From Buy-in to Specificity:

The Evolution of Standards-Based Reform Implementation in Two States

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Abstract
Using state-representative surveys of teachers and 94 interviews with state leaders and educators from 2016 to 2019, the authors examine perceptions of the policy environments for instructional content standards in Texas and Ohio and their association with teachers' practice. They find that Texas teacher perceive their policy environments for standards implementation to be stronger than Ohio teachers. Yet, teachers in both states reported the same key challenges to implementation. Further, early on in implementation, teachers' buy-in for the standards predicted their implementation of standards-emphasized instruction, yet specificity of district resources for standards implementation predicted standards-emphasized instruction in 2019. Findings suggest a need for districts to balance top-down resources with ongoing opportunities for educators to adapt resources to suit their students' needs.

Keywords: college-and-career-readiness standards; standards-based reform; mixed-methods research

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Introduction

It has been a decade since the Common Core State Standards (CCSS) first emerged. While the standards have evolved, primarily through state adaptations and relabeling of the standards, content standards remain a persistent presence in classrooms across the country (Desimone et al, 2019; Edgerton, 2020; Kaufman et al., 2018). Still, research on the outcomes of CCSS have been mixed. Some scholars identify positive effects on student learning (Bleiberg, 2020) while others proclaim outright that "Common Core has not worked" to increase student achievement (Loveless, 2020) and find null or even small negative effects (Song, Garet, & Yang, 2019).

Rather than focus on student test scores and whether changes can be attributed to the use of the CCSS or other college-and-career readiness (CCR) standards, we focus on how teachers' implementation of standards has progressed in various contexts and how policies can support teachers in aligning their instruction to the standards. Standards-based reform has called for immense changes in teaching and learning, making success difficult (Cohen & Mehta, 2017). This difficulty makes it all the more important to understand both broad patterns in state standards implementation and the conditions that enable changes in teacher practice.

Since early efforts at standards-based reform, scholars have emphasized that a central component is creating a system of aligned and specific supports that facilitates teacher learning (Smith & O'Day, 1991). To change teaching and learning, as the theory of standards-based reform goes, policymakers and administrators must develop a robust system of curricula, assessments, and training alongside adoption of instructional standards and accountability provisions, which will lead to changes in teaching practice and, ultimately, increases in student

learning (Clune, 2011; Porter et al., 1988; Smith & O'Day, 1991). Such policy instruments comprise the infrastructure necessary for improving teaching and learning (Cohen & Mehta, 2017; Cohen, Moffitt, & Goldin, 2007).

Decades of education scholarship on standards-based reform efforts have yielded a rich literature of the conditions influencing teacher change, emphasizing coherence among policies and professional learning (PL) opportunities for teachers to learn new ways of teaching. In their seminal study of math instructional reform, Cohen and Hill (2001) drew the field's attention to key conditions that support instructional reform: coherence among policies and PL opportunities for teachers to learn a new way of teaching. Additional in-depth studies of standards-based reform have further highlighted the local conditions and contextual factors that influence reform efforts: educators' beliefs about prescribed practices (Bridwell-Mitchell, 2013; Hodge, 2019); school leadership's role in supporting implementation (e.g., Coburn, 2005; Pak et al., 2020); and opportunities for teacher collaboration to engage with standards and connect them to student learning (Stosich, 2016).

At the same time, scholars have investigated the broad-based patterns of state standards implementation through large-scale quantitative studies (e.g., Edgerton & Desimone, 2018; Kane et al., 2016; Kaufman et al., 2009, 2017; Opfer et al., 2018). These studies have been valuable in describing the trends in teachers' implementation of CCR standards—what materials and curricula they rely on in their teaching, their perceptions and knowledge of the standards, PL opportunities, and the extent to which teachers' instruction is aligned with the standards.

Case studies have also revealed the particular challenges that teachers of English learners (ELs) and students with disabilities (SWDs) face when implementing CCR standards. For instance, teachers of ELs and SWDs experience a lack of clarity with how to achieve alignment

to the standards and pacing that does not take into account student needs, in some cases leading to low buy-in for the standards (Bacon, 2015; Edgerton, Fuchs, & Fuchs, 2020; Figueroa Murphy & Haller, 2015). In response, some scholars have argued that PL that allows for the alignment of EL and SWD learning needs and collaboration across all staff (i.e., EL, SWD and general education teachers) is critical for supporting ELs and SWDs (Figueroa Murphy & Haller, 2015).

Importance of This Study

Collectively, the existing literature base suggests several takeaways for our understanding of standards-based reform, which we respond to in this study. First, varied interpretations are a natural part of the implementation process. To understand whether standards-based reform supports changes in teaching and learning, we must attend to the relationship between teachers' interpretations and their practice. In this study, we measure and analyze how teachers align their instruction to new emphases in the standards, which we label "standards-emphasized instruction." We focus our analysis on the relationship between teachers' perceptions of their policy environment, grounded in the policy attributes theory (Desimone, 2002; Porter, 1994; Porter et al., 1988), and their standards-emphasized instruction.

Second, local and state context shape standards implementation. In their reflection on what we still need to learn about standards-based reform, Coburn, Hill, and Spillane (2016) call for comparing different states to examine how variations in the policy context influences implementation. We provide a novel and much-needed assessment of the evolution of standards implementation over the last several years—prior to the Covid-19 pandemic—in two states with unique contexts for CCR standards implementation, including differences in student populations and state approaches to supporting the roll-out of standards.

Third, systems of specific and aligned supports remain central to efforts to implement instructional reform. Scholars consistently find that aligned PL supports standards implementation and student learning (e.g., Kane et al., 2016), especially when it allows for collaborative inquiry in support of teacher learning (e.g., Stosich, 2016). We ground our study in a conceptual framework that attends to institutional supports, including PL, as a key component in supporting teachers' standards-emphasized instruction.

Fourth, scholarship in this area seldom compares the experiences of teachers of ELs and SWDs to general educators. Our study is among the few to offer a comparison of teachers of general education students, ELs, and SWDs.

Finally, studies that combine broad-based findings and in-depth examinations of on-the-ground dynamics of standards implementation are rare. Even more rare are studies that examine these patterns longitudinally. Using a mixed-methods approach, we draw on descriptive, state-representative surveys and in-depth district case studies to understand broad patterns in standards implementation over time, as well as the nuanced dynamics of implementation at the local level.

We address the following research questions:

1. How did teachers perceive their policy environments related to CCR standards in 2019, and how have their perceptions changed since 2016? In what ways do perceptions differ for teachers of ELA, math, SWDs, and ELs in Texas and Ohio?
2. How is the policy environment related to teachers' use of standards-emphasized instruction, and how has this changed over time in Texas and Ohio?
3. How are aspects of the policy environment operationalized in Texas and Ohio, and what key factors influence the relationship between the policy environment and standards-emphasized instruction in those states?

We find a stronger policy environment for standards implementation in Texas than in Ohio, including improvements over time for teachers of ELs and SWDs. Yet, teachers in both states reported experiencing the same key challenges—primarily pertaining to student needs—in both years. We also find that buy-in for the standards was positively associated with standards-aligned instruction early in implementation, yet specificity of resources predicted instructional alignment in 2019. State-developed resources and materials were critical for adding specificity to the standards but required a balance with opportunities for educators to adapt resources to suit their students' needs. Embedded and ongoing PL was a space for teachers to adapt resources, but such opportunities were limited.

The remainder of this paper proceeds as follows: we first present background on the two states of focus and explain the conceptual framework grounding this study. We then present our results and conclude with a discussion of our findings and their relevance to the broader field.

State Background: Texas and Ohio

In this study, we focus on implementation of CCR standards in Texas and Ohio from 2016 to 2019. These states offer two unique contexts for understanding standards implementation, given their demographic differences as well as differences in their approach to CCR standards implementation (see Table 1). Texas serves a much larger student population than Ohio and a larger proportion of ELs and students of color. Notably, Ohio adopted the CCSS in 2010, while Texas developed its own college and career ready standards the year prior. Texas also engaged in an ongoing revisions process of their original state standards, which extended through the course of the study, with the most recent revision to their ELA standards in 2017.

[Table 1 here]

Conceptual Framework

We draw on two bodies of scholarship to ground this study: the policy attributes theory and policy implementation studies of standards-based reform and teacher learning. Our conceptual framework is depicted in Figure 1.

[Figure 1 here]

The Policy Attributes

The policy attributes theory (Porter, 1994; Porter et al., 1988) identifies five factors critical for successful policy implementation. *Specificity* is the degree of prescriptiveness of the policy, such as whether teachers receive guidance on the order and pacing of the curriculum. *Consistency* refers to the alignment of policies and resources—for instance, the extent to which curriculum, PL, and assessments are aligned. *Authority* refers to the legitimacy of the policy change, including the extent to which stakeholders have bought into the policy. In our study, authority includes teachers' perceptions of the appropriateness and relevance of the standards and the extent to which they believe the standards adequately prepare students for subsequent grades. *Power* refers to the accountability mechanisms built into the policy. These mechanisms can include rewards or incentives, such as supports, and punitive sanctions associated with lack of implementation of the policy (Desimone et al., 2019). Finally, *stability* is whether the policy is likely to change. This theory suggests that policies are more likely to be successfully implemented if stakeholders believe they will last. Scholars continue to iterate on the attributes, most recently in describing how the detail, drive, and durability of standards-based reform can explain its successes and failures (Edgerton, 2020).

We ground our analysis in educators' perceptions of the attributes, rather than attempting to measure some true value of each attribute (Desimone, 2002; Desimone et al., 2019). This lens

is especially suitable in our study, given our focus on the relationship between teachers' interpretations and their practice. We theorize that teachers' perceptions of their policy environment are linked to the extent to which they engage in standards-emphasized instruction.

Factors Affecting Implementation

Policy implementation studies of standards-based reform and teacher learning have drawn attention to policy instruments and local conditions that influence effects (Cohen, Moffitt, & Goldin, 2007). One key factor is teachers' access to aligned resources and PL. Teacher changes in practice depend in part on teachers' understandings and interpretations of instructional standards, which are shaped by their prior beliefs, practices, and experiences (Coburn, 2005; Cohen, 1990; Cohen & Hill, 2001; Spillane, Reiser, & Reimer, 2002). Despite the mixed findings on the impact of PL (e.g., Garet et al., 2011; Kraft, Blazar, & Hogan, 2018) which limit our ability to know exactly how to shape and provide effective PL, decades of literature supports the idea that properly constructed teacher learning opportunities are fundamental to productive teacher change (Desimone, 2009). PL around CCR standards can support teachers to engage in "joint inquiry" that enables them to identify gaps in their own practices (Stosich, 2016) and has been connected to student learning improvements under standards-based reform efforts (Hochberg & Desimone, 2010; Kane et al., 2016). As such, we posit that PL is a necessary component of standards-based reform, as it serves as the space in which teachers can make sense of policy expectations and adapt their practice. Furthermore, resources, such as curricular resources and standards-aligned tools, can mediate teachers' implementation of state standards (e.g., Hill, 2001; Polikoff, 2012, 2015; Spillane, 2004). Thus, our conceptual framework hypothesizes that PL and aligned resources are necessary to support standards-emphasized instruction.

Further, aspects of the teachers' school and teaching contexts, such as the students they serve and challenges in the school such as turnover, are likely to influence their efforts to implement standards. For instance, teachers of ELs or SWDs are likely to view standards differently than teachers who do not serve these populations of students, given differences in students' needs (Bacon, 2015; Edgerton, Fuchs, & Fuchs, 2020; Figueroa Murphy & Haller, 2015). Given scholarship that suggests differences in implementation across grade levels and subject areas (e.g., Dee & Jacob, 2011; Edgerton & Desimone, 2018; Porter et al., 2011), we also hypothesize that implementation of standards-emphasized instruction may differ based on these aspects of teaching context. Challenges in the school and classroom context, such as differences in students' preparation and insufficient class time to cover content, are likely to influence the relationship between teachers' perceptions of the policy environment, their access to resources and PL, and the extent to which they implement standards-emphasized instruction.

Finally, the outer box in our framework indicates that these dynamics occur within a broader state-level context. State-level policy differences—such as capacity to produce guidance for districts—is key to understanding teachers' efforts to implement CCR standards (Coburn, Hill, & Spillane, 2016; Edgerton & Desimone, 2018).

Methods

Drawing on longitudinal data from Texas and Ohio, this study uses a concurrent mixed-methods design (Creswell, 2014), which enables us to achieve both breadth and depth in the findings. More specifically, we used survey data to describe broad, state-representative patterns in teachers' perceptions of their state policy environment and how those patterns have changed over time. Survey data also allowed us to examine broad associations between aspects of the policy environment and teachers' standards-emphasized practice. State-level interviews and case

study interview data allowed us to examine why and under what conditions particular aspects of the policy environment were related to standards-emphasized instruction.

Data and Sample

For this study, we use longitudinal state-representative teacher survey data, longitudinal interview data with state education leaders, and interview data with educators in one case study district in each state.

Survey

We administered a teacher survey in Texas and Ohio during the 2016–17 and the 2018–19 school years. For each survey administration, we used stratified random sampling to ensure a state-representative sample that includes ELA and math teachers, teachers of ELs and SWDs, and teachers at elementary and high schools. Results are representative of states as a whole, not individual districts. We selected 42 districts in each state. In each selected district, we sampled up to two elementary and two high schools. In each elementary school, we sampled two fifth-grade math teachers, two fourth-grade ELA teachers, one teacher of SWDs, and one teacher of ELs. In each high school, we sampled two ELA teachers and one teacher of the following students or subjects: SWDs, ELs, Algebra I, Algebra II, and geometry. (See c-sail.org for additional information on sampling procedures.)

Of the eligible teachers for the 2015-16 survey, 417 of 654 sampled teachers responded in Ohio (conditional response rate: 64.8%) and 603 of 1,089 (55.3%) in Texas. Of the eligible teachers for the 2018-19 survey, 439 of 510 sampled teachers responded in Ohio (conditional response rate: 86.1%) and 339 of 484 (70.0%) in Texas.

State-level Interviews

We conducted semi-structured interviews (Creswell, 2014) by phone with key state-level leaders in each state in 2016-17 and in 2018-19, we conducted 6 interviews per state per year for a total of 24. Interviews focused on states' ongoing efforts to implement various aspects of standards-based reform, including changes to CCR standards and accountability guidance and policies, resources developed to support districts with CCR standards implementation, PL offerings made available to districts, and supports for SWDs and ELs.

Case Study Interviews

We also draw on in-person semi-structured interviews from one case study district in each state (Table 2). The purpose of the case study districts was to provide a nuanced examination of the ways standards-based reform policies were implemented at the local level, especially among teachers of different grades and student populations, allowing us to connect state-level policies with practitioners at all levels of the system. We purposefully selected our case study districts from our stratified random sample of survey districts. Our selection criteria for case study districts included (1) a large population of ELs and SWDs relative to other districts, given our interest in understanding experiences of teachers of these populations, and (2) district efforts to reform curriculum and instruction in response to CCR standards (Pak et al., 2020). See Table 2 for demographics of the selected case study districts in Texas and Ohio.

In each case study district, we visited two elementary schools and two high schools and interviewed school leaders, coaches, and teachers at each school. For this analysis, we focused on teacher interviews to understand how teachers perceived their policy environments and what factors influenced the relationship between specificity and standards-emphasized instruction.

[Table 2 here]

In total, we interviewed 70 teachers across the two case study districts: 38 teachers in the Ohio case study district and 32 teachers in Texas. We conducted individual interviews with 29 of those teachers (16 in Ohio and 13 in Texas). We interviewed the remaining 41 teachers through group interviews (22 in Ohio and 19 in Texas)—we conducted one focus group per school. Interviews were conducted by members of the research team, which included professors and graduate students. During interviews, we asked teachers about their experiences teaching with the CCR standards, their district's efforts to support standards-based reform, opportunities for PL, assessment practices, and supports for SWDs and ELs.

Measures

All key measures in this analysis are composite averages of multiple items on the survey to increase reliability and validity (Mayer, 1999). When possible, we used items from previously validated national surveys. When we needed to create or adapt items, we engaged in a development process that included expert review, cognitive interviews, and substantial iteration (Desimone & LeFloch, 2004).

Our key independent variables are multi-item composites for each of the policy attributes, challenges, resources, and PL. To measure specificity (Cronbach's α = 0.79 in Texas, 0.84 in Ohio), we asked teachers their level of agreement with statements related to how detailed guidance from the district was around standards implementation, where 1 = strongly disagree, 2 = somewhat disagree, 3 = somewhat agree, and 4 = strongly agree. For authority (α = 0.83 in Texas, 0.75 in Ohio), we asked teachers the extent of their agreement with statements that reflected their buy-in to the standards, such as if they thought the standards made learning relevant, if the standards were appropriate for their students, and if they gave them the flexibility they needed to help students below grade level. For consistency (α = 0.86 in Texas, 0.88 in

Ohio), we asked the degree to which teachers believed curricula, assessments, PL, evaluations, and other policies were aligned. For power ($\alpha =$ 0.73 in Texas, 0.72 in Ohio), we asked teachers about positive and negative repercussions for implementing the standards. For stability ($\alpha =$ 0.82 in Texas, 0.84 in Ohio), we asked them to predict how long the standards and assessments would last in each state.

To measure resources, we asked teachers about the instructional resources they used and found useful. To measure PL, we multiplied teachers' reported usefulness of PL (from 1 to 4) by the dosage of PL they received (on a 1–5 scale, where 1 = 1–10 hours, 2 = 11–20 hours, 3 = 21–40 hours, 4 = 41–80 hours, and 5 = 81 or more hours). Thus, the resulting variable, PL, represents both the reported amount and the perceived usefulness of PL. To measure challenges, we provided a list of 10 school, classroom, and student challenges and asked teachers to rate them as either not a challenge, a minor challenge, a moderate challenge, or a major challenge (on a scale of 1 to 4). We derived this list of challenges from the literature—for instance, student absenteeism may preclude teachers from engaging with resources and PL (Allensworth & Easton, 2007). Our key independent variables were not highly correlated. The highest correlation was 0.47 between consistency and resources.

The key outcome variable of interest is alignment of teachers' self-reported instruction with content emphasized in the standards. To measure standards-emphasized instruction, we used a modified version of the Surveys of Enacted Curriculum (SEC) approach (Porter, 2002), which has been used in several studies (e.g., Blank, 2004; Polikoff et al., 2011; Webb, 2002, 2007). We asked teachers to report the topics (e.g., adding fractions) and cognitive demands (e.g., memorize, problem solve) that they covered in math and ELA. Trained content experts

then mapped teachers' reported content onto the topics and cognitive demands from each state's standards to determine degree of standards-emphasized instruction.

Analytic Strategy

We used survey jackknife procedures to weight all survey analyses based on state demographics so that the results represent the state population. To answer RQ1, we used one-way ANOVA to assess differences on policy attributes across states in 2019 and differences across years within states on each of the policy attributes, both overall and by subgroups of teachers. We also used one-way ANOVA to assess differences on challenges, resources, and PL by state in 2019. We looked descriptively at the most common challenges teachers reported and the extent to which those top challenges changed over time.

To answer RQ2, we used two-level hierarchical linear models (HLMs), nesting teachers within school, to examine the extent to which instructional supports and teachers' perceptions of their policy environment predict changes in standards-emphasized instruction. Results from log-likelihood ratio tests indicated that a model which nested teachers in schools was significantly different from a linear model for ELA teachers in Texas (alpha level 0.05). For that sample, the school random effect accounted for approximately 17% of the variation in standards-emphasized instruction. For consistency across models, we used a two-level HLM for each model. We ran eight total models: one for each year of survey data, in each subject, in each state. The linear mixed model specification for each regression model was as follows:

$$\begin{aligned} Y_{si} = {} & \beta_{00} + \beta_{01}\,Specificity + \beta_{02}\,Authority + \beta_{03}\,Consistency + \beta_{04}\,Power \\ & + \beta_{05}\,Stability + \beta_{06}\,PDUsefulness\ x\ PDhours + \beta_{07}\,Resources \\ & + \beta_{08}\,Challenges + v_{i0} + \epsilon_{si} \end{aligned}$$

After examining state-representative trends in teachers' perceptions of their policy environments and the association between those perceptions and their standards-emphasized instruction, we turned to the qualitative data to unpack the broad-based patterns in each state to answer RQ3. All interviews were recorded and transcribed. We then coded the interview data for key constructs in our conceptual framework: each of the policy attributes, challenges, resources, and PL. We also added descriptive tags to each interview; this was especially helpful for analyzing teacher interviews, as we noted characteristics such as grade level, content area, and whether the teacher taught particular student populations (e.g., SWDs or ELs).

After finding that specificity was consistently related to standards-aligned instruction in our survey analysis, we next analyzed each state's approach to specificity over time. We started with the first round of state-level interviews, followed by the second, noting the major changes to the way they operationalized specificity (e.g., in their resources, PL offerings) over time. This round of analysis provided us with the state-level context for interpreting the findings from the survey analysis. With this context, we then turned to the case study interviews. We analyzed excerpts from each of the a priori codes, noting key patterns across respondents and looking at differences based on descriptive characteristics of the teachers noted above. We generated key assertions from the patterns that arose from these rounds of analysis (Miles, Huberman, & Saldaña, 2014; Ravitch & Carl, 2016).

Thus, we relied on the survey data to identify broad-based patterns among educators in Texas and Ohio and to assess the extent to which those patterns have changed over time. We then leveraged the interview data to operationalize, explain, and understand the relationships revealed through the quantitative data analysis. Our approach, then, offers both broad-based findings and in-depth examinations of those findings in local context.

Findings

Perceptions of the Policy Environment in Texas and Ohio

In 2019

Survey data indicated that the Texas policy environment for standards-based reform in 2019 was significantly stronger than the Ohio policy environment, and perceived specificity of the standards was the strongest characteristic among Texas teachers. Compared with Ohio teachers, Texas teachers reported, on average, significantly higher levels of specificity, consistency, authority, power, and stability of their policy environment related to CCR standards (Table 3). Notably, Texas teachers' perceptions of the specificity of their CCR standards policies, on average (3.25 out of 4), was significantly higher than all other policy attributes in Texas and Ohio. Thus, the clarity of standards content, expectations, and guidance stood out as a particularly strong among Texas teachers.

At the same time, perceptions of the policy attributes varied across subgroups in Texas. Teachers of SWDs perceived significantly lower specificity than math teachers ($p=0.01$) and reported significantly lower authority of the standards than both ELA and math teachers ($p=0.001$ and $p=0.002$, respectively). In Ohio, perceptions of teachers of SWDs and ELs did not differ significantly from ELA or math teachers. (See Table 5 for the mean values by subgroup for 2019. F statistics and significance levels for these comparisons are not shown in the table.)

[Table 3 here]

In addition, compared to Ohio teachers, Texas teachers, on average, reported fewer challenges and greater resources for CCR standards implementation. Texas teachers also reported, on average, higher amounts of usefulness and quantity of PL (Table 4). However, the usefulness and quantity of PL remained quite low across both states. The maximum value for this

scale (which would indicate that teachers reported receiving 81 or more hours of PL that was very useful) is 20. Thus, while Texas teachers reported receiving on average significantly more and more useful PL than Ohio teachers, the average reported PL in both states was relatively low (6.05 in Texas and 4.91 in Ohio out of 20).

[Table 4 here]

Change and Continuity Over Time

In both states, teachers perceived their policy environment to have become stronger since 2016-17—specifically in terms of authority and power (Table 5). In other words, across both states, teachers reported significantly greater buy-in and support for the standards (authority) and greater accountability structures for CCR standards implementation (power) in 2019 compared with 2016-17. In Ohio, however, teachers' perceptions of the stability of the CCR standards and associated assessments significantly decreased.

[Table 5 here]

When disaggregated by teacher subgroups, survey data in Texas suggested that teachers of different subjects (ELA, math) and serving different populations of students (SWDs, ELs) reported similar strengthening of the policy attributes over time. In contrast, the overall trends in Ohio were driven by changes in math teachers' perceptions: perceptions of ELA teachers, teachers of SWDs, and teachers of ELs did not change significantly over time. (Note, however, the small sample size for Ohio EL teachers.)

At the same time, the top five most commonly reported challenges from teachers in both states did not change from 2016-17 to 2019 (Figure 2). These challenges were: (1) wide range of student abilities to address; (2) inadequate student preparation in prior grades; (3) lack of support from parents; (4) insufficient class time to cover all the content; and (5) student absenteeism and

tardiness. Thus, while the policy environment for CCR standards has improved in both states driven by different subsets of teachers, teachers face consistent challenges across state contexts.

[Figure 2 here]

Connecting the Policy Environment to Instruction

In 2019

In 2019, specificity of standards and curricular materials was positively and significantly associated with more standards-emphasized instruction in ELA and math in Texas and ELA (but not math) in Ohio (Table 6). A one-unit increase on the specificity scale was associated with a 0.179-unit increased in standards-emphasized instruction among Texas ELA teachers, a 0.197-unit increase among Texas math teachers, and a 0.093-unit increase among Ohio ELA teachers. In other words, the greater the specificity of resources (e.g., clarity of content to teach and the order to teach it in), the greater teachers emphasized standards-based content in their instruction. For Texas math teachers in 2019, authority was also positively and significantly related to standards-emphasized instruction (each unit increase in authority was associated with a 0.252-unit increase in standards-emphasized instruction)—in other words, teacher buy-in predicted the extent of their standards-emphasized instruction.

For Ohio math teachers in 2019, our indicator for dosage and usefulness of PL was positively associated with standards-emphasized instruction. Among these teachers, each unit increase in PL is associated with a 0.046-unit increase in standards-emphasized instruction. These math teachers were the only group for which specificity was *not* related to instruction, and the only group in which PL *was* significantly related to instruction. Thus, on the whole, specificity was predictive of instructional alignment in each state, with the exception of math teachers in Ohio, for whom PL was associated with instructional alignment.

[Table 6 here]

Change and Continuity Over Time

The 2019 results were a notable change from 2016-17, during which authority was positively associated with standards-emphasized instruction in ELA in both states while specificity and PL were not significantly related to instruction among any group. While specificity became significantly related to instruction in 2019, our results do not suggest significant changes in teachers' perceptions of specificity over time in either state or among any subgroup of teachers (see Table 5). These results might suggest that while levels of specificity were similar, the role of specificity became important for instructional shifts over time, when CCR standards implementation was well underway in each state.

Factors Influencing Specificity

Guided by the survey data, we then turned to our qualitative data to examine the relationship between specificity and standards-emphasized instruction more closely. Analysis of our qualitative data indicated that state-developed resources and materials, which were prevalent in Texas, were immensely helpful for districts and teachers in their efforts to make the standards more concrete. At the same time, teachers valued opportunities to adapt those resources to suit their students' needs. Embedded and ongoing PL was a space for teachers to adapt resources, but not all teachers were granted such PL opportunities. In this section, we summarize these key findings from our qualitative data.

The Role of the State in Developing Resources

State-developed guidance was a key resource for Texas districts as they worked to implement the standards, whereas Ohio districts struggled without such guidance. In Texas, the

state made substantial efforts to generate resources for districts. By the 2018-19 school year, the state had built up Texas Gateway, an online repository of resources for districts and teachers, such as instructional videos, planning document templates (e.g., pacing guides), and benchmark assessments. State-level administrators also made great efforts to design resources for supporting English-as-a-second-language (ESL) programs, such as a virtual course on ESL instruction, literature reviews on ESL models, and a self-assessment rubric for districts to examine their ESL models. Less had been developed for teachers of SWDs, which state-level administrators indicated they planned to focus on in the future. State leaders characterized these resources as "guidance" and "support" for districts. As one state leader explained, "we try to provide enough information, but without being prescriptive or tying districts' hands in terms of being able to implement or design their own programs in the way that they best see fit." They saw their role as providing specific resources for districts to leverage as they developed localized implementation plans.

Leaders from our Texas case study district put available resources to use. For each subject, instructional specialists created a pacing guide that specified what standards to teach and when, with common assessments at the end of each unit. Teachers regularly used these resources. As one teacher explained, "We follow our district's pacing guide. So all we have to make sure is that we're covering the TEKS that we need to be covering, which is pretty much fine because we just constantly spiraling and teaching all the TEKS anyways." Further, in interviews, teachers of ELs noted improvements in the consistency among resources like ELA and English language proficiency standards. Thus, district leaders, aided by state resources, made significant efforts to make the content, timing, and order of CCR standards coverage clear to teachers, which reached teachers in the form of curricular resources.

In contrast, Ohio state leaders were cautious of providing too much detailed guidance. Relative to Texas, Ohio state leaders provided minimal resources for CCR standards implementation. The state focused on developing a Model Curriculum; they did not conduct a textbook review process or develop additional resources. Explaining this decision, one official in 2016 stated, "we didn't develop lots of details in expectations for learning because PARCC [The Partnership for Assessment of Readiness for College and Careers] was doing that."[1] Officials saw assessments as the means for clarifying CCR standards content and relied on these PARCC assessments to serve as guidance for teachers. They also did not want to create inconsistency with the state assessment. State leaders also often cited "local control" as a rationale for avoiding detailed guidance. In 2016, one official stated, "We're not that prescriptive because we can't be." This approach did not change over time; in 2019, an official said, "That might not be the right approach, but at least, it's our approach now, local control, and the way it is, we identify best practices, and you guys implement them." State leaders in Ohio saw adhering to the principle of local control as critical to implementation—which in their case, translated to a limited amount of state-developed resources and guidance.

District-level educators in our case study district were frustrated by the lack of guidance from the state department of education as they worked to facilitate standards implementation. Educators described policies as "incoherent," and stated that they lacked sufficient common planning time to increase coherence and consistency across curricular materials. One teacher said, "The data was just too much. There needed to be more discussion on implementation and teaching practices and strategies. And less discussion on the numbers [from diagnostic and other tests]." Both state and district leaders struggled to provide specificity around the core curriculum.

[1] Importantly, shortly after this these initial interviews, the Ohio state legislature decided to withdraw from PARCC. However, the attention to assessments as a guide for instruction maintained.

While the state departments of education created a statewide context for standards guidance, districts and schools then implemented those resources within their district contexts. In the next section, we describe the ways that our two case study districts operationalized the resources from their states.

Resources with Opportunities for Adaptation

While specific resources supported standards-emphasized instruction, teachers across both states valued having the autonomy to adapt specific resources as needed to suit their students' needs. As one elementary Texas teacher explained, "I don't feel really restricted [in what I teach]. Thankfully here in this school I feel supported and can plan activities that I like." Another Texas teacher noted: "We have a lot of freedom at [our school]. So as long as we're aligned with the TEKS, it's okay. Whatever we want to do." For these teachers, the resources provided structure, and their school leaders' approach to implementation gave teachers sufficient autonomy to adapt as needed.

Ohio teachers also felt this balance, but only after resistance to an overly-prescribed approach to curriculum. Initially, in our case study district, teachers were provided with a curriculum and "told they needed to follow it step by step, activity by activity, and everybody needed to be on the same thing every day." According to one participant, educators "never bought into it." More recently, teachers were allowed to lesson plan as they saw fit. They explained that they "pull what we think is necessary for the kids," and removed material such as narrative writing that was not on the state test. Increasing the level of flexibility while still providing specificity improved morale at the school, as teams of teachers were given more decision-making authority.

But not all teachers experienced the right balance between autonomy and top-down guidance. In Texas, several high school teachers felt constrained by the school pacing guides, noting the need to follow them due to "accountability." Teachers also spoke of the unreasonable pacing in district guidance. One high school math teacher explained, "We can't get through everything. It's impossible. And I, I work hard trying to get through everything and I still fall short every time." Thus, institutional structures—such as accountability demands and time constraints—prohibited teachers from having the autonomy with pacing guides that they felt was necessary to do their work well.

Lack of flexibility in the pacing guide was particularly challenging for teachers who taught students who were behind grade level, teachers of ELs, and special education teachers. These teachers described either not feeling able to remediate or ignoring the standards to focus on what they thought was appropriate for their students. A high school math teacher explained, "This year, I noticed that those scores were a lot lower than they had been in previous years, which let me know I'm going to have to do a lot of remediation. The curriculum that was already set in place didn't give me that time." A teacher of SWDs explained, "We're so far below the standard on a normal day that you just don't even think about the standard." For these teachers, a mismatch between their curricular documents and their student needs led them to make concessions in meeting their student needs or to ignore the guidance altogether.

Access to Ongoing, Embedded PL

Collaborative PL opportunities enabled teachers to engage with specific resources and offered an opportunity for teachers to discuss how to translate specific guidance into practice, but such opportunities were in short supply across both case study districts, especially for teachers of non-tested grades and special populations. In our Texas case study district, only teachers of

tested subjects or grades had time built into their schedules for professional learning communities (PLCs). PLCs were seen as spaces to share resources and materials, further supporting specificity of instructional standards, as well as consistency across classrooms. As one teacher of a tested subject explained, "We generally try to, whatever we decide as a team, stick with that though, and be the same across the board. So that if a kid ends up moving classes, they're still talking about the same text." Teachers of non-tested subjects or grades and teachers of special populations, however, had limited opportunities to connect with their colleagues through sustained PL opportunities. For example, teachers of ELs reported having attended initial English as a second language certification trainings, but these opportunities did not sustain throughout the school year.

In our Ohio case study district, teachers expressed similar concerns to some Texas teachers about the lack of specific PL. Teachers saw instructional coaches as particularly helpful, when they were available**,** so the district recently switched to an embedded model so that coaches had more time in their school buildings. As in Texas, teachers wanted more PL on how to make modifications for SWDs. They were provided with a suite of options, but according to a district administrator, "providing professional development to the regular content teacher has been a challenge…sometimes they're scared to use a program or don't feel comfortable." Educators that the team interviewed preferred to have more planning time rather than more district-led PL. In general, both districts lacked a comprehensive infrastructure of ongoing PL for teachers, though when this infrastructure was available, teachers leveraged it for planning and discussing instruction.

Limitations

Several limitations to our study should be considered in the interpretation of our findings. First, we report from only a single case study district in each state. Though we used a systematic process for case study site selection, these districts are not necessarily reflective of approaches to standards implementation across each state. Further, though our study offers a significant amount of data across these two states, we do not have detailed classroom observational data and therefore cannot make distinctions in the nature of standards implementation—e.g., superficial implementation versus deep meaningful change (Coburn, 2001; Coburn, Hill, & Spillane, 2016; Yurkofsky, 2020). Related, we also did not assess distinctions in teacher understanding of the standards. Since our survey data is self-reported, teachers who reported similar emphasis on standards-emphasized content could be interpreting the standards differently. Still, our approach to asking about standards-emphasized instruction on our survey (i.e., asking about the emphasis on specific content, rather than questions that ask more generally about how well aligned teachers believe their instruction to be) partially alleviates this concern. Finally, we do not have teacher interview data from the start of the study, so we lack the nuanced teacher perspective on change over time.

Despite these limitations, our study provides a useful longitudinal perspective on ongoing CCR standards implementation efforts. Our mixed-methods approach allows us to not only provide overarching patterns over time across our two focal states, but also to delve into some potential explanations for the broad patterns using interview and case study data.

Discussion and Conclusions

These findings, on the one hand, are promising. The data show that in both states, teachers' perceptions of their policy environment around CCR standards implementation have,

on the whole, improved over time—at least prior to the Covid-19 pandemic. Triangulating across data sources, we find suggestive evidence that state-level guidance and curricular resources play an important role in influencing instruction, suggesting value in the efforts that have been made at the state level to support CCR standards implementation, especially in Texas.

Importantly, our findings suggest that state context plays an important role in shaping districts' policy contexts. In Ohio, district leaders were frustrated with the lack of state guidance at their disposal for supporting implementation. In Texas, the state's robust resource repository for districts aided in our case study district's efforts to make standards implementation clear and concrete for teachers. Thus, the state policy context, though not the only factor influencing instruction, does indeed shape the district policy environment that teachers operate within.

Our findings also provide helpful context about CCR standards implementation over time—specifically, while buy-in and support for the standards (authority) might be important in initial implementation efforts (and at least in the case of Texas math teachers, remains important), specificity—providing detailed guidance—becomes critical as CCR standards implementation is well underway. These findings resonate with other scholars' conclusions that standards-aligned curriculum is a key lever in supporting teachers' efforts to teach instructional standards (Hill, 2001; Polikoff, 2012, 2015; Spillane, 2004). Further, these data were collected prior to the Covid-19 pandemic; we hypothesize that specificity may be even more critical for educators teaching in a virtual format as evidenced by the most recent national survey of educators (Diliberti, Schwartz, & Grant, 2021)

At the same time, our findings also point to areas of particular challenge for standards implementation, which are salient for both in-person and online instruction. First, it is important to consider the tradeoffs to an emphasis on specificity. Our findings suggest that specificity of

standards and curricular materials is key to supporting standards-emphasized practice. At the same time, our case study findings suggested that lack of time, autonomy, and collaborative structures for adapting specific resources leaves little room for teachers to meet their students' unique needs, especially for teachers who do not teach tested subjects and those who teach ELs or SWDs. As Hamilton et al. (2008) once noted about standards-based reform, "Alignment and autonomy may become competing goals" (p. 6). Providing districts and teachers with specificity requires attention to the right balance between top-down guidance and localized adaptation. These findings resonate with curricular studies that, while noting the importance of curriculum for supporting standards-aligned instruction, identify key challenges in doing so, such as misalignment between curriculum and standards, teachers' inconsistent use of curricular materials, and lack of PL that would provide teachers with ample time to learn how the curriculum supports standards implementation (Allen & Penuel, 2015; Pak et al., 2020; Polikoff, 2018).

Further, embedded and ongoing PL opportunities linked to instructional goals and meeting student needs allow for localized adaptation, yet we rarely saw instances of districts establishing such structures for all teachers due to capacity constraints and a prioritization of teachers of tested subjects. Leveraging embedded and ongoing PL and opportunities for local adaptation may be a route to addressing some of teachers' ongoing concerns about standards. It is also important to highlight that teachers in both states reported facing the *same* challenges in 2016 and 2019, and the nature of these challenges centered not on resources, supports, time or other institutional or organizational factors, but on students—e.g., having students in class with a range of needs and inadequate student preparation in prior grades. These challenges underscore the importance of ensuring not just that teachers have opportunities to make curricular

adaptations, but that these opportunities are institutionalized through a robust PL infrastructure. These challenges also point to the enduring tension between standardization and individualization of instruction (Desimone et al., 2019), and suggest that central to standards implementation is support for teachers to individualize instruction.

This study offers a unique longitudinal look at CCR standards implementation, revealing ongoing implementation work that shows improvement amidst persistent structural challenges. Ongoing and rapid shifts in the nature of teaching and learning, especially as online learning has become more prevalent, may alter the course of CCR standards implementation. Moving forward, it will be important to understand the continued evolution of CCR standards implementation and the efforts that states and local education agencies make to achieve the right balance between autonomy and clear guidance, to provide PL that responds to all teachers' needs, and to address the enduring challenges that teachers face.

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Tables

Table 1. Demographic and Policy Features by State

Feature	Texas	Ohio
PreK-12 enrollment	5,433,471	1,695,762
Number of school districts	1,025	619
Number of public schools	8,774	3,500
Number of public school teachers	356,877	98,912
Percentage of students of color	72.6%	30.7%
Percentage of students eligible for free-or-reduced-price lunch	58.7%	46.0%
Percentage of students with disabilities	9.8%	16.0%
Percentage of English learners	18.0%	3.2%
Rigor of ELA/math standards	6 (ELA) 4 (Math)	4 (ELA) 3 (Math)
CCR standards	Texas Essential Knowledge and Skills (TEKS)	Ohio's Learning Standards (OLS)
CCR standards adoption and implementation	TEKS adopted in 1997 and first implemented in 1998-99. ELA TEKS most recently revised in 2017[a] Math TEKS most recently revised in 2012 and fully implemented in 2014-15	OLS adopted in 2010 and fully implemented in the 2014-15 school year
Implementation of CCR-aligned assessments	CCR-aligned State of Texas Assessment of Academic Readiness (STAAR) fully implemented in 2015	CCR-aligned Ohio Achievement Assessment first implemented in 2015 (originally part of the PARCC consortium)

Notes. ELA = English language arts; CCR = college- and career-readiness. Demographic data is based on most recent NCES data (nces.ed.gov). Rigor of ELA/math standards is based on Carmichael, Martino, Porter-Maggee, and Wilson (2010). Further details on CCR standards and assessment policies in each state can be found at [blinded for review].

[a] https://tea.texas.gov/academics/curriculum-standards/teks/texas-essential-knowledge-and-skills

Table 2. Demographics of Case Study Districts

Demographic	Ohio	Texas
Enrollment	~10,000	~15,000
Number of schools	12-17	22-27
Number of teachers	500	1,000
Percentage of students of color	30%	60%
Percentage of students who are economically disadvantaged	30%[a]	19%[b]
Percentage of students with IEPs	14%	8%
Percentage of students with disabilities	4%	4%
Percentage of English learners	5%	18%
4-year graduation rate	95%	75%

Note. Demographic data is from NCES (nces.ed.gov) and represents the 2018-19 school year, unless otherwise noted. Numbers are approximated to preserve the anonymity. [a] Source: Ohio district website, 2019-20 data. [b] Source: Texas case study district website, 2019-20 data.

Table 3. 2019 Teacher Policy Attributes Across States

Attribute	TX		OH		Mean Difference	*F* Value	Sig
	n	Mean	n	Mean			
Specificity	329	3.25 (0.07)	431	2.48 (0.12)	0.77**	26.22	0.00
Authority	330	2.86 (0.03)	431	2.55 (0.05)	0.31**	24.30	0.00
Consistency	328	2.87 (0.05)	430	2.64 (0.04)	0.23**	19.00	0.00
Power	329	3.05 (0.04)	432	2.70 (0.06)	0.35**	20.60	0.00
Stability	328	2.54 (0.13)	430	2.27 (0.06)	0.27*	4.14	0.04

Note. Numbers in parentheses are standard errors. * p<0.05 ** p<0.01

Table 4. 2019 Challenges, Resources, and PL Across States

	TX		OH		Mean Difference	*F* Value	Sig
	n	Mean	n	Mean			
Challenges	330	2.25 (0.06)	435	2.43 (0.06)	-0.18*	4.33	0.04
Resources	313	3.11 (0.06)	403	2.77 (0.07)	0.34**	12.70	0.00
PL	285	6.05 (0.31)	322	4.91 (0.28)	1.14*	7.48	0.01

Note. Numbers in parentheses are standard errors. * p<0.05 ** p<0.01

Table 5. Teacher Policy Attributes Within States Over Time and by Subgroup

Attribute	TX All Teachers 2019 n	TX All Teachers 2019 Mean	TX All Teachers 2016-17 n	TX All Teachers 2016-17 Mean	Mean Difference	*F* Value	Sig	OH All Teachers 2019 n	OH All Teachers 2019 Mean	OH All Teachers 2016-17 n	OH All Teachers 2016-17 Mean	Mean Difference	*F* Value	Sig
Specificity	329	3.25 (0.07)	585	3.14 (0.07)	0.11	1.05	0.30	431	2.48 (0.12)	405	2.38 (0.13)	0.1	0.32	0.57
Authority	330	2.86 (0.03)	583	2.56 (0.05)	0.3**	18.43	0.00	431	2.55 (0.05)	402	2.3 (0.04)	0.25**	15.61	0.00
Consistency	328	2.87 (0.05)	564	2.82 (0.04)	0.05	0.59	0.44	430	2.64 (0.04)	379	2.71 (0.04)	-0.07	1.52	0.22
Power	329	3.05 (0.04)	586	2.68 (0.07)	0.37**	13.76	0.00	432	2.7 (0.06)	405	2.5 (0.06)	0.2*	5.74	0.02
Stability	328	2.54 (0.13)	579	2.51 (0.07)	0.03	0.06	0.80	430	2.27 (0.06)	398	2.44 (0.06)	-0.17*	4.18	0.04

Attribute	TX ELA 2019 n	TX ELA 2019 Mean	TX ELA 2016-17 n	TX ELA 2016-17 Mean	Mean Difference	*F* Value	Sig	OH ELA 2019 n	OH ELA 2019 Mean	OH ELA 2016-17 n	OH ELA 2016-17 Mean	Mean Difference	*F* Value	Sig
Specificity	96	3.26 (0.11)	207	3.16 (0.12)	0.1	0.30	0.59	163	2.39 (0.25)	157	2.38 (0.21)	0.01	0.00	0.98
Authority	96	2.98 (0.06)	207	2.7 (0.09)	0.28*	4.15	0.04	163	2.64 (0.07)	157	2.43 (0.08)	0.21	3.60	0.06
Consistency	96	3.68 (0.10)	202	2.85 (0.09)	0.83**	31.13	0.00	163	3.08 (0.20)	146	2.8 (0.05)	0.28	1.67	0.20
Power	96	3.06 (0.07)	207	2.73 (0.1)	0.33*	4.66	0.03	163	2.77 (0.13)	157	2.5 (0.08)	0.27	3.11	0.08
Stability	96	2.63 (0.22)	203	2.43 (0.13)	0.2	0.68	0.41	163	2.45 (0.14)	153	2.44 (0.08)	0.01	0.01	0.93

Attribute	TX Math							OH Math						
	2019		2016-17		Mean Difference	*F* Value	Sig	2019		2016-17		Mean Difference	*F* Value	Sig
	n	Mean	n	Mean		*F* Value	Sig	n	Mean	n	Mean		*F* Value	Sig
Specificity	115	3.43 (0.07)	250	3.24 (0.09)	0.19	1.77	0.18	167	2.64 (0.11)	166	2.4 (0.14)	0.24	1.82	0.18
Authority	116	2.94 (0.06)	248	2.52 (0.05)	0.42**	24.48	0.00	167	2.55 (0.08)	163	2.24 (0.06)	0.31**	9.88	0.00
Consistency	114	3.67 (0.13)	243	2.81 (0.04)	0.86**	65.55	0.00	167	3.00 (0.13)	158	2.57 (0.07)	0.43**	8.71	0.00
Power	115	3.05 (0.08)	250	2.65 (0.09)	0.4*	7.79	0.01	168	2.76 (0.07)	166	2.44 (0.07)	0.32**	10.10	0.00
Stability	114	2.54 (0.17)	249	2.61 (0.07)	-0.07	0.18	0.67	167	2.02 (0.08)	166	2.47 (0.12)	-0.45**	9.79	0.00

Attribute	TX SWD							OH SWD						
	2019		2016-17		Mean Difference	*F* Value	Sig	2019		2016-17		Mean Difference	*F* Value	Sig
	n	Mean	n	Mean		*F* Value	Sig	n	Mean	n	Mean		*F* Value	Sig
Specificity	60	2.98 (0.12)	78	2.87 (0.13)	0.11	0.33	0.57	79	2.37 (0.12)	67	2.35 (0.14)	0.02	0.01	0.92
Authority	60	2.60 (0.08)	79	2.29 (0.12)	0.31*	4.01	0.05	79	2.43 (0.10)	66	2.17 (0.1)	0.26	3.19	0.08
Consistency	60	3.30 (0.16)	71	2.8 (0.07)	0.5**	9.34	0.00	79	2.80 (0.19)	59	2.83 (0.1)	-0.03	0.01	0.91
Power	60	3.02 (0.10)	79	2.61 (0.07)	0.41**	11.57	0.00	79	2.52 (0.17)	67	2.57 (0.1)	-0.05	0.06	0.81
Stability	60	2.45 (0.21)	78	2.45 (0.2)	0.0	0.00	0.99	79	2.28 (0.12)	64	2.39 (0.13)	-0.11	0.36	0.55

Attribute	TX EL							OH EL						
	2019		2016-17		Mean Difference	*F* Value	Sig	2019		2016-17		Mean Difference	*F* Value	Sig
	n	Mean	n	Mean		*F* Value	Sig	n	Mean	n	Mean		*F* Value	Sig
Specificity	58	3.30 (0.13)	49	3.2 (0.13)	0.1	0.28	0.60	22	2.42 (0.30)	15	2.23 (0.41)	0.19	0.15	0.70
Authority	58	2.86 (0.05)	49	2.8 (0.1)	0.06	0.33	0.57	22	2.52 (0.11)	16	2.6 (0.36)	-0.08	0.05	0.82
Consistency	58	3.63 (0.11)	48	2.78 (0.12)	0.85**	25.86	0.00	21	3.34 (0.23)	16	2.7 (0.39)	0.64	2.23	0.14
Power	58	3.03 (0.08)	50	2.67 (0.08)	0.36**	10.77	0.00	22	2.64 (0.15)	15	2.68 (0.28)	-0.04	0.02	0.89
Stability	58	2.51 (0.12)	49	2.5 (0.19)	0.01	0.00	0.98	21	2.71 (0.34)	15	3.09 (0.29)	-0.38	0.63	0.43

Note. F-statistic values represent the comparison of the mean values for a given attribute in each survey year by state (e.g., a comparison of the mean value for specificity in Texas in 2016/17 compared to 2019). * $p<0.05$ ** $p<0.01$

Table 6. HLM Results

	TX				OH			
	2016-17		2019		2016-17		2019	
	ELA	Math	ELA	Math	ELA	Math	ELA	Math
Elementary	-0.178**	-0.027	-0.179*	0.207*	-0.151*	0.245*	-0.152*	0.110
	(0.052)	(0.103)	(0.078)	(0.084)	(0.059)	(0.117)	(0.071)	(0.105)
Specificity	0.042	0.049	0.179**	0.197**	0.002	-0.002	0.093*	0.085
	(0.031)	(0.064)	(0.059)	(0.074)	(0.029)	(0.058)	(0.046)	(0.074)
Authority	0.147**	0.001	0.101	0.252**	0.123*	0.002	0.025	0.127
	(0.045)	(0.069)	(0.074)	(0.085)	(0.049)	(0.098)	(0.082)	(0.112)
Consistency	0.036	-0.007	0.010	0.087	0.112	-0.062	0.006	-0.084
	(0.049)	(0.087)	(0.061)	(0.077)	(0.061)	(0.109)	(0.049)	(0.078)
Power	0.023	0.117	0.063	0.012	0.05	-0.178	0.038	0.002
	(0.04)	(0.063)	(0.079)	(0.082)	(0.048)	(0.099)	(0.081)	(0.108)
Stability	0.002	-0.077	0.034	0.021	0.017	0.103	0.046	-0.038
	(0.025)	(0.043)	(0.036)	(0.037)	(0.03)	(0.056)	(0.037)	(0.056)
Resources	-0.014	0.257**	-0.006	-0.024	0.011	0.063	0.102	0.104
	(0.047)	(0.086)	(0.064)	(0.079)	(0.058)	(0.096)	(0.062)	(0.100)
Challenges	0.056	0.140*	0.058	0.053	-0.008	-0.014	-0.013	-0.068
	(0.04)	(0.068)	(0.067)	(0.063)	(0.054)	(0.098)	(0.053)	(0.095)
PL	0.012*	0.008	0.014	0.013	0.006	-0.002	0.006	0.046**
	(0.006)	(0.01)	(0.009)	(0.008)	(0.007)	(0.016)	(0.010)	(0.014)
Constant	2.659**	2.136**	2.128***	1.108**	2.554**	3.479**	2.607***	2.586***
	(0.228)	(0.395)	(0.398)	(0.391)	(0.279)	(0.512)	(0.271)	(0.556)
N	248	194	125	128	163	102	150	102

Note. Standard errors in parentheses.

* p<0.05 ** p<0.01 *** p<0.001

Figures

Figure 1. Conceptual Framework

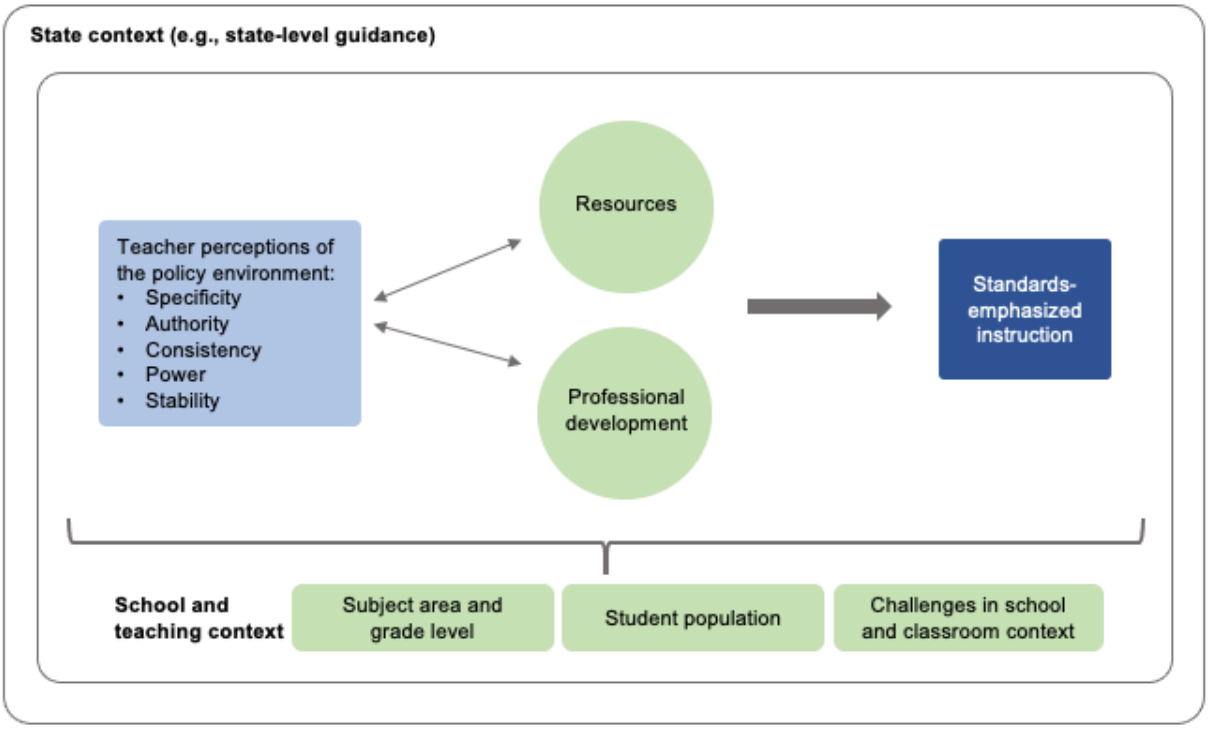
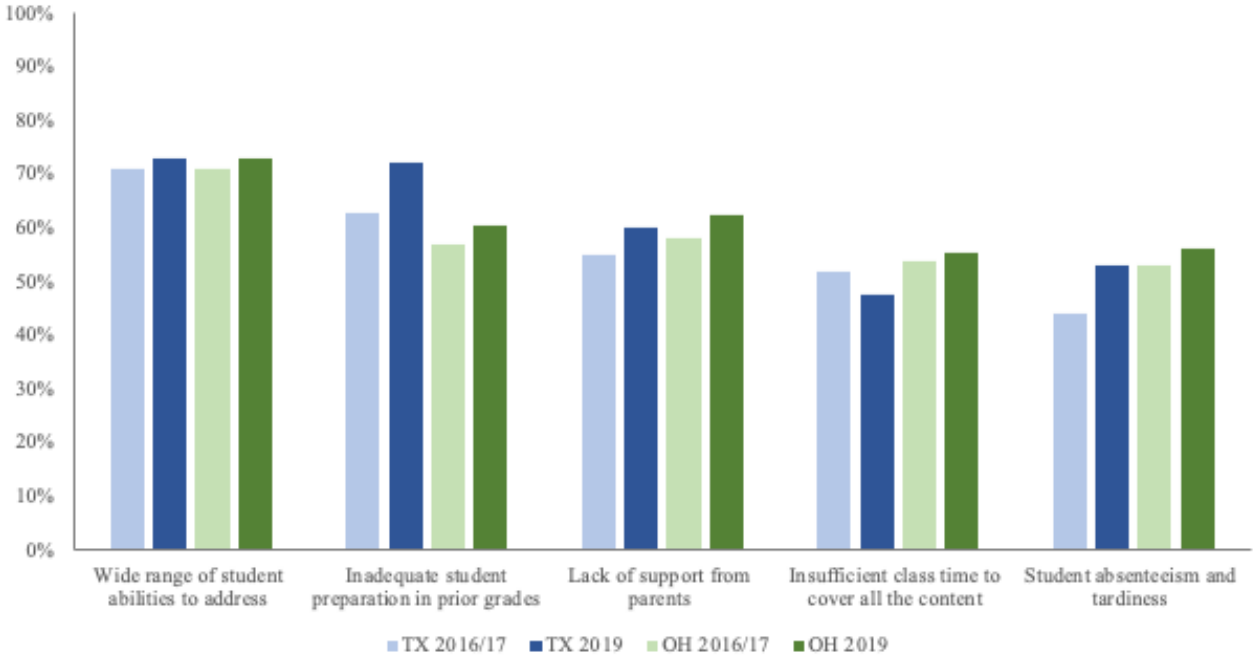


Figure 2. Challenges Over Time By State



Note: Percentages represent the total percentage of teachers in each state who identified the challenge as a "moderate" or "major challenge."