Summary

This research brief reports on findings from an on-line survey conducted by the American Institutes for Research (AIR) to study state education agency capacity to develop and deploy a statewide system of support for schools identified for improvement under No Child Left Behind (NCLB). To provide support commensurate with the challenges facing low-performing schools, state education agencies need adequate capacity—including infrastructure, professional resources, and political support. Data from a survey of state officials in all 50 states reveal that:

- State officials report limited capacity to support school improvement: only 16 states reported “moderate” capacity while 33 reported limited capacity.
- Respondents in states with more challenging workloads perceived lower levels of capacity.
- State officials generally perceive expertise within the state education agency to be a strength, although they report lower levels of expertise regarding the needs of English language learners.

In summary, state officials perceive constraints associated with their own capacity to provide support to low-performing schools, particularly with regard to staff, funding, and technology. This brief is a companion to State Systems of Support under NCLB: Design Components and Quality Considerations.

Help Wanted: State Capacity for School Improvement

Compliance with the landmark No Child Left Behind Act (NCLB) has been a formidable challenge for educators and administrators at all levels, from teachers and aides to district superintendents. Administrators in state education agencies (SEAs), forced to navigate through a complex code of administrative and regulatory requirements, bore much of the initial workload associated with implementing the NCLB mandates. Among these was the requirement that states develop “statewide systems of support” that provide resources and technical assistance to help under-performing schools boost levels of student proficiency.
NCLB went into effect in 2002, at a time when state governments were shrinking and state officials were learning to manage limited resources. The increased directives associated with developing student assessments, tracking achievement, and reporting academic data, required substantial state-level resources. One researcher noted that “little effort is made through NCLB to build state capacity. This leaves understaffed, underfunded education agencies, with a history and culture of compliance monitoring, to suddenly reinvent themselves into leadership agencies.”

Policy analysts frequently cite the low capacity of state education agencies as a challenge to the implementation of NCLB mandates and maintenance of adequate state-level systems of support. This brief examines state education agencies’ capacity to put into practice state systems of support for schools identified for improvement.

To study the extent to which state education officials perceive that they have capacity to support school and district improvement, staff from the American Institutes for Research (AIR) surveyed state education agency officials in February 2008. Respondents were state officials with primary responsibility for state systems of support for schools and districts identified for improvement under NCLB. State officials responded to a series of closed-ended survey questions, but also had several opportunities to provide written responses to clarify issues or add detail. Officials from all 50 states responded to the on-line survey.

The mandate of school improvement: state obligations under NCLB

The central objective of NCLB is to set in place policies and procedures that will ensure that all students are proficient in mathematics and English language arts by the end of the 2013–14 school year. To do so, states must determine what it means for a student to be considered “proficient,” that is, what each proficient student should know and be able to do. Next, states must develop valid and reliable assessments for measuring student knowledge and skills, in grades 3 through 8 and once in the high school grades. State officials must then calculate the proportion of students in each school that score at the proficient level, and determine whether each school is meeting annual targets designed to ensure that all students are proficient by 2013–14. If schools do not make adequate yearly progress for at least two or more consecutive years, states identify them for improvement, corrective action, or restructuring.

The provisions of NCLB endorse an approach to improvement that assumes that low-performing schools cannot change on their own. Thus, they need people from outside the school to help analyze problems, identify solutions, and find resources.
The support provided by states may take several forms. State education agency staff may themselves provide direct assistance or they may opt to work through regional offices or hire external consultants. While some states opt to send “school support teams” and others deploy school improvement facilitators, coaches, or auditors, these systems are bound by a common mandate to introduce outside expertise into low-performing schools. Together, these outside experts constitute the set of personnel who contribute to the collective capacity of the system of support.

That said, developing a statewide system of support means more than simply setting up school support teams or identifying distinguished educators, as specified under No Child Left Behind. Adequate capacity implies that state education agencies have resources to provide sufficient numbers of external staff, generate timely data, deliver professional development, offer grant monies, and leverage relevant expertise in the service of low-performing schools. For example, teachers in one school may lack content knowledge and need content-focused professional development. In another low-performing school, staff may need access to effective strategies for serving the needs of English language learners. Still elsewhere, the challenge may be how to engage students in school and to prevent high school dropout. The nature and the depth of the challenges faced by schools have implications for the kinds of supports that may be provided through a statewide system, and the types of resources that state education agencies need to leverage in service of low-performing schools.

Implicit in the provisions of NCLB was the untested assumption that states were up to the challenge of supporting low-performing schools. However, many administrators and scholars anticipated that the numbers of schools identified for improvement would burgeon as annual performance objectives increased—thereby increasing the demand among schools that needed help from the state. Although the number of schools identified for improvement remained relatively stable from 2004–05 to 2005–06, this is still a concern among state level officials. As one wrote in response to our survey: “The state’s capacity is not sufficient at this time and that will only worsen as more schools and districts move into improvement status.” Several researchers have pointed to the limits of state capacity, with one prominent researcher commenting that “capacity is the stepchild of No Child Left Behind.”

State officials design their systems of support in ways that accommodate their internal capacity. They may seek efficiencies or simply ration support in ways that conserve their scarce resources. Indeed, the ways state officials define their states’ role is a function of how they measure their internal resources, how they understand local needs, and what model of support they think will enable them to meet those needs.

Components of state capacity

Implicit in discussions of state capacity are assumptions about its key components. When state officials, researchers, journalists, or policy experts comment on state capacity, they reveal implicit assumptions about what exactly “capacity” means. For example, consider the following comment from a state official:

“We want to do everything we can to improve those lower-performing and struggling schools and districts.... But
given less staff, given the number of schools involved and the amount of need, it’s resource-wise just something we can’t [do for] everyone.8

Clearly, to this state official—and others—the number of staff available to provide support to schools is a critical component of state capacity. Likewise, when researchers write, “The technical demands imposed by NCLB appear to exceed many states’ capacity to handle complicated psychometric problems,”9 they imply that state technical expertise is another fundamental component. To be sure, these are components of state capacity—but a fuller definition includes a broader spectrum of resources.

A review of literature on state education policy and organizational theory suggest a set of elements that frame state capacity to support low-performing schools. In addition to basic resources such as staff and funding, these include supports or constraints associated with the political environment and professional assets such as expertise (see Exhibit 1).

Resources are the building blocks of state capacity, but there are different types of resources on which state agencies may draw. First are those that may be considered the SEA infrastructure, or the core elements of any organization: funding, the number of staff, and technology. These are the foundation required for the adequate functioning of any professional organization. Infrastructure resources are linked, to some extent, with less tangible resources, or “professional resources.” These resources include staff expertise, both substantive and technical, and the ability to identify and leverage expertise, as appropriate. In addition, the quality of organizational leadership contributes importantly to state capacity. Likewise, communication skills, both within the organization and with stakeholders, are related to an organization’s professional resources necessary to accomplish its goals.

Experts in organizational capacity frequently refer to factors in the “external operating environment” that are related to capacity. In the context of state education agencies, political resources are a critical influence on the capacity of the organization. Both through rhetorical and financial support, state governors, legislatures, and interest groups influence the degree to which state education agencies can carry out the mandates set before them.

Exhibit 1: Framework of Elements of State Education Agency Capacity

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<td>Financial resources</td>
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<td>Technology</td>
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<th>Professional Resources:</th>
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<tr>
<td>Access to expertise</td>
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<td>Strategic leadership</td>
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<td>Communication skills</td>
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To ensure that state education agencies’ support strategies are designed and implemented in ways that increase the likelihood of sustained change, they must have adequate resources. For example, to deliver effective professional development on topics that concern schools, SEAs must be able to leverage appropriate expertise. To provide personnel for on-site assistance, SEAs need an adequate number of staff. To disburse grants in a timely manner, SEAs must themselves have adequate financial resources, which are allocated by state legislatures—which ultimately points to the importance of political resources in support of school change.

Overall, state officials reported limited capacity to support school improvement

Only about one-third of state respondents perceived that their state agencies had adequate capacity to support low-performing schools. We developed an overall index of state education agency capacity based on states’ responses to a survey item that questioned state officials on their perceptions of state capacity to support low-performing schools (including components of state infrastructure, professional resources, and political support). Negative scores indicated “constraints” and positive numbers indicated “strengths.” State cumulative scores were frequently negative, indicating that on the whole, state officials perceived more limitations to their capacity than strengths. Indeed, only 16 states had positive scores (see Exhibit 2).10

Using this index, we divided states into three groups: States with acute capacity limitations (those depicted in red in Exhibit 2), states with mild capacity limitations (those shaded in amber), and states with moderate capacity (those in green). Overall, 16 states may be characterized as having acute capacity limitations, 17 have mild capacity limitations, and 16 have moderate capacity.11

Exhibit 2: State Education Agency Capacity Indices, 2007–08

Note: Because survey respondents were assured confidentiality, state names have been omitted.
One state’s index was zero, and is grouped with the “mild capacity limitations” states.

Only about one-third of state respondents perceived that their state agencies had adequate capacity to support low-performing schools.
Overall, 16 states have acute capacity limitations, 17 have mild capacity limitations, and 16 have moderate capacity.

On average, respondents in states with acute capacity limitations had more schools identified for improvement: In 2006–07, an average of 19 percent of schools were identified for improvement under NCLB in states with acute capacity limitations. In contrast, approximately 15 percent of schools in all other states were identified for improvement. These broad differences do not seem surprising: in general, states perceive challenges to their internal capacity when the “demand for services” (that is, the number/proportion of schools identified for improvement) increases. Interestingly, these differences in state officials’ reports of capacity are not related to state size, enrollment, or demographics of the student population.

That said, state officials’ perceptions of their capacity is not simply a reflection of differences in the number of schools identified for improvement. Indeed, there is noteworthy variation within clusters of states: among the acute limitations states, for example, some have well over 40 percent of schools identified for improvement, but others in the same category have less than 10 percent of schools identified for improvement. Similarly, we find states at both ends of the spectrum, in terms of perceived capacity, that have the same proportion of schools identified for improvement. This suggests that the perceptions of state education agency capacity are not only influenced by “demand” on the part of schools, but may reflect real differences in terms of the “supply” of resources available at the state level. In addition, differences in state officials’ perceptions of their capacity are likely shaped by the degree to which their system of support was designed in a way that accounted for capacity constraints.

The school improvement “workload” varies greatly across states

Another measure of state capacity—or its limitations—is the number of employees available to work within the state system of support, whether providing direct assistance to schools or performing management tasks within the state agency. To be sure, there are few hard data and no single model for what would constitute an appropriate threshold in terms of the minimum number of SEA staff. Nor is there conclusive data on what constitutes a standard per-unit cost to improve schools or districts; or an appropriate number of staff required to facilitate and sustain school change. Comments from state officials—such as the following—offer a rough “rule of thumb” with regard to what might be considered

Exhibit 3. Indices of State Education Agency Capacity, Clustered by Level of State Workload of Schools Identified for Improvement, 2006–07

Note: Numbers of schools identified for improvement under NCLB collected from extant sources including state education agency websites, the Government Accountability Office, the American Association of School Administrators, and local press reports.
a manageable workload for staff who support low-performing schools:

Given the number of schools identified for improvement... coupled with the lack of resources at the state level, it’s caused us to have to spread [support] thinner. We would like to have a coach working with no more than two or three buildings at a time. We are simply unable to sustain that today.14

To gauge the workload challenge faced by states, we calculated the ratio of the number of staff within a state system of support to the number of schools identified for improvement under NCLB. To do so, we asked state officials to provide counts of the number of full-time equivalent (FTE) staff who provide assistance through the state system of support, whether at the state level, in regional offices, districts, or employed as consultants. We compiled these data to estimate the number of staff who collectively provide assistance to schools identified for improvement within a given state (acknowledging that this is an approximate measure of the number of FTEs). Then, based on data about schools identified for improvement in 2006–07, we calculated the approximate number of schools identified for improvement for which each school improvement staff member would be responsible.

Not surprisingly, the ratio of staff to schools identified for improvement differs substantially across states. In almost one-third of the 36 states with adequate data for analysis,15 the number of staff exceeded or nearly matched the number of schools identified for improvement. In over one-third of states, the ratio of staff to low-performing schools ranges from 1:2 to 1:4. These first two sets of states we have clustered together and suggest that they have a “moderate workload.” The remaining states, in which the ratios of staff to low-performing schools exceed 1:6 we have characterized as having a “challenging workload.”16 Although we took steps to minimize error, we do recognize potential problems associated with state reports of the number of staff. As such, we believe it is more appropriate to report aggregate categories of the degree of challenge associated with state efforts to promote school improvement.

Overall, states with challenging workloads are also those that report lower levels of capacity.17 The overall capacity index is lower for states with a challenging workload while states with a moderate workload have a somewhat higher average index (although still negative). The differences persist across the indices for infrastructure, political resources, and expertise, with lowest ratings consistently associated with the states with the most challenging workloads (see Exhibit 3). Nearly all indices were negative, indicating that states perceive more weaknesses than strengths. The only positive index is that which measures the perceived level of expertise of state education staff, among states with a moderate workload.

Limited staffing levels is a key constraint

Most state officials reported challenges associated with the number of staff available to provide support to schools and districts identified for improvement. Administrators from 39 states responded that the limited number of SEA staff was a constraint on their capacity to support schools and districts identified for
improvement. Similarly, more than half of state officials (29 states) indicated that staff turnover was a constraint. As one state official commented, “Most challenges relate to not having enough state education agency staff members to effectively assist schools in school improvement initiatives.” Another stated simply, “The problems are many and we are few.” In contrast, just seven respondents perceived they had adequate numbers of SEA staff, and indeed, the number of staff was a strength of their organization (see Exhibit 4).

As we describe in a companion research brief, State Systems of Support Under NCLB: Design Components and Quality Considerations, SEA staff in 42 states provide direct support to low-performing schools. However, SEA staff are not the only—or even the primary—support providers in most states: in all states but one, consultants and staff from external organizations offer direct assistance at the local level. Nonetheless, SEA staff anchor the system of support, and their limited numbers are sorely felt.

State reports of insufficient funds

Most states reported financial constraints as well: three-quarters of respondents (36) indicated that state funding for school improvement was a constraint, and officials from 27 states reported that levels of federal funding constrained their school improvement capacity as well (see Exhibit 4). One state official noted, “We are a small minimum-funded state which means our state administration amount is capped and never increases. It is extremely difficult to meet the federal requirements pertaining to the statewide system of support with the minimal amount of funds we receive for administration of the Title I program.” Two-thirds of respondents (29 states) indicated that state funding for school improvement was a constraint, and officials from 27 states reported that levels of federal funding constrained their school improvement capacity as well (see Exhibit 4).
ty-nine respondents indicated that the base level of funding for schools in their state was a barrier to school improvement.

However, not all states are in similar financial predicaments. One state official wrote, “[Our state] is sparsely populated, has few school districts and schools, and lots of money for education (because of the mineral wealth)… Schools in this state are performing at the median level or higher with all the advantages they have: high teacher stability and pay, new, updated buildings, latest technology, and any requested resources.”

The variation in states’ allocation of federal funding for school improvement (funding authorized through NCLB section 1003(a)) reflect variations between states with thin resources and those with more ample resources. For example, in 2004–05, Alaska received $609,000 for 179 schools identified for improvement, while North Dakota had $607,000 in school improvement funds for 21 schools identified for improvement (McClure, 2005).

Technology resources still fall short

Since NCLB went into effect, states have been working to build their data systems to better track data related to testing, accountability, and teacher quality. Technology can be an asset in supporting low-performing schools as well. For example, states with more sophisticated technical resources may be able to link teacher and student data, provide data to schools quickly and through a user-friendly platform, and leverage on-line resources to facilitate networking among school-level staff. Indeed, 19 respondents indicated that their technological resources were an asset in supporting low-performing schools. Conversely, 22 state respondents reported that their technology infrastructure was a constraint with regard to school improvement (see Exhibit 4). Across all resources, it appears that state education officials perceive that they lacked the core “hard resources” that constitute the base of state capacity.

Perhaps not surprisingly, the level of state resources is related to the level of political support for state education agencies, as reported by state education officials. State indices for the level of political support were moderately correlated (0.46) with state indices measuring the level of “hard resources,” including staff, financial, and technological resources. That is, states that report higher levels of resources also report somewhat higher levels of support from state legislatures and governors, and fewer constraints associated with collective bargaining processes.

On average, more than half of states reported that staff expertise was a strength; the remainder were neutral or perceived expertise to be a weakness.

SEA staff perceive adequate in-house expertise

State officials were somewhat more likely to report staff expertise as an organizational strength. Our survey asked respondents to evaluate the strength of their agency’s expertise in various instructional areas, including curriculum, assessment, the needs of special education students and of English language learners. On average, more than half of states (31) reported that staff expertise was a strength; the remainder were neutral or perceived expertise to be a weakness. Over half of respondents (29) reported that their state education agency

"The problems are many and we are few."
expertise in issues related to special education was a strength as they worked to support school improvement. Somewhat fewer respondents (24) indicated that expertise in issues related to curriculum or assessment, was a strength. Fewer respondents indicated such strengths with regard to expertise in issues related to English language learners, and 19 state respondents regarded this area of expertise as a weakness.18

State education officials perceive greater support from governors than from legislatures

State officials were more likely to report that their legislatures were a constraint (18 states) than were state governors (8 states). Officials from 17 states reported support from their governor as a strength, compared to 14 who reported similar levels of support from the state legislature. While state governors propose policies and budgets, state legislatures are in the position of negotiating and approving financial supports for public education. The perceived levels of support of state legislatures may be associated with legislators’ political responsibilities, as well as limited ability to leverage bully pulpit opportunities. (That is, the state governor is more often on the public stage and can tout new initiatives.) As one state official wrote, “To date, the state legislature has provided no money to support low performing schools and districts.”

State-reported capacity levels were associated with another measure of the school improvement challenge each state faces: the ratio of staff to the number of schools identified for improvement. That is, states that had a moderate workload (fewer schools identified for improvement in relation to the number of support staff) reported higher levels of capacity. States that faced challenging workloads perceived lower levels of capacity.

One implication of this work is that we need far better research on the nature of capacity at the state level, how it is related to the model of assistance that each state employs and how different states cope with differing level of capacity—including how state officials use specific strategies to leverage the capacity they have.

Conclusion

The limitations of state capacity are the subject of frequent commentary in the literature on state systems of support. The data presented in this brief suggest that state officials perceive constraints associated with their own capacity to provide adequate assistance to schools identified for improvement, particularly with regard to staff, financial resources, and technology—the basic resources that are the building blocks of any state approach to providing assistance that will stimulate and sustain change at the school or district level. States rate their own expertise somewhat higher, particularly with regard to special education, but still point to deficits, most notably with regard to strategies that will assist English language learners. Finally, state education agencies are reliant on their political context, and particularly the will of their elected officials, both governors and legislators. Overall, SEA administrators perceived slightly less support from legislatures than from governors. These perceived capacity limitations also suggest that states may encounter barriers to fulfilling the promise of their systems of support.

State officials perceive constraints associated with their own capacity to provide adequate assistance to schools, particularly with regard to staff, funding, and technology.
Finally, we must also note that sustained school improvement is a bigger task than can be accomplished by a statewide system of support alone. Many schools encounter systemic challenges that are beyond the scope of what can be accomplished through the intervention of a set of external experts—whether related to teacher quality, state standards and assessments, base funding levels, or system leadership. That said, state assistance, if delivered in a way that is of high quality, can be an important piece of the puzzle. Adequate capacity will help state officials to get it right.

Endnotes


2 See, for example, Sunderman, G. and Orfield, G. (October, 2007). Do states have the capacity to meet the NCLB mandates? Phi Delta Kappan.

3 The District of Columbia and Puerto Rico were not surveyed.


10 This index was derived from responses to a composite question including 18 sub-items, all focused on “capacity to assist low-performing schools.” These sub-items addressed the adequacy of state education staff, expertise in various topics, technology, local control issues, financial resources for school improvement, and political support. Responses of “major constraint” were weighted -2 in the index, while responses of “major strength” were weighted at 2. Thus, the maximum range of the index was -36 to 36, although the actual range was -28 to 22. States with indices of -10 and lower were included in the “acute capacity limitations” category, states with scores of 0 to -9 were judged to have “moderate capacity limitations” and states with positive indices were included in the “moderate capacity” category.

11 One state did not respond to this question, so the total n = 49 states.


15 Because not all states responded to this question (and among those that did, we suspected mis-interpretation of the question), 36 states were included in these analyses.

16 We acknowledge that the cut-point between categories may be perceived as somewhat arbitrary. In addition, we acknowledge that we cannot infer a given staff members’ workload, because this depends on the state’s model of support. Nonetheless, we believe this measure of enough analytic interest to warrant use.

17 State officials responded to separate questions to measure SEA capacity to support school (an index of 18 sub-items), and to determine the number of SEA staff available to support low-performing schools.

18 Note that survey items related to expertise drew a higher proportion of responses (15 to 22 percent) that indicated that it was neither a strength nor a weakness.