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An Analysis of Teacher Certification Testing:
How Maine Can Expand and Diversify Teacher Certification Requirements

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Abstract

This argumentative essay analyzes the effects that current teacher certification state testing requirements has on our education system. The primary test scores focus on Maine certification requirements. While research on the topic is fairly limited among Google Scholar, much of the data and surveys collected hold a diverse variety of subjects in both geographical and socioeconomic case study terms. Each study analyzes current practices within the last twenty years and how specific standardized testing affects aspiring educators and where they end up: private schools, charter schools, public schools, or choosing an alternative career pathway. The summary of this research dives into educational philosophies and best practices towards implementing a well-rounded and diverse accommodating certification track in which policy makers and school districts can use standardized testing data of each teacher applicant as just one way of assessing their competency in teacher readiness and content knowledge.

Keywords: teacher certification, Praxis, standardized testing, teacher certification requirements, Department of Education

Introduction

Teacher certification and licensure requirements have been heavily debated throughout the years and have more recently turned up under the scrutinous microscope of pre-service educators, education policy makers, and aspiring teachers across the United States (U.S.). Particularly, standardized testing has not only been a longstanding discomfort in our public education curriculums, but also among the rigorous, high stakes test of what it takes to become a certified educator among our nation's education system. While some states may succeed in their competitive standardized testing obligations, other rural states such as Maine are missing out on educators who leave the profession before they get the chance to begin.

While most Council for the Accreditation of Educator Preparation (CAEP) accredited teacher preparation programs have a successful Praxis II passing rate, you will notice that they also have a very high teacher-prep program drop out rate (Teacher Certification Degrees, 2020). Along with this, it is evident that there is an incredibly high demand of essential educators throughout all Maine school districts. Furthermore, we also know that teacher retention rates after becoming certified are historically low, which is why we need licensure barriers to be more accommodating, flexible, and relatable to each unique aspiring educator. Finally, while Maine is the whitest state in the nation at 94.6% as of 2019 according to the U.S. Census Bureau, it is crucial to address socioeconomic disadvantages in the current system even though the population of people have a more privileged advantage compared to minoritized educators and learners (U.S. Department of Commerce, 2019). While 11.8% of the U.S. lives in poverty, 11.6% of Mainers live below the poverty line. It can be assumed that these children who grew up to become aspiring educators were a part of this economic inequity (U.S. Department of

Commerce, 2019). It is important to address the socioeconomic disadvantages of white people in Maine and rural states alike in the North Eastern part of the U.S., there is far more to address for populations of color and indigenous aspiring educators. We need to address the intersectionality of non-white aspiring educators along with English Language Learners and their own socioeconomic disadvantages in terms of teacher certification requirements in rural areas in the U.S. Essentially, all of this means that current teacher certification practices arguably minoritize creative aspiring educators coming from a variety of underprivileged backgrounds that could diversify our education systems, communities, and workforce for the better.

Current Teacher Certification Requirements

There are several ways one could teach another of the certification requirements for their state. Each state varies to its own degree on standardized test score requirements, standardized assessments, as well as strict student teaching guidelines. For this paper, I will address Maine's teacher certification requirements as a reference. All state requirements can be found at ets.org. Maine's requirements are as follows according to the Maine Department of Education:

- Bachelor's degree from an accredited teacher preparation program
- Fingerprinting
- Background check
- Praxis I examination with passing scores
- Praxis II examination with a passing score
- Student Teaching (15 weeks in a classroom with a mentor teacher and a supervisor)

(Maine Department of Education, 2020)

Thankfully, there are plenty of alternative ways to become certified in the state of Maine. While there a variety of alternative tracks, each option is still singularly categorized and conditioned to *standardized assessment* as the traditional track. Alternative tracks all have the same requirements; they simply vary in accelerated programming depending on already obtained college credits, degrees, and classroom experience (University of Maine at Farmington, 2017). Some of the advantages to having such rigorous and lengthy teacher-preparation programs aligns with the notion that these schools are putting forth high quality educators into our education system. While there is truth to this, it cannot be ignored that with such a narrow and dense scope of certification requirements, we are missing out on some of our most diverse, creative, and inspirational potential educators.

Maine Praxis I CORE And Praxis II Requirements

Praxis I CORE comprises three sections: mathematics, reading and writing (ETS Praxis Core Academic Skills for Educators Tests Overview). In Maine, test takers must achieve a minimum score on a 100-200 scale in order to phase into the next integral required courses in their teacher preparation program:

- Mathematics: 156
- Reading: 172
- Writing: 164 (ETS Understanding Your Praxis Scores 2019-2020).

There are ways test takers can take up to two points from one section and add them to another section if they are within two points of passing that failed section. This allows for some form of flexibility along test scores holistically.

Certification requirements continue to increase in rigor and complexity as pre-service educators advance into their teacher preparation programs. When it comes time to take the Praxis II exam, scores vary on which content area the aspiring educator is focusing in, as well as the age demographic they have chosen to study. In order to leave little room for misunderstanding or confusion when I am addressing our current certification system and how we can create more accommodating assessments of competency for aspiring educators, I have created a chart following ETS Maine standards of the states required scores. I am using Maine as an example, as I have personal experience with Maine state requirements.

Figure 1.1¹

Age, Content Area and Required Exam(s)	Praxis II Minimum Score (100-200 scale)
Early Childhood (Ages 0–5)	160
Early Elementary (K–3): Education of Young Children Principles of Learning and Teaching: Early Childhood	160 157
General Elementary (K–8) Elementary Education Multiple Subjects: Reading and Language Arts Mathematics Social Studies Science	157 157 155 159
Secondary Education (7–12) Mathematics:	160
Secondary Education (7–12) Social Studies:	157
Secondary Education (7–12) English:	167
Secondary Education (7–12) Physical Science (pick one): Chemistry General Science	151 153

¹ All of the scores were found on [Understanding Your Praxis II Scores - ETS](#), there are additional certifications but I chose the most common leading toward diverse career opportunities.

Physics	141
Secondary Education (7-12) Life Science: Biology	150
World Languages K-12: French	162
Chinese (Mandarin)	164
Spanish	168
Latin	152
German	163
Special Education (K-12)	151

While there is clearly a wide variety of certifications aspiring educators can pursue, there is an *inconsistency with the variety of ways an educator can demonstrate their competency* in their subject area. While these students must obtain a degree from their program with a minimum grade point average, the true test of what it takes to be a teacher according to current teacher certification requirements lies within their Praxis I and II scores. This suggests that while a student can make it to the end of their program prior to student teaching with a grade point average of 3.3 or above, if they fail their Praxis II exam they cannot become certified and advance into the final semester of their teacher preparation program: student teaching.

Some programs which are not Council for the Accreditation of Educator Preparation (CAEP) accredited will allow students to fulfill their student teaching requirements prior to taking their Praxis II exam, while those that are CAEP accredited require Praxis II score before fulfilling student teacher requirements (Masters in Education Guide 2020). What does this mean for these CAEP accredited schools? This means that they have great test score passing rates for all of the hypothetical *Best Teacher Preparation Programs* (Teacher Certification Degrees, 2020). This has the potential to push education majors who can't pass the Praxis I or II exam out

of their programs and into other fields of study. But for the school, it makes their teacher preparation programs look competitive.

Figure 1.3 under the header “Why Maine Needs More Teachers,” shows the incoming education majors when they start the program at each school, along with how many they end up with at the finish line. With these numbers we can determine that many students leave the program for a variety of reasons. While the CAEP accredited schools have such high exam passing rates, and the non-CAEP accredited schools have lower scores, and opposite numbers of dropout rates from enrollment, it furthers the assumption that many students in these competitive teacher preparation programs drop out due to test failure; Students are unable graduate with their degree from the CAEP accredited programs if they lack certification. If certification requirements mean passing the Praxis I and II examinations, then this infers that students drop out due to giving up on passing the Praxis examinations. Figure 1.2 outlines CAEP vs. non-CAEP accredited teacher preparation programs in Maine.

Figure 1.2

State Approved School	CAEP Accredited	NCTQ Undergrad Elementary Program %	NCTQ Undergrad Secondary Program %	Teacher Prep Program Enrollment	Teacher Prep Program Completers	Licensing Exam Pass Rate	Net Price
University of Maine-Farmington	Yes	—	40%	535	112	100%	\$13,554
University of Maine-Orono	Yes	—	—	463	89	98%	\$17,564
University of	Yes	5%	20%	399	122	93%	\$11,338

Southern Maine							
Bates College	No	—	—	—	5	—	\$23,312
Bowdoin College	No	—	—	0	6	—	\$24,447
Colby College	No	—	—	2	1	—	\$20,361
College of the Atlantic	No	—	—	25	4	—	\$17,213
Husson University	No	17%	—	55	18	100%	\$19,429
Maine College of Art	No	—	—	13	11	100%	\$30,796
Saint Joseph's College of Maine	No	9%	3%	110	15	73%	\$25,694
Thomas College	No	—	—	78	15	100%	\$21,606
Unity College	No	—	—	6	1	—	\$25,286
University of Maine-Fort Kent	No	2%	1%	—	—	—	\$11,686
University of Maine-Machias	No	1%	1%	80	8	—	\$10,257
University of Maine-Presque Isle	No	1%	11%	115	19	56%	\$9,647
University of New England	No	41%	18%	84	15	100%	\$33,204

Figure 1.2 CAEP Certified Teacher Preparation Programs in Maine Statistics on Teacher-Prep Retention Rates. Taken and modeled from Best Teaching Schools and Degrees in Maine (2020) statistics.

Do Standardized Assessments Predict Career Competency?

Akin to the LSAT or BAR examinations for law students, the Praxis exams are heavily questioned regarding their accuracy of predicting a good or bad educator, just as the former attempts to sift out any ineffective future lawyers. A Cambridge University case study of 3,000 students from Berkeley Law School and Hastings College of the Law demonstrated that tests should not be the sole determiner for proficiency in the field of law. Shultz determined that “Tests measuring personality constructs, interests, values, and judgement predict lawyer competency” (Shultz & Zedeck, 2009, p. 620). While Shultz addressed the importance of well-rounded observations and assessments of a person, a holistic approach is a better way to determine lawyer competency.

Shultz argued that “Combined with the LSAT and UGPA, these broader tests could assess law applicants on the basis both of projected professional effectiveness and academic indicators,” (Shultz & Zedeck, 2009, p. 620). Similar to Shultz’s analysis, current teacher certification standardized testing requirements could be making similar mistakes. If we ignore holistic approaches and continue to put such a harsh emphasis on test scores, we could not only be missing out on wonderful educators who demonstrate their teaching abilities in other ways, but we could also be sending avid test acers into a field they aren’t necessarily completely competent in. However, this study clearly presented quantitative research regarding standardized testing, and that the effectiveness in general is not an accurate indicator or predictor of proficiency in the particular field being explored.

Comparatively, if law students competency in the field should be judged on a well-rounded diverse set of data, shouldn’t educators be evaluated the same way, with strong indicators suggesting competency regarding their interests, skills, background, personality

constructs, values? An additional analysis of BAR and Medical licensing exams ability to predict competency in the field related to teacher licensing exams written by Joshua Angrist and Jonathan Guryan in the *Economics of Education Review Journal* clearly touches upon further details regarding the issues outlined in Shultz and Zedeck's study.

In Angrist and Guryan's 2007 analysis of "Does teacher testing raise teacher quality?: Evidence from state certification requirements" outlines the historical context of why certification testing was implemented in the field of education, and analyzes its accuracy in predicting teacher competency as well as retention. We now know that in the 1960s teacher's began certain testing for the sole purpose to assess teacher competency on basic necessary skills in the classroom as well as within their content area (Angrist & Guryan, 2007). 39 years later in "1999, 41 states required applicants to pass some sort of standardized certification test such as the National Teacher Examination or Praxis examinations published by the Educational Testing Service (ETS)" (Angrist & Guryan, 2007, p. 2). While individual states practiced various testing requirements, teachers today have to meet each individual states requirement regardless of their examination scores in their certified state. Guryan and Angrist make an excellent point for the argument of ambiguity that certification testing is in its current state, and that it is capable of driving good teachers away from teaching in public schools where teacher licensure is crucially dependent on standardized test scores.

Aspiring educators face plenty of anxiety driven turmoil from deadlines, lesson planning, curriculum building, and standard following, while balancing their extracurriculars and jobs. While they do this, some face even more. There is a spectrum of *socioeconomic disadvantages* that need to be addressed especially when thinking about predominantly white rural states like

Maine. The purpose of the next section is to address the disadvantages not only poor white aspiring educators face, but the intersectional disadvantages that poor people in minoritized populations face in the realm of pre-service education programs and certification.

Why Praxis II Requirements Excludes A Variety Of Aspiring Educators

Angrist and Guryan's 2007 study on the effects of teacher certification state testing requirements continues to further demonstrate knowledge on how these practices affect our education system and aspiring educators. From statistics they surveyed of nearly 5000 districts, each district containing around 3000 students and 160 teachers, noting that teachers with less than 3 years experience are "inexperienced teachers," over "40% of districts have inexperienced teachers and almost 20% have teachers hired in the past year," (Angrist & Guryan, 2007, p. 6). What does this have to do with testing? Well, it mostly has to do with evaluating teacher competency in the field, and the authors are simply acknowledging that they are working with a high population of new educators. While their study is comprehensible, there are a variety of variables that could also correlate to success of students who are aspiring educators. Their conclusion to this survey was that, "although state testing requirements are associated with an increase in the use of teacher tests and with higher teacher wages, there is little evidence that this translates into better teachers, at least along the quality dimensions we can measure," (Angrist & Guryan, 2007, p. 13). They further explain that the data does not prove any correlation between the quality of an educator's undergraduate program and testing requirements, which they theorized using SAT scores as a means of measurement (Angrist & Guryan, 2007).

Why Maine Needs More Teachers

Research suggests that investments in education is an investment in the economy. A study on *The Economic Case For Education* states that:

Education is a leading determinant of economic growth, employment, and earnings in modern knowledge-based economies. Ignoring the economic dimension of education would endanger the prosperity of future generations, with widespread repercussions for poverty, social exclusion, and sustainability of social security systems. Policy-makers interested in advancing future prosperity should particularly focus on educational outcomes, rather than inputs or attainment. (Wosseman, 2015, p. 1)

According to the United States (U.S.) Census Bureau, 11.6% of Mainers live below the poverty line and 3.2% are unemployed as of March 2020 (U.S. Department of Commerce, 2020). This suggests that Mainers need amazing teachers to help change the cycle of poverty and unemployment in their state. Unemployment and poverty are seen as if they start with the head of each family, but I am offering an alternative perspective. If the individuals interacting with these children who come from homes where unemployment and poverty reside are public school teachers, then it would suggest that much of the way these children break the cycles of poverty are through the inspiration, learning, and connections they make in a public school setting. This would suggest that the more we invest in our teachers, preparation programs, school districts, classrooms, and individual students' lives, the quicker the turnaround for a stimulated economy in Maine. These children are inevitably the future of our state. They are the future teachers, plumbers, mechanics, nurses, foresters, doctors, health care providers, therapists, and managers of essential and non-essential businesses alike. Investing in them will make Maine's economy

sky-rocket. If we can make them believe in themselves, find their passions, and help them to build appropriate connections to academics and how academics relate to their passions through scaffolding techniques, then the hard work of investing in students and teachers will pay off.

Without these crucial investments in Maine's future, or in any state's future, there will be a lack of economic prosperity along with advancement in innovative career exploration and design. The start to these positive changes is investing in Maine's education system, students and teachers alike. When thinking about where these investments should go, we have to look at the subjects direly in need of support and how often they occur. Using Maine as an example, I give insight in Figure 1.1 with a developed chart from Teacher Shortage Areas of 2020-2021 (U.S. Department of Education 2020). This chart has been modified to show the areas in the highest need-based demand by program and content area, to the least needed.

Figure 1.3

Subject Matter	Frequency
Career and Technical Education	41
World Languages	13
Science	7
Special Education	5
Academically Advanced	4
English as a Second Language	4
Mathematics	4
Art and Music Education	3
Core Subjects	3
Early Childhood	3
Health and Physical Fitness	3
Language Arts	1
Social Studies	1
Support Staff	1

It should be no mystery that in Maine, the subject area needed most, occurring 41 times across schools in Maine, is in Career and Technical Education. Maine is split very evenly into three sections, with one outlier: 32% of Mainers have a High School Diploma, GED or equivalent, 31% have Bachelor's degree or higher, 30% have an Associates Degree or "some college," and 7 percent have "less than high school" (American Community Survey Data, 2020, p. 1). If a third of Maine's workforce have a High School diploma, GED or equivalent, this would mean that at least a third of Maine's employees are working in trade jobs or in employment that would qualify under high school technical school courses. Additionally, another third of Maine's workforce has some college or an Associates degree. This would suggest that over 60% of Maine workers are without a Bachelor's degree or higher, and that a high percentage of these workers are also working in jobs that would be taught in a technical school. If we are lacking these positions at such a high demand for the workforce of our state and our economy, then we are missing the gaps that need to be filled. We undoubtedly need teachers in these fields.

Socioeconomic Disadvantages

Socioeconomic disadvantages such as the color of one's skin or their monetary advantages and disadvantages throughout their youth and into adulthood should be addressed in a paper discussing the effects of teacher certification testing. Especially when this testing is supporting the creators of examinations employed by the Educational Testing Service. Angrist and Guryan's 2007 study fortunately covers a well-rounded analysis of a variety of variables that play into teacher certification testing. In looking at their final takeaways, they unveil the relation between teacher diversity and state testing certification requirements. While addressing that

standardized testing is at times “thought to be more of a barrier for minorities,” there is evidence that there are “negative associations between testing requirements, especially for basic skills, and the number of new teachers who are Hispanic” (Angrist & Guryan, 2007, p. 17). They suggest that because of standardized testing requirements, there is a 2% decrease in Hispanic educators, and even more interestingly, in their case study there were only 5% of new teachers that were Hispanic in 1999-2000.

There are minimal studies that assess teacher certification testing with both racial minoritized and economically disadvantaged backgrounds. With that being said, it seems fair to suggest that continuing to equate intellect and privilege with economic status is an inaccurate way to predict and determine both competent and incompetent current and aspiring educators; sometimes poor people are really competent at their job, just as some rich people inherit money and aren’t particularly competent. Additionally, “If testing is viewed as costly, some applicants will choose not to teach to avoid having to study for and take the test. Because the cost is common to all individuals in this model [their surveyed model], applicants on the margin between teaching and an alternative occupation are the highest quality teachers. In other words, these applicants have the best outside options” (Angrist & Guryan 2007, p. 4). This relates back to investing in Maine’s future; if we continue to implement practices that only benefit a specific population of people, i.e., those with financial accessibility, then we are continuing to marginalize a large portion of potential educators. This also creates a lack of diversity in socioeconomic educators in our school districts classrooms, administrators, and policy makers. Inevitably this leads to misrepresentation and underrepresentation of a variety of social and economically underprivileged groups.

Possible Solutions

To ensure this discussion wraps up the analysis of data we have collected while promoting functional and accurate opportunities in which states can illicit creative and diverse teachers within their communities, I have compiled a plethora of suggestions both based on the research as well as from my own personal experience as a person who was deeply affected by teacher certification testing state requirements.

In regards to the date, I cannot help but refer to Angrist and Guryan's 2007 study, not only because of how fantastically they addressed multiple facets of state testing requirements, but also because they are one of the few comprehensive studies analyzing the effectiveness of our current practices. Therefore, my first suggestion is one from their journal:

As a measure of teacher quality, the use of alternative certification methods can be seen as a plus or a minus, depending on the value of traditional certification methods as a quality screen...It is particularly important to establish that districts do not avoid testing requirements by hiring more teachers without standard certification. As it turns out, alternative certification is uncorrelated with testing requirements, suggesting that our estimates of testing effects are not confounded with other changes in certification policy. (Angrist & Guryan, 2007, p. 17)

I cannot help but bring light to their fine balance of the pros and cons of state testing requirements. While over a decade ago they relevantly suggest that while testing is no accurate indicator of teacher success, districts should not dismiss testing requirements for alternatives. There are many ways one could interpret this message, I do so as this:

- a. It is not to suggest that testing should be removed, but to think of how we can utilize a more well-rounded curriculum to assess and predict teacher competency? I suggest that teacher certification testing not be removed, but that:
 - i. The financial burden be lifted. We are sending aspiring educators into a field that requires well over the full-time 40 hour work week for 9 months out of the year, while also expecting competency that requires work during the adjacent 3 months of the year. If these requirements remain in place, they should not be costly. Teachers should not be worried about the cost of the things they are made to do to maintain their career.
 - ii. Remove minimum score requirements. If we implement an emphasis on a thesis or portfolio that touches upon each individual's philosophy of education in their content area, we can clearly analyze their competency of the content area while also evaluating their philosophies on inclusion and student success, paralleled to their rigorous non-paid 15 week student teacher experience.

These suggestions relates to Angrist and Guryan's 2007 suggestion that districts do not find ways to dismiss testing requirements in looking at alternative certification tracks because it addresses that testing as the capability of showing the competency of an aspiring educator while simultaneously both driving away and losing diverse creative educators to a testing system that does not fit their way of learning, thinking and teaching. It is to suggest that we utilize testing as a variable of the entire teacher application package, but not a determiner.

From a more personal perspective derived from my own personal experience with the Praxis II teacher certification state requirements in Maine, I would suggest the following:

1. Eliminate the Praxis I requirement and use SAT scores to determine standardized testing capabilities, if students have poor SAT scores, have them take Praxis I with no test fee.
2. If we want to keep Praxis II as a way to evaluate teacher readiness, have there be no minimum score for starting student teaching, and add a GPA equivalency of 3.5 or higher to avoid Praxis II test. This will promote students to work hard during their content and teacher classes.
3. In place of Praxis testing, have education majors do a thesis on their opposite semester on student teaching in their final year on their philosophy of education within their content area and have more evaluation and feedback from high stakes professionals such as the Commissioner of Education, Board of Education, a committee of professors at each campus, etc. The ideas are endless on which professionals could be used to evaluate each thesis.

Conclusion

Analyzing teacher preparation programs while simultaneously thinking of the impact it can have on the prosperity of a profound economic future is crucial to consider. Furthermore, evaluating the ways in which teacher certification state standardized testing requirements affect the diversity of our educators should always be considered. With that, I hope to have shared a well-rounded study of how we can utilize the tools we have in place and move them towards more accommodating best practices for all aspiring educators. It is evident that making these practices more accommodating will increase teacher diversity in all facets of the word. I would add that along with increasing teacher equity and diversity, implementing positive changes to teacher certification tracks would create a more inclusive classroom filled with relatable

educators, and give learners a chance to see someone who was just like them make big impacts in everyday ordinary life. By making teacher certification testing requirements more accommodating for all aspiring educators, we would *not* be lowering our standards, but *raising* the prosperity for the future of our students, our communities, and our humanity.

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