to, and whether—and how—the “one SEM” condition should be revised).⁶⁴

Finally, as the educator workforce data infrastructure in Connecticut continues to evolve and capture additional types of data (for example, measures of EPP completer effectiveness), the state would be better-positioned to monitor the efficacy of each of these new options on an ongoing basis, and to update its approach to demonstration of educator minimum content knowledge accordingly.

6. Concluding Thoughts

Notwithstanding its advantages (e.g. its relative ease of administration and usefulness for institutional reporting purposes), the concerns surfaced by existing research on Praxis II and the growing national trend of moving away from exclusive or predominant reliance on Praxis II (and content area standardized assessments in general) warrant consideration. And it raises the question of what a more inclusive approach that is both measured and feasible could look like in Connecticut.

The memo above describes the landscape of approaches to assessing educator minimum content knowledge, sets forth design principles that might be used to determine and evaluate alternatives, and presents an illustrative example of how the Certification Board might use those design principles to determine and effectuate an updated approach to assessing minimum content knowledge. This example illustrates how the Certification Board might balance the competing demands of establishing a system rooted in evidence on the one hand whilst being attentive to the practical limitations of a more expansive approach on the other. And it aims to do so in a way that is aligned with the broad principles underlying Public Act 24-41 as the originating legislation of the Certification Board’s January Reporting Obligations: flexibility and a focus on competency/quality over prescriptive, rigid rules that keep otherwise-qualified candidates from joining the profession. As the Certification Board undertakes the work of reviewing and improving Connecticut’s approach to assessing educator minimum content knowledge, it is important that such efforts are guided not only by these principles, but also considerations of the legal mechanisms most appropriate to effectuate the desired changes; and the standards and guidance that would be helpful to the field as it responds to these changes. And as these changes take effect, it would be equally important that their efficacy and implications are monitored and understood; such knowledge must inform subsequent determinations of whether—and how—to further modify Connecticut’s approach.

⁶⁴ It would be interesting to examine how many candidates the “one SEM” condition applies to in Connecticut during this initial phase. According to ETS, one SEM for their entire series of Praxis II tests mostly range from approximately 3 to 8 points only. “Understanding Your Praxis Scores 2022–2023,” ETS Praxis (2022-2023), <https://praxis.ets.org/on/demandware.static/-/Library-Sites-ets-praxisLibrary/default/dwf1acec35/pdfs/understanding-your-scores-22-23.pdf>

Appendix 1 - National Landscape Scan⁶⁵

**Some states use Praxis II or state-developed content area standardized assessments for a majority of their certification areas; however for a few specialized certification areas (such as special education) they rely on bespoke assessments or alternatives (in the case of special education, many states require the Foundations of Reading test⁶⁶). For the purposes of this table, these states are treated in a similar manner as states which exclusively rely on Praxis II or state-developed content area standardized assessments for demonstration of educator minimum content knowledge.*

State	Praxis II Only / Predominantly*	State-Developed Content Area Standardized Assessment Only / Predominantly*	Alternatives for Barely Failing Candidates	Multiple Measures (Praxis II / State-Developed Content Area Standardized Assessments AND Other Options)	EPP Graduation Only
Alabama ⁶⁷			✓		
Alaska	✓				
Arizona ⁶⁸				✓	
Arkansas ⁶⁹			✓		
California ⁷⁰				✓	

⁶⁵ Information presented in this table is mostly derived from official state department of education websites as well as the ETS Praxis website, and hence is contingent on both the accuracy and currency of the content of those websites.

⁶⁶ "The Science of Reading," Pearson,

<https://www.pearsonassessments.com/large-scale-assessments/k-12-large-scale-assessments/teacher-licensure/reading-assessment.html>

⁶⁷ Alabama relies on Praxis II to assess educator minimum content knowledge, and defines "barely failing" as failing within 1 SEM of the passing score. The alternatives offered include an increased teaching field GPA or relevant coursework. "Resolution To Modify Current Testing Requirements for Educators," *Alabama State Department of Education*, July 12, 2022, https://www.alabamaachieves.org/wp-content/uploads/2022/07/SBOE_2022714_Resolution-to-Modify-Current-Testing-Requirements-for-Educators-w-amendment_V1.0.pdf

⁶⁸ While Arizona uses its own state-developed content area standardized assessment—the Arizona Educator Proficiency Assessments ("AEP") Subject Knowledge Tests—it also generally recognizes the following ways for candidates to demonstrate educator minimum content knowledge: bachelor's, master's, or doctorate degree in the relevant subject area, or three years of full-time teaching experience in any state, including Arizona, in the appropriate grade and subject area (experience teaching in a foreign school or as a substitute teacher does not suffice). "Certification Requirements," *Arizona Department of Education*, <https://www.azed.gov/educator-certification/forms-and-information/certificates>

⁶⁹ Arkansas relies on Praxis II to assess educator minimum content knowledge, and defines "barely failing" as failing within 2 SEMs of the passing score. Eligible candidates may qualify for licensure through an Alternate Assessment Plan ("AAP") if they complete an Arkansas Division of Elementary and Secondary Education ("DESE")-approved micro-credential(s) or performance-based content assessment and at least three years of relevant teaching experience in the content area. "Districts hiring an educator under an AAP will ensure additional mentoring, coaching, and yearly progress toward the completion of the DESE-approved performance assessment in the content area." "Information Regarding Alternate Assessment Plans (AAP)," *Division of Elementary and Secondary Education*, https://dese.ade.arkansas.gov/Files/AAP_Form_Updated_07_20_2022_EEF.pdf

⁷⁰ While California uses its own state-developed content area standardized assessment—the California Subject Examinations for Teachers ("CSET")—it also generally recognizes the following ways for candidates to demonstrate educator minimum content knowledge: relevant coursework, relevant subject degree major, or completion of a California Commission on Teacher Credentialing-approved subject-matter program. "Teaching Credentials Requirements," *California Commission on Teacher Credentialing*, <https://www.ctc.ca.gov/credentials/req-teaching>

State	Praxis II Only / Predominantly*	State-Developed Content Area Standardized Assessment Only / Predominantly*	Alternatives for Barely Failing Candidates	Multiple Measures (Praxis II / State-Developed Content Area Standardized Assessments AND Other Options)	EPP Graduation Only
Colorado ⁷¹				✓	
Connecticut ⁷²			✓		
Delaware	✓				
Florida		✓			
Georgia		✓			
Hawaii	✓				
Idaho	✓				
Illinois		✓			
Indiana	✓				
Iowa					✓
Kansas	✓				
Kentucky	✓				
Louisiana	✓				
Maine					✓

⁷¹ While Colorado uses Praxis II, it also generally recognizes the following ways for candidates to demonstrate educator minimum content knowledge: relevant coursework, relevant subject degree, or portfolio evidence. "Multiple Measures of Content Competency," *Colorado Department of Education*, <https://www.cde.state.co.us/educatortalent/multiplemeasuresinfo>

⁷² While Connecticut uses Praxis II, it recently introduced a limited exception where candidates who have attempted any of the subtests within the Praxis Elementary Education: Multiple Subjects (5001) series at least once and scored within 1 SEM of the passing score can complete a professional learning module instead of retaking the Praxis II test. "Alternate Passing Option – Connecticut, Frequently Asked Questions For Test Takers," *Praxis*, Accessed on December 4, 2024, <https://portal.ct.gov/sdecertification/-/media/sde/certification/ct-altpass-test-taker-faq.pdf?rev=0aca12b1580f46a2a92efef91b5fcdcf&hash=7B6E339752F65912F52EC610EE6F44A0#:~:text=The%20Alternate%20Passing%20Option%20is.submit%20a%20CT%20Retest%20Certificate>

State	Praxis II Only / Predominantly*	State-Developed Content Area Standardized Assessment Only / Predominantly*	Alternatives for Barely Failing Candidates	Multiple Measures (Praxis II / State-Developed Content Area Standardized Assessments AND Other Options)	EPP Graduation Only
Maryland	✓				
Massachusetts ⁷³		✓			
Michigan		✓			
Minnesota					✓
Mississippi	✓				
Missouri	✓				
Montana ⁷⁴				✓	
Nebraska	✓				
Nevada	✓				
New Hampshire	✓				
New Jersey	✓				
New Mexico ⁷⁵				✓	

⁷³ While Massachusetts generally relies on its own state-developed content area standardized assessment—the Massachusetts Tests for Educator Licensure (“MTEL”)—to assess educator minimum content knowledge, it recently introduced a regulatory **pilot** (running through June 30, 2025) where the Massachusetts Department of Elementary and Secondary Education (“DESE”) can—and has—approved alternative assessments to the MTEL. Currently, there are two main alternatives: (i) EPP subject matter knowledge attestation (signed off by a dean and designated content expert within the EPP); and (ii) the “MTEL-Flex” (which applies to candidates failing within one SEM of the passing score, and requires candidates to “provide an analysis of an MTEL test objective to demonstrate the depth of their subject matter knowledge”). “Alternative Assessments to the Subject Matter Knowledge MTEs,” *Massachusetts Department of Elementary and Secondary Education*, June 14, 2023, <https://www.doe.mass.edu/mtel/alt-assess/smk.html>

⁷⁴ While Montana uses Praxis II, it also generally recognizes the following ways for candidates to demonstrate educator minimum content knowledge: relevant coursework or portfolio evidence. “Educator Licenses,” *Office of Public Instruction*, <https://opi.mt.gov/Educators/Licensure/Educator-Licensure/Educator-Licenses#9389210445-class-2-standard-teaching-license>

⁷⁵ “Beginning July 2022, approved educator preparation programs in New Mexico must adopt a standardized portfolio that will serve as a rigorous approval process for becoming a licensed educator in New Mexico, and Praxis examination pathways will be removed for educators who will graduate in Spring 2024.” However, Praxis II is still required for the certification areas of Elementary Education and Special Education. “Updated Requirements for Teacher Licensure- Portfolio in lieu of Praxis,” *State of New Mexico Public Education Department*, May 16, 2024, <https://webnew.ped.state.nm.us/wp-content/uploads/2024/08/Updated-Requirements-for-Teacher-Licensure-Portfolio-in-lieu-of-Praxis.pdf>

State	Praxis II Only / Predominantly*	State-Developed Content Area Standardized Assessment Only / Predominantly*	Alternatives for Barely Failing Candidates	Multiple Measures (Praxis II / State-Developed Content Area Standardized Assessments AND Other Options)	EPP Graduation Only
New York		✓			
North Carolina	✓				
North Dakota	✓				
Ohio		✓			
Oklahoma		✓			
Oregon		✓			
Pennsylvania	✓				
Rhode Island	✓				
South Carolina	✓				
South Dakota	✓				
Tennessee ⁷⁶				✓	
Texas		✓			
Utah ⁷⁷				✓	
Vermont	✓				
Virginia	✓				

⁷⁶ Tennessee generally relies on Praxis II to assess educator minimum content knowledge, but recently introduced an exception where it exempts candidates that have completed a State Board-approved baccalaureate or post-baccalaureate EPP and hold a degree with a relevant subject major from the Praxis II requirement. Thus, effectively, Tennessee now recognizes two ways for candidates to demonstrate educator minimum content knowledge. "Licensure Assessments Guidance," *Tennessee Department of Education*, March 2024, https://www.tn.gov/content/dam/tn/education/licensure/Licensure_Assessments_Guidance.pdf

⁷⁷ While Utah uses Praxis II, it also generally recognizes relevant subject degree majors as an alternative way for candidates to demonstrate educator minimum content knowledge. "Educator Licensing FAQs," *Utah State University*, <https://cehs.usu.edu/teacher-education/educator-licensing-faq>

State	Praxis II Only / Predominantly*	State-Developed Content Area Standardized Assessment Only / Predominantly*	Alternatives for Barely Failing Candidates	Multiple Measures (Praxis II / State-Developed Content Area Standardized Assessments AND Other Options)	EPP Graduation Only
Washington ⁷⁸				✓	
Washington, D.C.	✓				
West Virginia ⁷⁹				✓	
Wisconsin ⁸⁰				✓	
Wyoming	✓				

⁷⁸ While Washington generally relies on its own state-developed content area standardized assessment—the Washington Educator Skills Tests - Endorsements (“WEST-E”)—to assess educator minimum content knowledge, it recently introduced “case-by-case exceptions” designed to allow EPPs to assess their candidates’ content knowledge using multiple forms of evidence. Candidates must still take WEST-E once in order to be eligible for case-by-case exception. If the EPP determines that a candidate has the requisite knowledge and skills, it can recommend the candidate for certification. The Washington State Professional Educator Standards Board (“PESB”) provides guidance both on the review process EPPs must undertake, as well as the types of acceptable evidence (for example, coursework and letters of recommendation). “Case-by-case exceptions for content knowledge assessments,” *Washington State Professional Educator Standards Board*,

<https://www.pesb.wa.gov/preparation-programs/standards/assessments/content-knowledge/#:~:text=Case%2Dby%2Dcase%20exceptions%20process&text=Recognizing%20that%20diverse%20teachers%20play,work%20to%20meet%20assessment%20requirements>

⁷⁹ While West Virginia uses Praxis II, it also generally recognizes the following ways for candidates to demonstrate educator minimum content knowledge: National Board for Professional Teaching Standards (“NBPTS”) certification; relevant doctorate degree; or relevant master’s degree with five years of directly related work experience. “West Virginia Licensure Testing Directory,” *West Virginia Department of Education*, <https://wvde.us/wp-content/uploads/2023/08/WV-Licensure-Testing-Directory-Effective-8-9-23.pdf>

⁸⁰ While Wisconsin uses Praxis II, it also generally recognizes the following ways for candidates to demonstrate educator minimum content knowledge: relevant coursework or portfolio evidence. “Content Knowledge Requirements for Teacher Certification,” *University of Wisconsin-Madison School of Education*, <https://tec.education.wisc.edu/wp-content/uploads/sites/18/2021/05/UW-Madison-Content-Knowledge-Assmt-Policy-approved-by-DPI-12-28-18.pdf>; “Content Knowledge/Praxis II,” *Educate-WI*, <https://www.educate-wi.com/content/programs/10sped/tests/content-knowledge-praxis-ii>