

Unpacking the Accountability Theory of Action Implementing School Improvement Strategies



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About This Research Brief

This research brief is part of a [series of briefs](#) within the broader *Study of the Impact of CSI Designation in ESSA Accountability Systems*. In this brief, we explore the strategies that low-performing schools implement to improve school performance and student outcomes.¹

Study Overview

Our study aims to understand whether school accountability systems operate as intended under the most recent federal education law, the Every Student Succeeds Act (ESSA). In addition, we assess whether student outcomes improve in schools identified for Comprehensive Support and Improvement (CSI), which represent the lowest performing 5% of Title I schools² and all public high schools with graduation rates below 67%. To do so, we partnered with three states (California, Florida, and Ohio) and performed several activities, including analyzing administrative data provided by the states, administering and analyzing a principal survey, and conducting and analyzing interviews with district administrators in each state. More information about the study's design and methods are available in [the first brief](#), and results for each survey item are included in a technical compendium.

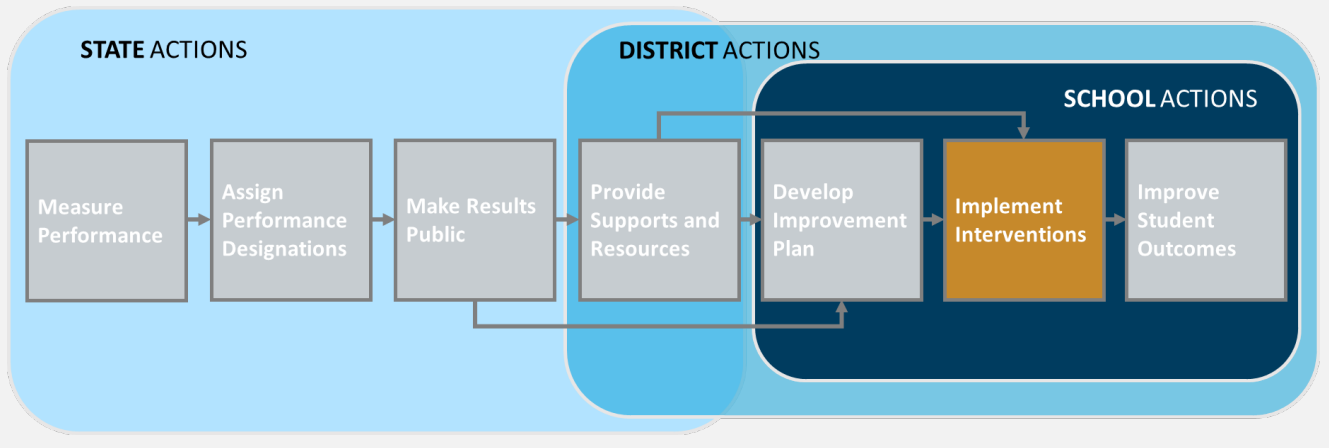
The effectiveness of accountability systems is contingent on their ability to induce school-level improvement actions aimed at boosting student outcomes. According to the accountability theory of action, this goal is achieved through several steps: assessing school performance, assigning

Key Findings

- Schools used divergent approaches to improvement, with some focusing on a single strategy and others adopting many strategies.
- Across all schools, the most used improvement strategies were those that emphasized data-driven instruction, student well-being, and academic support for struggling students.
- With a few exceptions, Comprehensive Support and Improvement (CSI) and non-CSI schools largely emphasized the same strategies.
- The strategies principals considered most promising were using data to inform decision making and addressing students' social-emotional or other health needs.
- When investigating evidence-based strategies, schools favored compliance with state or district requirements and local sources of information over federally recommended resources.

performance designations, publicly sharing results, and offering support and resources (see Exhibit 1). However, low-performing schools often struggle with selecting, sequencing, and managing these actions due to limited capacity, resources, and shifting priorities in federal law.

Exhibit 1. Accountability Theory of Action



Over time, federal policy has vacillated from providing explicit checklists of required actions under the No Child Left Behind (NCLB)³ Act to allowing wide latitude in the selection of improvement activities under ESSA. Indeed, ESSA only requires that CSI schools conduct a needs assessment and develop a school improvement plan, allowing districts and schools to focus on improvement strategies aligned with their needs and sequenced in a manner that facilitates thoughtful implementation.

Despite these shifts in federal policy, research on school improvement has identified a core set of practices for sustainable improvement. Although there is considerable consensus around the key activities, these practices are often organized differently by researchers and policymakers.⁴ For this brief, we have grouped improvement strategies into three broad categories as follows:

Curriculum and instructional practice. Often described as the technical core of schooling, effective strategies under this domain may include the adoption of evidence-based instructional programs in math^{5,6} or literacy,^{7,8} practices to support English language acquisition,⁹ individualized approaches for students with disabilities (SWDs),¹⁰ high-dosage tutoring,^{11,12} and extended learning opportunities, such as summer school programs¹³ and afterschool programs.¹⁴

School climate and culture. In addition to changing instructional practices, low-performing schools often tackle school climate and culture,^{15,16} implementing strategies such as social-emotional learning (SEL) supports, schoolwide student behavior plans, enrichment opportunities, family engagement, and wraparound services.

Human capital. Strategies under this domain include improving the selection, placement, development, and retention of high-quality personnel^{17,18,19} as well as strategies to support and

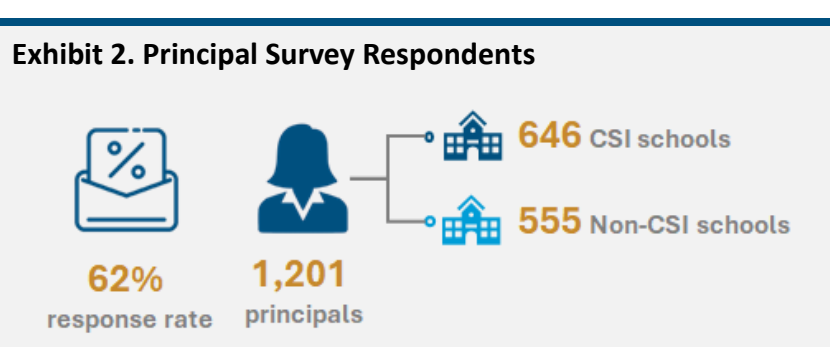
motivate staff, such as professional learning opportunities, financial incentives, and principal autonomy over school-based decision making on budget, staffing, curriculum, and other decisions.

Although a diverse range of strategies has proven important for improving schools, introducing all of these strategies simultaneously likely exceeds a school’s capacity. Consequently, schools must make decisions about which strategies to prioritize at different points in their improvement efforts, and which strategies most closely align with their students’ needs.

In this brief, we investigate how low-performing schools respond to accountability information in terms of the school improvement strategies they adopt, using data from the study’s principal survey administered during the 2021–22 school year (see Exhibit 2). More specifically, it addresses the following four interrelated research questions:

1. How are low-performing schools approaching school improvement in the ESSA policy context?
2. On what school improvement strategies do low-performing schools focus, and do they differ between CSI and non-CSI schools?
3. Which of these strategies do principals report to be most promising?
4. What sources of information do low-performing schools consider in selecting evidence-based school improvement strategies, and do they differ between CSI and non-CSI schools?

The analyses described in this brief encompassed all school survey respondents, including those from both CSI and non-CSI schools. The non-CSI schools sampled were among the lowest performing in their respective states, although they did not receive the federal CSI



designation. Regardless of their CSI status, all surveyed schools in these three states received information signaling their low performance: Hence, it is reasonable to infer that all surveyed schools should have implemented some improvement strategies in response to state accountability data.

Study Findings

Approaches to School Improvement

Although federal policy often portrays school improvement as a rational, linear process, it is, in fact, a complex and messy process that involves frequent shifts in direction. To enhance student outcomes, school leaders actively engage in conducting needs assessments, analyzing data trends, and selecting appropriate interventions. Yet, external factors—such as state policies, local politics, leadership turnover, changing demographics, and technology trends—can shift a school’s trajectory.

Schools adopt different approaches to school improvement. Some may concentrate on a few key strategies, sequencing their efforts over time. Others, fueled by a profound sense of urgency, may feel compelled to put out multiple fires at once. Some schools might ignore signs of low performance and disengage with accountability pressures to improve altogether.

To understand how schools approached the improvement process under ESSA accountability, we conducted a latent class analysis²⁰ of principal survey responses. Specifically, this analysis was based on survey items that asked principals to report the improvement strategies they prioritized during the 2021–22 school year. The analysis identified six distinct groups of schools, each with different emphases (see Exhibits 3 and 4).

Schools exhibited divergent approaches to school improvement, with one group focusing on just one strategy, on average, and another group embracing 16 strategies, on average.²¹ However, neither of these extremes is advisable. Implementing a set of improvement activities is an expected response for low-performing schools to better meet students’ needs. It appears, however, that one in eight schools in our sample failed to heed the signals of the accountability system and are engaged in almost no improvement efforts. On the other end of the spectrum, an excess of uncoordinated improvement activities is a well-documented challenge in low-performing schools. This approach seldom leads to improved outcomes,²² and placing a “major focus” on 16 strategies, or more in some cases, is likely untenable.

Exhibit 3. Overview of School Classifications of Improvement Approaches

Classification	Number and Percentage of Schools	Average Number of Strategies With Major Emphasis	Primary Strategies
Limited Action	151 (13%)	1	No primary strategies
Student Wellness	248 (21%)	5	Addressing students' social, emotional, or health needs; discipline; and attendance
Data & Instruction	205 (17%)	5	Using student achievement data to inform instruction and school improvement
Student Wellness & Teacher Learning	146 (12%)	9	Social-emotional supports for students and professional development for teachers
Instruction & Student Wellness	282 (23%)	11	Using data, supporting struggling students, standards alignment, and social-emotional supports for students
Everything, All at Once	169 (14%)	16	All strategies except increasing instructional time, reducing class size, removing teachers who are ineffective, and adding new staff positions

Note. N = 1,201 respondents.

Between the two extremes of inaction and exuberance, schools tended to cluster around different, seemingly more focused sets of school improvement strategies. Two sets of schools reported placing major focus on an average of just five improvement strategies: one set emphasizing students (social-emotional health and discipline) and another set focusing on instruction (use of data to inform instructional decisions and aligning instruction with standards). The smallest set, comprising 12% of schools, appeared to have a dual focus on both students' and teachers' well-being. The final group, which formed the largest segment of the sample (23%), reported a major emphasis on 11 improvement strategies. Although this is not as high as the "everything, all at once" set of schools, implementing 11 strategies is still a significant undertaking. Most schools would likely find it challenging to implement this many strategies effectively unless the change process is exceptionally well managed. Given that a recent meta-analysis of school improvement interventions found that replacing ineffective teachers was one of the most effective approaches²³, it is notable that the surveyed schools were least likely to engage in human capital interventions (see Exhibits 3 and 4).

Exhibit 4. Detail of School Classifications of Improvement Approaches

		Limited Action	Student Wellness	Data & Instruction	Student Wellness & Teacher Learning	Instruction & Student Wellness	Everything, All at Once ^a
Curriculum and Instructional Practice	Using student achievement data to inform instruction and school improvement	5%	43%	83%	50%	94%	99%
	Aligning curriculum and instruction with standards and/or assessments	3%	25%	68%	32%	88%	99%
	Implementing new instructional approaches or curricula in reading/ELA	3%	9%	31%	20%	78%	96%
	Implementing new instructional approaches or curricula in mathematics	1%	12%	23%	12%	64%	94%
	Providing additional instruction to students who are struggling academically	5%	44%	51%	49%	98%	97%
	Implementing instructional strategies targeting students with disabilities	9%	25%	22%	35%	75%	96%
	Implementing instructional strategies targeting English learners	2%	21%	27%	36%	56%	78%
	Increasing instructional time for all students	2%	4%	6%	10%	22%	55%
	Providing high-dosage tutoring to individual students or small groups of students	5%	25%	18%	30%	58%	72%
	Offering smaller class sizes	13%	21%	3%	30%	25%	54%
	Implementing strategies for increasing family and community engagement	3%	25%	5%	63%	40%	96%
Culture and Climate	Implementing strategies to address students' social, emotional, or health needs	14%	93%	21%	95%	79%	97%
	Implementing strategies to improve student behavior, discipline, or safety	2%	71%	19%	84%	64%	97%
	Implementing strategies to improve student attendance	6%	59%	13%	69%	61%	96%
Human Capital	Increasing the intensity, focus, or effectiveness of PD for teachers	3%	2%	22%	95%	51%	98%
	Increasing the intensity, focus, or effectiveness of PD for school leaders	4%	2%	7%	66%	30%	95%
	Implementing strategies to attract and retain effective teachers	5%	7%	15%	49%	37%	97%
	Removing teachers who are ineffective	5%	15%	12%	30%	27%	67%
	Adding new staff positions	6%	13%	5%	32%	23%	62%

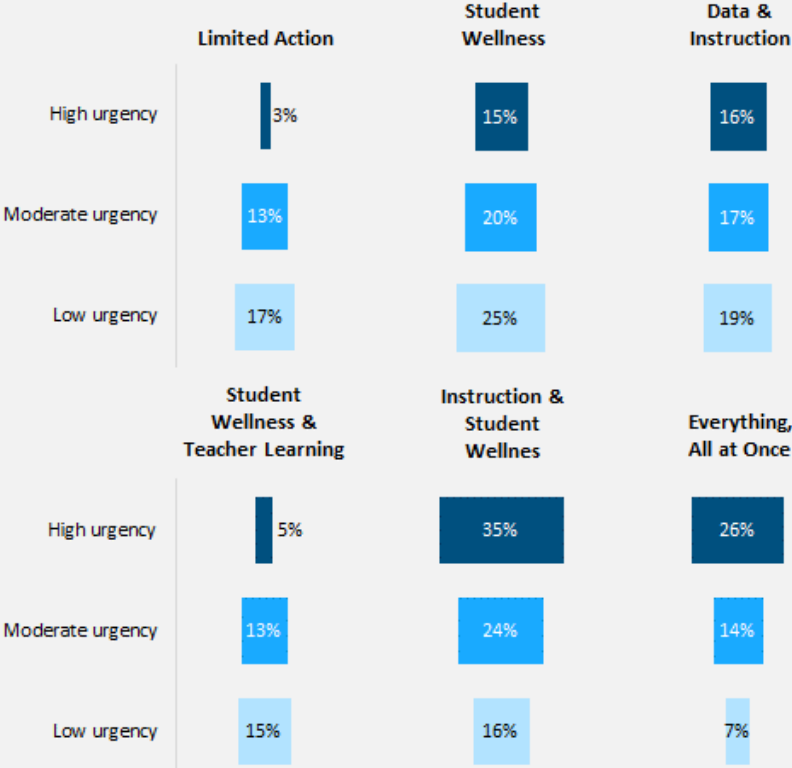
Note. N = 1,201 respondents. ELA = English language arts; PD = professional development.

^aSchools in this category reported placing a major focus on an average of 16 of the 19 improvement strategies included in the principal survey. Cells do not equal 100% as not all schools within this category necessarily adopted all 19 strategies.

Given the striking differences in approaches to school improvement—especially between the “limited action” and “everything, all at once” groups—we expected to find noteworthy differences in school characteristics. However, in many ways, these schools are similar. Across the groups, we detected no noteworthy differences with regard to CSI status, urbanicity, charter school status, and most student demographic groups. Nor did the sets of schools appear to differ in terms of principal experience and perceived challenges, as reported by survey respondents. Given that accountability policy is intended to stimulate changes in behavior among adults in CSI schools, one might have expected CSI schools to engage in different school improvement strategies than non-CSI schools. However, the non-CSI schools in our sample also were low performing, so likely received similar signals to improve student outcomes.

However, across both CSI and non-CSI schools, the sets of schools differed based on principals’ perceptions of the sense of urgency generated by the accountability system. That is, schools in which principals reported that accountability stimulated high urgency were more likely to focus on many improvement actions, while principals who reported low urgency were prevalent in the “limited action” and “student wellness” groups (see Exhibit 5). Thus, there is evidence that principals in both CSI and non-CSI schools reacted to the signals they interpreted from state accountability information.

Exhibit 5. Latent Classes of School Improvement Actions, by Perceived Level of Urgency

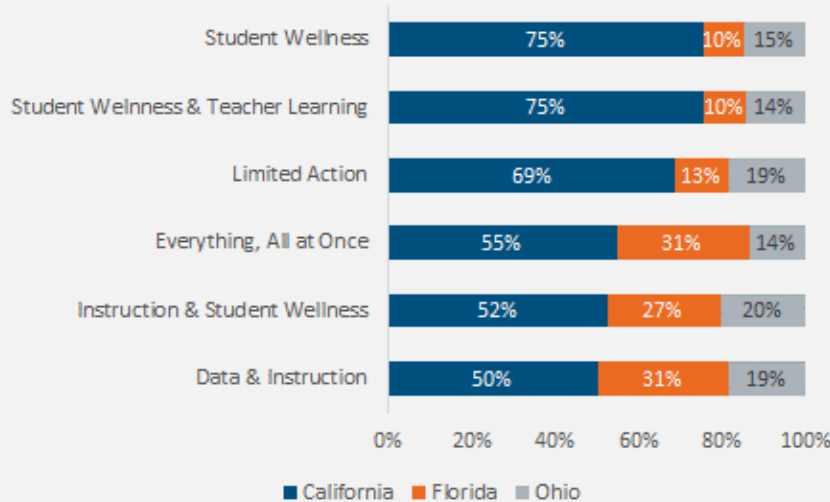


Note. N = 1,200 respondents.

Although all three states were represented in each set of schools, there were some differences by state. California schools appeared to be overrepresented in the “student wellness” group: California

represented 75% of the schools in this group compared with 62% of survey respondents (Exhibit 6). This is consistent with state policy: the [California Department of Education](#) endorses SEL as fundamental to academic success, and collaborates with other states to share information and best practices with regard to SEL. In contrast, the Florida Department of Education lists SEL as an [“unsolicited theory that may](#)

Exhibit 6. Latent Classes of School Improvement Actions, by State



Note. N = 1,201 respondents.

[lead to student indoctrination,](#)” which is associated with a [widely reported decline in SEL in Florida schools.](#)²⁴ Not surprisingly, Florida schools were underrepresented in the two sets of schools that exhibit an emphasis on student well-being. Florida also was underrepresented in the “limited action” set of schools. Florida’s accountability system has been associated with more stringent consequences than other states and thus is more apt to create a sense of urgency and stimulate school-level activities.²⁵ Moreover, Florida schools constituted 21% of survey respondents, but were overrepresented in the two sets of schools with the highest number of interventions, constituting 27% and 31% of the “instruction and student wellness” and “everything, all at once” groups, respectively. Within the “limited action” group, Florida only made up 13% of schools, while California represented 69%. Ohio schools were generally balanced across all sets, although slightly overrepresented among the “instruction and student wellness” set and underrepresented among the “everything, all at once” set.

By school level, elementary schools were overrepresented in the two groups with a greater focus on instruction. More than half of the surveyed elementary schools were in the “data and instruction” and “instruction and student wellness” groups. Elementary schools also tended to engage in a high level of improvement activities, with almost half of elementary schools (48%) in the sets of schools with the highest number of interventions, and were underrepresented among the less active schools. High schools, by contrast, were overrepresented in the schools engaging in the fewest interventions. High schools constituted 37% of the sample and 45% of the schools in the “limited action” category and 48% of the schools in the “student wellness” category.²⁶

Perhaps not surprisingly, alternative schools were overrepresented among the sets of schools that focus on student well-being. Although only 40% of the survey sample, alternative schools made up more than half of the “student wellness” and “student wellness and teacher learning” categories. On the other hand, only 23% of the “data and instruction” schools were alternative schools. Because alternative schools enroll students who have not thrived in traditional public schools, who may have experienced trauma or mental health challenges and are at risk of dropping out, these schools often seek to increase student engagement, attendance, and connection with adults.²⁷

Finally, schools that enroll higher percentages of White students tended to be less responsive to accountability signals. Almost one third of students in the “limited action” category were White, on average, but they represented only 18% of students in the “everything all at once” schools. Although all surveyed schools enrolled relatively high percentages of economically disadvantaged students, they constituted 82% of enrollment in the “everything all at once” schools, compared with 72% of the “limited action” schools.²⁸ Thus, schools that enroll more students of color and disadvantaged students are more likely to work busily to improve outcomes, whereas underperforming schools that enroll more White students appear to be more passive.

Focal School Improvement Strategies

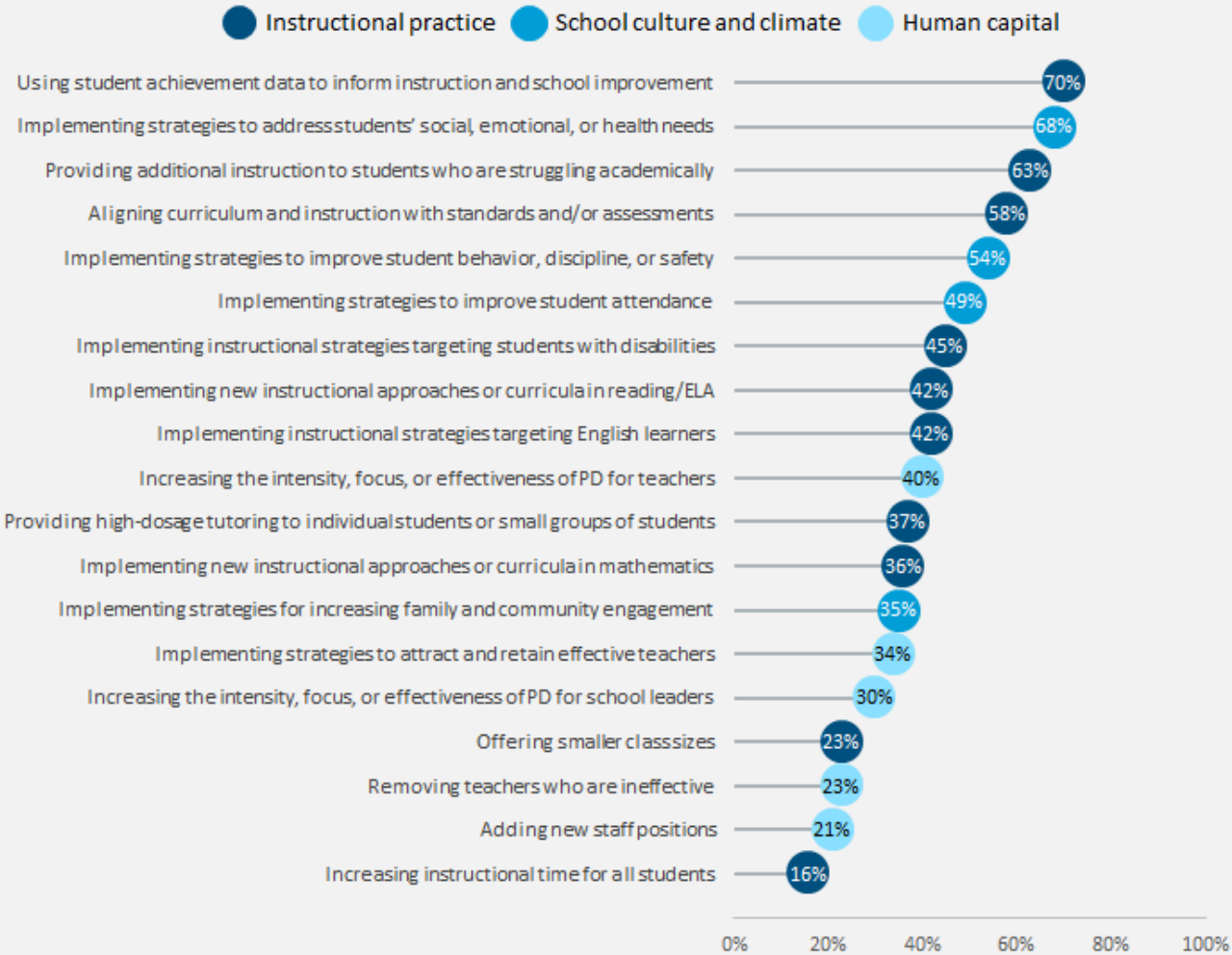
To gain a deeper understanding of the broad improvement approaches adopted by low-performing schools, this section delves into the specific improvement strategies these schools employ. Unlike NCLB, which prescribed specific improvement strategies,²⁹ ESSA provides schools the flexibility to devise their own strategies, provided they align with their unique needs identified through a comprehensive needs assessment. This autonomy introduces a potential array of strategies. This section also explores whether selected school improvement strategies differ between CSI and non-CSI schools, offering a comparative perspective on school improvement approaches.

Strategies emphasizing data-driven instruction, student well-being, and academic support for struggling students were among the most used improvement strategies among all schools. A large majority of surveyed principals reported a major focus on three improvement strategies: using student achievement data to inform instruction and school improvement (70%); implementing strategies to address students’ social, emotional, or health needs (68%); and providing additional instruction to students who are struggling academically (63%) (see Exhibit 7).

Despite a clear policy shift from NCLB to ESSA, these results were largely consistent with a national study of NCLB implementation. Specifically, Taylor et al. (2010) found that *using student achievement data to inform instruction and school improvement* and *providing additional support to struggling students* were reported as among the most widely implemented improvement strategies for schools identified for improvement in 2006–07 under NCLB.³⁰ As for strategies addressing students’ social, emotional, or health needs, the emphasis on these strategies can be seen as a response to the unique challenges brought about by the COVID-19 pandemic. Indeed, studies have noted an increase in the

use of SEL strategies in schools, particularly in the context of distance learning and in schools serving low-income students.^{31,32} Additional strategies prioritized by the majority of principals include aligning the curriculum with standards (58%) and implementing measures to improve student behavior, discipline, and safety (54%). In contrast, fewer than half of surveyed principals identified strategies related to building human capital as a major focus. This limited focus on human capital strategies could be attributed to budgetary constraints, which hinder these strategies from becoming long-term approaches. The irregular nature of these strategies may also play a role. For instance, actions such as adding or removing staff are typically one-time events, whereas other strategies, including using data for decision making, are ongoing practices that occur throughout the academic year.

Exhibit 7. Percentage of School Principals Who Reported a Major Focus, by School Improvement Strategy



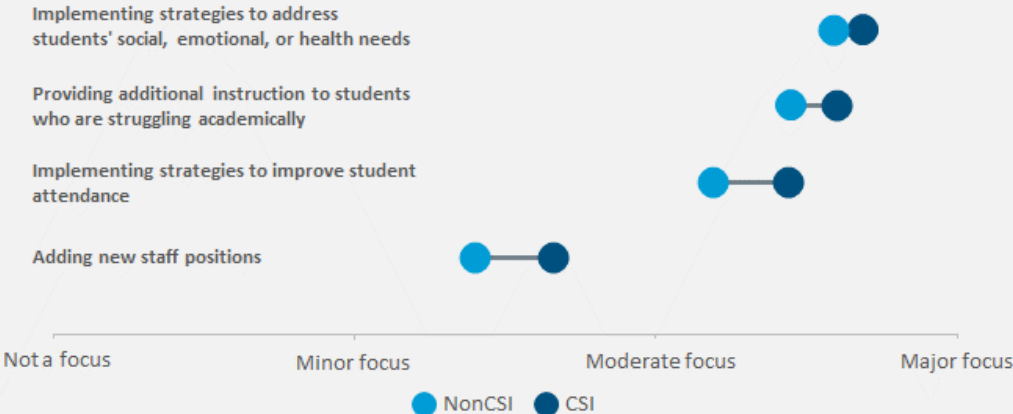
Note. N = 1,200 respondents. ELA = English language arts; PD = professional development.

Principals in the three states differed in the improvement strategies they prioritized (see Exhibit B1). For example, principals in Florida were more likely than those in California and Ohio to report a major

focus on several strategies, mostly related to instructional practice. These included using student achievement data to inform instruction and school improvement, aligning curriculum and instruction with standards and/or assessments, providing additional instruction to students struggling academically, implementing strategies targeting SWDs, and employing new instructional practices in English language arts (ELA). In contrast, principals in California were most likely to focus on strategies addressing students’ social, emotional, or health needs, while Ohio principals were the least likely to prioritize strategies aimed at English learners (ELs) and initiatives to improve attendance.

Compared with non-CSI schools, CSI schools were more likely to emphasize strategies such as providing additional instruction for struggling students; addressing students’ social, emotional, and health needs; improving student attendance; and adding new staff positions. The differences between CSI and non-CSI schools for these strategies were statistically significant (see Exhibit 8). As noted above, addressing students’ social, emotional, or health needs and providing additional instruction to students who are struggling academically were among the most used improvement strategies in CSI schools. The largest differences, however, were observed in the implementation of strategies to improve student attendance and the addition of new staff positions. The level of emphasis on the latter was relatively modest, with CSI principals, on average, rating the focus on this strategy between minor and moderate.

Exhibit 8. School Principals’ Reports on the Level of Focus on Select Improvement Strategies, by CSI Status



Note. Ns = 554 respondents for non-CSI schools and 646 respondents for CSI schools.

Most Promising Strategies, According to Principals

Along with the results from closed-ended survey items, we also collected open-ended responses from principals, asking them to describe up to five school improvement strategies they considered the most promising for improving student outcomes. This resulted in more than 3,970 strategies from 1,138 schools. Two researchers on the study team systematically coded these responses. Using an inductive approach, they initially identified 57 codes, which were subsequently consolidated into a final total of

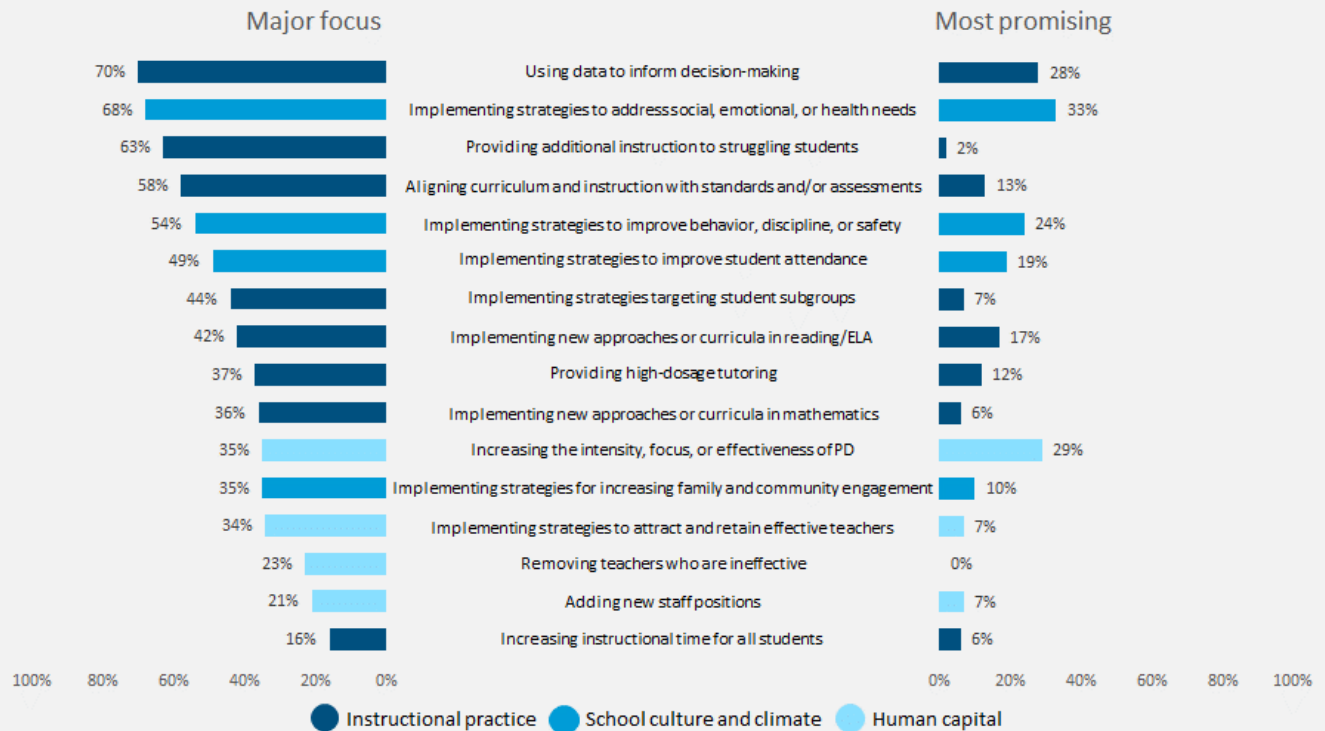
31 codes for the open-ended responses (see Appendix A). These open-ended responses, rarely included and analyzed in large-scale surveys, provide unique insights into improvement strategies in low-performing schools.

The first analysis compares the closed-ended survey responses with the coded open-ended data to determine if the strategies that principals focused on were similar to the ones they described as *promising* (see Exhibit 9). Although most open-ended codes aligned with the closed-ended survey items, not all did. For example, the survey distinguished between strategies for ELs and SWDs, but some principals combined these student groups in one response. Despite these alignment limitations, this comparison provides valuable insights into schools' approaches to the improvement process.

Although schools' focal strategies were not consistently those that principals reported as promising, there were notable overlaps. For instance, the most frequently reported strategy on which schools focused—using data to inform decision making—also was identified as one of the most promising. Rigorous research supports the regular monitoring of data.³³

Similarly, the most frequently reported promising strategy—addressing students' social-emotional or other health needs—also was among the most used. The prevalence of these strategies was likely influenced by the COVID-19 pandemic and the resulting disruptions to schooling. Indeed, the COVID-19 pandemic increased the need for schools to address social-emotional challenges related to distance learning and students' lack of physical time in school.³⁴ SEL strategies reported by schools as the most promising included embedding advisory blocks into schedules, incorporating SEL units within traditional class structures and subjects, and using surveys such as Panorama to understand students' social-emotional or health needs. Research shows that SEL in schools positively impacts student emotional well-being and academic performance.³⁵ Wraparound services—collaborations with agencies to provide students with health needs—also are included in this category. These services have been shown to be highly effective to address issues surrounding child welfare³⁶ and seem to be a response to the increase in adolescent mental health issues since the pandemic.³⁷

Exhibit 9. Percentage of School Principals Who Reported a Major Focus Versus Most Promising, by School Improvement Strategy



Note. The following strategies listed in the closed-ended survey items were consolidated to align with the categories developed from the open-ended responses: “Implementing instructional strategies targeting English learners” and “implementing instructional strategies targeting students with disabilities” were combined into “implementation strategies targeting student subgroups,” and “increasing the intensity, focus, or effectiveness of PD for school leaders” and “increasing the intensity, focus, or effectiveness of PD for teachers” were combined into “increasing the intensity, focus, or effectiveness of PD.” “Offering smaller classes” was excluded due to its lack of alignment with the categories developed from the open-ended responses.

N = 1,200 respondents. ELA = English language arts; PD = professional development.

Human capital strategies were neither a major focus nor perceived as promising by principals. Only about a third of schools focused on strategies to attract and retain effective teachers, and only 7% of principals described this as one of the most promising strategies. This is notable considering that low-performing schools often struggle with staff retention³⁸ and that high-quality teachers are among the primary drivers of improved student learning.³⁹ However, the fact that these human capital strategies are not reported as promising does not mean they are not needed. Indeed, although principals may recognize the need to recruit and retain highly qualified teachers, they may not believe that the strategies available to them will enable them to secure the teachers they need.

Open-ended responses revealed a wide range of approaches adopted by low-performing schools. Inviting principals to share information about school improvement approaches in their own words provides insight into the variety of activities in schools seeking to improve performance. No single

category of intervention was reported by more than a third of the open-ended responses, and most strategies were reported in single digits (see Exhibit 9, which focuses on self-reported strategies related to instruction).

Information Sources Used in Selecting Evidence-Based Strategies

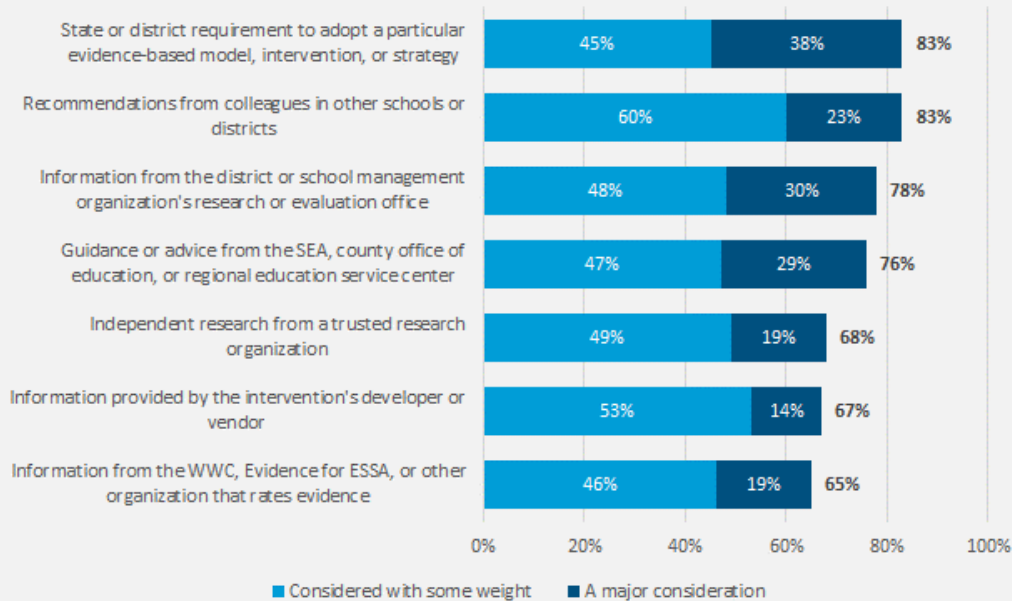
Since the passage of NCLB, federal education law has underscored the importance of adopting research-backed strategies to enhance school performance. ESSA further clarified this, mandating that CSI schools incorporate at least one evidence-based intervention. This requirement, however, can pose challenges for district and school officials who may not be well versed with the nuances of using evidence. The task of identifying and implementing effective interventions can be overwhelming, given the wide array of strategies available and the complexities involved in assessing their evidence base.

To assist districts and schools in identifying evidence-based interventions, ESSA guidance⁴⁰ and other resources^{41,42} highlight several valuable sources of information. These include existing clearinghouses of evidence-based strategies, most notably the What Works Clearinghouse (WWC), as well as technical assistance resources from the U.S. Department of Education's Regional Educational Laboratories and Regional Comprehensive Centers. By leveraging these resources, schools can make evidence-informed choices that enhance student outcomes and foster positive educational change. At the same time, there are certain sources of information that could be detrimental or unreliable. For instance, anecdotal evidence, although potentially inspiring, often lacks generalizability and can lead to confirmation bias. Similarly, research from vendors, despite its potential insights, may carry inherent biases as vendors have a vested interest in promoting their own products or services.

When choosing evidence-based strategies, low-performing schools favored compliance with state or district requirements and local sources of information over federally recommended sources, signaling a potential disconnect with federal policy intentions. Across the three states, the most common considerations were state or district requirements to adopt particular evidence-based strategies (83%), recommendations from colleagues in other schools or districts (83%), and information from the district's research offices (78%; see Exhibit 10). Although mandated strategies may be evidence based, they also may be at odds with ESSA's emphasis on selecting strategies that reflect each school's unique needs. Indeed, a one-size-fits-all approach may not effectively address the diverse needs of individual schools. Moreover, relying on colleague recommendations is unlikely to offer robust evidence for improvement strategies. In contrast, although federally recommended sources that rate and share evidence, such as the WWC or Evidence for ESSA, were still favored by the majority of respondents (65%), they received lower priority, suggesting a potential gap in alignment with federal policy intentions. Principals in CSI schools, however, were more likely than those in non-CSI schools to report considering information from the WWC, Evidence for ESSA, or other organizations that rate evidence. It remains uncertain whether this observation is tied to the school improvement support received by CSI schools: Although surveyed CSI principals in Florida showed a greater

likelihood of receiving technical assistance on identifying effective strategies, these differences were not significant in California and Ohio. A more likely explanation is that CSI schools are required to include at least one evidence-based intervention in their school improvement plan, which may provide an additional incentive relative to non-CSI schools for using these resources.

Exhibit 10. Sources of Information Considered by Low-Performing Schools in Selecting Evidence-Based Strategies



Note. N = 893 respondents. SEA = state education agency; WWC = What Works Clearinghouse.

IMPLICATIONS FOR POLICY AND PRACTICE

Schools are the ultimate proving ground of accountability policy: If school-level actors do not change behavior, the policy is unlikely to succeed. Our principal survey findings, although only representative of our three partner states, shed light on the school improvement process under ESSA accountability. In summary, we offer the following reflections:

- **Policymakers should consider how to support appropriate school-level responses to accountability information.** Based on the latent class analysis, most schools seem to choose interventions that allow them to concentrate on specific areas, such as student well-being or instruction. However, two types of schools do not show promising responses to accountability signals:
 - (1) “Limited action” schools, which provide almost no evidence of efforts to improve student outcomes, and
 - (2) “Everything, all at once” schools, which initiate so many strategies that optimal implementation of any one strategy is unlikely. These schools illustrate the double-edged sword of accountability-related urgency: At moderate levels, a sense of urgency can stimulate focus and change, but it also can veer into an ill-advised flurry of activity.
- **The limited focus on human capital suggests that many schools may be overlooking strategies that research indicates could be beneficial.** This could be a function of the survey items; schools might recognize the need to recruit and retain highly qualified teachers but may not find the strategies promising. However, as we reported elsewhere⁴³, CSI schools in Ohio had a higher rate of turnover than other schools, suggesting that teacher retention should, in fact, be a priority. Given the crucial role of teachers and leaders in sustained improvement, these findings raise questions about barriers to the implementation of human capital strategies.
- **Systematic evidence reviews are not among the resources most often used by school administrators.** Despite the impressive resources made available through the WWC and substantial technical assistance from states, regional agencies, and federal comprehensive centers, principals are far more likely to defer to recommendations from colleagues in other schools than to systematic evidence reviews. This may suggest a need for more accessible and user-friendly formats for presenting systematic review findings as well as opportunities for principals to engage in communities of practice that build their understanding of rigorous evidence.

Appendix A. Codebook for Reported Promising Strategies

Appendix A provides the codebook developed to assist analysts in sorting and labeling data from question 25 of the principal survey. This question asked respondents to consider the current school year (2021–22) and identify up to five of the most promising strategies their school was implementing to support improved student outcomes. The codebook consists of a list of all codes sorted by category, along with definitions for each category and each individual code.

CURRICULUM AND INSTRUCTIONAL PRACTICE: Codes in this category pertain to strategies associated with the technical core of schooling.

Code	Definition
Academic interventions—Literacy	Strategies or tools that focus on interventions to support or improve literacy skills.
Academic interventions—Math	Strategies or tools that focus on interventions to support or improve math skills.
Academic interventions—Other	Strategies or tools that focus on multiple subject areas or subject areas other than literacy and math. Also include tools used in the classroom to improve instruction, such as rubrics or graphic organizers.
Course access and expansion	Strategies that focus on expanding student access to relevant rigorous coursework.
Curriculum alignment	Strategies that focus on aligning the curriculum to state standards or adjusting the curriculum to better fit student needs.
Extended learning time	Strategies that focus on student learning outside of regular school hours.
Focus on academic subgroups	Strategies that focus on improving student outcomes for subgroups based on academic performance (e.g., “at-risk” students or “struggling” students).
Focus on English learners and/or students with disabilities	Strategies that focus on improving student outcomes for English learners and/or students with disabilities.
Focus on subgroups	Strategies that focus on improving student outcomes or enhancing enrichment opportunities for subgroups based on socioeconomic status and racial/ethnic demographics.
Graduation rate improvement	Strategies that focus on increasing graduation rates, such as credit recovery.
Grouping strategies	Strategies that focus on grouping students to improve student outcomes, including strategic grouping of students or teaching in multiple modalities (e.g., hybrid, virtual, and in-person classroom environments).
Intervention blocks and reteaching	Strategies that focus on creating blocks to be used exclusively for interventions or times in the school day dedicated to reteaching and acceleration.
Multi-tiered system of supports (MTSS)—Academic focus	Strategies that reference MTSS to address academic needs.
Small groups	Strategies that focus on dividing students into small groups to provide targeted interventions. These include small groups in a full classroom setting, coteaching, or pull-out services.

Code	Definition
Student data	Strategies that focus on monitoring student progress with data or using data to inform instructional practices.
Student-centered practices	Strategies that allow students to be more involved in classroom activities and take ownership of their learning, such as personalized learning and project-based learning.
Technology resources	Strategies that focus on providing technology resources to enhance academic activities.
Tutoring	Strategies that focus on time set aside during the school day for tutoring or adding blocks specifically for tutoring.

SCHOOL CLIMATE AND CULTURE. Codes in this category pertain to strategies associated with the individual experiences of students and staff and the physical and social environment of the school.

Code	Definition
Behavioral and discipline interventions	Strategies that focus on behavioral interventions, such as positive behavioral interventions and supports, classroom management, and trauma-centered practices.
Climate and culture interventions—General	Strategies that focus on improving the overall school climate or culture, school safety, equity in the school vision or mission, aligning school mission statements, or a combination of strategies with the goal of improving school culture.
Increasing staff satisfaction	Strategies that focus on increasing staff satisfaction and well-being.
Parent, family, and community engagement	Strategies that focus on engaging parents, families, and the larger community in school activities.
Social-emotional supports	Strategies that focus on supporting social and emotional learning and/or regulation in the classroom or practices that support social-emotional competencies schoolwide.
Student engagement supports	Strategies that focus on supports for attendance and student engagement, such as after-school clubs.
Student sense of belonging	Strategies that focus on supporting students' sense of belonging within the greater school community, including opportunities for student input on decision-making and leadership opportunities.
Student-teacher relationships	Strategies that focus on supporting student and teacher relationships, such as mentorships.
Wraparound services	Strategies that focus on wraparound services, including health and housing referrals, as well as home visits and supports for reenrollment.

HUMAN CAPITAL. Codes in this category pertain to strategies associated with improving the selection, placement, development, and retention of high-quality personnel as well as strategies to support and motivate staff.

Code	Definition
Adding new staff positions	Strategies that focus on adding staff or creating new staff positions to address student needs.
Hiring and retaining staff	Strategies that focus on hiring or retaining staff, reducing class sizes, or moving ineffective teachers to other schools.
Professional learning	Strategies that focus on professional learning opportunities provided to school staff (e.g., leadership, teachers, specialists) or established supports to improve teacher performance, such as classroom observations, cycles of feedback, and visiting model schools.
Teacher collaboration	Strategies that focus on providing teachers time to collaborate with one another, including the use of professional learning communities.

Appendix B. Additional Exhibit

Exhibit B1. Percentage of School Principals Who Reported a Major Focus for Various School Improvement Strategies, by State and Comprehensive Support and Improvement (CSI) Status

	California			Florida			Ohio		
	Total	CSI	Non-CSI	Total	CSI	Non-CSI	Total	CSI	Non-CSI
Curriculum and Instructional Practice									
Aligning curriculum and instruction with standards and/or assessments	50%	51%	48%	79%	79%	79%	61%	69%*	57%
Implementing instructional strategies targeting English learners	47%	45%	48%	46%	47%	46%	16%	13%	19%
Implementing instructional strategies targeting students with disabilities	39%	37%	40%	67%	75%	61%	39%	50%	33%
Implementing new instructional approaches or curricula in mathematics	34%	36%	33%	46%	51%*	42%	31%	36%*	28%
Implementing new instructional approaches or curricula in reading/English language arts	38%	40%	35%	57%	60%	55%	41%	44%	38%
Increasing instructional time for all students	15%	13%	17%	20%	26%	16%	14%	11%	16%
Offering smaller class sizes	23%	21%	25%	31%	41%	23%	15%	13%	16%
Providing additional instruction to students who are struggling academically	63%	66%	59%	72%	76%*	70%	54%	72%	43%
Providing high-dosage tutoring to individual students or small groups of students during school hours or after school	36%	36%	37%	48%	54%*	44%	27%	32%	25%
Using student achievement data to inform instruction and school improvement	66%	66%	66%	82%	80%	83%	69%	74%	67%
School Climate and Culture									
Implementing strategies for increasing family and community engagement	34%	34%	35%	42%	49%*	37%	29%	35%*	25%
Implementing strategies to address students' social, emotional, or health needs	73%	74%*	72%	62%	70%*	55%	54%	65%*	47%

	California			Florida			Ohio		
	Total	CSI	Non-CSI	Total	CSI	Non-CSI	Total	CSI	Non-CSI
Implementing strategies to improve student attendance	52%	59%	43%	50%	60%*	42%	35%	42%*	30%
Implementing strategies to improve student behavior, discipline, or safety	54%	53%	56%	60%	65%	55%	48%	62%	39%
Human Capital									
Adding new staff positions	22%	26%	17%	24%	30%	19%	14%	15%	13%
Implementing strategies to attract and retain effective teachers	32%	36%	29%	49%	48%	50%	19%	23%	17%
Increasing the intensity, focus, or effectiveness of professional development for school leaders	31%	33%	28%	32%	36%	29%	23%	23%	23%
Increasing the intensity, focus, or effectiveness of professional development for teachers	40%	42%	38%	45%	50%*	41%	37%	36%	37%
Removing teachers who are ineffective	21%	20%	21%	33%	37%	30%	19%	22%	16%

Note. * Represents differences between CSI and non-CSI schools that are statistically significant. Percentages may not sum to 100 because of rounding. *Ns* = 744 respondents for California, 252 respondents for Florida, and 204 respondents for Ohio.

Endnotes

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² States have the option to include non-Title I schools in identifying CSI schools based on low performance.

³ Under NCLB, schools in corrective action (i.e., schools that missed performance targets for 4 years) were expected to select from a list of mandated interventions, including staff replacement, curriculum changes, extended learning days, or appointing external advisors. Later, the Obama Administration revamped the School Improvement Grant program using funds from the American Recovery and Reinvestment Act, mandating schools to implement a checklist of activities—such as replacing the principal and no less than half of teachers, reopening as a charter school, and introducing significant instructional reforms—in exchange for federal funds.

⁴ For example, the UChicago Consortium on School Research has documented “five essential” supports for school improvement, including effective leaders, collaborative teachers, a supportive environment, involved families, and ambitious instruction.

⁵ Fuchs, L.S., Newman-Gonchar, R., Schumacher, R., Dougherty, B., Bucka, N., Karp, K.S., ... & Morgan, S. (2021). *Assisting students struggling with mathematics: Intervention in the elementary grades* (WWC 2021006). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. <https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/WWC2021006-Math-PG.pdf>

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⁷ Graham, S., Bruch, J., Fitzgerald, J., Friedrich, L., Furgeson, J., Greene, K., ... & Smither Wulsin, C. (2016). *Teaching secondary students to write effectively* (NCEE 2017-4002). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/508_WWCPG_SecondaryWriting_122719.pdf

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- ⁹ National Academies of Sciences, Engineering, and Medicine. (2017). *Promoting the educational success of children and youth learning English: Promising futures*. The National Academies Press.
- ¹⁰ Jung, P.-G., McMaster, K. L., Kunkel, A. K., Shin, J., Stecker, P. M. (2018). Effects of data-based individualization for students with intensive learning needs. *Learning Disabilities Research & Practice* 33, 144–155.
- ¹¹ Dietrichson, J., Bøg, M., Filges, T., & Jørgensen, A.-M. K. (2017). Academic interventions for elementary and middle school students with low socioeconomic status: A systematic review and meta-analysis. *Educational Researcher* 87(2), 243-282.
- ¹² Nickow, A., Oreopoulos, P., & Quan, V. (2020). *The impressive effects of tutoring on prek-12 learning: A systematic review and meta-analysis of the experimental evidence*. NBER Working Paper No. w27476 https://www.nber.org/system/files/working_papers/w27476/w27476.pdf
- ¹³ McCombs, J. S., Whitaker, A. A., & Youngmin Yoo, P. (2017). *The value of out-of-school time programs*. RAND Corporation. <https://www.rand.org/pubs/perspectives/PE267.html>
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- ¹⁷ Guarino, C. M., Santibañez, L., & Daley, G. A. (2006). Teacher recruitment and retention: A review of the recent empirical literature. *Review of Educational Research* 76(2), 173–208.
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²⁰ Latent class analysis is a statistical model that classifies entities into mutually exclusive and exhaustive types (latent classes) based on their responses to a set of categorical measured variables. Latent class analysis is commonly used to uncover hidden groupings in data.

²¹ The latent class analysis included all survey items that applied to K–12 schools and hence was inclusive of all surveyed schools. However, the principal survey also included a related item that was specific to high schools, including subitems such as “providing credit recovery during the school year” and “providing dual-enrollment or dual-credit coursework for students.” We conducted a separate analysis for high schools using this item, and the patterns of emphasis remained similar.

²² Dougherty, S. M., & Weiner, J. M. (2017). The Rhode to turnaround: The impact of waivers to No Child Left Behind on school performance. *Educational Policy*, 33(4), 555–586. <https://eric.ed.gov/?q=%22no+child+left+behind%22&ff1=pubJournal+Articles&id=EJ1214548>

²³ Schueler, B. E., Armstrong Asher, C., Larned, K. E., Mehrotra, S., & Pollard, C. (2021). Improving low-performing schools: A meta-analysis of impact evaluation studies. *American Educational Research Journal*, 59(5), 975–1010. https://scholar.harvard.edu/files/schueler/files/schueler_et_al_aerj_2021_meta-analysis.pdf

²⁴ Although Florida schools increased their focus on social-emotional learning following the mass shooting at Marjorie Stoneman Douglas High School in 2018, by 2022 (concurrent with our principal survey administration), schools were discouraged from engaging in social-emotional learning based on guidance from the Florida Department of Education and new laws, including the so-called “Don’t Say Gay” law and the “Stop W.O.K.E. Act.” Also see <https://www.npr.org/2022/04/28/1095042273/ron-desantis-florida-textbooks-social-emotional-learning>.

²⁵ Rouse, C. E., Hannaway, J., Goldhaber, D., & Figlio, D. (2013). Feeling the Florida heat? How low-performing schools respond to voucher and accountability pressure. *American Economic Journal: Economic Policy*, 5(2), 251–281. <https://www.nber.org/papers/w13681>

²⁶ The latent class analysis was conducted using survey items that included 19 school improvement actions that could plausibly be implemented in schools of any grade level. However, we also asked high school principals about improvement actions that would only be a focus in high schools, such as “providing dual enrollment or dual credit coursework for students.” Analysis of the high school specific item identified the same patterns among schools as did the latent class analysis with the 19 school improvement items.

²⁷ Addis, S., Greer, K., & Dunlap, L. (2020). *Effective strategies for alternative school improvement*. National Dropout Prevention Center. https://dropoutprevention.org/wpcontent/uploads/2020/02/Alt_School_Guide_NDPC_2020.pdf

²⁸ These differences by race were significant when controlling for CSI status, school level, alternative school status, charter status, and state.

²⁹ Under NCLB, schools identified for improvement faced escalating consequences. In the first stage of improvement, identified schools had to offer supplemental services, including tutoring, for low-income students. In the second stage, it became mandatory to provide students options to transfer to other nonidentified schools in the district. Beyond the third stage, schools were obliged to introduce extra services, such as after-school programs, and by the fifth stage, drastic changes were mandated, including options such as reopening as a charter school, staff replacement, state takeover, and other governance restructuring.

³⁰ Taylor, J., Stecher, B., O'Day, J., Naftel, S., & Le Floch, K. C. (2010). *State and local implementation of the No Child Left Behind Act, Volume IX—Accountability under NCLB: Final report*. U.S. Department of Education, Office of Planning, Evaluation, and Policy Development, Policy and Program Studies Service. <https://files.eric.ed.gov/fulltext/ED508912.pdf>. Strategies addressing students' social, emotional, or health needs were not included.

³¹ Hamilton, L. S., & Gross, B. (2021). *How has the pandemic affected students' social-emotional well-being? A review of the evidence to date*. Center on Reinventing Public Education. <https://files.eric.ed.gov/fulltext/ED614131.pdf>

³² Zeiher, A. K., Cipriano, C., Meyer, J. L., & Strambler, M. J. (2021). Educators' implementation and use of social and emotional learning early in the COVID-19 pandemic. *School Psychology, 36*(5), 388–397. https://medicine.yale.edu/childstudy/services/community-and-schools-programs/scholastic-collaborative/covid-resources/chin%202019%20educators%20use%20of%20sel%20during%20pandemic_432705_55371_v1.pdf

³³ See, for example: Hamilton, L., Halverson, R., Jackson, S., Mandinach, E., Supovitz, J., & Wayman, J. (2009). *Using student achievement data to support instructional decision making* (NCEE 2009-4067). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from <http://ies.ed.gov/ncee/wwc/publications/practiceguides/>.

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³⁵ Cipriano, C., Strambler, M. J., Naples, L. H., Ha, C., Kirk, M., Wood, M., ... & Durlak, J. (2023). The state of evidence for social and emotional learning: A contemporary meta-analysis of universal school-based SEL interventions. *Child Development, 94*(5), 1181–1204.

³⁶ The California Evidence-Based Clearinghouse for Child Welfare. (n.d.). Wraparound. <https://www.cebc4cw.org/program/wraparound/>

³⁷ National Institute of Mental Health. (2023). *COVID-19 pandemic associated with worse mental health and accelerated brain development in adolescents*. <https://www.nimh.nih.gov/news/science-news/2023/covid-19-pandemic-associated-with-worse-mental-health-and-accelerated-brain-development-in-adolescents>

³⁸ Goldring, R., Taie, S., & Riddles, M. (2014). *Teacher attrition and mobility: Results from the 2012–13 Teacher Follow-up Survey*. Washington, DC: National Center for Education Statistics.

³⁹ See, for example, Lee, S. W. (2020). Pulling back the curtain: Revealing the cumulative importance of high-performing, highly qualified teachers on students' educational outcomes. *Educational Evaluation and Policy Analysis*, 40(3), 359–381. <https://eric.ed.gov/?id=EJ1186805>

⁴⁰ U.S. Department of Education. (2023). *Non-regulatory guidance: Using evidence to strengthen education investments*. <https://www2.ed.gov/fund/grant/about/discretionary/2023-non-regulatory-guidance-evidence.pdf>

⁴¹ WestEd. (2016). *Evidence-based improvement: A guide for states to strengthen their frameworks and supports aligned to the evidence requirements of ESSA*. <https://www.wested.org/wp-content/uploads/2016/12/Evidence-Based-Improvement-Guide-FINAL-122116-TOOL-3.docx>

⁴² Fleischman, S., Scott, C., & Sargrad, S. (2016). *Better evidence, better choices, better schools: State supports for evidence-based school improvement and the Every Student Succeeds Act*. <https://www.americanprogress.org/wp-content/uploads/sites/2/2016/08/EvidenceESSA-report.pdf>

⁴² Results were largely consistent by CSI status for all other sources of information.

⁴³ Atchison, D., Özek, U., Hurlburt, S., & Le Floch, K. C. (forthcoming). *Effects of Comprehensive Support and Improvement school designation under the Every Student Succeeds Act on student outcomes: Evidence from Ohio*. American Institutes for Research.



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