



Promoting learning of PK-12 students through the promotion of high quality preparation and continuing education for all school personnel

**TO: Brian Whiston,
Superintendent Michigan Department of Education**

**FROM: Dale-Elizabeth Pehrsson,
President, Michigan Association for Colleges of Teacher Education**

DATE: October 15, 2015

**RE: Assessment of Michigan Pre-Service Teacher Candidates:
Issues, Opportunities and Recommendations**

Representatives of the Michigan Association for Colleges of Teacher Education (MACTE) and representatives from the American Association for Colleges of Teacher Education (AACTE) met on the campus of Northern Michigan University in June of this year. Our goal was to develop ideas that would support quality pre-service teacher education programs better connected to the goals and outcomes of our K-12 partners. We believe this goal coincides with and supports your stated mission to be more deliberate in the testing of our students and to develop a more cohesive and purposeful P-20 system.

Your colleagues in higher education are excited to meet with you to discuss MACTE's examination of critical issues related to Michigan's assessment of pre-service teacher candidates. We would welcome the opportunity to share our analyses and specific recommendations for the following:

- Use of the Scholastic Aptitude Test (SAT) as a P-20 measure and connector of the Michigan Curriculum and Michigan InTASC Standards
- The Professional Readiness Exam's structural weaknesses and harms
- The Praxis I and II exams as an alternative to replace the Michigan PRE

MACTE work groups developed several briefs which include analyses and recommendations for each of the above issues and/or opportunities. These briefs are provided for your review. We look forward to the opportunity to work strategically with the Michigan Department of Education to forge a cohesive, comprehensive, and effective strategy that truly ensures the highest level of quality and support for professionals leading teaching and learning for Michigan's children.

On behalf of the MACTE, we invite you to consider the recommendations generated from our education preparation program (EPP) members; and we respectfully request a time to meet with you to discuss our ideas for working together. As you review the following briefs, we hope you will gain further insight into the opportunities for how Michigan could:

1. ***Better utilize the Scholastic Aptitude Test (SAT) as a P-20 measure and connector of the Michigan Curriculum and the Michigan InTASC Standards.*** We believe that having one common focus would allow our Pre-K through university system to coalesce around a common purpose and theme and would allow us to better connect college and career ready standards as they were intended to be integrated.

2. ***Address Serious Problems Associated with the Professional Readiness Exam.*** The exam has structural weaknesses and its use causes serious harm when used as a predictor of teacher readiness. Furthermore the implementation of PRE has long-term negative consequences related to recruiting a pool of teacher candidates that better reflects our P-12 student population. This is a critical issue to address in our state as we work to develop a teaching and learning community that not only supports the new Council for the Accreditation of Educator Preparation Standards (CAEP), but one that allows our P-12 students to see themselves in positions of leadership and influence in a classroom setting.
3. ***Consider the advantages of using the Praxis exams to replace the flawed PRE test.*** Michigan's higher education communities and EPP's recognize the importance of being able to compare our Michigan candidates to the national pool of candidates. To that end we have explored how to utilize the Praxis exams as a substitute or replacement for the Michigan PRE. Having data sets that allow Michigan to compare its graduates to those across the nation is something we wish to do as we are proud of our graduates and believe they meet or exceed expectations from our partner institutions across the country.

On behalf of MACTE's dynamic and diverse membership of university and college educator preparation programs across Michigan, we appreciate your review and response. I will follow-up with you in the next week to schedule a meeting.

Educationally yours,



Dr. Dale-Elizabeth Pehrsson, MACTE President 2015-2017
Dean of the College of Education & Human Services,
Central Michigan University
Mt. Pleasant, MI 48859
dr.dale@cmich.edu

Attached Documents:

MACTE Work Group Briefs and Appendices



Promoting learning of PK-12 students through the promotion of high quality preparation and continuing education for all school personnel

MACTE ISSUE ONE BRIEF

Scholastic Aptitude Test (SAT)

Work Group Members:

Sally Rae, Siena Heights University, SRAE@sienaheights.edu – Group Leader

Julie Sinkovitz, Adrian College, jsinkovitz@adrian.edu

Chris Schram, Baker College, chris.schram@baker.edu

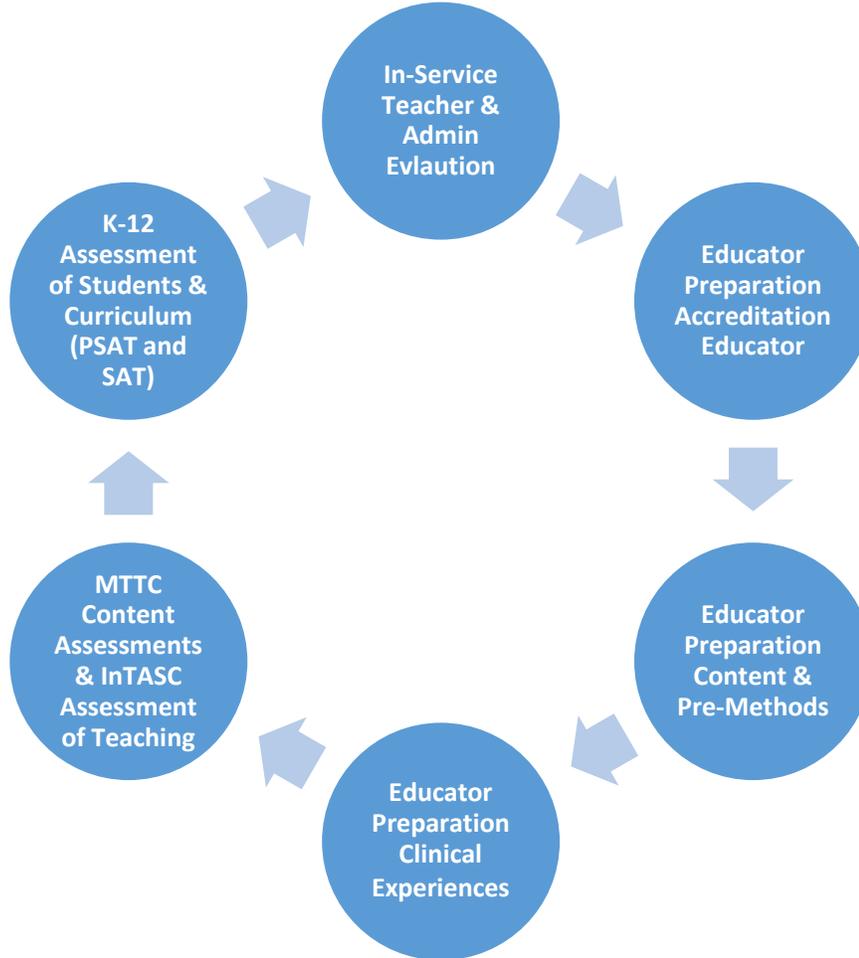
Joe Lubig, Northern Michigan University, jlubig@nmu.edu

Recommendation: The Michigan Association for Colleges of Teacher Education supports the use of the SAT College and Career Ready score of 1550 assessing critical reading, mathematics, and writing as a valid and reliable measure for admittance to Michigan educator preparation programs¹. The SAT is poised to serve as an assessment that has the ability to unify P-20 around a common assessment tool as it is integrated into all aspects of P-12 curriculum, initial teacher preparation, advanced certificate preparation, and in-service teacher and administrator evaluation.

See Figure 1. We further recommend that the use of the SAT be studied longitudinally over a 19 year period (P-20) so a determination can be made as to the reliability and validity of: the SAT, P-12 curriculum, educator preparation programs, and in-service teaching using this common measure. Constant change in assessment measures and instruments are disrupting the profession's ability to establish a coherent and consistent system of educator and student development and support.

¹ A score of 1490 is at the 50th percentile. A score of 1550 is at the 57th percentile and thus puts the use of a score of 1550 beyond the recommended standards set by the CAEP. It would be critical for MACTE to determine minimum scores with College Board and the MDE for each sub-area.

Figure 1: P-20 SAT Integration of Measures and Supports



As Figure 1 illustrates, the cycle of educator preparation involves developing teachers for initial, advanced, and continuing licensure around the Michigan InTASC Standards. Candidates cannot successfully complete a program and be recommended for licensure without developing rich content lessons with developmentally appropriate pedagogy as assessed by these standards. Through clinical partnerships, educator preparation programs and P-12 systems are collaboratively implementing and assessing in-service and pre-service teachers through the use of MI InTASC. Key assessment measures include: the MTTC content exams as aligned to the Common Core and SAT; clinical practice instruments as aligned to MI InTASC, Common Core, and SAT; in-service teacher and administrator evaluations as aligned to MI InTASC, Common Core, and SAT; and district-wide data as aligned to Common Core through the 9th and 10th grade PSAT and 11th grade SAT administration. We have the potential for a system of development, integration, assessment, and revision that is common to the entire profession.

Through the use of the SAT as our longitudinal measure, the Michigan Department of Education, educator preparation programs, and local education agencies finally have an opportunity to connect curriculum and the assessment of curriculum through one unified system. Through acceptance of the SAT score of 1550 for admittance to a preparation program,

we can develop a more streamlined and collaborative recruitment initiative that is understood by all stakeholders through common goals, language, and outcomes.

Superintendent Whiston has acknowledged that Michigan potentially wastes too much money on standardized tests.² Utilizing the SAT as a measure of entry for potential college ready teacher candidates sets us on a path to be more efficient and responsible with our resources. The opportunity to get all of P-20 pulling in the same direction through the use of an agreed upon college and career ready SAT score of 1550 offers an opportunity we cannot afford to miss.

Rationale:

- A score of 1550 assessing critical reading, mathematics, and writing indicates a 65% likelihood that the test taker will receive a B- or better average during their first year of college.³ The State of Michigan has accepted and is investing in the SAT as a valid and reliable measure of college and career readiness. The decision to utilize the SAT meets or exceeds the Council for the Accreditation of Educator Preparation (CAEP) Standard 3: Candidate Quality, Recruitment, and Selectivity.⁴
- The State of Michigan has chosen to use the SAT as its state standardized assessment of college and career ready readiness for all P-12 students.⁵ The SAT is assessing potential teacher candidates' understanding of the very curriculum they will be responsible for implementing upon successful completion of high school and for initial entry into an educator preparation program.
- The Professional Readiness Exam (PRE) is a requirement that must be met prior to admittance to student teaching.⁶ A review of EPPs revealed that institutions are using the PRE as a gate to full admittance to a program several semesters prior to student teaching in order to better demonstrate compliance with CAEP Standard 3: Candidate Quality, Recruitment, and Selectivity.⁷ Additionally, EPPs do not want to put candidates in a position where they cannot successfully complete the PRE (an assessment of college and career ready standards) and attain a degree they cannot use while incurring a substantial amount of debt. EPPs have discussed the ethical responsibility we have to our candidates and have thus chosen to use the PRE as an early screen. The use of the SAT will alleviate this dilemma.
- The State of Michigan has chosen to use the PSAT as a measure for 9th and 10th grade assessment of college and career readiness.⁸ The PSAT will provide P-12 educators, most of

² New School Chief Wants Bigger Role with Governor, DPS; <http://www.detroitnews.com/story/opinion/columnists/ingrid-jacques/2015/06/25/jacques-brian-whitston-new-superintendent/29283799/>

³ The SAT College and Career Readiness Benchmark User Guidelines; http://media.collegeboard.com/digitalServices/pdf/sat/12b_6661_SAT_Benchmarks_PR_120914.pdf

⁴ CAEP Standards; <http://www.caepnet.org/standards/introduction>

⁵ Michigan Department of Education New Release; http://content.govdelivery.com/attachments/MIMDE/2015/01/07/file_attachments/353738/New+College+Assessment+Named.pdf

⁶ All candidates for a Michigan provisional teaching certificate must pass the Professional Readiness Examination before enrolling in student teaching. The Professional Readiness Examination consists of three subtests: Reading, Mathematics, and Writing; http://www.mtc.nesinc.com/MI17_requirements.asp

⁷ CAEP Standards; <http://www.caepnet.org/standards/introduction>

⁸ State law (388.1704) prescribes that the Michigan Department of Education (MDE) shall administer to all Michigan public school students a summative assessment for English language arts and mathematics in grades 9 and 10 in the 2015-2016 school year. In lieu of building new summative assessments for this purpose, the MDE has decided to pursue a more streamlined solution – the use of the PSAT to meet the statutory requirement. Since we've heard that districts are currently looking to purchase the PSAT on their own, using the PSAT as the state summative assessment for grades 9 and 10 will potentially save districts money (http://mymassp.com/content/psat_become_9th_and_10th_grade_test_201516)

whom are graduates of Michigan EPPs, the ability to assess P-12 learning and teaching through a connected system of assessment. The rich data EPPs will gain from the PSAT and SAT will foster greater connectivity and collaboration between P-12 and Higher Education.

- The requirement for teacher and administrator evaluation stipulates that some measure of standardized test scores will be used in teacher evaluation. Michigan teacher preparation programs are required to demonstrate that candidates have the requisite content knowledge, as assessed by the MTTC Content Area Exams. Teacher preparation programs are required to assess candidate readiness in their ability to plan, develop, deliver, and assess the Common Core State Standards. The MTTC content exams are aligned (or are being revised to align) to the CCSS/College and Career Ready Standards.
- SAT has preparation materials that support the college and career ready standards readily available on their website. Materials are updated as changes to the curriculum occur thus providing an efficient and cost-effective method to support potential candidates for entry to an educator preparation program. Some materials are free to all potential test takers and are aligned to the CCSS. Additionally, the national partnership with Kahn Academy provides remedial and preparation support resources for the SAT test.
- The SAT provides Michigan's P-20 system with access to data and a clear path of national comparison as to the quality of programs and licensure reciprocity with our colleagues across state lines.

The members of the Michigan Association for Colleges of Teacher Education are prepared to commit resources to support the use of the SAT college and career ready measure as a required measure for entry into an educator preparation program. The outstanding relationship EPPs have with the MDE OPPS, our LEAs, and the American Association for Colleges of Teacher Education will allow us to create a shared understanding and expectations within our profession regarding what it means to be college ready for entry into an educator preparation program.

Communicating the purpose and goals for the use of the SAT will be a natural extension of the preparation of our teacher candidates as a requirement of program completion for them to demonstrate planning, development, implementation, assessment, and revision of teaching and learning that meets or exceeds college and career ready standards. Imagine what we can do collectively to improve P-20 outcomes and state and national teacher entry requirements if we were to seize this opportunity to unify and establish agreed upon common goals and outcomes as outlined in the SAT.



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MACTE ISSUE TWO BRIEF

Concerns with the Professional Readiness Exam

Work Group Members:

Tom Sampson, Chair, Olivet College
Sue Brondyk, Hope College
Beth Kubitskey, Eastern Michigan University
Rheta Rubenstein, University of Michigan- Dearborn
Mike Saylor, Eastern Michigan University
Shari Stockero, Michigan Technological University

Background:

- Beginning October, 2013 Michigan replaced its Basic Skills Test with the Professional Readiness Exam (PRE).
- The PRE is taken by ALL teacher candidates in ALL teaching areas. The intent is to ensure that teacher candidates have good mathematics and literacy (reading and writing) skills.
- Michigan teacher candidates must pass all three subtests of the PRE before being allowed to student teach/participate in a capstone clinical experience, typically done in the senior year plus.
- Beginning in Spring 2014 alternative measures were allowed for each of the three subtests: specific ACT scores, specific MME scores, or passing two sections and being within one standard error on the third.

Conclusion:

PRE is Problematic. PRE is flawed in content, expectations, scoring, and usage. Further, the exam's use as a predictive indicator has serious and potentially harmful long-term consequences.

- 1. Content:** PRE content includes advanced STEM-oriented mathematics and grammar/linguistics terminology required of copy-editors. We could not identify research suggesting that all teachers, regardless of area of teaching (world language, history, biology, early childhood, vocational education), need to be screened for this content, nor could we find evidence that tests such as the PRE predict future success as a teacher. Further, the PRE fails to evaluate the more recent Michigan Common Core State Standards (MiCCSS)

standards of mathematical reasoning or English language argumentation. *The PRE content items are not related to teaching.*

- 2. Expectations:** The PRE test was created before Michigan adopted the MiCCSS, so it could not have been developed to align with the MiCCSS. The alignment of PRE to MiCCSS is based on the argument that both the PRE and the High School Content Expectations (HSCE) are aligned with the MiCCSS. Even with the questionable notion that all teachers should know all the high school graduation expectations (Michigan Merit Curriculum), the alignment of PRE to those standards is based on multiple indirect correlations. *The claim that the test measures potential candidates' learning of high school content standards relevant to teaching is not supported.*
- 3. Scoring:** The ACT alternative score for the PRE Writing subtest is significantly higher than the ACT College Ready Benchmark Score; the ACT benchmark scores are the alternative scores accepted by MDE for the Math and Reading subtests. *MDE's own analysis of the writing scores suggests the test and/or cut scores do not represent minimal knowledge of writing required to be a teacher.*
- 4. Usage:** The timing of administration of the PRE test is not clearly stipulated by the MDE and has proven problematic for students. The MDE supports the "generally accepted practice of requiring passage of the PRE before admittance to a preparation program." However, many programs only require students to pass the test prior to student teaching (which is the legal requirement). Two significant problems result from taking the PRE so late in a student's college program: 1) It is expensive for students who must take it multiple times and 2) Students' personal and financial investment in post-secondary education and professional preparation is costly; wasting time and expense for students who are unable to pass the test and must change programs as late as their junior or senior year. *Although MDE requires passing the test before student teaching, the Department supports institutions' decision to require it for admission.*
- 5. Consequences:** The PRE is eliminating a large percentage of the candidates who are eager to support education in Michigan. Data suggest that the PRE is severely reducing the pool of minority candidates. These are future teachers who can be models and inspirations to all students, including minority children and youth. Reduced numbers of minority teachers will ultimately *negatively impact student learning* from these same populations.

Rationale Supporting Problems of the PRE

- 1. Content – PRE Test Questions (See Appendix 1 for examples).** Test questions focus on declarative (memorized) knowledge and vocabulary rather than problem solving, reasoning and writing. Questions require STEM mathematics and copy-edit technical terminology.
 - Examination of PRE multiple-choice Writing Items reveals:
 - Requires technical language of grammar and linguistics; this is what copy-editors need to know, unlike PRAXIS which requires direct editing

- Has formatting issues; it is not intuitive what the small numbers refer to
- Contains its own grammar errors (is redundant in a question about redundancy)
- Requires work that is antithetical to recommended practices in learning to write [according to English Composition faculty at multiple education preparation institutions (EPIs)]
- Examination of PRE Mathematics Items reveals the test: (See samples in Appendix 1)
 - Does not address Mathematical Practices portion of MiCCSS-Math
 - Has few problem solving items
 - Has few reasoning items
 - Has no items to evaluate an argument
 - Relies on highly technical memorized vocabulary and symbolism, declarative knowledge
 - Is generally decontextualized (no story to provide a foot-hold)
 - Requires advanced STEM mathematics not relevant to most teachers outside of secondary mathematics or physics
 - Omits items that are basic but relevant to teaching. [e.g., John has a 94% average on 5 tests. How will his average be affected if he skips test 6 and takes a 0?]
- There is a lack of research supporting the argument for predictability of PRE for quality teaching. The Following are examples relevant studies and their findings:
 - D’Agustino & Powers, AERA Journal, Mar. 2009. Results of a meta-analysis (123 studies) suggested that licensure test scores are at best moderately related to teaching competence. Student performance in a teacher preparation program is a significantly better predictor.
 - Goldhaber, D., University of Washington & The Urban Institute, Oct 2006. No states use quantifiable research to correlate with cut scores to predict teacher effectiveness. Most states use panels of experts who set cut scores and are consensus driven.
 - Goldhaber, D. & Hansen, M., AERA Journal Mar. 2010. Study found that state licensure tests have different predictive validity for student achievement by teacher race. This study found that student achievement is impacted by race/ethnicity match between student and teacher. Black students significantly benefit when matched with a Black teacher.
 - Gitomer, D. H. & Latham, A.S. c. 1999, ETS. Impact of Admissions Licensure Tests showed that testing, Praxis I (basic skills) & II (disciplinary knowledge) being used as a screening tool, did cause the scores of those entering educator preparation programs to rise. A follow-up analysis by Gitomer, c. 2007, ETS, showed a continued rise in Praxis II test scores of those exiting educator preparation programs. This was true for all groups, e.g., gender, race. There was no increase in the proportion of minority students from 1999 to 2007 who passed Praxis II.

2. Expectations (See Appendix 2)

- Michigan’s Common Core State Standards (MiCCSS) are not addressed in the Professional Readiness Examination (PRE) materials.⁹

⁹ MDE claims that the content of the PRE is aligned with the MiCCSS based on the argument that the previous high school content expectations (HSCE) align with MiCCSS.

- Based on examination of available PRE study materials and sample tests, the PRE does not attempt to address critical aspects of the MiCCSS, including the Standards for Mathematical Practices (problem solving, reasoning, assessing others' arguments, etc.) and goals related to argumentation for language literacy.
- A test item aligning with a standard does not mean that the test item measures understanding of the standard needed for teaching.

3. Scoring (See Appendix 3)

- MDE's analysis determined an ACT score that would predict a test taker having a 50% chance of passing the Writing portion of the PRE test would be a 24 (combined English and writing), and thus determined 24 to be the minimum score allowed to be considered "passing" the writing portion.
- MDE allows the "college ready score" ACT score of 22 for Mathematics and Reading.
- College ready for ACT English is 18.¹⁰
- Analyses suggest that the writing cut score is inordinately high as the aligned passing score of 24 is in the 74th percentile. An English score of a 20 with a perfect writing score of 12 (99+ percentile) would result in a 24, making a 20 the lowest English score possible to get a 24 overall, where 18 is considered college ready.
- Analysis minimally suggests an ACT combined English with writing score of 18, or a 20 ACT score at the most, should be adequate for meeting the requirements.

4. Usage (See Appendix 4)

- The PRE is intended to be aligned with the (K-12) Michigan Merit Curriculum/Common Core State Standards (MiCCSS). Current rationale for the PRE implementation is based on several invalid assumptions about "when" the test is administered. For instance, it's been assumed that teacher candidates would take the PRE test early in their teacher preparation programs, typically freshman year, and would be successful given that they just graduated and should be familiar with the content.
- Many EPIs require passing the PRE (formerly the Basic Skills Test) prior to admission into their teacher preparation program, primarily to avoid students taking courses towards a teaching degree and license that they might not be able to use towards another degree if they cannot pass the PRE. In actuality, candidates are required to take the test typically at the end of their sophomore year, or beginning of junior year.
 - As a result of the challenges of passing the PRE some EPIs have chosen to require the PRE later in their program.
- The model used by many EPIs, exacerbated by the issues with the exam itself, often results in students taking the sub-tests multiple times.
 - Taking the test multiple times is expensive for many students; this negates the legislated \$50 cap.
 - Failure to pass the test (after multiple attempts) wastes students' time
 - Some students are unable to complete their program as a result of failure to pass the PRE and must begin another degree program late in their college career.

¹⁰ This score does not include the writing component. See analysis of the impact in Appendix 3

- In most cases, additional years in a teacher preparation program do not better prepare students to successfully pass the PRE (unless perhaps they are secondary mathematics or literacy majors.)

5. Consequences

- PRE best attempt passing rate¹¹:
 - Mathematics
 - African American/Black 25%
 - Asian Pacific 77%
 - Hispanic/Latina(o) 43%
 - White 56%
 - Native American/American Indian 38%
 - Writing
 - African American/Black 19%
 - Asian Pacific 31%
 - Hispanic/Latino(a) 27%
 - White 38%
 - Native American/American Indian 18%
 - Reading
 - African American/Black 68%
 - Asian Pacific 80%
 - Hispanic/Latino(a) 81%
 - White 88%
 - Native American/American Indian 75%
- Since the introduction of alternative scores in spring 2014, candidates with high enough ACT or MME scores are opting out of particular PRE subtests. However, given historical data regarding ACT and under-represented groups, it is highly unlikely to expect under-represented candidates to opt out of the PRE.
 (<http://www.act.org/research/policymakers/cccr13/performance3.html> , 2013 data below)

Average ACT cumulative score by race:

○ Africa American	16.9
○ American Indian	18.0
○ Asian	23.5
○ Hispanic	18.8
○ Pacific Islander	19.5
○ White	22.2

¹¹ 'Best attempt' means percentage of students who eventually pass regardless of the number of attempts. Students can pass these subsections through external measures: ACT and MME. Students left taking the test represent a population that failed to demonstrate sufficient understanding with these measures. This analysis is based on MDE data of Spring 2015 using "Results Analyzer."

- Given the correlation between student learning and students' connection to the race of the teacher, using measures that disproportionately negatively impact underrepresented populations in becoming teachers would also negatively impact student learning of that same population, as stated above (Goldhaber & Hansen, 2010)



Appendix 1. Sample PRE Questions with Comparisons to Praxis I items Comparison: PRE items with Praxis I items

Sources: PRE MTTE #96 Study Guide, online Praxis I Study Guide

Sample PRE Multiple Choice Writing

¹Dr. Patricia Bath may not be a common household name, but her accomplishments as a physician and inventor are certainly noteworthy. ²Born in Harlem during World War II, she demonstrated an early aptitude for science, a subject in which she did well from an early age. ³_____ ⁴She was the first African American in the field of ophthalmology... [text continues]

1. Which of the following sentences, if used as Part 3, **effectively gives emphasis to the main idea of the passage?** [Choices are given.]
2. Which of the following parts should be edited **to eliminate unnecessary repetition or redundancy?**
 - a. Part 1
 - b. Part 2
 - c. Part 4
 - d. Part 6
3. Which of the following parts should be edited for **subject-verb agreement?** [Choices are given.]

Compare to PRAXIS I Writing

The Praxis I uses a few formats with multiple items in each set. The directions are simple.

Usage	Find the error among five underlined parts
Sentence Correction	Choose the best correction
Revision in Context	Choose the best way to strengthen the passage
Research Skills	Answer questions related to doing research
Constructed response	Write a paragraph on a given topic

Sample Praxis I Writing: Usage Item

Directions: Each question consists of a sentence that contains four underlined portions. Read each sentence and decide whether any of the underlined parts contains a grammatical construction, a word use, or an instance of incorrect or omitted punctuation or capitalization that would be inappropriate in carefully written English. If so, select the underlined portion that must be revised to produce a correct sentence. If there are no errors in the sentence as written, select “No error.” **No sentence has more than one error.**

The club members agreed that each would contribute ten days of volunteer work annually each year at the local hospital. No error.

Sample Praxis I Writing: Revision Item

Sentence Correction

Directions: In each of the following sentences, some part of the sentence or the entire sentence is underlined. Beneath each sentence you will find five ways of writing the underlined part. The first of these repeats the original, but the other four are all different. If you think the original sentence is better than any of the suggested changes, you should select the first answer choice; otherwise you should select one of the other choices.

As a consumer, one can accept the goods offered to us or we can reject them, but we cannot determine their quality or change the system’s priorities.

- As a consumer, one can accept
- We the consumer either can accept
- The consumer can accept
- Either the consumer accepts
- As consumers, we can accept

Writing Comparison

Comments on sample PRE questions:

- Tiny numbers identify sections of text (not intuitive.)
- Item 2 is itself redundant.
- Item 3 is one example of the need to know technical vocabulary of grammar and linguistics. The online sample test had many items using technical grammar or linguistics terminology.
- Candidates report needing to read items multiple times just to understand the questions being asked.

Comments on sample Praxis I question:

- The same directions apply across multiple writing items.
- Candidate edits or improves text directly. He is not required to know formal language of grammar or linguistics.
- The Praxis Study Guide explains why the choices are correct or wrong.

- (PRE Study Guide only states the objective for the item; there is no opportunity to learn.)

Sample PRE Mathematics Items

1. What is $\log_4 64 + \log_4 4$?
 - a. 3
 - b. 4
 - c. 8
 - d. 17
2. Which equation represents a **linear** function?
 - a. $y = 3x^3 - 4x + 3$
 - b. $y = 2x^2 + 5x$
 - c. $y = 2x^2$
 - d. $y = 3x + 8$
3. A rectangle has vertices located at (0,0), (1,0), (1,4), and (0,4). The rectangle undergoes a **dilation** with a **scale factor** of 3. What is the area of the **image** of the new rectangle?
 - a. 4
 - b. 12
 - c. 18
 - d. 36
4. A bag contains 5 marbles numbered 1 to 5. A marble is drawn, its number recorded, and it is returned to the bag. This is repeated a second time. How many **elements** are found in the **sample space**?
 - a. 5
 - b. 10
 - c. 25
 - d. 32

Sample Praxis I Mathematics Items

1.

x	y
0	5
2	11
6	23
7	26
10	35

Which of the following equations expresses the relationship between x and y in the table above?

- a. $y = x + 5$
- b. $y = x + 6$
- c. $y = 3x + 5$
- d. $y = 4x - 5$
- e. $y = 4x - 1$

2.

Persons	Number
Men	12
Women	18
Boys	10
Girls	8

The table above shows the distribution of men, women, boys, and girls in a group of 48 individuals. If one individual is randomly selected from the group, what is the probability that the individual will be a woman?

- a. $\frac{1}{18}$ b. $\frac{2}{15}$ c. $\frac{1}{4}$ d. $\frac{3}{8}$ e. $\frac{1}{2}$

Mathematics Comparison

Comments on PRE Mathematics:

- Items use advanced symbols and terminology.
- Most items are abstract and decontextualized, not ‘problem solving.’
- There is little possibility to use reasoning, the hallmark of doing mathematics.
- There is no context which could give candidates a foot-hold.
- Items do not reflect CCSS Standards for Mathematical Practices and are not aligned with paradigms of reasoning and problem solving needed for the 21st century.
- The PRE item on probability omitted the key condition of randomness.

Comments on sample Praxis I Math questions:

- Praxis #1 is modeling. Modeling is used extensively in data analysis and in science (what is the shape of the data? Can we make predictions?). Candidates can “figure it out.” Moreover, the PRAXIS study book explains how candidates might use slope or trial and error. The study materials provide instruction. PRE materials only state the objective the item addresses.
- Praxis #2. Here students are actually finding a probability, not being asked for the size of a ‘sample space,’ an academic item.



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Appendix 2: Expectations

While the Michigan Common Core State Standards (MiCCSS) are not addressed in any of the Professional Readiness Examination (PRE) materials, the MDE claims the content of the PRE is aligned with the MiCCSS

https://www.michigan.gov/documents/mde/PRE_Q_and_A_3.9_484580_7.pdf:

- However, development of the revised Basic Skills Test, which was later renamed the Professional Readiness Exam (PRE), began in 2008, years earlier than the release of MiCCSS (MTTC Technical Report). At the time of test development, the test was designed to align with the current state standards, the Michigan High School Content Expectations (HSCE).
- MDE's assumption that the PRE aligns with the CCSS is based on the claim that "[a]lignment of the HSCE to the CCSS in both [mathematics and ELA] suggested that the two sets of content standards were highly aligned and therefore the PRE for both these subject areas was still aligned to the content knowledge that students leaving high school were expected to have"
https://www.michigan.gov/documents/mde/PRE_Q_and_A_3.9_484580_7.pdf, p. 3).
- The PRE was not directly designed to align with the CCSS, but its alignment rests on the argument that both the PRE and the CCSS align with the HSCE. This argument likely explains why PRE does not attempt to address critical aspects of the CCSS, including the Standards for Mathematical Practices (problem solving, reasoning, assessing others' arguments, etc.) and goals around argumentation for language literacy.

Key aspects of the CCSS that are not reflected in the PRE are problematic, particularly given that the PRE is required of ALL teacher education candidates, regardless of grade level or content area. Because the CCSS Standards for Mathematical Practice cut across grades K-12, many would argue these standards are more important to ALL teachers than any particular mathematics content that is tested. This is particularly true for future elementary teachers, who will be largely responsible for develop students' views of mathematics as a discipline. It is problematic that the PRE has very few contextualized problems and no items requiring sense-making, making claims and substantiating them, or error analysis. These are exactly the mathematical skills that we would want teachers to demonstrate--much more important than the decontextualized definitions and procedures that are currently tested.

Even if the claim that PRE items are aligned with CCSS were true, it is not reasonable to expect current teacher education candidates to know this content. K-12 schools have only recently begun to align their curricula and instruction to CCSS standards. It will be several years before students enrolling in our Colleges of Education will have studied curriculum aligned with the CCSS for more than their last few years of school. It will be even longer for the mature adults who seek admission to our programs to have had any CCSS experience.

Finally, while a given PRE test item might fit within a given objective; if someone were asked how to assess that objective, the corresponding item would not be appropriate or sufficient. An examination of the sample questions available to the EPI's suggests that the inquiry focused on "does this question align with a particular objective?" rather than asking "does this question test understanding of the objective?" Just because someone can get a particular item correct, it does not mean they meet the objective.



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Appendix 3: Scoring

“The Benchmarks are scores on the ACT subject-area tests that represent the level of achievement required for students to have a 50% chance of obtaining a B or higher or about a 75% chance of obtaining a C or higher in corresponding credit-bearing first-year college courses. These college courses include English composition, college algebra, introductory social science courses, and biology. Based on a sample of 214 institutions and more than 230,000 students from across the United States, the Benchmarks are median course placement values for these institutions and as such represent a *typical* set of expectations.” The ACT College Readiness Benchmarks are:

College Course	ACT Subject-Area Test	The ACT® Benchmark
English Composition	English	18
College Algebra	Mathematics	22
Social Sciences	Reading	22
Biology	Science	23

<http://www.act.org/solutions/college-career-readiness/college-readiness-benchmarks/>

Scoring Rubric Prior to September 2015 – Overview

Two scorers score each writing segment and scores are added. Scores of 2-12 given to test taker. This method does not ensure inter-rater reliability.

For more information see:

<http://www.actstudent.org/writing/scores/guidelines14.html>

For how to calculate the combined English/Writing Score see:

<http://www.actstudent.org/writing/combined.html>



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Appendix 4: Usage

“Section 1531 of Public Act 451 (1976), as amended by Public Act 267 (1986), Public Act 282 (1992), and Public Act 289 (1995), mandates a testing program as part of Michigan's teacher certification requirements. The purpose of the tests is to ensure that each certified teacher has the necessary professional readiness and content knowledge to serve in Michigan schools.” (MTTC website) In 2013, the PRE replaced the previously used Basic Skills Test.

The PRE has been aligned with the (K-12) Michigan Merit Curriculum/Common Core State Standards (CCSS). The work to update the original Basic Skills Test was influenced by the passing of the MMC^[1] in 2006, which stated that all students (beginning with those who were 8th graders in 2006) needed to be proficient with the state content expectations that included 4 credits of mathematics and English Language Arts (ELA), and 3 credits of science and social studies.

At the same time, the MDE released content expectations for high school mathematics, and ELA followed the next year, along with the science and social studies high school expectations. Known by their acronym of the HSCE (high school content expectations), these sets of standards for each of the content areas were developed with input from nationally-known education and content experts from Institutions of Higher Education (IHEs). The thinking is that students would take the PRE test early in their teacher preparation programs and would be successful given that they just graduated from and should be familiar with the content. The timing of the PRE test for students is currently at the discretion of individual departments and students. In actuality, this is not always the case as some EPPs have chosen to administer the PRE later in their programs.

It is mandated by law to act as a gateway for teacher candidates before students begin their final clinical experience as teachers (i.e., student teaching). However many EPIs support the generally accepted practice of requiring passage of the PRE before admittance to a preparation program. The MDE sees this as a responsible policy that reduces the number of prospective teacher candidates who spend the money and time to start a teaching preparation program, only to be blocked mid-way if they cannot pass the PRE. (MDE – Q&A)

In the Program Overview, the current language reads: “All candidates for a Michigan provisional teaching certificate must pass the Professional Readiness Examination before enrolling in student teaching.” Under the “When to Take the Test” section, it states:

You may take the Professional Readiness Examination and the subject-area tests as early in your college program as you wish. Check with your academic advisor for further

information about when you should take the tests for the MTTC. An academic advisor may request that you wait to take a subject-area test until you have completed at least 90 percent of your coursework in that program. State-approved teacher preparation programs may require students to pass the Professional Readiness Examination before entering the program (MTTC website). However, this also means that candidates who take the PRE earlier in their college careers (for example, as freshmen or early sophomores) will have more time to take advantage of remediation programs that may be offered to them after one or more subtests of the PRE have not been passed (MDE – Q&A).

Problem: Many students cannot pass one or more subjects and are taking the test multiple times. Example from a selective independent EPI: Of the 105 students who took the writing portion of the PRE during the 2013-14 academic year,

- 64 students failed the exam
- 41 passed the exam
- 11 students took it a second time and passed
- 9 students took it a second time and failed again
- 2 students passed it on the third try
- 1 student took it a third time and failed again

Of the 108 students who took the mathematics portion of the PRE during the 2013-14 academic year,

- 48 students failed the exam
- 60 passed the exam
- 3 students took it a second time and passed
- 10 students took it a second time and failed again
- 1 student took it a third time and failed again
- 2 students took it a fourth time and failed again

Taking the test multiple times is expensive and costly both personally and financially for many students. Students spend more than the expected \$50.00 if they take it multiple times. State legislation currently puts a \$50 cap on the cost to candidates for any Michigan Test for Teacher Certification (MTTC).

Because candidates are re-taking the test, and because they are taking it online (more costly than paper \$50 test), they are spending far more than \$50 such as:

- \$50 per paper test
- \$140 per online test
- \$75 to retake just the math or reading section online
- \$85 to retake just the writing portion online
- Many students are required to pay late (\$30.00) or emergency (\$70.00) fees for repeat tests.

Other costly and negative consequences include:

- Failure to pass the test (after multiple attempts) wastes students' time and learning investment.
- Some students are unable to complete their program as a result and must switch majors as late as junior/senior year.
- In most cases, additional years in a teacher preparation program do not better prepare students to successfully pass the PRE (unless perhaps they are secondary mathematics or literacy majors).



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Appendix 5: Consequences

Test taking scores for the State of Michigan. A score of 220 is passing. [MBST: Michigan Basic Skills Test, predecessor to PRE.]

	Avg. State Score, MBST Math 2012-13	Avg. State Score, PRE Math 2013-14
Afr/Am	248.7	168.2
Asian	280.9	237.8
Hispanic	258.8	194.0
Nat Am	253.9	200.4
Not Provided	268.9	202.5
Other	253.1	200.9
White	269.3	215.6
AVG	267.7	211.8
	Avg. State Score, MBST Writing 2012-13	Avg. State Score, PRE Writing 2013-14
Afr/Am	225.7	174.3
Asian	228.7	195.5
Hispanic	232.2	186.4
Nat Am	230.5	191.5
Not Provided	233.7	198.9
Other	228.4	193.3
White	234.2	203.9
AVG	233.3	201.1
	Avg. State Score, MBST Reading 2012-13	Avg. State Score, PRE Reading 2013-14
Afr/Am	260.4	230.1
Asian	265.3	246.4
Hispanic	262.9	238.2
Nat Am	259.9	249.5
Not Provided	270.8	245.5
Other	259.0	239.5
White	269.1	250.1
AVG	268.2	248.1

Michigan Test for Teacher Certification
Annual Summary of State Results: Initial and Cumulative
Program Year: August 2013 – July 2014
Professional Readiness Examination

KEY: N = Number of Eligible Test Takers

N Pass (% Pass) = Number (Percent) of Eligible Test Takers Who Passed the Test

NOTE: This table should be viewed with the accompanying descriptive information and interpretive cautions

Preparation Institution	Attempt Type					
	Initial			Cumulative		
	N	N Pass	% Pass	N	N Pass	% Pass
Adrian College	18	4	22.2	18	4	22.2
Albion College	10	3	30.0	10	3	30.0
Alma College	19	2	10.5	19	3	15.8
Andrews University	10	1	10.0	10	2	20.0
Aquinas College	59	17	28.8	59	21	35.6
Baker College	34	3	8.8	34	6	17.6
Calvin College	69	25	36.2	69	29	42.0
Central Michigan University	358	52	14.5	358	78	21.8
College for Creative Studies	6	**	**	**	**	**
Concordia University	19	4	21.1	19	7	36.8
Cornerstone University	17	3	17.6	17	6	35.3
Eastern Michigan University	378	47	12.4	378	86	22.8
Ferris State University	58	4	6.9	58	10	17.2
Grand Valley State University	338	85	25.1	338	137	40.5
Hope College	99	32	32.3	99	43	43.4
Lake Superior State University	13	3	23.1	13	5	38.5
Madonna University	22	3	13.6	22	7	31.8
Marygrove College	9	**	**	**	**	**
Michigan State University	500	130	26.0	500	206	41.2
Michigan Tech. University	11	5	45.5	11	6	54.5
Northern Michigan University	107	16	15.0	107	25	23.4
Oakland University	226	40	17.7	226	65	28.8
Olivet College	8	**	**	**	**	**
Robert B. Miller College	1	**	**	**	**	**
Rochester College	8	**	**	**	**	**
Saginaw Valley State University	135	25	18.5	135	36	26.7
Siena Heights University	7	**	**	**	**	**
Spring Arbor University	60	13	21.7	60	17	28.3
University of Detroit Mercy	9	**	**	**	**	**
University of Michigan-Ann Arbor	134	76	56.7	134	95	70.9
University of Michigan-Dearborn	80	10	12.5	80	15	18.8
University of Michigan-Flint	60	8	13.3	60	11	18.3
Wayne State University	157	19	12.1	157	30	19.1
Western Michigan University	284	32	11.3	284	57	20.1
Statewide	3,323	667	20.1	3,323	1,015	30.5

Statewide Pass Rates by Subtest (August 2013-July 2014)

		Attempt Type			
		Initial		Cumulative	
	N	N Pass	% Pass	N Pass	% Pass
All 3 subtests	3323	667	20.1	1015	30.5
Reading	3262	2726	83.6	2829	86.7
Mathematics	3265	1579	48.4	1853	56.8
Writing	3304	912	27.6	1243	37.6



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MACTE ISSUE THREE BRIEF

Use of Praxis Exam as Alternative to PRE

Praxis Workgroup Members:

Rick Benedict, Madonna University
Leonard Johnson, Ferris State University
Elizabeth Kirby, Central Michigan University
Roberta Rea, Oakland University

The workgroup examined how the Praxis test is being used across the nation and explored the options that Michigan students have for taking the Praxis instead of the PRE. A review was conducted of: what is happening nationally, cost comparatives, and considerations of access Michigan students would have to testing sites. Information is compiled in this brief and accompanying Appendix. Given the findings, the workgroup concluded that the Praxis 1 exam presents a viable option to establish professional readiness in lieu of the PRE exam.

National Use of Praxis:

An analysis of Praxis 1 usage across the nation revealed that of 51 entities (50 states and D. C.), 33 require passing the Praxis 1 as a test of Professional Readiness; 4 states accept the Praxis 1 (including Michigan according to attached Excel Spreadsheet); and 14 states have other test to measure professional readiness. This information was compiled from (<http://www.praxis-exams.com/>). Additional highlights summarized from this site include the following:

- a. Only one state, North Carolina, published alternative methods of passing the PRAXIS. These included an ACT score of 21 on the relevant reading or math portion of the ACT, or a total of 1100 points on the SAT with at least a score of 550 on the relevant reading and math portions of the SAT.
- b. The average required Praxis Reading Score is 173.8 with a standard deviation of 2 points. The required passing scores range from 170 to 178.
- c. The average required Praxis Mathematics Score is 172.8 with a standard deviation of 2.1 points. The required passing scores range from 169 to 178.
- d. The average required Praxis Writing Score is 172.8 with a standard deviation of 1.3 points. The required passing scores range from 171 to 176.

Attached: APPENDIX A Praxis I State by State Memo and Spreadsheet

Key Questions Considered:

Is the Praxis aligned to Common Core State Standards (CCSS)?

The work group was interested in knowing if the Praxis is clearly aligned to the CCSS. The following link provides verification that the Praxis is aligned to CCSS:

<http://www.ets.org/praxis/ccss> and indicates that "...the Praxis Core Academic Skills Tests for Educators in Reading, Writing and Mathematics, which replace the Praxis I Pre-Professional Skills Tests (PPST)" has been aligned.

How do the PRE and Praxis 1 Exam Costs Compare?

The cost comparison of the PRE versus the Praxis 1 Exam was investigated, with consideration given to current legislative limitations in the state to require anything over \$50. Based on evidence compiled by MACTE work groups, students are actually spending much more than \$50 given the number of retakes they are taking. Ferris State University data demonstrates students are retaking the exam multiple times and with little success (12% passing rate). The average cost to the student is listed below based on the total number of students and the total number of retakes to-date.

Praxis and Professional Readiness Exam Cost

Test	Paper-based cost (3) sections	Computer-based cost (3) sections	Computer Based Cost Reading (1) section	Computer Based Cost Math (1) section	Computer Based Cost Writing (1) section
Professional Readiness Exam	\$50	\$140	\$75	\$75	\$85
Praxis 1	<i>n/a</i>	\$150	\$90	\$90	\$90

Sources: http://www.mttc.nesinc.com/MI_testinfo.asp?t=096 and <https://www.ets.org/praxis/about/fees>

Example of Actual PRE Cost for Students:

- The following data were provided by Ferris State University (FSU) based on a breakdown of the costs to those who had their PRE scores sent to FSU.
- Of the 169 students who had their PRE scores reported to FSU since October, 2013, 134 took the paper test, while 35 (21%) took the computer-based test. Forty-four (44) students repeated at least one of the sections one time, 32 repeated at least one of the sections twice, 4 repeated at least one section three times, and one student repeated at least one section four times. Of those 77 repeats, 18 (23%) were computer-based.
- The total amount of money spent by these 169 students was \$15,410 (not including any who may have paid the \$30 late fee!) for an average of \$91.18 per student; nearly double the state cap.
- *To-date, only 20 of those 169 (12%) have passed all three sections

What is the availability of ETS Testing Sites in Michigan?

There are 11 ETS testing sites throughout Michigan that would provide access for many students.

1. Ann Arbor
2. Auburn Hills
3. Detroit
4. Detroit/Livonia
5. East Lansing
6. Grand Rapids
7. Lansing
8. Livonia
9. Mt. Pleasant
10. Sault Ste Marie
11. Troy



APPENDIX A

Praxis I Exam - State by State Comparisons Explanatory Memo and Spreadsheet

July 3, 2015

Hi Everyone at MACTE,

I kept digging (no response yet from ETS) and I found a website with some very important data (<http://www.praxis-exams.com/>). I entered that data on a spreadsheet. I am sending you that spreadsheet. The spreadsheet has six tabs at the bottom.

1. The first is a list of states with identifying population and geographic data. I added to that list, alphabetically by state (and the District of Columbia) whether or not that state (or D.C.) demands Praxis I scores (and the passing scores needed if they were included in the information I had access to); if the state accepts a Praxis I score (Michigan is included in this category according to this website); or if the state does not accept the Praxis 1.
2. The second tab simply lists, by state, whether or not the state requires, accepts or does not accept the Praxis 1. According to this data, 33 state require the Praxis 1; 4 states (including Michigan) accept the Praxis 1; and 14 states have other tests to measure Professional Readiness.
3. The third tab lists the states [and D.C.] that reported their passing scores (for Michigan I used Madonna's required scores that we've required for at least the past 20 years – until the PRE); and the passing scores by test: Mathematics, Reading and Writing.
4. The fourth, fifth, and sixth tabs rank scores for passing the Praxis 1 from lowest to highest and show which states (or D.C.) are associated with those scores. The fourth tab is for the Mathematics scores, the fifth tab is for the Reading scores and the sixth tab is for the Writing scores. At the end of each column of scores, I asked the spreadsheet to calculate the average pass score (to the nearest one-tenth of a point) and the standard deviation of that spread (to the nearest tenth).
5. Because all of this data can be sifted into summaries, I summarize some highlights (below)
 - a. Again, of 51 entities (50 states and D.C.) 33 require passing the Praxis 1; 4 accept the Praxis 1 as a test of Professional Readiness (including – according to this data – Michigan); and 14 states have some other means of assessing Professional Readiness (Reading, Writing, and Mathematics)
 - b. Only one state, North Carolina, published alternative methods of passing the PRAXIS. These included an ACT score of 21 on the relevant reading or math portion of the ACT, or a total of 1100 points on the SAT with at least a score of 550 on the relevant reading and math portions of the SAT.

- c. The average required Praxis Reading Score is 173.8 with a standard deviation of 2 points. The required passing scores range from 170 to 178.
- d. The average required Praxis Mathematics Score is 172.8 with a standard deviation of 2.1 points. The required passing scores range from 169 to 178.
- e. The average required Praxis Writing Score is 172.8 with a standard deviation of 1.3 points. The required passing scores range from 171 to 176.

I'm happy I could find some current and relevant data that will help our leadership team argue effectively that the Praxis (as well as the ACT and the SAT) can all be adequate measures of Professional Readiness.

Sincerely,



Rick Benedict

Madonna University

Y/N	State	Tests	Passing
ACCEPTS	Michigan	Mathematics	175
ACCEPTS	Michigan	Reading	175
ACCEPTS	Michigan	Writing	173
YES	Alaska	Mathematics	173
YES	Alaska	Reading	175
YES	Alaska	Writing	174
YES	Arkansas	Mathematics	171
YES	Arkansas	Reading	172
YES	Arkansas	Writing	173
YES	Connecticut	Mathematics	171
YES	Connecticut	Reading	172
YES	Connecticut	Writing	171
YES	Delaware	Mathematics	174
YES	Delaware	Reading	175
YES	Delaware	Writing	173
YES	District of Columbia	Mathematics	174
YES	District of Columbia	Reading	172
YES	District of Columbia	Writing	171
YES	Hawaii	Mathematics	173
YES	Hawaii	Reading	172
YES	Hawaii	Writing	171
YES	Indiana	Mathematics	175
YES	Indiana	Reading	176

Y/N	State	Tests	Passing
YES	Nevada	Mathematics	172
YES	Nevada	Reading	174
YES	Nevada	Writing	172
YES	New Hampshire	Mathematics	172
YES	New Hampshire	Reading	174
YES	New Hampshire	Writing	172
YES	North Carolina	Mathematics	173
YES	North Carolina	Reading	176
YES	North Carolina	Writing	176
YES	North Dakota	Mathematics	170
YES	North Dakota	Reading	173
YES	North Dakota	Writing	173
YES	Ohio	Mathematics	172
YES	Ohio	Reading	173
YES	Ohio	Writing	172
YES	Oklahoma	Mathematics	171
YES	Oklahoma	Reading	173
YES	Oklahoma	Writing	172
YES	Oregon	Mathematics	175
YES	Oregon	Reading	174
YES	Oregon	Writing	171
YES	Pennsylvania	Mathematics	173
YES	Pennsylvania	Reading	172

YES	Indiana	Writing	172
YES	Louisiana	Mathematics	172
YES	Louisiana	Reading	174
YES	Louisiana	Writing	173
YES	Maine	Mathematics	175
YES	Maine	Reading	176
YES	Maine	Writing	175
YES	Maryland	Mathematics	177
YES	Maryland	Reading	177
YES	Maryland	Writing	173
YES	Minnesota	Mathematics	171
YES	Minnesota	Reading	173
YES	Minnesota	Writing	172
YES	Mississippi	Mathematics	169
YES	Mississippi	Reading	170
YES	Mississippi	Writing	172
YES	Missouri	Mathematics	169
YES	Missouri	Reading	170
YES	Missouri	Writing	172
YES	Nebraska	Mathematics	172
YES	Nebraska	Reading	170
YES	Nebraska	Writing	172

YES	Pennsylvania	Writing	173
YES	South Carolina	Mathematics	172
YES	South Carolina	Reading	175
YES	South Carolina	Writing	173
YES	Tennessee	Mathematics	173
YES	Tennessee	Reading	174
YES	Tennessee	Writing	173
YES	Utah	Mathematics	173
YES	Utah	Reading	173
YES	Vermont	Mathematics	175
YES	Vermont	Reading	177
YES	Vermont	Writing	174
YES	Virginia	Mathematics	178
YES	Virginia	Reading	178
YES	Virginia	Writing	176
YES	West Virginia	Mathematics	172
YES	West Virginia	Reading	174
YES	West Virginia	Writing	172
YES	Wisconsin	Mathematics	173
YES	Wisconsin	Reading	175
YES	Wisconsin	Writing	174