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## Preservice Teachers' Beliefs about High-stakes Testing and Their Working Environments

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**Abstract:** In this exploratory mixed methods survey study, we assess preservice teachers' ( $n=379$ ) experiences with and beliefs about their high-stakes testing experiences and analyze how they relate to their beliefs about the role and efficacy of high-stakes testing in education and their future profession. Using Likert, vignette, and open-ended response opportunities, we gauged preservice teachers' beliefs about accountability and the role of high-stakes testing in three ways: (a) what are their personal experiences with high-stakes testing, (b) what are their their beliefs about accountability and high-stakes testing in general, and (c) what role does accountability (and testing pressures) play in their future workplace preferences? Results indicate that preservice teachers' experiences with and beliefs about high-stakes testing accountability vary based on gender, ethnicity, and previous experiences with high-stakes tests. Importantly, although in aggregate our participants reported they generally disliked the high-stakes tests they personally had to take in high school, subgroup analyses reveal that for those who took them during the NCLB era, they also saw high-stakes tests as good thing for education overall. Preservice teachers who were younger and "grew up" under NCLB and the height of high-stakes testing

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believed high-stakes tests to be a waste of time for them personally, but a useful way to evaluate teachers as an educational policy. Vignette and qualitative analyses of workplace preferences and rationales underscore some of the assumptions our preservice teachers hold about high-stakes testing as a policy mechanism to help explain this finding. We conclude with implications for policy and future research.

**Keywords:** preservice teachers; high-stakes testing; teacher beliefs

### **Creencias de los maestros de pre-servicio sobre las pruebas de alto riesgo y sus entornos de trabajo**

**Resumen:** En este estudio exploratorio de encuesta de métodos mixtos, evaluamos las experiencias y creencias de los maestros de pre-servicio ( $n = 379$ ) sobre sus experiencias de pruebas de alto riesgo y analizamos cómo informan a sus creencias sobre el papel y la eficacia de las pruebas de alto riesgo en educación y su futura profesión. Usando respuestas (Likert, viñeta y abierta), evaluamos las creencias de los maestros de pre-servicio sobre la rendición de cuentas y el papel de las pruebas de alto riesgo de tres maneras: (a) cuáles son sus experiencias personales con las pruebas de alto riesgo, (b) ¿Cuáles son sus creencias sobre la rendición de cuentas y las pruebas de alto riesgo en general, y (b) qué papel desempeña la rendición de cuentas (y las presiones de las pruebas) en sus futuras preferencias laborales? Los resultados indican que las experiencias y creencias de los maestros de pre-servicio con respecto a la rendición de cuentas de las pruebas de alto riesgo varían según el género, el origen étnico y las experiencias previas con las pruebas de alto riesgo. Es importante destacar que, aunque en conjunto nuestros participantes informaron que generalmente no les gustaban las pruebas de alto riesgo que personalmente tenían que tomar en la escuela secundaria, los análisis de subgrupos revelan que para aquellos que los tomaron durante la era NCLB, también vieron las pruebas de alto riesgo como algo bueno para educación en general. Los maestros de pre-servicio que eran más jóvenes y “crecieron” bajo NCLB y la altura de las pruebas de alto riesgo creían que las pruebas de alto riesgo eran una pérdida de tiempo para ellos personalmente, pero una forma útil de evaluar a los maestros como una política educativa. La viñeta y los análisis cualitativos de las preferencias y los fundamentos del lugar de trabajo subrayan algunas de las suposiciones que sostienen nuestros maestros sobre las pruebas de alto riesgo como un mecanismo de política para ayudar a explicar este hallazgo. Concluimos con implicaciones para la política y la investigación futura.

**Palabras-clave:** maestro de pre-servicio; pruebas de alto riesgo; creencias del maestro

### **Creanças de professores de pré-serviço sobre testes de alto risco e seus ambientes de trabalho**

**Resumo:** Neste estudo exploratório de pesquisa de métodos mistos, avaliamos as experiências e creanças dos professores de pré-serviço ( $n = 379$ ) sobre suas experiências em testes de alto risco e analisamos como eles informam suas creanças sobre o papel e a eficácia de testes de alto risco na educação e sua futura profissão. Usando várias respostas (Likert, vinheta e em aberto), avaliamos as creanças dos professores de pré-serviço sobre prestação de contas e o papel dos testes de alto risco de três maneiras: (a) quais são suas experiências pessoais com o teste de alto risco; (b) o que são suas creanças sobre prestação de contas e testes de alto risco em geral e (b) que papel a prestação de contas (e as pressões de teste) desempenham em suas preferências futuras no local de trabalho? Os resultados indicam que as experiências e creanças dos professores de pré-serviço e educação sobre a prestação de contas pelos testes de alto risco variam de acordo com o gênero, a etnia e as experiências

anteriores com os testes de alto risco. É importante ressaltar que, embora agregados nossos participantes tenham relatado que geralmente não gostam dos testes de alto risco que eles pessoalmente tiveram que fazer no ensino médio, as análises de subgrupos revelam que, para aqueles que os fizeram durante a era NCLB, eles também viram os testes de alto risco como algo bom para educação geral. Os professores de pré-serviço que eram mais jovens e “cresceram” sob a NCLB e a altura dos testes de alto risco acreditava que os testes de alto risco eram uma perda de tempo para eles pessoalmente, mas uma maneira útil de avaliar os professores como uma política educacional. A vinheta e as análises qualitativas das preferências e da lógica do local de trabalho sublinham algumas das suposições que nossos professores de pré-serviço mantêm sobre os testes de alto risco como um mecanismo político para ajudar a explicar essa descoberta. Concluimos com implicações para políticas e pesquisas futuras.

**Palavras-chave:** professores de pré-serviço; teste de alto risco; crenças dos professores

## Introduction

The passage of the No Child Left Behind Act (2002) ushered in an era of education reform dominated by high-stakes testing accountability. High-stakes testing, the practice of attaching significant consequences to standardized test scores, has created an education system dominated by pressures to make sure students pass standardized exams. Although reform efforts since 2002, coupled with state variation in implementation, has meant teachers' and students' experiences with high-stakes tests vary (e.g., some take a lot of tests, some take fewer, some experience a great deal of pressure to pass, others feel less pressure), what is relatively uniform is the annual exercise of students taking tests, scores of which have some level of importance and consequence to schools, teachers, and/or students.

This situation has created particularly unique conditions for newer teachers who are just entering the profession, most of whom come from K-12 experiences where high-stakes testing was the norm. In contrast to veteran teachers who come to know high-stakes testing as a practicing teacher (with many of them reporting the demoralizing effects of the policy that disrupts their practice, e.g., Barrett, 2009; Ford, Van Sickle, Clark, Fazio-Brunson, & Schween, 2015; Vasquez Heilig & Darling-Hammond, 2008; Winkler, 2002), newer teachers come into the profession already having been exposed to a tradition of standardized testing and accountability-related pressures as a student. This raises an overarching question: How are prior experiences with high-stakes testing related to beliefs about accountability systems in general as well as the role of those accountability systems in hypothetical future workplace preferences?

There is evidence that the policies and practices of a society shape teachers' beliefs (Brown & Harris, 2009) and in turn, those beliefs inform their classroom practices (Buehl & Beck, 2015). Thus, it seems reasonable to suggest that the salient and wide ranging policies of the No Child Left Behind act (NCLB), and specifically the proliferation of high-stakes testing accountability it mandated, has had a socializing effect on the beliefs of preservice teachers who went to school during that time. However, there is no research to interrogate these connections. In this study, we want to know whether past (personal) experiences with high-stakes testing accountability has any relationship to preservice teachers' beliefs about those accountability systems in general (specifically high-stakes testing accountability) as well as their preferences for the type of accountability conditions they seek in their future workplace.

## Theoretical Rationales

Erikson's (1950) seminal theory of identity development suggests that our thinking about what we do and how we do it stems from the resolution of internal struggles as they relate to societal demands throughout life. That is, our current and future identities are shaped by previous social experiences and opportunities. Identities are central unifying scripts that guide our behavior and motivation (Garner & Kaplan, 2018; McCaslin, 2009) and in the teacher identity literature, there is evidence that past educational experiences inform future teacher identities and decision making in important ways (Akkerman & Meijer, 2011; Alsup, 2006; Flores & Day, 2006; Lortie, 1975; Stets & Burke, 2014).

Bandura's social cognitive theory also underscores the power of past socialization as predictors of beliefs and future behavior (Bandura, 1986, 1989). According to this vast body of literature, our past experiences (both direct and those that are observed), combined with beliefs about self (e.g., self-efficacy; Bandura, 1997) accumulate over time and influence our ongoing and future actions, beliefs, and expectations. There is a wealth of literature to suggest that teachers' beliefs guide teachers' actions (e.g., Fives & Gill, 2015; Pajares, 1992; Pfitzner-Eden, 2016; Song & Looi, 2012; Thoonen, Slegers, Peetsma, & Oort, 2011; Tsangaridou, 2008; Wilkins, 2008). As Bandura's theory predicts, we also know that engaging in practices can inform beliefs (e.g., Swain, Nordness, & Leader-Janssen, 2012; Yilmaz & Cavas, 2008).

The goal of this exploratory study is to examine how preservice teachers' past socialization experiences may relate to their beliefs about accountability practices in general and as they may exist in their future workplace. We examine these beliefs based on variables of gender, ethnicity, general test taking anxiety, and past experiences with high-stakes testing. We know that educational experiences vary widely by gender and ethnicity (Alemán, 2018; Bailey & Graves, 2016; Sadker, Sadker, & Klein 1991; Saw, Chang, & Chan, 2018; Valenzuela, 1999), especially as it relates to high-stakes testing (Nichols & Berliner, 2007; Vasquez Heilig & Darling-Hammond, 2008). Thus, we include gender and ethnicity in our analyses along with prior experiences with high-stakes testing to explore how those lived experiences may relate to beliefs about accountability and high-stakes testing as well as preferences for future working conditions.

## Review of Relevant Literature

### Brief History of Education Reform: The Context of Teaching and Learning

Education reform efforts over the last few decades have fundamentally changed the conditions of teaching and learning in American schools. The enactment of the No Child Left Behind Act (NCLB) in 2002 marked one of the more significant and wide-ranging policy shifts affecting all public schools. In fact, NCLB was the first federal legislation to significantly direct and control how all schools and teachers would function (Herman & Haertel, 2005; Ravitch, 2011).

NCLB was a 1000-page law that included a lengthy list of demands states had to adopt to receive federal funds. The cornerstone of these demands was that states adopt high-stakes testing accountability as the primary mechanism to affect educational change. States were required to develop a set of curriculum standards for every subject and grade level, a standardized test to measure students' progress against these standards, and a set of benchmarks dictating the amount of progress students must make from year to year. A core feature of these demands was the expectation that states hold teachers and students "accountable" by attaching significant consequences to how students perform on standardized tests. The theory of action of this approach is that the threat of punishment and the promise of rewards tied to students' standardized test performance will compel educators into effective action (Ryan, 2004). These external pressures, it

was theorized, will lead to increases in learning as measured by performance on state standardized tests (Carnoy & Loeb, 2002; Hanushek & Raymond, 2005).

Race to the Top (RttT) was a follow-up federal grants program launched in 2009 that reflected a shift in the government's approach to educational accountability (Lavigne & Good, 2019; U.S. Department of Education, 2009). RttT offered over \$4 billion in competitive grants to states who reorganized their policies to align with federal government educational reform goals—specifically an increased emphasis on teacher (versus school) accountability through the adoption of performance-based evaluations of teachers (using growth models to evaluate teacher effectiveness), the adoption of common standards, and policies that allowed the expansion of charter schools throughout the state (U.S. Department of Education, 2015a). Eighteen states and the District of Columbia received RttT funds to develop and implement a system of teacher evaluation that relied primarily on value-added modeling (VAM) techniques—a way of predicting a teacher's “added value” to students' standardized test scores from year to year. In spite of well-known validity and reliability problems with this approach (e.g., see Amrein-Beardsley, 2008; Kane, 2017; Koedel, Mihaly, & Rockoff, 2015), the use of VAM's proliferated, and by about 2014, 40 states and the District of Columbia were “using, piloting or developing some type of growth model or VAM” for measuring teacher effectiveness (Close, Amrein-Beardsley, & Collins, 2018, p. 8).

In 2015, Congress passed the Every Student Succeeds Act that reauthorized NCLB and shifted the control of education reform and accountability back to the states (U.S. Department of Education, 2015b). Although state testing was still a mandate, the federal government's role in its form, function, and value was lessened, turning greater responsibility for oversight and control over to the states (Berg-Jacobson, 2016; Loewus, 2017). As a result, some states have minimized the importance of tests in evaluating schools, teachers, and students (e.g., using multiple indicators, or reducing the importance of test scores). Although the role, purpose, and importance of tests vary widely from state to state, standardized testing continues to play a central role in teachers' and students' lives (Close et al., 2018).

### **Effects of High-Stakes Testing**

In spite of the changing dimensions of federal laws, teachers (and their students) have lived under some form of high-stakes testing since at least 2002. In that time, we have come to learn a great deal about its effects on teachers and students. For example, in addition to its failure to raise student achievement (Nichols, Glass, & Berliner, 2006; 2012; Jennings & Bearak, 2014; Grodsky, Warren, & Kalogrides, 2009; Reardon, Atteberry, Arshan, & Kurlaender, 2009), close the achievement gap (Braun, Chapman, & Vezzu, 2010; Braun, Wang, Jenkins, & Weinbaum, 2006; Timar & Maxwell-Jolly, 2012), or increase student graduation rates (Holme, Richards, Jimerson, & Cohen, 2010), evidence has accumulated to show how the pressures associated with students having to pass standardized tests has created undesirable teaching conditions and practices (Nichols & Berliner, 2007; Jones, Jones, & Hargrove, 2003; Koretz, 2017; Neill, Guisbond, & Schaeffer, 2004; Valenzuela, 2005). For example, the pressures of high-stakes testing alters (mostly negatively) what is taught (e.g., narrower curriculum), how we teach (more rote and drill and less critical inquiry), and how teachers relate to diverse learners (Blaise, 2015; Booher-Jennings, 2005; Hofflinger & von Hippel, 2018; Nichols & Castro-Villarreal, 2016, 2017; Perlstein, 2007; Rodriguez & Arellano, 2016; Valli & Chambliss, 2007).

Data suggest that the pressures to get students to pass tests—especially when working with students who struggle to pass them—present incentives to engage in undesirable instructional practices. For example, teachers report the enduring pressures to get students to pass tests encourages them to teach to the test, engage in boring repetitive drills and lower-level cognitive

tasks, and create classroom climates steeped in extrinsic motivational control (e.g., “learn this so you can pass the test”) (Lloyd, 2007; Simzar, Martinez, Rutherford, Domina, & Conley, 2015; Valli & Buese, 2007). Students feel this. There is evidence to suggest students’ experiences with tests and testing have undermined their motivation, interest, and enjoyment in learning (Deci & Ryan, 2016; Markowitz, 2018; Vasquez Heilig & Darling-Hammond, 2008). Although these effects vary widely, the negative effects on students are disproportionately experienced by marginalized student populations include minority youth, youth who live in poverty, youth in special education and those for whom English is a Second Language (Menken, 2010; Pazez, Vasquez Heilig, Cole, & Sumbera, 2015; Rodriguez & Arellano, 2016).

### **High-Stakes Testing and Pre-Service Teachers**

Despite what we know about the experiences of current teachers and students under the accountability systems of the past few decades, we know much less about how high-stakes testing and high-stakes teacher evaluation systems impact preservice teachers (i.e., those coming into the teaching profession under NCLB). There are only a few relevant studies available, with many of them focusing on how preservice teachers think about being a teacher under the weight of high-stakes testing systems and conducted in the early years of NCLB. For example, Gerwin (2004) provided some anecdotal perspectives of preservice teachers weighing in their concerns about having to prepare students for high-stakes tests in the classroom. Gerwin (2004) reported on preservice teachers’ thoughts shared with him during a teaching mentoring program associated with Queens College in New York City. According to his students, the idea of preparing students for the test poses a complicated dilemma. Many of his teacher candidates worried about the anticipated future conflict between helping students to develop critical thinking skills and the pressures of getting them to pass the New York Regents exam—goals they saw to be in direct conflict with one another. Early on in the institution of NCLB requirements, preservice teachers already worried about the role high-stakes testing would play in their future profession (Brown, 2010; Lloyd, 2007; Ng, 2006; White, Sturtevant, & Dunlap, 2003).

Lloyd (2007) conducted an in-depth qualitative analysis of one kindergarten preschool teacher’s development of mathematics instruction during her student-teaching internship in an urban school setting. Drawing from data from eight classroom observations of her classroom and semi-structured interviews conducted before and after each observation period, Lloyd (2007) found that even though kindergarteners would not face high-stakes testing until the third grade, student teachers received strong messages about expectations for preparing their kindergarteners for future success in math. In this study, the preservice teacher’s perception of the school’s expectations for kindergarteners’ success in mathematics focused on two goals: the importance of “paper-and-pencil, skill-oriented mathematics lessons for students and the need to control students’ behavior” (Lloyd, 2007, p. 342). Although a study with only one participant, the analysis provides evidence that preservice teacher preparation in the high-stakes testing era involves messages that pressure even kindergarten teachers to start thinking about preparing students for tests.

In another relevant study, and based on semi-structured interviews with preservice teachers at the beginning and conclusion of their professional development sequence of their teacher education program, Brown and Goldstein (2013) found that preservice teachers struggle with how to think about the notion of academic achievement in a standards-based era. “Participants expressed concern and confusion about the relationship between their academic progress view of academic achievement and the academic success view of academic achievement they expected to encounter as practicing teachers contending with NCLB-driven policy mandates” (p. 15). This concern reveals the

conflict between what preservice teachers learn about quality teaching and the expectations for student success they will face in a standards-based classroom.

Lastly, and perhaps most relevant to the current study, was a study by Brown (2010) who examined how eight female preservice teachers' prior schooling experiences in Texas's K-12 high-stakes classrooms, as well as their experiences in their teacher education program in Texas, affected their conceptions of teaching and learning. Brown (2010) interviewed study participants five different times as they progressed through a three-semester sequence of courses throughout 2005-2006. All participants had to pass the Texas's state Texas Assessment of Academic Skills (TAAS) test to receive a high school diploma and had been tested in reading and math in grades 3-8, writing in grades 4-8 and science and social studies in grade 8. Findings suggest preservice teachers' views of high-stakes tests they took are diverse—with some viewing the test as a valid indicator of learning and others rejecting its meaningfulness. Data also reveal that these preservice teacher candidates entered their program with diverse views about the role of the teacher in general and as it relates to high-stakes testing, with most asserting that teachers are responsible as “role model,” “guide,” and someone who helps students “be good citizens” (p. 483). In other words, preservice teachers progress through their training program with beliefs that teaching is more than about enhancing students' academic success, but it is about the whole child/student. Although preservice teachers understand their future role will be to prepare students for the state test through the state-mandated curriculum, most also expressed deep concern and conflict with how they would go about this endeavor. Similar to what others found (e.g., Brown & Goldstein, 2013), preservice teachers' understanding that teaching will involve preparing students for the test, conflicts with teacher preparation pedagogy that espouses critical inquiry and student-centered approaches.

The study reported on here exploits a gap in this existing literature on the experiences and beliefs of preservice teachers and their future professional lives. We simply don't know how prior high-stakes testing experiences relate to emerging teacher beliefs about tests, accountability, and future work preferences. In an era where high-stakes testing pressures and experiences dominate elementary and secondary settings, it seems an opportune time to trace the beliefs of those who have gone through it as a student to understand if (and how) those past experiences connect with future attitudes and decision making.

### **Pre-Service Teachers and Beliefs about Future Working Conditions**

In this study, we also explore preservice teachers' beliefs about the role accountability systems may play in their future workplace preferences. There are no studies that directly examine preservice teachers' past experiences with tests and testing and their potential influence on how they think about accountability in their future job; however, two studies provide some implications for the data in this study. Lankford, Loeb, and Wyckoff (2002) point out there are four potential factors that influence teacher hiring practices. Three of these involve institutional characteristics such as (1) district/school level preferences, (2) hiring practices efficiencies, and (3) school political power. The fourth factor has to do with teacher preferences and goals. Across a range of studies, salary plays a significant role in teachers' work-related decision making (e.g., Sass, Flores, Claeys & Pérez, 2012; Stinebrickner, 2002; Theobald & Gritz, 1996; Viadero, 2018).

Other than salary preferences, there is also evidence that state testing policies may influence teachers' decisions about where they work. Achinstein, Ogawa, and Speigman (2004) found that accountability pressures combined with local school management practices may lead to two tracks of teachers: one type prefers schools that are more structured, and another type prefers schools that provide more autonomy and independence. Thus, pressures of testing combined with managerial philosophies of schools may interact in ways that entice specific types of teachers to specific

working environments. In their data, two types of teachers emerged; one who preferred more autonomy, flexibility, and opportunity to be creative in the classroom and one who preferred a school with more scripted curriculum and direct day-to-day instructions about teaching goals. Thus, there is some data to suggest teachers' preferences vary according to the way accountability manifests in their preferred school. In this case, some teachers preferred high accountability/low autonomy conditions, whereas others preferred the reverse. A question not considered is the role of past experiences with accountability in these preferences.

## Methods

In this cross-sectional mixed methods study we explore preservice teachers' beliefs about test-based accountability systems by asking them to describe (1) their past experiences with high-stakes tests, (2) their current beliefs about NCLB, accountability systems and high-stakes tests, and (3) the kind of test-based accountability conditions in which they prefer to work in the future. As an exploratory study, we wanted to know how (if) these beliefs vary by gender, ethnicity, and past experiences with high-stakes testing. We also include a measure of general test anxiety—partly as a check on other survey items and partly to understand if anxiety has any relationship to beliefs about high-stakes testing policies. Our research questions (and specific sub questions) include:

- (1) What are participants' beliefs about what testing was like for them? Specifically,
  - a. Do beliefs about testing experiences vary by gender, ethnicity, and past high-stakes testing experiences?
  - b. Are beliefs about testing related to test anxiety?
- (2) What are preservice teachers' beliefs about NCLB, accountability, and the role of high-stakes testing in teaching? Specifically,
  - a. Do these beliefs vary by gender, ethnicity, and past high-stakes testing experiences?
- (3) Are there meaningful patterns in participants' beliefs about the test-based accountability conditions in their future work preferences? Specifically,
  - a. Do these patterns vary by gender, ethnicity, and past high-stakes testing experiences?
  - b. How do preservice teachers talk about the role of accountability and testing pressures on teachers in describing their workplace preferences?

## Sample

We surveyed 379 students enrolled in seven different sections of an undergraduate educational psychology course that is a requirement for preservice teachers seeking their teaching certificate. Surveys were administered in the first two months of the spring 2010 semester at a large public university located in Texas. The first author collected survey data in person during a class period and collected data from all students who were present on the day of collection (i.e., no student refused to participate). The course was required for all students who were seeking teacher certification, so the sample represents a significant cross-section of those who were seeking teacher certification at this time and at this university.

Of those participants who provided relevant demographic information, there were 143 males (38%) and 235 females (62%) (one person did not fill out gender). Participants' ages ( $n=376$ ) ranged from 18-60, with an average age of 26.62 (SD of 8.225). Most participants were enrolled in preservice teacher education course as part of their undergraduate degree program ( $n=333$  or 88%), but several were in a master's degree program ( $n=6$  or 1.6%) or post-baccalaureate program fulfilling credit hours to obtain their teaching certificate ( $n=38$  or 10%). Undergraduate students consisted of seniors ( $n=186$  or 49%), juniors ( $n=123$  or 32%), and sophomores ( $n=23$  or 6.3%).

Students were asked to self-identify their ethnicity/race given the choices of: African American ( $n=16$ , 4%), Asian-Pacific Islander ( $n=9$ , 2%), Caucasian ( $n=155$ , 41%), Hispanic (with most specifying Mexican  $n=140$  or 37%, followed by Puerto Rican,  $n=3$  and Columbian,  $n=2$ ), Native American ( $n=2$ ), Bi/multiracial (Hispanic/White,  $n=23$ , 6%; African American/Hispanic,  $n=3$ ). Several participants choose “other” indicating various responses such as “human” or “multi” ( $n=21$ , 6%).

Participants graduated from high school between 1967 through 2011. Collapsing the data by decade, we found most of our sample graduated high school sometime after the institution of NCLB-mandated high-stakes testing, or sometime from 2003-2011 ( $n=215$ , 60%). The rest of the participants graduated 2000-2002 ( $n=47$ , 13%), 1990-1999 ( $n=58$ , 15%), 1980-1989 ( $n=31$ , 8%) and 1967-1979 ( $n=12$ , 3%). We collapsed some of these categories for group-level analysis. With respect to experience with high-stakes testing, we created a two-group variable to compare pre-NCLB group (graduated 2002 or before,  $n=148$ ) and a post NCLB group (graduated 2003 or later,  $n=215$ ). Elsewhere, in a study of 25 states conducted in the first few years post NCLB, we found that Texas had an accountability system that imposed the most test-based pressure on its students (Nichols, Glass, & Berliner, 2006). Thus, although imperfect, those in our sample who graduated after NCLB was passed were exposed to a greater degree of test-based accountability than their peers who went to school prior to NCLB.

With respect to ethnicity, and to account for sample size differences, we created a two-group variable characterizing two of the largest groups represented: Caucasian ( $n=155$ ) and Hispanic<sup>1</sup> ( $n=171$ ). Importantly, we recognize this blunt categorization not only undermines the variability of ethnic backgrounds and identities represented in our sample but also discards the voice of some of our smaller groups (African American, Native American). We do this for descriptive purposes only but acknowledge this important limitation.

## Setting

This study takes place with preservice teachers at a large four-year university in Texas, a state with a relatively long history of high-stakes testing in its K-12 schools. Texas started high-stakes testing in 1980, adopting five different standardized tests between then and 2019, and attaching an escalating set of stakes to each. From 1980-1983, the state had the Texas Assessment of Basic Skills (TABS) in reading, writing and math that was a relatively low stakes exam. Students in the ninth grade were required to take the test every year until passing or graduating. In 1984, the test changed to the Texas Educational Assessment of Minimum Skills (TEAMS), which was administered more frequently than TABS and had higher stakes (implemented through 1990). Students who didn't pass by 12<sup>th</sup> grade weren't awarded a high school diploma (the first time a state had implemented such a consequence for students). In 1991, the test changed to the Texas Assessment of Academic Skills (TAAS), which was similar to TEAMS but with higher standards (higher passing criteria) and the same stakes to students who had to pass to receive a diploma. In 2003, the test changed again to the Texas Assessment of Knowledge and Skills (TAKS) to comply with NCLB. This test was more comprehensive and was administered in more grade levels and had school-level consequences attached to it (in addition to the ongoing stakes to students who had to pass to receive a diploma). In 2007, the test changed again to the State of Texas Assessment for Academic Readiness (STAAR), an end-of-course testing program first administered in 2012. Most of the participants in our sample went to school during the TAKS era with some who were older and had gone through earlier, less consequential versions of the state test.

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<sup>1</sup> This variable included all participants who identified as Hispanic Mexican, Columbian, Puerto Rican, and biracial Hispanic/African American and biracial Hispanic/White.

## Survey

After the demographic variable section, the survey includes four major sections. These sections included to measure: (1) beliefs about high-stakes testing experiences (2) test anxiety beliefs, and (3) beliefs about NCLB, educational accountability, and testing, and (4) a vignette section having to do with the type of test-based accountability conditions in which participants would choose to work (see Appendix). Section 1 of the survey included a range of questions regarding participants' perceptions of what it was like for them to take the relevant high-stakes test when they were in high school. Only those who reported they had taken some type of high-stakes test responded to this section. Questions focused on the more recent Texas test, the Texas Assessment of Knowledge and Skills (TAKS), but respondents were asked to substitute the name of the test they had taken if it was different (e.g., in Texas, earlier versions of the high-stakes test included the Texas Assessment of Basic Skills, TABS and the Texas Assessment of Academic Skills or TAAS). Importantly, although the stakes associated with these varying tests as well as the difficulty levels of each varied over time, the goal of this study was not to interrogate these nuances on preservice teachers' beliefs. Instead, the goal was to probe how preservice candidates generally thought about them in their lives and to explore how these views related to other assessment-related beliefs. The reliability of items in section 1 is low ( $\alpha = .59$ ) but is not a concern since these items were not drafted to measure a single construct. Inter-item correlations reveal meaningful relationship among items that would be expected to correlate. For example, participants who reported tests were "easy" also reported they did not make them nervous ( $r = .629, p = .000, n = 317$ ). Respondents who reported the tests were "easy" for them also reported they usually passed those tests on their first try ( $r = .586, p = .000, n = 317$ ). (Complete table of correlations available upon request.)

Section two included the Revised Test Anxiety Scale (RTAS) devised by Benson and El-Zahhar (1994) to estimate participants' test-related anxiety dispositions. Importantly, the RTAS has demonstrated adequate reliability and validity as a measure of overall test-taking anxiety (Bados & Sanz, 2005; Benson & El-Zahhar, 1994) and has high internal reliability ( $\alpha = .91$ ) with this study sample. We were interested to see if test anxiety was related to any patterns of beliefs regarding high-stakes testing. Students taking high-stakes tests can experience heightened anxiety (e.g., Segool, Carlson, Goforth, von der Embse, & Barerian, 2013). We also know test anxiety can interfere with test performance (e.g., Cassady & Johnson, 2002; Hancock, 2001) and among test takers, females tend to experience higher anxiety than males (Cassady & Johnson, 2002; Stenlund, Eklöf, & Lyrén, 2016). In this exploratory analysis, we wanted to see what patterns existed among beliefs about high-stakes tests and the experience of taking them with a measure of overall test anxiety.

In section three, we asked questions organized by three general areas: What do you know about NCLB? ( $\alpha = .552$ ), what do you think about accountability in general? ( $\alpha = .653$ ) And are high-stakes tests a good way to judge teachers? ( $\alpha = .467$ ). Lower reliability estimates are acceptable since each section only contained seven items each and each section was crafted to be exploratory and not to evaluate a single construct. For example, in the section on NCLB we asked a variety of questions to which respondents may have different opinions. We asked whether respondents understood what NCLB is and also if they thought it would improve education. Internal consistency across these items is not necessarily meaningful. However, inter-item correlations revealed respondents' general consistency where it would be expected. For example, we asked whether NCLB had a positive effect on education and whether it would impact "my" teaching negatively. Predictably, these items were negatively correlated ( $r = -.429, p = .000, n = 373$ ), suggesting those who thought NCLB would have a positive effect on education also believed it would not impact their teaching negatively. (A complete table of correlations across all three blocks of items available upon request.)

In section four, we created four vignettes that each described a hypothetical school district context. Teachers were presented with four vignettes describing particular characteristics of schools and asked to (a) rank in order of preference from 1-4 which school they would prefer to work in and (b) describe (through open-ended response) their rationales for these decisions. For the vignettes, we varied two possible features of schools: (a) Test Pressure (high or low), and (b) student test performance/motivation/parent involvement (high or low). Test pressure is described as pressure on teachers to get students to pass test. For example, a high pressure vignette is described in the following way: *In this school, there is a great deal of pressure to do well on the MSAT. Everyday the teachers are reminded how important it is to get students to score well. In fact, the MSAT is so important, you have to talk about somehow in your teaching every day.* Vignettes assumed the following combination of these target variables:

Vignette A: High pressure, high scores/motivation/parent involvement

Vignette B: High pressure, low scores/motivation/parent involvement

Vignette C: Low pressure, high scores/motivation/parent involvement

Vignette D: Low pressure, low scores/motivation/parent involvement

In order to control for order effects, four survey forms were created, each with a different order of vignettes (including whether they were placed at the start or end of the larger survey). The result was four different survey forms characterized by the following vignette orders:

Form E ordered Vignettes as C, D, A, B located at the end of the survey ( $n=89$ )

Form R ordered Vignettes as A, B, C, D located at the end of the survey ( $n=92$ )

Form T ordered Vignettes as A, B, C, D located at the front of the survey ( $n=90$ )

Form Y ordered Vignettes as C, D, A, B located at the front of the survey ( $n=96$ )

We did a check to see if it mattered whether vignettes were encountered before the larger survey or after, hypothesizing that experience of answering Likert-based items regarding test-based pressures and practices may influence respondents' beliefs and therefore preferences about where they opt to work. To explore this, we ran four Vignette X Form chi-square analyses. All chi-square values were insignificant suggesting order had no impact on the likelihood of participants' choices of where to work. There were no differences according to form/vignette order for Vignette A [ $\chi^2(9, n=367) = 4.186, p = .899$ ], Vignette B [ $\chi^2(9, n=367) = 14.714, p = .099$ ], Vignette C [ $\chi^2(9, n=367) = 9.467, p = .395$ ], or Vignette D [ $\chi^2(12, n=367) = 15.822, p = .200$ ]. Therefore, we collapsed data across all forms for all subsequent analyses.

## Results

### Research Question 1: What Was Testing Like For You?

Means and standard deviations (overall and by gender) for items probing respondents' beliefs about what it was like for them to take a high-stakes test in the state where they graduated from high school are presented in Table 1.<sup>2</sup> Participants were asked to indicate their beliefs on a scale of 1-5, where 1 was anchored by one end of the spectrum and 5 provided an anchor for the other end. As can be seen in Table 1, respondents' averages suggest participants regarded high-stakes tests as mostly easy, but not a good use of educational time. Similarly, more respondents disliked the test even though they were motivated in school. Three items were significantly different

<sup>2</sup> Importantly, each item in this section was worded to include the name of the state test relevant to this sample. We remove the specific name of this test here and in all tables for confidentiality purposes.

Table 1  
*Beliefs about high-stakes tests (HST) overall and by gender*

	ALL (n=309)		Female (n=200)		Male (n=109)		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
HST were hard for me	4.02	.99	3.94	0.99	4.17*	0.99	HST were easy for me
HST made me nervous	3.41	1.39	3.25	1.36	3.70**	1.39	HST did NOT make me nervous
HST WERE really important	2.52	1.32	2.47	1.32	2.62	1.33	HST were NOT really important
I am really BAD on HST	3.81	1.13	3.70	1.15	4.02*	1.08	I am really GOOD on HST
I really HATE taking HST	2.14	1.11	2.07	1.08	2.25	1.16	I really ENJOY taking HST
HST are fair	3.26	1.18	3.39*	1.11	3.04	1.30	HST are NOT fair
HST are a good indication of what I can do	3.77	1.17	3.68	1.17	3.93*	1.16	HST are NOT a good indication of what I can do
I usually have to take HST many times to pass	4.66	.79	4.68	0.77	4.62	0.83	I usually pass HST on first try
Doing well on HST is because of a good teacher	3.24	1.14	3.22	1.09	3.28	1.23	Doing well on HST is because I was smart
Scoring badly is because of a bad teacher	3.45	.96	3.47	0.944	3.41	0.99	Scoring badly is because I wasn't good in subject
I was motivated to do well in school	2.00	1.20	1.82	1.11	2.34**	1.30	I was NOT motivated to do well in school
HST DID motivate me in school	3.91	1.25	3.84	1.23	4.03	1.30	HST did NOT motivate me in school
HST are good use of time	4.05	1.02	4.10	0.98	3.95	1.09	HST are NOT a good use of time

Note: \* $p < .05$ , \*\* $p < .01$ , only cases with complete data across all items are included.

based on past exposure to high stakes testing. Students who graduated before NCLB were more likely to report standardized tests are not important than those who graduated after NCLB [ $t(293)=2.037, p=.043$ ]. They were also more likely to report that passing tests like these were hard and required multiple tries [ $t(293)=2.59, p=.026$ ] and that they were less motivated than their younger counterparts to do well in high school [ $t(293)=2.96, p=.003$ ].

When disaggregated by gender, males were more likely to report high-stakes tests were easy and did not make them nervous; however, they were also more likely to not be motivated in school compared to females. When disaggregated by ethnicity, white preservice teachers were more likely to report that high-stakes tests did not make them nervous, and they were not important. Similarly, white participants were more likely to report they did well on high-stakes tests (HST) because they were “smart,” and that they usually passed HST on their first try.

We also wanted to know if there was a relationship between generalized test anxiety beliefs and beliefs about testing experiences. We began by calculating means and standard deviations of test anxiety beliefs overall and disaggregated by gender for each item (Table 2). In general, females are more likely to be uneasy, self-defeated, anxious, trembling, and worried when taking tests. Similarly, Hispanic participants were more likely to be worried and uneasy about taking tests. Across a few items, we found that participants who graduated before NCLB responded differently than those

Table 2

*Test anxiety scale, means and standard deviations overall and disaggregated by gender*

	All ( $n=365$ )		Females ( $n=228$ )		Males ( $n=137$ )	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Thinking about my grade interferes with my work on tests	3.14	1.18	3.19	1.16	3.04	1.21
I seem to defeat myself while taking important tests	2.70	1.14	2.83**	1.08	2.47	1.20
During tests I find myself thinking about the consequences of failing	3.07	1.32	3.18*	1.31	2.90	1.33
I start feeling very uneasy just before getting a test paper back	3.49	1.18	3.60*	1.19	3.28	1.13
During tests I feel very tense	3.25	1.21	3.35*	1.23	3.08	1.16
I worry a great deal before taking an important exam	3.67	1.23	3.88**	1.19	3.34	1.22
During tests I find myself thinking of things unrelated to the material	2.88	1.26	2.90	1.25	2.69	1.30
During tests, I find myself thinking how much brighter other people are	2.09	1.21	2.22**	1.25	1.88	1.11

Table 2 cont.

*Test anxiety scale, means and standard deviations overall and disaggregated by gender*

	All ( <i>n</i> =365)		Females ( <i>n</i> =228)		Males ( <i>n</i> =137)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
I think about current events during a test	2.02	1.08	2.05	1.06	1.99	1.11
I get a headache during an important test	1.93	1.14	2.18**	1.22	1.56	.87
While taking a test, I often think about how difficult it is	3.09	1.10	3.16	1.10	2.95	1.13
I am anxious about tests	3.25	1.25	3.40**	1.26	2.99	1.27
While taking tests I sometimes think about being somewhere else	2.58	1.3	2.61	1.34	2.50	1.26
During tests I find I am distracted by thoughts of upcoming events	2.44	1.23	2.48	1.25	2.34	1.20
My mouth feels dry during tests	1.84	1.09	1.91	1.15	1.69	.98
I sometimes find myself trembling before or during tests	1.65	1.05	1.76**	1.13	1.46	.87
While taking a test my muscles are very tight	2.08	1.25	2.25**	1.30	1.80	1.15
I have difficulty breathing while taking a test	1.40	0.84	1.48*	.91	1.27	.67
During the test I think about how I should have prepared for the test	3.28	1.24	3.43**	1.17	3.03	1.32
I worry before the test because I do not know what to expect	3.42	1.20	3.58**	1.18	3.15	1.23

Note: \* $p < .05$ , \*\* $p < .01$ , only cases with complete data across all items are included.

who graduated after NCLB. Specifically, those who graduated after NCLB (and were generally younger) were more likely during tests to find themselves thinking of things unrelated to the material [ $t(360) = 2.74, p = .006$ ], more likely to think about being somewhere else [ $t(360) = 2.85, p = .005$ ], and were more distracted by thoughts of upcoming events [ $t(360) = 3.98, p = .000$ ].

Given the high internal reliability of the test anxiety scale ( $\alpha = .914$  for this sample), we generated an overall anxiety index for each respondent based on an average of all 20-items. Using this as the dependent variable, we found no significant differences in overall reported levels of test anxiety based on whether participants graduated before or after the institution of NCLB. However, we did find that females ( $M = 2.77, SD = .737$ ) express higher overall levels of anxiety than males ( $M$

=2.47,  $SD = .680$ ) [ $t(363)=3.811, p = .000$ ] and that Hispanic ( $M=2.77, SD= .75$ ) participants reported higher levels of test anxiety than White participants ( $M=2.55, SD= .73$ ) [ $t(315)=2.67, p= .008$ ].

Bivariate correlations among averaged test anxiety score and beliefs about and experiences with high-stakes tests reveal that generally, the more anxious pre-service teachers were as student test takers, the more likely their experiences with these tests were negative and views about the role of high-stakes tests were unfair and not useful (Table 3). Participants who are more nervous are more likely to report tests are not easy, they do make them nervous, they are not good at them, they do not enjoy taking them, they don't represent what they can do, and that they had to take their tests multiple times to pass.

Table 3  
*Correlations of average test anxiety and beliefs about high-stakes testing (HST)*

	A	B	C	D	E	F	G	H	I	J	K
A: Test Anxiety Averaged Score	1										
B: HST were easy for me	<b>-.325*</b>	1									
C: HST did NOT make me nervous	<b>-.447*</b>	<b>.626*</b>	1								
D: HST are NOT important	-.104	<b>.156*</b>	<b>.211*</b>	1							
E: I am really good on HST	<b>-.404*</b>	<b>.687*</b>	<b>.605*</b>	<b>.153*</b>	1						
F: I really enjoy taking HST	<b>-.273*</b>	<b>.260*</b>	<b>.307*</b>	.084	<b>.350*</b>	1					
G: HST are NOT fair	.127*	<b>-.166*</b>	<b>.241*</b>	.058	<b>.214*</b>	<b>.289*</b>	1				
H: HST DON'T represent what I can do	<b>.155*</b>	<b>-.156*</b>	.116*	.006	<b>.161*</b>	<b>.312*</b>	<b>.365*</b>	1			
I: I pass HST on first try	<b>-.268*</b>	<b>.586*</b>	<b>.407*</b>	<b>.151*</b>	<b>.525*</b>	<b>.161*</b>	-.058	<b>.192*</b>	1		
J: I was NOT motivated in school	.008	-.101	-.029	.028	.146*	-.059	.067	.036	-.133*	1	
K: HST did NOT motivate me	-.116*	.089	<b>.153*</b>	<b>.164*</b>	.057	.146*	<b>.143*</b>	<b>.284*</b>	.040	<b>.211*</b>	1
L: HST are a waste of time	-.112	.123	-.029	.031	-.073	<b>.456*</b>	<b>.367*</b>	<b>.455*</b>	-.070	.068	<b>.324*</b>

Note\*= $p > .05$ , \*(**bold**)  $p < .01$

Test Anxiety Averaged Score=scale of 1-5, higher number represents greater degree of overall test anxiety  
All HST questions based on 1-5 scale, higher value represents statement indicated (i.e., C: HST did NOT make me nervous where 5=they did NOT make me nervous and 1=they DID).

### Research Question 2: Knowledge of NCLB, Accountability, and Testing

We asked preservice teachers to report on their knowledge of (a) NCLB, (b) educational accountability, and (c) the merits of using high-stakes tests for holding teachers accountable. Table 4 displays means and standard deviations for all three sections for all participants and disaggregated by gender. When it comes beliefs about NCLB, students who graduated after NCLB were more likely than those who graduated before NCLB to believe NCLB has a positive effect on education [ $t(351)=2.15, p= .032$ ] and that it will improve education [ $t(351)=2.16, p=.031$ ]. By contrast, older participants, those who graduated before NCLB more strongly believed NCLB would impact their teaching negatively than their counterparts who graduated since NCLB passed [ $t(351) = 3.167, p=.002$ ]. We also found that females were more likely to believe NCLB had a positive impact on

education [ $t(373) = 2.37, p = .018$ ] and that it will improve education [ $t(374) = 2.80, p = .005$ ]. There were no differences based on ethnicity.

When it comes to beliefs about accountability, participants who graduated under NCLB were more likely to believe educational accountability will improve how teachers teach [ $t(357) = 3.41, p = .001$ ] and that it will make them a better teacher [ $t(357) = 3.27, p = .001$ ] than those who graduated before NCLB. There were no gender differences; however, White preservice teachers were more likely than Hispanic preservice teachers to believe that holding teachers accountable is a good thing [ $t(320) = 3.72, p = .000$ ] and that using tests is a fair way to do it [ $t(320) = 2.27, p = .024$ ]. By contrast, Hispanic preservice teachers are more likely to believe they should learn more about educational accountability than their White counterparts [ $t(320) = 2.17, p = .031$ ].

When it comes to beliefs about using tests to hold teachers accountable, there were no differences based on past exposure to high-stakes testing or ethnicity. Females worry more than males about preparing students for high-stakes tests [ $t(372) = 2.947, p = .003$ ] and are more likely to agree that there is a lot of pressure on teachers when it comes to high-stakes tests than males [ $t(372) = 2.78, p = .009$ ]. Females are more nervous than males when thinking about preparing students for high-stakes tests [ $t(372) = 3.97, p = .000$ ]. By contrast, males are more likely than females to believe that high-stakes tests will make their job easier [ $t(372) = 2.138, p = .033$ ].

Table 4

*Knowledge of NCLB, accountability and testing: Means and standard deviations overall and disaggregated by gender*

	All ( $n=367$ )		Female ( $n=227$ )		Male ( $n=140$ )	
	M	SD	M	SD	M	SD
<b>On NCLB....</b>						
I understand what NCLB is	3.82	0.94	3.89	0.90	3.70	0.99
I can explain NCLB	3.37	1.11	3.43	1.07	3.26	1.15
NCLB has had a positive effect on education	2.42	1.06	2.55*	1.09	2.26	1.00
Glad to be teaching under NCLB	2.34	1.13	2.43	1.19	2.21	1.02
NCLB improves education	2.41	1.09	2.54**	1.12	2.21	1.03
Have read a lot about NCLB	2.69	1.22	2.77	1.19	3.07	1.24
NCLB will impact teaching negatively	2.95	1.16	2.86	1.13	3.07	1.20
	All ( $n=374$ )		Female ( $n=231$ )		Male ( $n=143$ )	
<b>On educational accountability....</b>						
Is teacher accountability good?	3.83	1.03	3.75	1.03	3.94	1.0
Are tests a fair way to hold teachers accountable?	2.26	1.06	2.17	1.02	2.38	1.12
I want to be evaluated for my job	4.05	0.92	4.03	0.93	4.09	0.91
I have confidence in explaining "ed accountability"	3.44	1.00	3.37	1.02	3.56	0.959
I should learn more about accountability	3.98	0.97	4.02	0.92	3.90	1.03
Accountability improves teaching	3.32	0.98	3.29	0.94	3.35	1.03
Accountability will make me a better teacher	3.28	1.08	3.28	1.04	3.28	1.14
	All ( $n=374$ )		Female ( $n=234$ )		Male ( $n=140$ )	
<b>On the use of tests to evaluate....</b>						
High scores on a test indicate how good a teacher is	1.91	0.99	1.88	0.99	1.94	0.99

Tests like the TAKS will affect my teaching	2.12	0.91	2.15	0.92	2.06	0.91
I worry about preparing students for tests	3.63	1.17	3.76**	1.18	3.40	1.13
A lot of pressure when it comes to standardized tests	4.59	0.71	4.67**	0.65	4.47	0.80
Thinking about test prep makes me nervous	3.63	1.15	3.81**	1.15	3.34	1.07
The TAKS will make my job easy	1.79	0.93	1.71*	0.85	1.92*	1.04
My future students will learn from TAKS	1.96	0.98	1.98	0.99	1.92	0.99

Note: All data are based on scale of 1-5 where 1=strongly disagree and 5=strongly agree

\*=  $p < .05$ , \*\* $p < .01$ , only cases with complete data across each section are included.

### Research Question 3: Beliefs about Accountability and Where I Want to Teach

We wanted to understand the role of accountability conditions in preservice teachers' preferences for where they want to work in the future. To do this we presented participants with four vignettes varying school contexts that depicted high versus low student motivation and high versus low test-based pressures on teachers (i.e., "there is a great deal of pressure to do well on the state test. Everyday the teachers are reminded how important it is to get students to score well. In fact, the state test is so important, you have to talk about somehow in your teaching every day"). We found that when given these choices, our sample preferences were consistent and straightforward. Most of our sample preferred to work in a context where students had high motivation regardless of the level of pressure on them to get students to pass the test. The first choice was a context where student motivation was high, and pressures were low ( $n=310$ ). Their second choice was for a school where student motivation was high, and pressures were high ( $n=222$ ). Most ranked third a school with low pressure and students with low motivation ( $n=185$ ) and there was relative consensus in ranking a school where pressures were high and motivation was low as their fourth option ( $n=261$ ). This pattern was consistent even when responses were disaggregated by gender, ethnicity, whether the respondent had to pass a test him/herself to be promoted in school, and whether or not the respondent had to pass a test to receive a diploma. In spite of background or past experiences, participants preferred motivated students regardless of the amount of testing pressures they would face in the classroom.

We wanted to understand some of the underlying reasons guiding why participants overwhelmingly chose one response over as a way to understand preservice teachers' beliefs about accountability in their personal lives. We asked participants to describe via open-ended written response to their reasons for their choices. Guided by grounded theory techniques (Strauss & Corbin, 1998), we began by reading all open-ended responses provided by 308 participants who gave responses we could read. This gave us a full picture of the range of rationales provided. One of us went through this process multiple times, searching for redundancy and patterns. We met several times to examine the range of responses. After multiple iterations, we emerged with several overarching categories. We report on the most popular and least popular options next.

**Low test pressure, high student motivation context.** Preservice teachers overwhelmingly chose a school with low test-based pressures and high student motivation as the preferred workplace environment. Characterized by low test-related pressures and high student motivation, 308 (84%) believed this work environment to be more preferable. Participants provided five types of rationales for selecting this vignette as the preferred context of choice. The most frequently cited reason for their choice was *because* of the minimal pressure (50%). Other reasons included parental

involvement/support (38%), student motivation (32%), teacher flexibility (25%), and testing not being a priority (8%).<sup>3</sup>

Interestingly, many respondents' rationales for their choices reflected assumptions they made regarding the perceived effects of low testing pressures. For example, many respondents believed low testing pressures meant the school would provide a more "flexible teaching environment" and opportunities to "engage their students and make the classroom a fun learning experience." Others believed that low pressure meant a teaching environment resistant to "teaching to the test." Furthermore, low testing pressure would be "less intimidating" and therefore, allow students to learn test material with no pressure. Many respondents also expressed that putting too much pressure on a test was "silly" and "absurd." Low test-related pressure for a few respondents, meant greater teacher flexibility which according to some is "always important" whereas for others, it means they would have autonomy to modify their teaching style to best suit their students' needs.

According to many in our sample, student motivation was a positive attribute since it provided teachers with students who were ready, willing, and interested in learning. One respondent explained, "I can't teach, if students don't want to learn." Another respondent stated, "If students are engaged and motivated then success is inevitable." The involvement and the support of staff, parents and community were important since it was perceived to equate to a "positive learning environment." Some respondents expressed that if there were a lack of support, it would be very difficult to have the resources needed to succeed. Parental involvement was desired because as one respondent stated, having parents involved "helped take the burden off of teaching."

Although a majority of participants believed this would be an ideal working environment, there were a small minority of respondents who rated this scenario as the *least* preferred working environment ( $n=4$ ). For these few participants, they explained that the school was not appealing because it didn't provide a "challenging environment." These respondents wanted to "make an impact on performance and motivation." While another believed that there should be more pressure on testing. Interestingly, one participant expressed that they "didn't feel needed" at this type of school.

**High test pressure, low student motivation.** We found that most participants ranked the school characterized by high testing pressures and low student motivation as their last preference ( $n=259$ , 71%). Three types of rationales for why preservice teachers did not want to work in this context emerged: (a) too much pressure (b) no student motivation, and (c) no parent involvement. As with our analysis of the preferred place to work, we found that many participants made additional assumptions about the type of context it would be on the basis of the two presented factors of high-test pressure and low student motivation. When it comes to test-related pressure, for example, many believed too much pressure was the direct cause of students' low performance. For example, one respondent wrote, "If students are too pressured, they will have a hard time performing."

Participants considered the school's seemingly "negative" characteristics to be inherently interrelated. Many suggested that high pressure *caused* lowered student motivation. Others believed the lack of motivation from the students also contributed to even more pressure on the teachers. And, some reported this school as having "low morale overall" and also being a "very negative learning environment." Respondents repeatedly stated that test pressures caused lowered motivation and "poor morale." Others expressed a concern for how the pressure would affect the students and teachers; they described this pressure as "overbearing, "stressful," and "overwhelming." One

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<sup>3</sup> Percentages do not add up to 100% because many respondents gave more than one reason and therefore are counted twice in this data.

respondent stated, "I do not want to be at a school that pressures kids, and then they don't do well it increases the pressure."

Another rationale for their choices was that students were simply not motivated, "Without motivation the school suffered." Others expressed that teaching would only become difficult without student willingness to learn. One respondent said, "Teaching is about motivating students to make them curious about what happens next and what else is there to know." Another reason for their choice was the lack of parental involvement. Many believed this factor to be "discouraging," and that it meant "parents did not care." Many believed that the lack of support from parents would make their jobs more difficult. As one respondent expressed, "parent's do not get involved in the student's academics so to me that tells the students that school is really not all that important."

In contrast to the majority of our sample, a minority expressed the desire to work in this type of context ( $n=10$ ). Among these reasons was the need to feel challenged, feel needed, and make a difference. These respondents wanted to enter a work environment where they could help "push students" to be motivated and learn. Most of these participants expressed a strong desire to "make a difference." According to one respondent, "This school has the potential and is in need of help in a few crucial areas like getting kids motivated, improving parents' involvement, and improving test scores. I would love to work here and be a part of getting a school on its feet when it shows so much potential."

## Discussion

The impetus for this study in part came from data suggesting that high-stakes testing accountability practices may be socializing two types of teachers: one type who "goes along" with accountability practices, preferring environments with less autonomy and flexibility for ones that are more scripted and rigid, and another type who seeks more flexibility and professional autonomy in their workplace (Achinstein et al., 2004). Importantly, this research does not differentiate whether these attitudes lead to work environment choices or whether these attitudes are socialized experiences that come from working in these environments. By collecting data prior to entry into the teaching workforce, it provides some clues regarding their positioning before these socialization experiences.

A second impetus comes from rapidly growing body of research suggesting that high-stakes testing contexts encourages diluted instructional practice characterized by watered down curricula, teaching-to-the-test practices, and many forms of "gaming" activities in which teachers are sometimes co-participants (e.g., cheating) (Berliner, 2009; Jacob, 2005; McNeil, Coppola, Radigan, & Vasquez Heilig, 2008). If high-stakes testing accountability practices persist, more and more preservice teachers will be entering the profession having come from environments where high-stakes testing was the norm. What types of beliefs are formed about teaching on the basis of these past experiences? Will this state of affairs encourage new teachers to become increasingly compliant with teaching directives that may go against their professional training? This study is the first step in trying to understand how previous test-based experiences may shape future incoming teachers' attitudes and decision-making.

We found that among our sample of preservice teachers, and as it relates to experiences with tests and testing, our data were similar to what others have reported (Cassady & Johnson, 2002; Segool et al., 2013). Thinking about taking tests in school, females reported they were more worried than males, but also they were more motivated. Regarding test anxiety, females reported being more test anxious than males, younger test takers more anxious than older test takers, and Hispanic participants were more anxious than white participants. Interestingly, our data also show that

females are much more worried about future accountability demands than males but that males believed that high-stakes tests will make their job easier.

We also found some differences in belief patterns based on when participants graduated: either before NCLB or after. We found that preservice teachers who graduated after NCLB was implemented (those who had experienced the most consequential version of accountability systems) viewed accountability as a policy more favorably—they were more likely to believe that it will improve teaching, that it is good for education overall, that it will make them a better teacher and will have a positive effect on education than those who graduated before NCLB. Although virtually all of our participants encountered some form of state standardized testing in their secondary experiences, these data suggest those who were in school during NCLB and under the most consequential set of testing experiences in Texas held more positive beliefs about accountability than those who experienced less consequential testing administered before NCLB. This small data point confirms our organizing hypothesis that newer teachers who were in school at the apex of NCLB (and who were directly socialized at the height of the accountability movement of NCLB) are more positive about its use in education than those with less frequent and intense high-stakes testing experiences.

Importantly, although in aggregate our participants reported they generally disliked the high-stakes tests they personally had to take in high school, subgroup analyses reveal that for those who took it during the NCLB era, they also saw high-stakes tests as good thing for education overall. This finding—NCLB era students disliked the test for themselves but believed it was a good way to evaluate teachers (i.e., high-stakes testing is a “good” policy)—reveals an interesting distinction between personal experiences and beliefs about policies in general. Similar to Gallup poll data where citizens typically judge the schools their children attend more positively than schools in general (e.g., Starr, 2016), our data also reveal a distinction between our participants’ personal experiences with high-stakes testing versus their views of it as a policy mechanism for others. In our data, those who graduated during NCLB reported that taking high-stakes testing is a negative, undesirable experience for them personally; however, they also report that using those tests to evaluate teachers is a reasonable policy. One hypothesis to explain this contradiction might be that beliefs about national systems/policies are informed by a different source of information (such as the media) than beliefs informed by personal experiences. Our vignette analysis provides additional clues regarding how our participants view accountability for themselves but also what implicit assumptions they hold about high-stakes testing accountability in general.

In this study, we also asked participants to rank in order of preference four hypothetical schools, varying test-related pressure and student motivation. Importantly, there were no differences in preferences on the basis of past experiences. Instead, we found that our sample overwhelmingly preferred contexts with motivated students regardless of the testing pressures picking in order (1) high motivated students and low test pressure school, (2) high motivated students and high test pressure school, (3) low motivated students and low test pressure school, and (4) low motivated students and high test pressure school. Collectively this preference provides some initial clues on how preservice teachers conceptualize the role, value, and impact of accountability conditions when it comes to thinking about their first teaching job. Consistent with what we know about principals (Loeb, Kalogrides, & Lai Horng, 2010), preservice teachers appear to want to work in contexts that are “easier” to teach as defined by more motivated students, lesser “pressure” and more involved parents.

Qualitative analyses of rationales provided by preservice teachers about where they prefer to teach (focusing on the most and least desirable contexts) were in some ways expected and, in some ways, unexpected. With respect to their first preferences, an overwhelming majority chose a school

with low test-related pressures and high student motivation. By contrast, an overwhelming majority selected the opposite type of climate as the least desired place to work. The rationales provided suggest that their reasons had a lot to do with the type of characteristics described in the vignette: They wanted to work where pressures were low and students were motivated *because* of these factors and similarly they did not want to work in high pressured, low motivated contexts *because* of these characteristics. Therefore, to some degree, our data were unsurprising.

Our analyses also revealed implicit assumptions regarding the role of high-stakes testing pressure in school settings. For example, many of our participants' rationales for their preferences were based on beliefs that students were motivated (or were not motivated) *because* of the low (high) testing pressures. So, pressure could be good or bad depending on the characteristics of the students. Similarly, although our vignettes did not discuss anything about teacher flexibility, or autonomy, many presumed that low testing pressure equated to greater autonomy and vice versa (greater testing pressures equated to lesser teaching autonomy). Our survey data suggested that our participants did not like the high-stakes test for themselves, but that those who graduated after NCLB still saw it as a positive and useful mechanism for teaching in general. Our qualitative data from the vignette portion of the survey underscore some of the nuances of those findings. If students are perceived to be doing well, test-based pressures may be acceptable, whereas if students are doing poorly, than pressures may or may not be ok. In the end, test-based accountability is something those who graduated after NCLB have lived with for most of their lives and therefore, their beliefs regarding its generalized effectiveness are informed by longer period of exposure to the practice and its implementation and effects as discussed throughout contemporary culture. Our post NCLB graduates believe test-based accountability is overall a good thing, even if it isn't for them personally. More research is needed to understand the sources (and effects) of these beliefs.

### Limitations

These data come from a cross-sectional snapshot of preservice teacher attitudes in one teacher educational program in one state. Thus, our ability to generalize across state contexts where educational accountability experiences vary is limited. Using the institution of NCLB as a marker of preservice teachers' prior experiences with HST is limited since our participants live in a state where HST was ongoing prior to NCLB. Although NCLB is a significant time in history where there was more uniform exposure to HST, the historical context might dilute that impact on our participants' emerging attitudes about and beliefs towards HST. In short the absence of a control group (i.e., those participants without any experiences with high-stakes testing) limits any causal claims regarding high-stakes testing socialization effects. We also acknowledge the problems with uneven sample sizes among our groups and especially between our groups who graduate before versus during NCLB.

Our ability to extrapolate participants' work preferences on the basis of four vignettes that vary only two constructs (student motivation, test-based pressure) is also limited. For example, the data are limited in underscoring the relative independent contributions of parents, student success and student motivation in preservice teacher decision-making. Similarly, the detail provided in each vignette precluded participants from providing rationales for the types of schools they would want to work in without being prompted. Therefore, there may be rationales and/or school-based characteristics not represented. In the end, the data only separates the role of testing pressure from the role of student motivation, thereby eliminating an ability to understand the relative independent role of parent involvement and/or student success when it comes to desired characteristics of future first job sites.

## Policy Implications and Future Research

The data here suggest that the role of high-stakes standardized tests in the future lives of teachers is either not well understood or at least for many in this sample was viewed as “acceptable.” Preservice teachers who were raised on a steady diet of high-stakes tests seem “ok” with the prospect of tests in their professional lives. Although we do not know the exact nature of these beliefs (i.e., this is all they know, so why not go along with it? Or, they believe in testing as a good approach to education), the fact that the younger participants were “ok” and the older participants more “suspicious” of testing is notable. As the first author has argued elsewhere (Nichols, 2016), teachers should be equipped to be able to advocate for their profession. Well trained teacher advocates are better positioned to identify and resist mandates that are counterproductive to evidenced-based educational practice (such as high-stakes testing and value-added teacher evaluation systems, e.g., Dianis, Jackson, & Noguera, 2015; Koretz, 2017; Lavigne & Good, 2019). As long as high-stakes testing remains a part of teacher evaluation and school accountability problems, it will remain critical that our teachers understand what is at stake.

Our vignette data make it clear that preservice teachers hold specific ideas about how high-stakes testing pressure plays out in schools. If students are motivated, than working under high pressure conditions is acceptable, whereas if the school is characterized by unmotivated student, then high testing pressure is problematic and restrictive. High-stakes testing pressure is awarded differential power based on how students respond and what assumptions are made about its impact on teaching. Thus, even though the survey data revealed that overall our participants didn’t like high-stakes tests personally, the role of those tests in future teaching conditions varies. More data are needed to disentangle these beliefs and their role in subsequent practices in the classroom.

Our findings suggest teacher preparation programs and policies should ensure preservice teachers understand the role and purpose of high-stakes testing practices and its potential influence on classroom-based decision-making. In this sample, females were more stressed and worried about the prospect of preparing students for high-stakes testing. Teacher preparation programs, therefore, should help preservice teachers begin to develop coping strategies to deal with these stressors, which might help prevent teacher turnover and to better prepare them for the classroom. Lastly, most of the sample stated they least preferred working conditions with low (vs high) motivated students. Since teachers cannot control who will enter their classroom, this finding suggests teacher preparation programs should ensure teacher candidates are equipped and comfortable to deal with low motivated students.

Future research can build on these data by considering how preservice teachers’ ongoing experiences shape their test-related teaching beliefs as they enter the workforce and into their first few years in the classroom. How do these incoming beliefs relate to their actions with students as they are required to administer high-stakes tests? More longitudinal studies are needed to understand how high-stakes testing accountability practices socialize instructional practice and professional identities of new teachers. If beliefs are a precursor to action as is suggested by a rich literature on teacher beliefs (Buehl & Beck, 2015), then these data underscore some interesting patterns for future study.

## References

- Achinstein, B., Ogawa, R. T., & Speiglmán, A. (2004). Are we creating separate and unequal tracks of teachers? The effects of state policy, local conditions, and teacher characteristics on new teacher socialization. *American Educational Research Journal*, 41(3), 557-603.  
<https://doi.org/10.3102/00028312041003557>

- Akkerman, S. F., & Meijer, P. C. (2011). A dialogical approach to conceptualizing teacher identity. *Teaching and Teacher Education*, 27(2), 308-319. <https://doi.org/10.1016/j.tate.2010.08.013>
- Alemán, S. M. (2018). Mapping intersectionality and Latina/o and Chicana/o students along educational frameworks of power. *Review of Research in Education*, 42(1), 177-202. <https://doi.org/10.3102/0091732X18763339>
- Alsup, J. (2006). *Teacher identity discourses. Negotiating personal and professional spaces*. Lawrence Erlbaum Associates. <https://doi.org/10.4324/9781410617286>
- Amrein-Beardsley, A. (2008). Methodological concerns about the Education Value-Added Assessment System (EVAAS). *Educational Researcher*, 37(2), 65-75. <https://doi.org/10.3102/0013189X08316420>
- Bados, A., & Sanz, P. (2005). Validation of the revised test anxiety scale and the friedben test anxiety scale in a Spanish sample. *Ansiedad y Estrés*, 11(2-3), 163-174.
- Bailey, L. E., & Graves, K. (2016). Gender and education. *Review of Research in Education*, 40(1), 682-722. <https://doi.org/10.3102/0091732X16680193>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, 44, 1175-1184. <https://doi.org/10.1037/0003-066X.44.9.1175>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman.
- Barrett, B. D. (2009). No Child Left Behind and the assault on teachers' professional practices and identities. *Teaching and Teacher Education*, 25(8), 1018-1025. <https://doi.org/10.1016/j.tate.2009.03.021>
- Benson, J., & El-Zahhar, N. (1994). Further refinement and validation of the Revised Test Anxiety Scale. *Structural Equation Modeling: A Multidisciplinary Journal*, 1(3), 203, 221. <https://doi.org/10.1080/10705519409539975>
- Berg-Jacobson, A. (2016). *Teacher effectiveness in the Every Student Succeeds Act: A discussion guide*. Center on Great Teachers & Leaders. American Institutes for Research. Retrieved from [https://gtlcenter.org/sites/default/files/TeacherEffectiveness\\_ESSA.pdf](https://gtlcenter.org/sites/default/files/TeacherEffectiveness_ESSA.pdf)
- Berliner, D. C. (2009). *Rational response to high-stakes testing and the special case of narrowing the curriculum*. Paper presented at the International Conference on Redesigning Pedagogy, National Institute of Education, Nanyang Technological University, Singapore.
- Blaise, J. G. (2015). The effects of high-stakes accountability measures on students with limited English proficiency. *Urban Education*, 53(9), 1154-1181. <https://doi.org/10.1177/0042085915613549>
- Booher-Jennings, J. (2005). Below the bubble: 'Educational triage' and the Texas accountability system. *American Educational Research Journal*, 42(2), 231-268. <https://doi.org/10.3102/00028312042002231>
- Braun, H., Chapman, L., & Vezzu, S. (2010). The Black-White achievement gap revisited. *Education Policy Analysis Archives*, 18(21). <https://doi.org/10.14507/epaa.v18n21.2010>
- Braun, H. I., Wang, A., Jenkins, F., & Weinbaum, E. (2006) The Black-White achievement gap: Do state policies matter? *Education Policy Analysis Archives*, 14(8). Retrieved from <http://epaa.asu.edu/epaa/v14n8/>.
- Brown, C. P. (2010) Children of reform: The impact of high-stakes education reform on preservice teachers. *Journal of Teacher Education*, 61(5), 477-491. <https://doi.org/10.1177/0022487109352905>
- Brown, K. D., & Goldstein, L. S. (2013). Preservice elementary teachers' understandings of competing notions of academic achievement coexisting in post-NCLB public schools. *Teachers College Record*, 115(1), 1-37.

- Brown, G. T. L., & Harris, L. R. (2009). Unintended consequences of using tests to improve learning: How improvement-oriented resources heighten conceptions of assessment as school accountability. *Journal of MultiDisciplinary Evaluation*, 6(12), 68-91.
- Buehl, M. M., Y Beck, J. S. (2015). The relationship between teachers' beliefs and teachers' practices. In H. Fives & M. G. Gill (Eds.). *International Handbook of Research on Teachers' Beliefs* (pp. 66-84). Routledge.
- Carnoy, M., & Loeb, S. (2002). Does external accountability affect student outcomes? A cross-state analysis. *Educational Evaluation and Policy Analysis*, 24(4), 305-331. <https://doi.org/10.3102/01623737024004305>
- Cassady, J. C., & Johnson, R. B. (2002). Cognitive test anxiety and academic performance *Contemporary Educational Psychology*, 27(2), 270–295. <https://doi.org/10.1006/ceps.2001.1094>
- Close, K., Amrein-Beardsley, A., & Collins, C. (2018). *State-Level Assessments and Teacher Evaluation Systems after the Passage of the Every Student Succeeds Act: Some Steps in the Right Direction*. National Education Policy Center. Retrieved [date] from <http://nepc.colorado.edu/publication/state-assessment>
- Deci, E. L., & Ryan, R. M. (2016). Optimizing students' motivation in the era of testing and pressure: A self-determination theory perspective. In W. Liu, J. Wang & R. Ryan (Eds.), *Building autonomous learners*. Springer. [https://doi.org/10.1007/978-981-287-630-0\\_2](https://doi.org/10.1007/978-981-287-630-0_2)
- Dianis, J. B., Jackson, J. H., & Noguera, P. (2015). High-stakes testing hasn't brought education gains. *Phi Delta Kappan*, 97(1), 35-37. <https://doi.org/10.1177/0031721715602235>
- Erikson, E. (1950). *Childhood and society*. W. W. Norton.
- Fives, H. & Gill, M. G. (Eds.) (2015). *International handbook of research on teachers' beliefs*. Routledge. <https://doi.org/10.4324/9780203108437>
- Flores, M. A., & Day, C. (2006). Contexts which shape and reshape new teachers' identities: A multi-perspective study. *Teaching and Teacher Education*, 22(2), 219-232. <https://doi.org/10.1016/j.tate.2005.09.002>
- Ford, T. G., Van Sickle, M. E., Clark, L. V., Fazio-Brunson, M., & Schween, D. C. (2015). Teachers self-efficacy, professional commitment and high-stakes teacher evaluation policy in Louisiana. *Education Policy*, 31(2), 202-248. <https://doi.org/10.1177/0895904815586855>
- Garner, J. K., & Kaplan, A. (2018). A complex dynamic systems perspective on teacher learning and identity formation: An instrumental case. *Teachers and teaching: Theory and Practice*, 25(1), <https://doi.org/10.1080/13540602.2018.1533811>
- Gerwin, D. (2004). Preservice teachers report the impact of high-stakes testing. *The Social Studies*, 95(2), 71-74. <https://doi.org/10.3200/TSSS.95.2.71-74>
- Grodsky, E. S., Warren, J. R., & Kalogrides, D. (2009). State high school exit examinations and NAEP long-term trends in reading and mathematics, 1971-2004. *Educational Policy*, 23, 589-614. <https://doi.org/10.1177/0895904808320678>
- Hancock, D. R. (2001). Effects of test anxiety and evaluative threat on students' achievement and motivation. *The Journal of Educational Research*, 94(5), 284–290. <https://doi.org/10.1080/00220670109598764>
- Hanushek, E., & Raymond, M. E. (2005). Does school accountability lead to improved student performance? *Journal of Policy Analysis and Management*, 24(2), 297-327. <https://doi.org/10.1002/pam.20091>
- Herman, J. L., & Haertel, E. H. (Eds.). (2005). *Uses and misuses of data for educational accountability and improvement. The 104th Yearbook of the National Society for the Study of Education* (part 2, pp. 1-34). Blackwell. <https://doi.org/10.1111/j.1744-7984.2005.00023.x>

- Hofflinger, A., & von Hippel, P. (2018). *The response to high-stakes testing in Chile: Did schools improve learning or merely inflate test scores?* <https://doi.org/10.2139/ssrn.2906552>
- Holme, J. J., Richards, M. P., Jimerson, J. B., & Cohen, R. W. (2010). Assessing the effects of high school exit examinations. *Review of Educational Research, 80*(4), 476-526. <https://doi.org/10.3102/0034654310383147>
- Jacob, B. (2005). Accountability, incentives and behavior: The impact of high-stakes testing in the Chicago Public Schools. *Journal of Public Economics, 89*(5-6), 761-796. <https://doi.org/10.1016/j.jpubeco.2004.08.004>
- Jennings, J. L. & Bearak, J. M. (2014). "Teaching to the test" in the NCLB era: How test predictability affects our understanding of student performance. *Educational Researcher, 43*(8), 381-389. <https://doi.org/10.3102/0013189X14554449>
- Jones, M. G., Jones, B. D., & Hargrove, T. (2003). *The unintended consequences of high-stakes testing*. Rowman & Littlefield.
- Kane, M. T. (2017). *Measurement error and bias in value-added models*. Educational Testing Service (ETS) Research Report Series. <https://doi.org/10.1002/ets2.12153>
- Koedel, C., Mihaly, K., & Rockoff, J. E. (2015). Value-added modeling: A review. *Economics Education Review, 47*, 180-195. <https://doi.org/10.1016/j.econedurev.2015.01.006>
- Koretz, D. (2017). *The testing charade: Pretending to make schools better*. University of Chicago Press. <https://doi.org/10.7208/chicago/9780226408859.001.0001>
- Lankford, H., Loeb, S., & Wyckoff, J. (2002). Teacher sorting and the plight of urban schools: A descriptive analysis. *Educational Evaluation and Policy Analysis, 24*(1), 37-62. <https://doi.org/10.3102/01623737024001037>
- Lavigne, A., & Good, T. L. (2019). *Enhancing teacher education, development and evaluation: Lessons learned from educational reform*. Routledge. <https://doi.org/10.4324/9781315630892>
- Lloyd, G.M. (2007). Strategic compromise: a student teachers' design of kindergarten mathematics instruction in a high-stakes testing climate. *Journal of Teacher Education, 58*(4), 328-347. <https://doi.org/10.1177/0022487107305260>
- Loeb, S., Kalogrides, D., & Lai Horng, E. (2010). Principal preferences and the uneven distribution of principals across schools. *Educational Evaluation and Policy Analysis, 32*(2), 205-229. <https://doi.org/10.3102/0162373710369833>
- Loewus, L. (2017). Are states changing course on teacher evaluation? Test-score growth plays lesser role in six states. *Education Week, 37*(13), 1-7.
- Lortie, D. (1975). *School teacher: A sociological study*. University of Chicago Press.
- Markowitz, A. J. (2018). Changes in school engagement as a function of No Child Left Behind: A comparative interrupted time series analysis. *American Educational Research Journal, 55*(4), 721-760. <https://doi.org/10.3102/0002831218755668>
- McCaslin, M. (2009). Co-regulation of student motivation and emergent identity. *Educational Psychologist, 44*(2), 137-146. <https://doi.org/10.1080/00461520902832384>
- McNeil, L. M., Coppola, E., Radigan, J., & Vasquez Heilig, J. (2008). Avoidable losses: High-stakes accountability and the dropout crisis. *Education Policy Analysis Archives, 16*(3). <https://doi.org/10.14507/epaa.v16n3.2008>
- Neill, M., Guisbond, L., & Schaeffer, B. (with Madison, J. & Legeros, L.). (2004). *Failing our children: How "No Child Left Behind" undermines quality and equity in education and an accountability model that supports school improvement*. Fairtest. <https://doi.org/10.3200/TCHS.78.1.12-16>
- Menken, K. (2010). NCLB and English language learners: Challenges and consequences. *Theory Into Practice, 49*, 121-128. <https://doi.org/10.1080/00405841003626619>

- Ng, J. C. (2006). Understanding the impact of accountability on preservice teachers' decisions about where to teach. *The Urban Review*, 38(5), 353-372. <https://doi.org/10.1007/s11256-006-0038-2>
- Nichols, S. L. (Ed.) (2016). *Educational policies and youth in the 21<sup>st</sup> century: Problems, potential, and progress*. Information Age.
- Nichols, S. L., & Berliner, D. C. (2007). *Collateral damage: How high-stakes testing corrupts America's schools*. Harvard Education Press.
- Nichols, S. L. & Castro-Villarreal, F. (Eds.) (2016). Accountability practices and special education services: Impact and implications. *Teachers College Record (Yearbook)*, 118(14). Retrieved August 22, 2016, from <http://www.tcrecord.org> ID Number: 21537.
- Nichols, S. L. & Castro-Villarreal, F. (2017). Introduction to the special issue: The social (in)justice of labeling in a high-stakes testing era: Implications for teachers and school psychologists. *Teachers College Record*, 119(9). Retrieved July 18, 2017, from: <http://www.tcrecord.org> ID Number: 22007.
- Nichols, S. L., Glass, G. V., & Berliner, D. C. (2006). High-stakes testing and student achievement: Does accountability pressure increase student learning? *Education Policy Analysis Archives*, 14(1). <https://doi.org/10.14507/epaa.v14n1.2006>
- Nichols, S. L., Glass, G. V., Berliner, D.C. (2012) High-stakes testing and student achievement: Updated analyses with NAEP data. *Education Policy Analysis Archives*, 20(20). <https://doi.org/10.14507/epaa.v20n20.2012>
- No Child Left Behind (NCLB) Act of 2001, 20 U.S.C.A. § 6301 (2001).
- Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research*, 62(3), 307-332. <https://doi.org/10.3102/00346543062003307>
- Pazey, B. L., Vasquez Heilig, J., Cole, H. A., & Sumbera, M. (2015). The more things change, the more they stay the same: Comparing special education students' experiences of accountability reform across two decades. *Urban Review*, 47, 365-392. <https://doi.org/10.1007/s11256-014-0312-7>
- Perlstein, L. (2007). *Tested: One American school struggles to make the grade*. Henry Holt & Co.
- Pfizner-Eden, F. (2016). I feel less confident so I quit? Do true changes in teacher self-efficacy predict changes in preservice teachers' intention to quit their teaching degree. *Teacher and Teacher Education*, 55, 240-254. <https://doi.org/10.1016/j.tate.2016.01.018>
- Ravitch, D. (2011). *The death and life of the great American school system: How testing and choice are undermining education*. Basic Books.
- Reardon, S. F., Atteberry, A., Arshan, N., & Kurlaender, M. (2009, April 21). *Effects of the California High School Exit Exam on student persistence, achievement and graduation* (Working Paper 2009-12). Stanford University, Institute for Research on Education Policy & Practice.
- Rodriguez, J. M., & Arellano, L. (2016). The impact of high-stakes testing on Latina/o students' college aspiration. *Journal of Hispanic Higher Education*, 15(2), 113-135. <https://doi.org/10.1177/1538192715627192>
- Ryan, J. E. (2004). The perverse incentives of the No Child Left Behind Act. *New York University Law Review*, 79, 932-989. <https://doi.org/10.2139/ssrn.476463>
- Sadker, M., Sadker, D., & Klein, S. (1991). The issue of gender in elementary and secondary education. *Review of Research in Education*, 17(1), 269-334. <https://doi.org/10.3102/0091732X017001269>
- Sass, D. A., Flores, B. B., Claeys, L., & Pérez, B. (2012) Identifying personal and contextual factors that contribute to attrition rates for Texas public school teachers. *Education Policy*

- Analysis Archives*, 20(15) Retrieved September 3, 2019, from <http://epaa.asu.edu/ojs/article/view/967> <https://doi.org/10.14507/epaa.v20n15.2012>
- Saw, G., Chang, C.-N., & Chan, H.-Y. (2018). Cross-sectional and longitudinal disparities in STEM career aspirations at the intersection of gender, race/ethnicity, and socioeconomic status. *Educational Researcher*, 47(8), 525-531. <https://doi.org/10.3102/0013189X18787818>
- Segool, N. K., Carlson, J. S., Goforth, A. N., von der Embse, N., & Barterian, J. A. (2013). Heightened test anxiety among young children: Elementary school students' anxious responses to high-stakes testing. *Psychology in the Schools*, 50(5), 489-499. <https://doi.org/10.1002/pits.21689>
- Simzar, R. M., Martinez, M., Rutherford, T., Domina, T., & Conley, A. M. (2015). Raising the stakes: How students' motivation for mathematics associates with high and low stakes test achievement. *Learning and Individual Differences*, 39, 49-63. <https://doi.org/10.1016/j.lindif.2015.03.002>
- Song, Y., & Looi, C. (2012). Linking teacher beliefs, practices and student inquiry-based learning in a CSCL environment: A tale of two teachers. *International Journal of Computer-Supported Collaborative Learning*, 7(1), 129-159. <https://doi.org/10.1007/s11412-011-9133-9>
- Starr, J. P. (2016). Why school? Americans speak out on education goals, standards, priorities, and funding: The 48<sup>th</sup> annual PDK poll of the public's attitudes toward the public schools. *The Phi Delta Kappan*, 1, k1-k31. <https://doi.org/10.1177/0031721716666049>
- Stenlund, T., Eklöf, H., & Lyrén, P.-E. (2016). Group differences in test-taking behavior: An example from a high-stakes testing program. *Assessment in Education: Principles, Policy & Practice*, 24(1), 4-20. <https://doi.org/10.1080/0969594X.2016.1142935>
- Stets, J. E., & Burke, P. J. (2014). The development of identity theory. In *Advances in group processes* (pp. 57-97). Emerald Group Publishing Limited. <https://doi.org/10.1108/S0882-614520140000031002>
- Stinebrickner, T. R. (2002). An analysis of occupational change and departure from the labor force: Evidence of reasons that teachers leave. *The Journal of Human Resources*, 37(1), 192-216. <https://doi.org/10.2307/3069608>
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: Sage Publications.
- Swain, K. D., Nordness, P. D., & Leader-Janssen, E. M. (2012). Changes in preservice teacher attitudes toward inclusion. *Preventing School Failure*, 56(2), 75-81. <https://doi.org/10.1080/1045988X.2011.565386>
- Theobald, N. D., & Gritz, R. M. (1996). The effects of school district spending priorities on the exit paths of beginning teachers leaving the district. *Economics of Education Review*, 15(1), 11-22. [https://doi.org/10.1016/0272-7757\(95\)00022-4](https://doi.org/10.1016/0272-7757(95)00022-4)
- Thoonen, E. J., Slegers, P. C., Peetsma, T. D., & Oort, F. J. (2011). Can teachers motivate students to learn? *Educational Studies*, 37(3), 345-360. <https://doi.org/10.1080/03055698.2010.507008>
- Timar, T. B., & Maxwell-Jolly, J. (2012) (Eds.), *Narrowing the achievement gap: Perspectives and strategies for challenging times*. Harvard Education Press.
- Tsangaridou, N. (2008). Trainee primary teachers' beliefs and practices about physical education during student teaching. *Physical Education and Sport Pedagogy*, 13(2), 131-152. <https://doi.org/10.1080/17408980701345667>
- U.S. Department of Education. (2009). *RTTT executive summary*. Retrieved from <https://www2.ed.gov/programs/racetothetop/executive-summary.pdf>

- U.S. Department of Education. (2015a). *Fundamental change: Innovation in America's schools under Race to the Top*. Retrieved from <https://www2.ed.gov/programs/racetothetop/rttfinalrptfull.pdf>
- U.S. Department of Education. (2015b). Every Student Succeeds Act of 2015, Pub. L. No. 114-95 § 114 Stat. 1177 (2015-2016).
- Valenzuela, A. (1999). *Subtractive schooling: U.S.-Mexican youth and the politics of caring*. University of New York Press.
- Valenzuela, A. (Ed.). (2005) *Leaving children behind: How "Texas-style" accountability fails Latino youth*. State University of New York Press.
- Valli, L., & Buese, D. (2007). The changing roles of teachers in an era of high-stakes testing accountability. *American Educational Research Journal*, 44(3), 519-558. <https://doi.org/10.3102/0002831207306859>
- Valli, L., & Chambliss, M. (2007). Creating classroom cultures: One teacher, two lessons, and a high-stakes test. *Anthropology & Education Quarterly*, 38(1), 57-75. <https://doi.org/10.1525/aeq.2007.38.1.57>
- Vasquez Heilig, J., & Darling-Hammond, L. (2008). Accountability Texas-style: The progress and learning of urban minority students in a high-stakes testing context. *Educational Evaluation and Policy Analysis*, 30(2), 75-110. <https://doi.org/10.3102/0162373708317689>
- Viadero, D. (2018, January 23). Teacher recruitment and retention: It's complicated. *Education Week*, 37(18), 4-5.
- White, C. S., Sturtevant, E. G., & Dunlap, K. L. (2003). Preservice and beginning teachers' perception of the influence of high stakes tests on their literacy-related instructional beliefs and decisions. *Reading, Writing and Instruction*, 42(2), 39-62. <https://doi.org/10.1080/19388070309558385>
- Wilkins, J. L. M. (2008). The relationship among elementary teachers' content knowledge, attitudes, beliefs, and practices. *Journal of Mathematics Teacher Education*, 11(2), 139-164. <https://doi.org/10.1007/s10857-007-9068-2>
- Winkler, A. (2002). Division in the ranks: Standardized testing draws lines between new and veteran teachers. *Phi Delta Kappan*, 84(3), 219-225. <https://doi.org/10.1177/003172170208400310>
- Yilmaz, H. & Cavas, P. H. (2008). The effect of the teaching practice on pre-service elementary teachers' science teaching efficacy and classroom management beliefs. *EURASIA Journal of Mathematics, Science & Technology Education*, 4(1), 45-54. <https://doi.org/10.12973/ejmste/75305>

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## Appendix: Survey Instrument

**SECTION I: Background Information.** In this section, I want to get to know a little bit about you, who you are now, and what kind of school experiences you have had.

1. Gender (circle one) M      F
2. Your current age \_\_\_\_\_
3. When it comes to your ethnicity, how do you identify?
  - a. African American
  - b. Asian/Pacific Islander
  - c. Caucasian
  - d. Hispanic: Specify how you identify \_\_\_\_\_
  - e. Native American
  - f. Bi/multiracial (describe) \_\_\_\_\_
  - g. Other (please describe) \_\_\_\_\_
4. How far are you in school as of right now? I am a (Circle one):
  - a. Sophomore
  - b. Junior
  - c. Senior
  - d. Graduate Student (What Degree/Program/Year? \_\_\_\_\_)
5. What grades do you get at this school?
  - a. Mostly A's
  - b. Mostly B's
  - c. Mostly C's
  - d. Mostly D's
  - e. A mix of two or more above (which ones \_\_\_\_\_)
6. What is your current GPA? \_\_\_\_\_
7. What year did you graduate from high school? \_\_\_\_\_
8. In what state did you graduate from high school (e.g., Texas, Louisiana)? \_\_\_\_\_
9. What grades did you get in high school? (Circle one: Estimate the best you can)
  - a. Mostly A's
  - b. Mostly B's
  - c. Mostly C's
  - d. Mostly D's
  - e. A mix of two or more above (which ones \_\_\_\_\_)
10. In Texas, and since the 1990s, students have had to take a state test. This test has had many names including the TEAM, TABS, TAAS and now TAKS. Other states have their own test. In Louisiana it is LEAP, Arizona it is AIMS. Thinking back to high school, did you take tests such as these? (Circle one)
 

Yes ----- IF YOU ANSWERED YES, CONTINUE ON TO ITEM 11  
 No ----- IF YOU ANSWERED NO, PLEASE SKIP TO ITEM 28 (page 5)
11. What was your test called? \_\_\_\_\_
12. In any grade level, did you have to pass this test to get promoted to the next grade? Yes      No
13. If so, in what grade(s) \_\_\_\_\_



ABCD was MOSTLY because of having a bad teacher

ABCD was MOSTLY because I wasn't good in that subject

25. Some students are really motivated to do well in high school, others are not so motivated. What was it like for you?  
 I WAS motivated to do well in school 1 2 3 4 5 I was NOT motivated to do well in school
26. For some students, wanting to do well on the ABCD was a big motivator to do well in school. For others, the ABCD was not a big motivator to do well in school. What was it like for you?  
 Tests like ABCD DID motivate me to do well in school 1 2 3 4 5 Tests like ABCD did NOT motivate me to do well in school
27. Some students believe tests such as the ABCD are a good use of time in school. For others, they think it is a waste. What was it like for you?  
 Tests like ABCD are a mostly GOOD use of school time 1 2 3 4 5 Tests like ABCD are a mostly a WASTE of school time

**SECTION II: Test Taking Beliefs --The following items refer to how you feel when taking tests. Use the scale below to rate the items in terms of how you *generally* feel when taking tests.**

		Almost Always	Some times	Almost never
28. Thinking about my grade in a course interferes with my work on tests .....	1	2	3	4 5
29. I seem to defeat myself while taking important tests .....	1	2	3	4 5
30. During tests I find myself thinking about the consequences of failing .....	1	2	3	4 5
31. I start feeling very uneasy just before getting a test paper back .....	1	2	3	4 5
32. During tests I feel very tense .....	1	2	3	4 5
33. I worry a great deal before taking an important exam .....	1	2	3	4 5
34. During tests I find myself thinking of things unrelated to the material.....	1	2	3	4 5
35. While taking tests, I find myself thinking how much brighter the other people are.....	1	2	3	4 5
36. I think about current events during a test .....	1	2	3	4 5
37. I get a headache during an important test.....	1	2	3	4 5

38. While taking a test, I often think about how difficult it is.....	1	2	3	4	5
39. I am anxious about tests .....	1	2	3	4	5
40. While taking tests I sometimes think about being somewhere else.....	1	2	3	4	5
41. During tests I find I am distracted by thoughts of upcoming events .....	1	2	3	4	5
42. My mouth feels dry during a test .....	1	2	3	4	5
43. I sometimes find myself trembling before or during tests .....	1	2	3	4	5
44. While taking a test my muscles are very tight .....	1	2	3	4	5
45. I have difficult breathing while taking a test .....	1	2	3	4	5
46. During the test I think about how I should have prepared for the test..	1	2	3	4	5
47. I worry before the test because I do not know what to expect.....	1	2	3	4	5

**SECTION III: Getting Your Thoughts on No Child Left Behind (NCLB), Accountability, and Testing**

For the statements below, indicate your agreement or disagreement by circling the number that *best* expresses what you think about the statement. **NOTE: Strongly Disagree (SD)=1, Strongly Agree (SA)=5.**

**Some educators know a lot about the No Child Left Behind act (NCLB), others know very little. What about you?**

	(SD)				(SA)
1. I understand what the No Child Left Behind act is.....	1	2	3	4	5
2. I could explain NCLB to people who are not in education .....	1	2	3	4	5
3. NCLB has had a positive effect on education .....	1	2	3	4	5
4. I am glad I am going into teaching under NCLB.....	1	2	3	4	5
5. NCLB will improve education.....	1	2	3	4	5
6. I have read a lot about NCLB.....	1	2	3	4	5
7. NCLB will impact my teaching negatively.....	1	2	3	4	5

**Many people believe teachers should be held accountable for how they do their job. What do you think?**

	(SD)				(SA)
8. Holding teachers accountable is a good thing .....	1	2	3	4	5
9. Using student tests is a fair way to hold teachers accountable .....	1	2	3	4	5
10. I want to be evaluated for how I do my job.....	1	2	3	4	5
11. I feel confident I could explain “educational accountability” to people outside education .....	1	2	3	4	5
12. I should learn more about educational accountability.....	1	2	3	4	5
13. From what I understand, educational accountability improves how teachers teach.....	1	2	3	4	5
14. From what I understand, educational accountability will make me a better teacher.....	1	2	3	4	5

**Many people believe standardized tests such as ABCD are a good way to judge teachers. Others believe it is not a good way to judge teachers, what do you think?**

	(SD)				(SA)
15. I know how good a teacher is if I know how students did on a test.....	1	2	3	4	5
16. Tests such as the ABCD will affect my teaching positively .....	1	2	3	4	5
17. I worry about preparing students for tests such as the ABCD.....	1	2	3	4	5

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 18. There is a lot of pressure on teachers when it comes to tests such as ABCD..... | 1 | 2 | 3 | 4 | 5 |
| 19. Thinking about preparing students for the ABCD makes me nervous .....           | 1 | 2 | 3 | 4 | 5 |
| 20. The ABCD will make my job easy.....   | 1 | 2 | 3 | 4 | 5 |
| 21. My future students will learn a lot because of the ABCD.....                    | 1 | 2 | 3 | 4 | 5 |

**SECTION IV: What Kind of School Do You Want to Teach In?**

**Directions:** In this section of the survey, I want to get sense of the kind of school in which you want to teach. Imagine you have recently interviewed for teaching jobs at four schools. Each of these schools is located in a hypothetical district named “Jackson.” Jackson School District is located in Miller State. In Miller State ALL students have to take the Miller State Achievement Test (MSAT). Every year after students take the MSAT, the local newspaper reports on the results, indicating which schools passed and which schools did not. Yesterday, you received word that all four schools want to hire you. Now you need to make a decision. Where do you want to work? In the space provided, RANK ORDER your preference assigning a 1 to the school where you MOST want to work, a 2 to the one you next most want to work, and so forth. A 4 is assigned to the school you LEAST want to work in. On the next page, tell me a little bit about your decision.

In School A, there is minimal pressure to do well on the MSAT. Although it is always important that students score well, it is not the primary focus of the school. The principal rarely talks about the test to the teachers and scoring well on the test is not a primary goal. In this school, teachers have a lot of flexibility in their classrooms. Everyday the teachers are reminded how important it is to get students’ minds engaged. The teachers here feel supported by their principal and in general, everyone gets along and helps each other. Teachers like teaching at this school. Students generally score well on the MSAT and from what you hear, they are pretty motivated to learn. Parents get involved at this school, and it is in good standing in the community.

In School B, there is minimal pressure to do well on the MSAT. Although it is always important that students score well, it is not the primary focus of the school. The principal rarely talks about the test to the teachers and scoring well on the test is not a primary goal. In this school, teachers have a lot of flexibility in their classrooms. Everyday the teachers are reminded how important it is to get students’ minds engaged. The teachers here feel supported by their principal and in general, everyone gets along and helps each other. Teachers like teaching at this school. Students generally do not score well on the MSAT and from what you hear, they are not really motivated to learn. Parents do not get involved at this school, and it is not in good standing in the community.

In School C, there is a great deal of pressure to do well on the MSAT. Everyday the teachers are reminded how important it is to get students to score well. In fact, the MSAT is so important, you have to talk about somehow in your teaching every day. The teachers here feel supported by their principal and in general, everyone gets along and helps each other. Teachers like teaching at this school. Students generally score well on the MSAT and from what you hear; they are pretty motivated to learn. Parents get involved at this school, and it is in good standing in the community.

In School D, there is a great deal of pressure to do well on the MSAT. Everyday the teachers are reminded how important it is to get students to score well. In fact, the MSAT is so important, you have to talk about somehow in your teaching every day. The teachers here feel supported by their principal and in general, everyone gets along and helps each other. Teachers like teaching at this school. Students generally do not score well on the MSAT and from what you hear; they are not really motivated to learn. Parents do not get involved at this school, and it is not in good standing in the community.

**Tell me a little bit about your decision-making. Why did you order these schools the way you did? In the space provided, please give me a brief (sentence or two) rationale for your ranking.**

- You gave school A, a ranking of \_\_\_\_\_: Why?
- You gave school B, a ranking of \_\_\_\_\_: Why?
- You gave school C, a ranking of \_\_\_\_\_: Why?
- You gave school D, a ranking of \_\_\_\_\_: Why?

**Is there anything else about these schools you would want to know when making this important decision?**

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