State Implementation
& Scaling-up
of Evidence-based Practices

Implementation and Scaling Evaluation Report: 2013-2017

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This report documents the culmination of ten years of development of a new approach to improving human service systems, organizations, and outcomes. Based on the Active Implementation Frameworks, intensive support is provided to develop implementation and scaling infrastructures in state education systems to initiate and mange change processes, and to provide reliable supports for improved teacher instruction and student learning. Measures of capacity inform action planning and monitor progress in states, regions, districts, schools, and classrooms. Implementation is a significant addition to efforts to improve education in the United States.

Office of Special Education Programs

In 2006 the U.S. Department of Education Office of Special Education Programs (OSEP) was the first federal agency to recognize the potential benefits of implementation science for improving student outcomes. Through a RFP process, OSEP invested in developing implementation and scaling capacity in state education systems. This investment funds the State Implementation and Scaling up of Evidence-based Programs Center (SISEP) that started in October 2007. Since 2013, SISEP work in states also has been funded by the Center for School Turnaround (WestEd) and the Massachusetts Tiered System of Supports (Massachusetts Department of Education). This report pertains to the five-year funding cycle beginning January 2013.

Other federal and international agencies have begun to follow the lead of OSEP and are beginning to invest in developing implementation capacity in their human service systems. For example, the Administration for Children and Families, the Children's Bureau, and global health agencies are benefiting from the work initiated by OSEP.

In 2012 OSEP developed Results Driven Accountability (RDA) guidelines that make use of implementation principles and best practices. As part of RDA, OSEP requires states to submit an annual State Systemic Improvement Plan (SSIP) that is designed to increase support for states. The RDA and SSIP are the first step away from compliance monitoring and toward providing active support for improvement in outcomes for students with disabilities, and for all students (http://nirn.fpg.unc.edu/resources/case-example-us-office-special-education). These OSEP guidelines and requirements have provided encouragement for states as they engage in the capacity development and system change work described in this report.

The OSEP SISEP partnership with states since 2007 is an example of usability testing (Akin et al., 2013; Epstein & Klerman, 2013). As shown in Figure 1, a plan is followed with a small group of organizations, the results of doing the plan are intensively studied, and a new and improved plan is initiated with another small group. The resulting "virtuous circle" (Fox & Gershman, 2000) creates a learning organization (Morgan, 1997; Senge, 2006) where improved practice leads to better outcomes and continually improved plans as a result of each cycle.
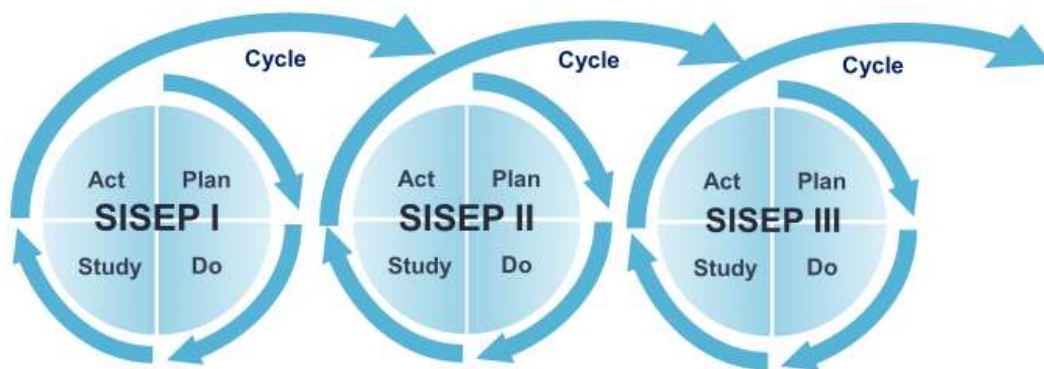

Figure 1. Usability testing employed for SISEP to be a learning organization.

A report is available (http://sisep.fpg.unc.edu/sites/sisep.fpg.unc.edu/files/resources/SISEP-SystemsChangesInStateEducationSystems.pdf) that describes the results of usability testing with five SISEP I states (2008-2012). By doing the work of state system change and capacity development on purpose, the work itself can be improved on purpose. SISEP II states (2013-2017) are the focus of this report.

Active Implementation Capacity Development

Educators typically use the term *capacity* to reference "the perceived abilities, skills, and expertise of school leaders, teachers, faculties to execute or accomplish something specific, such as leading a school-improvement effort." Capacity includes the ability of a school or educator to grow, progress, or improve (http://edglossary.org/capacity).

Given this definition, implementation capacity development necessarily focuses on organization and system structures, roles, and functions. Functions consist of the knowledge, skills, and abilities of individuals who perform particular roles within system structures. The capacity to be developed is summarized in the following education impact formula (Fixsen, Blase, Metz, & Van Dyke, 2013):

Effective Innovation X Effective Implementation X Enabling Contexts

= Educationally Significant Outcomes

Educators are experts regarding the content to be taught to students. State and federal policy makers and administrators are proficient at establishing enabling legislation, funding, and guidance. What is needed is expertise to guide effective implementation to assure the full and effective use of effective innovations in state, regional, and local education contexts (Glennan Jr., Bodilly, Galegher, & Kerr, 2004; McIntosh, Mercer, Nese, & Ghemraoui, 2016; Schofield, 2004). Implementation capacity is based on the evidence-based Active Implementation Frameworks (http://nirn.fpg.unc.edu/learn-implementation).

In 2007, the original design of SISEP was based on underlined assumptions that 1) evidence-based education practices (effective innovations) are in use in every state and most districts, 2) a fidelity measure is available (effective implementation) to assess the presence and strength of any evidence-based practice in use, and 3) data systems in states and districts (enabling contexts) include measures of education capacity and processes related to producing high levels of student learning (educationally significant outcomes). The purpose of SISEP, then, was to strengthen the capacity of state, regional, and district teams to provide supports to schools and teachers based on the latest developments in implementation science.

In SISEP I states, OSEP and SISEP learned these assumptions are rarely met (http://sisep.fpg.unc.edu/sites/sisep.fpg.unc.edu/files/resources/SISEP-SystemsChangesInStateEducationSystems.pdf) Yet, the evidence is strong that the factors summarized in the education impact formula still must be in place in order to produce educationally significant outcomes. Therefore, the tasks for SISEP II were expanded to include identifying and operationalizing effective innovations, establishing fidelity measures, and developing measures of education capacity and processes that can be used in state education systems. These new features were built into the development of implementation teams in each state and are reflected in this report.

Capacity development and linked implementation teams

The development of implementation capacity in the form of linked implementation teams is the focus of SISEP work in active scaling states (Fixsen et al., 2013). An outline of the linked implementation teams and their development is shown in Table 1. The linked implementation

teams are known as a cascading system of support. Any one level of capacity without the other levels is insufficient for effective and sustainable change at scale (Darling-Hammond & McLaughlin, 1995; Fixsen, Blase, & Fixsen, 2017).

Table 1. Intensive capacity development in state education systems.

Time Periods 1 - 10									
1	2	3	4	5	6	7	8	9	10
SMT SISEP	SMT SISEP	SMT SISEP	SMT SISEP	SMT SISEP	SMT SISEP	SMT SISEP	SMT SISEP	SMT SISEP	SMT SISEP
STSs	STSs & SIT	STSs & SIT	STSs & SIT	STSs & SIT	STSs & SIT	STSs & SIT	STSs & SIT	STSs & SIT	STSs & SIT
	Active Model RIT	Co-Lead RIT	Co-Lead RIT	Coach RIT	Coach RIT	Coach RIT	Coach RIT	Coach RIT	Coach RIT
		Active Model DIT	Active Model DIT	Co-Lead DIT	Co-Lead DIT	Coach DIT	Coach DIT	Coach DIT	Coach DIT
				Active Model BIT	Active Model BIT	Co-Lead BIT	Co-Lead BIT	Coach BIT	Coach BIT
								Teachers	
								Students	

SMT = State Management Team; SISEP = the SISEP state liaison; STSs = State Transformation Specialists; SIT = State Implementation Team; RIT = Regional Implementation Team; DIT = District Implementation Team; BIT = Building Implementation Team

Developing implementation capacity is nearly cost-neutral from a funding stand point; the "cost" is the purposeful effort required on the part of everyone involved to initiate and manage processes to change hearts, minds, and behavior (Blase, Fixsen, Sims, & Ward, 2015). Every system has staff assigned to improvement activities that are mandated by state and federal governments or initiated by local leaders. As these staff are selected to be members of implementation teams, their current work is repurposed, and their current roles are reassigned so that team members can learn the new ways of work and devote their time to accomplishing education improvement goals.

The 10 time periods in the top row of Table 1 are not defined. A column is complete when the knowledge, skills, and abilities required of participants named in that column are learned and used effectively. With advancements in OSEP SISEP methods and measures, the time required to reach the teacher-student level has been cut in half – about 30 months instead of five years or more (when it could be done at all).

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As indicated in Table 1, capacity development follows the "I do, we do, you do" approach to teaching complex skills in education settings. Just enough, just in time training and coaching are provided as needed to move from one time period to the next expeditiously. With linked implementation teams at the heart of the implementation infrastructure, SISEP provides active modeling (I do) of the new skills then follows up with co-leading (we do) and coaching (you do) during subsequent events in order to develop in-state capacity to establish linked teams as part of a sustainable state implementation infrastructure.

For example, educators generally are not aware of Exploration Stage activities that result in a mutually informed agreement to proceed with change; activities that make a big difference in eventual outcomes and costs (Romney, Israel, & Zlatevski, 2014). Thus, SISEP actively models Exploration skills for State Transformation Specialists (STSs) and members of the State Implementation Team (SIT) as regional agencies are approached to consider engaging in the development of Regional Implementation Teams (RITs). Then SISEP co-leads and coaches STSs as Exploration work is carried out by STSs and the SIT with additional regional agencies. When a RIT has developed sufficiently to begin work with districts, SISEP actively models Exploration activities in a district since this is a new set of skills for RIT and SIT members and STSs. This process is repeated at each new level until the STSs and all the implementation team members have experience and have acquired initial skills to conduct the work effectively with coaching from the SIT, STSs, and SISEP.

The Exploration Stage is just one of the many components that define the Active Implementation Frameworks. All the Active Implementation Frameworks components must be taught, learned, and used as the new way of work to accomplish the aims of public education. Given the complexity of the Active Implementation Frameworks, each new way of work at each level is first done by experienced SISEP staff so that staff embedded in the education system can see what it looks like and sounds like in practice before the embedded staff are asked to try it on their own. The preparation and debrief time provides opportunities for discussion of nuances and unusual events as well as continual review of the basic knowledge, skills, and abilities needed to achieve the goals.

Attempting to skip ahead from one time period to another (Figure 1) is counterproductive, leading to disconnects in the system and wasted resources. Fragmentation is endemic in education systems; the goal is to align, integrate, and leverage resources by developing linked implementation teams that have the ability to make intended improvements effectively and efficiently.

Intensive Implementation-Informed Support for States

To accomplish OSEP's goals, SISEP provides universal, targeted, and intensive supports to states and districts. Intensive support is provided by a SISEP state liaison who has established competence in the Active Implementation Frameworks and has demonstrated excellent facilitation skills. For intensive support, SISEP holds itself accountable for the outcomes in states. If a state has problems or fails in some way, SISEP staff engage in problem solving to find solutions. In this way, SISEP learns to avoid errors and continues to develop methods and measures to do the work better. SISEP is a learning organization and the lessons learned (SISEP I) are used to benefit current states (SISEP II) and the next states (SISEP III) in continual learning cycles. All of the work reported in this paper was done by 5.2 paid FTE staff in SISEP.

Intensive implementation-informed support for capacity development in state education systems consists of monthly three or four-day on-site visits for training, coaching, evaluation, leadership support, and organization and system change. Between SISEP visits, training and problem solving are carried out via web-based communications and email exchanges. As the work progresses, more levels of the system are engaged and the complexity of the tasks increases exponentially.

Table 2 documents the time spent by SISEP in one state that was in Year 2 of implementation capacity development. By the end of Year 2, preparations were underway to move to Time 5 activities in Table 1. It takes time to teach implementation and scaling knowledge, skills, and abilities; the development of new structures and implementation teams requires approvals for reallocating funds and changing the status quo; problems arise and must be resolved promptly; turnover in key positions requires time to orient and educate new people; celebrating advancements takes preparation; and so on. The job of a SISEP state liaison is challenging and rewarding in countless ways.

In any system, change at any one level impacts all other levels and affects long-standing relationships in ways that are difficult to predict before it happens. Managing change processes, and resolving adaptive and technical challenges that arise during change, is a large part of the work for SISEP state liaisons and STSs as they develop the capacity of state, regional, district, and school leaders and staff. The result of intensive SISEP and STS work at multiple

levels is defragmentation of current system components and alignment of key system functions with intended outcomes. The status quo is formidable but changeable.

Table 2. SISEP effort data for one state for one year (Year 2 in the state).

Support	Total Annual <u>Direct</u> Contact Time
In Person Meetings	
Capacity Assessment	36 hrs.
Coaching	96 hrs.
Meetings (Onsite)	376 hrs.
Meetings (Virtual)	62 hrs.
Planning Meetings	24 hrs.
Regional Trainings	40 hrs.
Total Direct Contact Time	*634 hrs.*
Email Exchanges	1,296
Coaching Calls	96

<u>Figure 2</u> highlights the delivery of intensive supports aligned with the cascading system of implementation supports and infrastructure development. These data are drawn from one active scaling state. The bar graph shows the allocation of time at state, regional, and district levels as the SIT, RITs, and DITs are formed and begin to function. The line graph shows the number of direct contact hours with in-state staff.
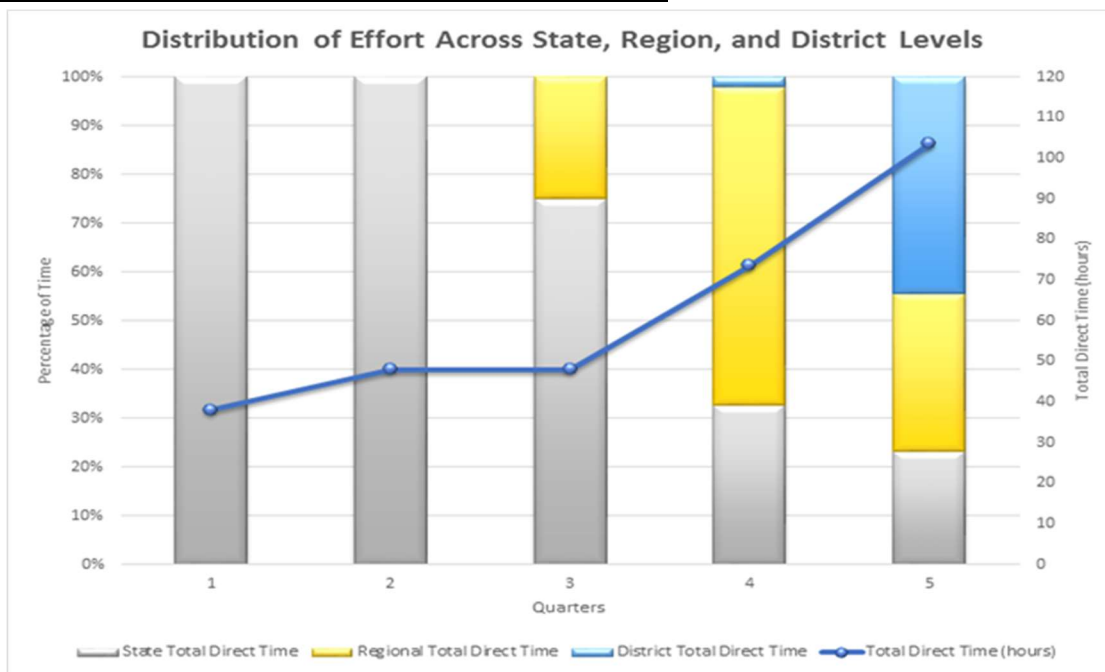

Figure 2. Distribution of Effort and Number of Direct Contact Hours in On-Site and Virtual Meetings During the First Five Quarters of SISEP Support in an Active Scaling State

The work of SISEP expands as capacity is developed at each level. For example, by Time Period 5 in Table 1, SISEP is in direct personal contact with 110 to 150 state, regional, district, and school personnel in a state in any given month with a focus on the development of knowledge,

skills, and abilities at each level and aligned relationships among levels. As a result of working throughout the system, aligned and integrated structures and functions are developed and collaborative interactions among them are established to leverage current resources in the system.

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The intensive work in states is supported by content on the Active Implementation Hub (Ai Hub: http://implementation.fpg.unc.edu/). The Ai Hub is used extensively in the intensive capacity development process. It provides the critical content that can be assigned, studied, and learned prior to SISEP visits to a state. Because implementation science is universal, the same active implementation content is used to develop the skills of implementation team members at each level of an education system – state, region, district, and school. With a common language and a common set of implementation methods based on the Active Implementation Frameworks, the linked implementation teams (see Table 1) can work together seamlessly to develop and assure effective supports for teacher instruction in all schools.

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Since the inception of the Ai Hub in 2013, SISEP has developed Modules, Lessons, a Resource Library with downloadable materials, and private spaces for workgroups in the intensive states and targeted states and TA Centers. The resources on the Ai Hub have been developed and tested in practice, and only those found useful for capacity development are included on the Ai Hub.

Capacity Assessment, Action Planning, and Progress Monitoring

Progress toward developing linked implementation teams' capacity as outlined in Table 1 is assessed at each level. Implementation capacity assessments (http://nirn.fpg.unc.edu/learn-implementation/measures) have been created by SISEP in order to drive the intensive work with states. It should be pointed out that these are the first implementation capacity assessments to be created in any human service system in the US or globally. The capacity assessments are "action assessments" where each item asks about an important dimension of implementation capacity, each item is actionable, and the scores are sensitive to apparent changes and setbacks. With each administration action plans can be established, progress can

be monitored, and gains can be documented and celebrated in the complex world of capacity development and system change. Corresponding with the levels in Table 1, there is a:

1. State Capacity Assessment (SCA; Fixsen, Ward, Duda, Horner, & Blase, 2015),
2. Regional Capacity Assessment (RCA; St. Martin, Ward, Harms, Russell, & Fixsen, 2015),
3. District Capacity Assessment (DCA; Russell et al., 2016; Ward et al., 2015),
4. School Drivers Best Practices Assessment (DBPA; Fixsen, Blase, et al., 2015), and
5. Classroom Observation Tool for Instructional Supports and Systems (OTISS; Fixsen, Ward, Ryan Jackson, & Chaparro, 2015).

The capacity assessments are a product of usability testing during the course of the intensive work in active scaling states where the usefulness of each assessment in the change process has

been documented. The psychometric properties of the assessments are being established as experience is gained with the instruments (e.g. Cronbach's alpha of .89 for the DCA; 0.79 to 0.91 for DBPA subscales).

> "Action assessments" help to establish action plans, monitor progress, and document gains that can be celebrated in the complex world of capacity development and system change.

Figure 3 shows the results of the entire set of measures for one state. The development of the cascading system of implementation supports can be seen in Figure 3: state capacity (SMT, STSs, SIT) begins to develop (SCA scores starting in Month 2); developing skills at the state level leads to development of regional capacity (RCA scores starting in Month 14); state and regional work to develop district capacity is reflected in the DCA scores (starting in Month 19); district capacity is used to develop school implementation capacity (DBPA scores starting in Month 26); and school capacity improves teacher instruction in the classroom (OTISS scores starting in Month 27). By the 33rd month, all capacity scores were approaching 80% (proficiency).

The data in Figure 3 are the first that show capacity can be measured, developed on purpose, and improved in complex state education systems. While capacity development occurs

sequentially from one level to the next (see Table 1), implementation teams at all levels are learning and growing together within a couple of years (Figure 3). The continued growth and integration of implementation teams is aided by this simultaneous and mutually dependent process.

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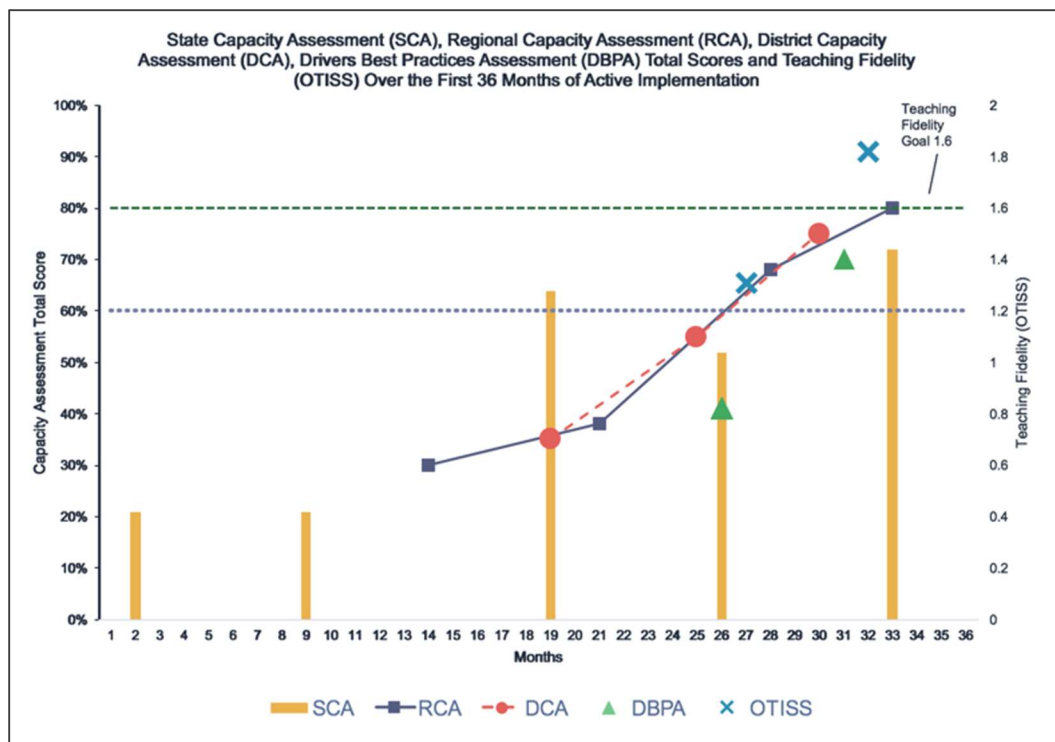
Figure 3. The development of a cascading system of implementation supports for improved student learning.

State Capacity Development

Figure 4 shows the first three years of data from the State Capacity Assessment (SCA) in four active scaling states. The SCA is administered twice a year in each active scaling state. The respondents who complete the SCA are directly involved in the change processes at the state level (e.g. Deputy Superintendent, Cabinet members, Division Directors, STSs). Within a few days after each SCA is administered in a facilitated meeting, the respondents and others prioritize areas that need attention and develop action plans to improve those areas. Figure 2 shows substantial growth over time in capacity for change in each active scaling state.

The data in Figure 4 are the first to show that a) purposeful development of implementation capacity is possible and b) can be replicated across unique state departments of education. Each of these findings is significant for education. While improving organization and system capacity for change is seen as critical in education and beyond (Barber & Fullan, 2005; Elmore, Forman, Stosich, & Bocala, 2014; Flatten, Engelen, Zahra, & Brettel, 2011; Marzano, 2010; Padgett, Bekemeier, & Berkowitz, 2005), there are few measures of capacity (Goodman, McLeroy, Steckler, & Hoyle,

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1993) and little evidence of change with repeated assessments of capacity (McGovern, Matzkin, & Giard, 2007). The data in Figures 3 and 4 are the first to reflect educationally significant change.
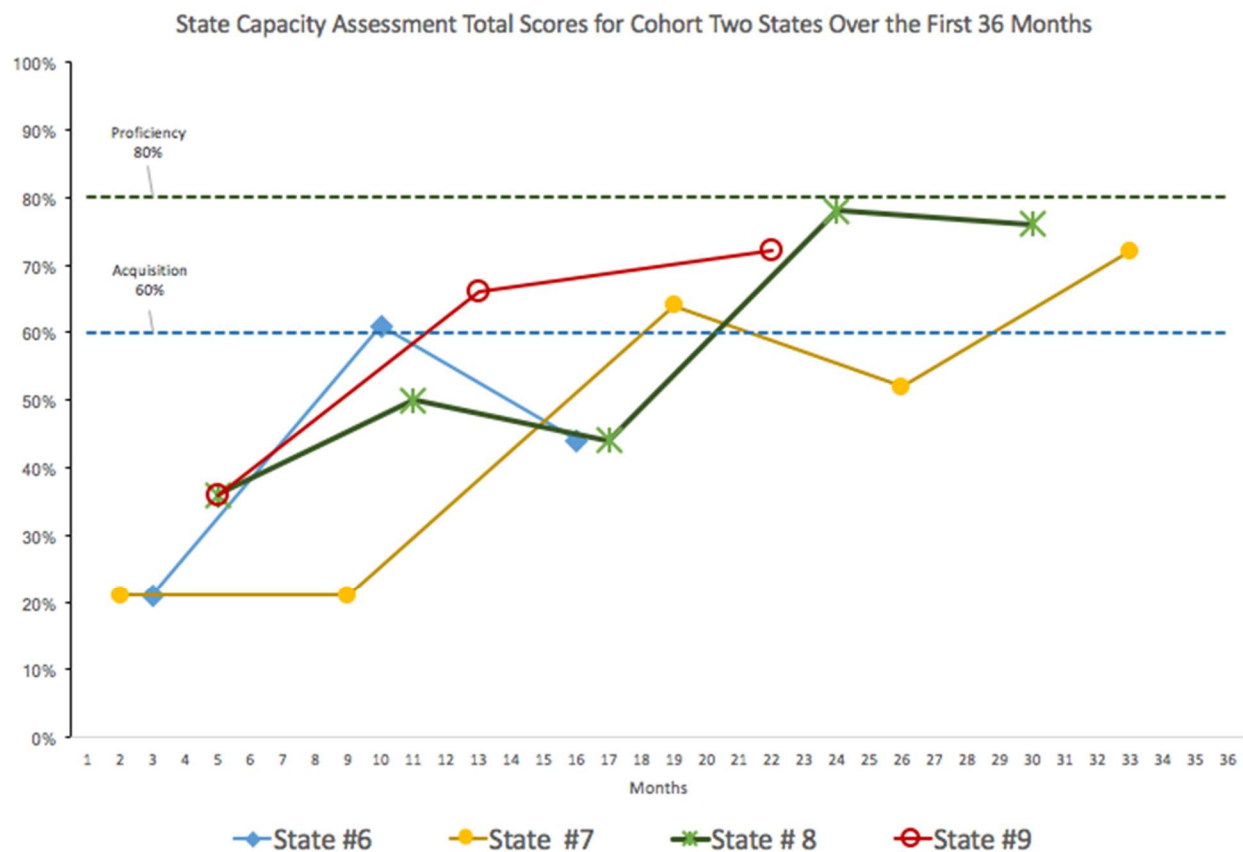

Figure 4: State Capacity Assessment (SCA) data for four active scaling states. A score of 60% marks initial learning and a score of 80% or more is proficiency.

The OSEP SISEP learning since 2007 has resulted in purposeful support for state education systems, from executive leadership in the capitol to teachers in classrooms. For the first time, it is now possible to change and improve state education systems on purpose. The ability to replicate the OSEP SISEP processes (e.g. Table 1) across states gives further hope for a better future for education.

Regional Capacity Development

In 2015, the development of the Regional Capacity Assessment (RCA) was complete and was used in education systems. The RCA is administered two times a year for each Regional Education Agency involved in active scaling. Figure 5 shows the development of implementation capacity in one region in State #7. With support from SISEP and the STSs, the regional education agency's scores increased from 9% at baseline to over 60% at the third

administration a year later. The results of each RCA administration are used by the regional staff for action planning by the RIT members and the STSs supported by SISEP.
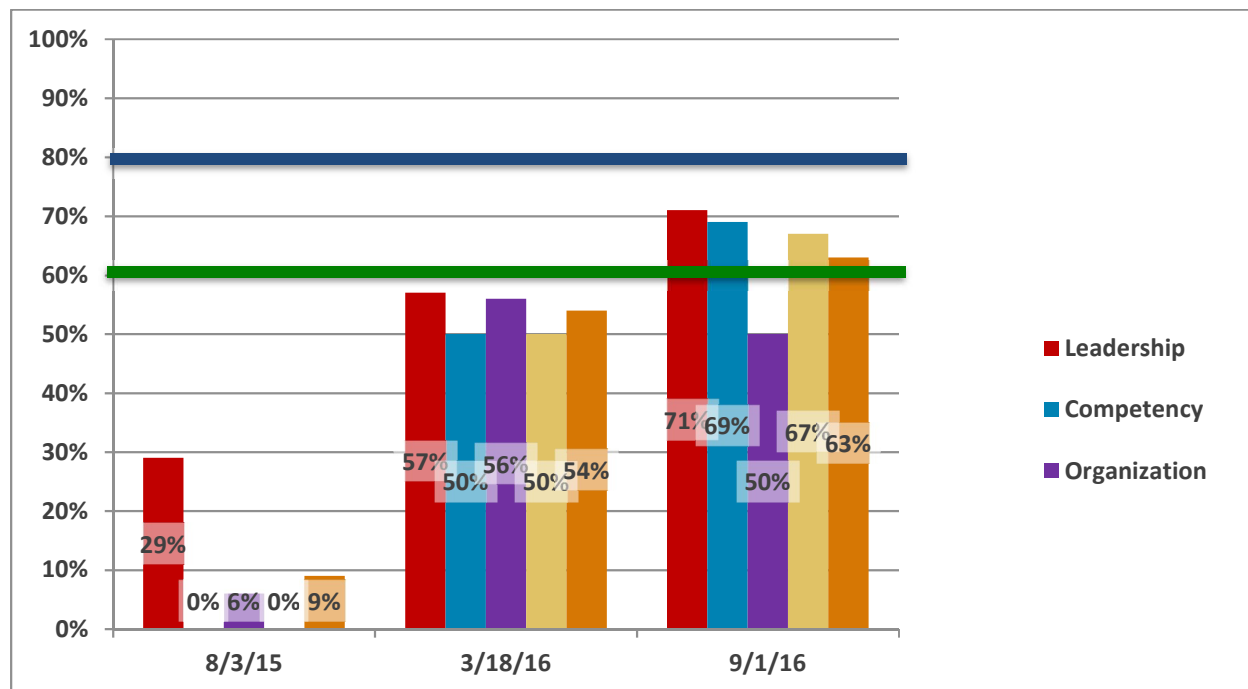

Figure 5: Regional Capacity Assessment (RCA) data for one region in an active scaling state. On each subscale, a score of 60% marks initial learning and a score of 80% or more is proficiency.

Regional Education Agencies are not a standard part of state education systems and their form and function vary widely across states. Nevertheless, implementation and scaling and the ultimate success of systemic change depends on having high functioning Regional Implementation Teams. A state team cannot effectively support hundreds of district teams. A state team can support a manageable number of regional teams that can, in turn, support a manageable number of district teams. The RCA data in Figure 5 are encouraging; capacity can be developed in highly variable regions.

District Capacity Development

The District Capacity Assessment (DCA) has been made available with web based preparation for potential administrators (http://implementation.fpg.unc.edu/resources/district-capacity-assessment-dca). To access the DCA and the national data base for data entry and reporting, administrators must pass the web-based course. As shown in Figure 6, the baseline scores for 195 education districts are in the 40% range. The data provide an indication of the work to be done to develop implementation capacity in education so that schools and teachers can be supported effectively.
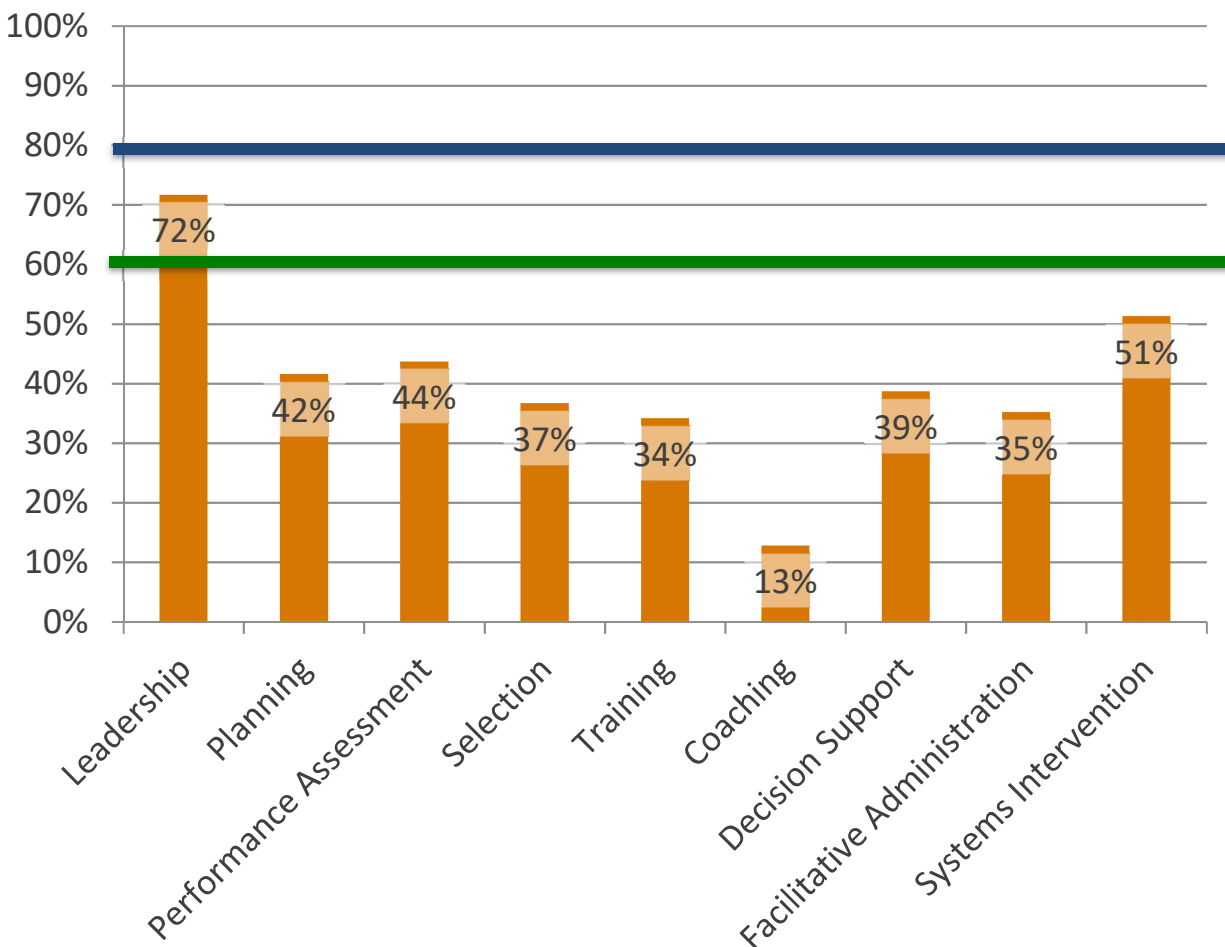
Figure 6: Baseline District Capacity Assessment (DCA) subscale scores for 195 districts in multiple states. On each subscale, a score of 60% marks initial learning and a score of 80% or more is proficiency.

In active scaling states, district capacity for change can be improved. With the support of a RIT, STSs, and SISEP, district implementation capacity is developed and DCA scores increase with each administration. Figure 7 shows the improvements in district capacity in one year in a district. The total score increased from 30% to over 80% and similar improvements were found for the subscale scores. There still is work to be done in this district. Leadership commitment, alignment, and staff selection, training, and coaching continue to be the topic for action planning and improvement.
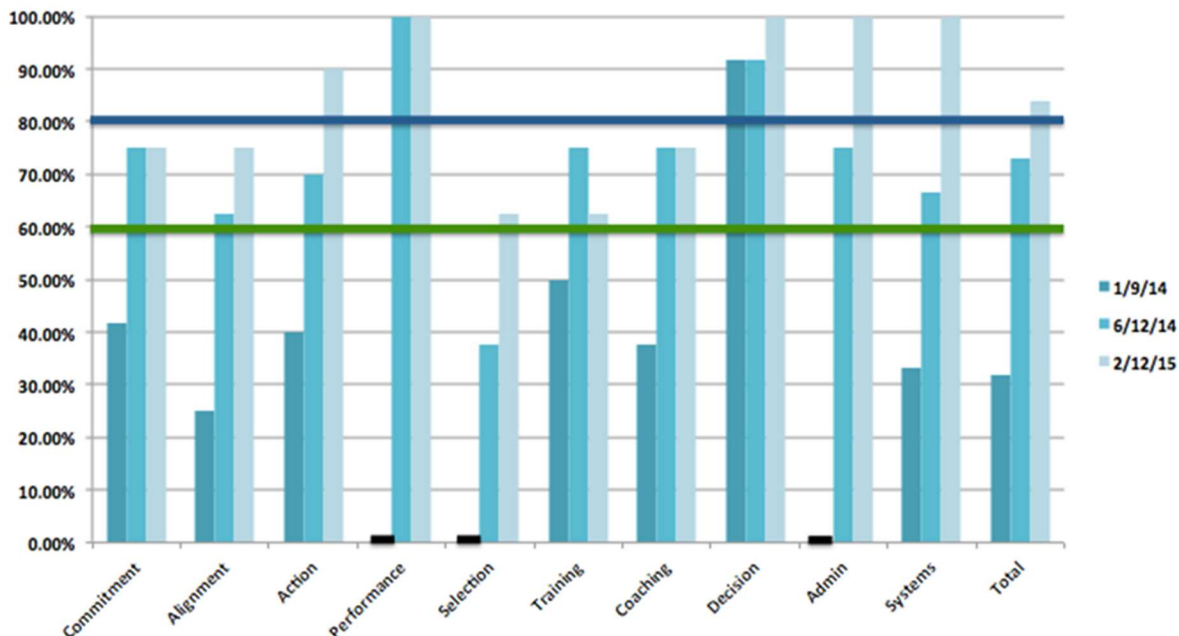
Figure 7: Repeated District Capacity Assessment scores showing increased capacity development in one district in an active scaling state. On each subscale, a score of 60% marks initial learning and a score of 80% or more is proficiency.

As district capacity is developed, the Exploration process is used to select schools (see Table 1) to begin active implementation and scaling. At this point, the district and schools are focused

on using a well-defined intervention to improve documented needs in the district. For example, an effective math, reading, or behavior program might be selected to close achievement gaps or reduce bullying or improve school climate. The goal of implementation capacity is not just to develop more implementation capacity; it is to solve education problems and promote student learning in visible ways (Hattie, 2009).

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School Capacity Development

Figure 8 shows the baseline scores for the Drivers Best Practices Assessment (DBPA) in 44 schools. Baseline scores for selection, training, coaching, and fidelity assessment supports for teachers and staff in schools are modest, at best. Decision Support Data Systems (DSDS) and Leadership scores are a bit better, but the use of data to improve administration (FA) or intervene with district, regional, and state levels of the system (SI) need improvement as well.

Given the research evidence that shows the importance of factors such as coaching, fidelity assessments, data-based feedback, and facilitative administration, the importance of improving

implementation capacity in schools cannot be emphasized enough. As Elmore (2002, p. 5) stated, "For every increment of performance I demand from you, I have an equal responsibility to provide you with the capacity to meet that expectation." In active scaling states, the DBPA is administered two times a year in each school. The data in Figure 2 show improvements in the DBPA data for a school in an active scaling district. High functioning regional and district implementation teams are required to develop, sustain, and improve the capacity "to meet that expectation" (eventually) in every school in every district in a state.
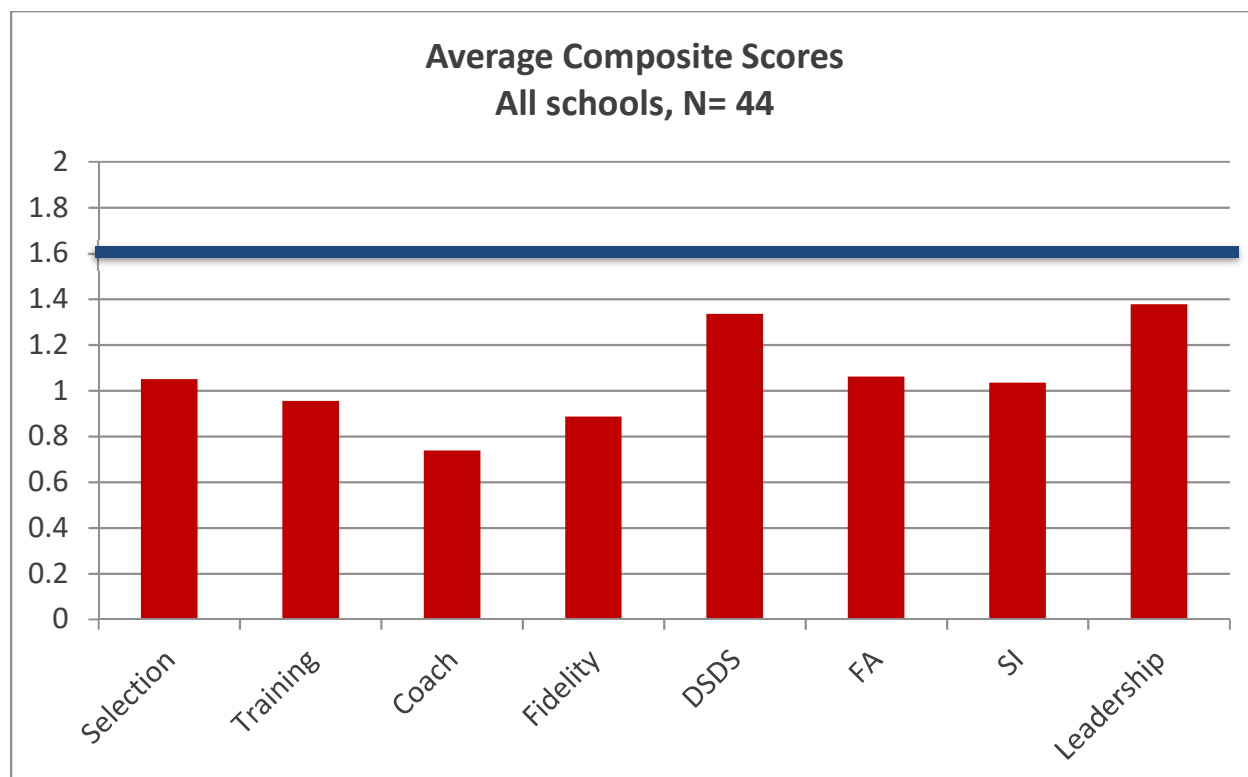
DSDS = Decision Support Data System; FA = Facilitative Administration; SI = Systems Intervention

Figure 8. Drivers Best Practices Assessment (DBPA) average scores for 44 schools. These baseline scores show the need for implementation capacity development in schools.

Classroom Instruction Improvement

The classroom is the final stop in the cascading system of supports for student learning (Table 1). The Observation Tool for Instructional Supports and Systems (OTISS) is based on findings from the meta-meta analyses of education research conducted by Hattie (2009). If teachers are supported effectively by school and district staff (DITs and BITs), then they should be providing high quality instruction to students, day after day and year after year, from one cohort of teachers to the next. The 7-item OTISS is designed to be used six times a year in each classroom so that within each academic year instruction can be supported more and more effectively by implementation teams at school, district, and regional levels. It is the feedback

from the teachers and schools that drives the cascading system of supports. If teachers don't teach effectively, students won't learn all they should. These data are reviewed frequently at district, regional, and state levels to continually improve the cascading system of supports for teachers and student learning.

Figure 9 shows the average OTISS scores for over 1,000 teachers at two points in time; the Fall and Spring terms of the 2016-2017 school year. The OTISS assessments were conducted as part of a school climate study and not as part of SISEP work in a state (Ward et al., 2017). The training and coaching of OTISS classroom observers provided opportunities for SISEP to learn what may be required to train additional observers via web-based training. Achieving high levels of inter-observer agreement (85%; 6 of 7 scores) is imperative when scoring a few items during a 10-minute walk through a classroom.

Observation Tool for Instructional Supports and Systems (OTISS) 2016-2017

■ Fall 2016   ■ Spring 2017
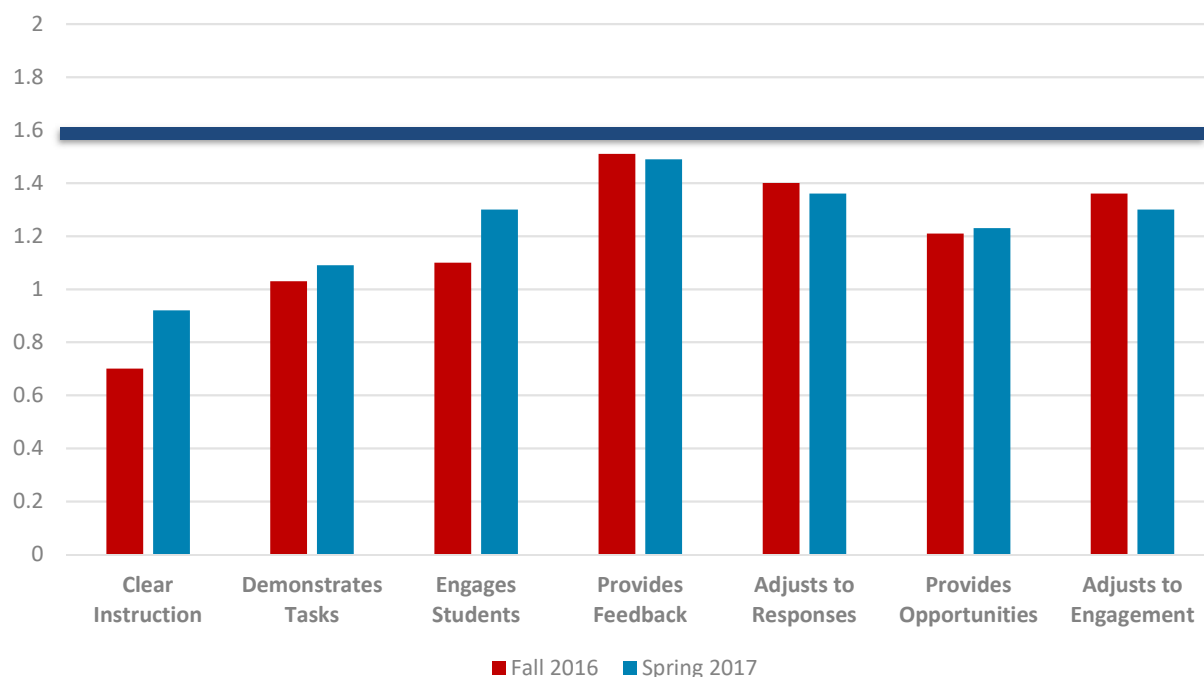
Figure 9. Average scores for two baseline administrations of the 10-minute Observation Tool for Instructional Supports and Systems (OTISS) classroom walkthrough assessment in N = 1,059 / 1,511 Teachers in 43 Schools. These are test-retest data with no intervention between assessments. Data from Ward, Lenard, Tillery, Miller, Preston, and Cusumano (2017), used with permission.

The OTISS is not a teacher assessment. The OTISS data provide feedback to the school and district implementation teams regarding how effectively they are supporting teachers. If OTISS scores are low, support for teachers needs to improve.

The next test for the OTISS is to correlate OTISS scores with student learning when the school capacity (DBPA) has improved and teacher instruction (OTISS) has improved on purpose. If predictions based on research hold up, then visible improvements in student learning done on purpose and replicable across schools, districts, regions, and states are within reach for OSEP and education.

Targeted support for states and TA Centers

The products of intensive state work are made available at targeted and universal levels. Thus, only methods, materials, and measures that have been found to be useful for intensive capacity development are shared with others. SISEP works in a continual Plan-Do-Study-Act-Cycle mode where there is a clear plan for capacity development, there is evidence that the plan was done as intended (or not), the results are studied, and action plans are developed to establish a new plan for the next cycle (see Figure 1). Consequently, the form and functions of methods and materials are continually improved and shared.

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SISEP support is targeted for several states, TA Centers, and national initiatives. For example, SISEP engages with TA Centers to develop their knowledge, skills, and abilities related to implementation practice and science. SISEP collaborated with and provided implementation informed assistance for the six Regional Resource Centers and the subsequent National Center for Systemic Improvement. SISEP is a partner in the Center for School Turnaround where implementation capacity development and assessment knowledge, skills, and abilities are contributed to states and partners working with the lowest performing schools. SISEP has been a partner with the Massachusetts Tiered Systems of Supports to develop implementation teams in select districts in the state. SISEP collaborates with the PBIS Center on the development of capacity assessments and reporting of results, and with the SWIFT Center on the use of capacity assessments and action planning. SISEP participates in ongoing collaboration with the IDEA Data Center, the National Technical Assistance Center on Transition, the OSEP-funded Project Iceberg (Intensifying Cognition, Early literacy and Behavior for Exceptional Reading Growth), the national Comprehensive and Content Centers, the Pennsylvania Training and Technical

Assistance Network, and the Northwest, Mid-Atlantic, and Southwest Regional Education Laboratories.

When requested, SISEP administers the SCA as part of its targeted support for states and other TA Centers. SISEP also provides training and coaching to other TA Centers on the administration of the RCA in regional education agencies. Additional targeted support is provided via the DCA short course. This web-based resource was established to give educators access to the DCA and to the sisep.org data entry and reporting website. Administration of the DCA requires training and experience and these are provided on the web site (http://implementation.fpg.unc.edu/resources/district-capacity-assessment-dca).

Additional targeted support is provided via the DCA short course that was developed in 2015. This web-based resource was established to give educators access to the DCA and the sisep.org data entry and reporting website. Administration of the DCA requires training and experience and these are provided on the web site (http://implementation.fpg.unc.edu/resources/district-capacity-assessment-dca). By the end of 2017, 508 individuals had completed the DCA Short Course and 417 individuals passed the final exam to gain access to administer the DCA with districts in their state. Table 4 shows the 508 enrollees came from 34 states, and others from independent organizations (ORG) or had generic email addresses (YY). Twenty-nine states have used the DCA since 2012.

Table 4: The number of people by state enrolled in the DCA training course (2015-2017). Current and previous active scaling states are highlighted.

State	Enrollees	State	Enrollees	State	Enrollees	State	Enrollees
AR	6	IL	17	MT	1	TX	2
AZ	1	IN	15	NC	20	UT	6
CA	55	KY	21	NH	4	VA	53
CO	3	LA	3	NJ	9	VT	2
DE	1	MA	4	NY	4	WA	24
FL	1	MD	6	OH	1	WI	16
GA	6	MI	74	OR	12	WY	1
IA	4	MN	45	SC	3	ORG	25
ID	1	MO	14	TN	1	YY	47
						Grand Total = 508	

The DCA has been administered (i.e. data were entered in sisep.org) 604 times in 262 districts in 25 states. Importantly, repeated DCA administrations have been conducted in almost half the

districts (130). In these districts the DCA is being used as intended to inform action plans and monitor progress toward establishing implementation capacity. Correspondence with administrators who have passed the final exam and administered one or more DCAs indicate they are doing so in support of district change or as a way to evaluate school climate grant projects.

With the continuing work to develop the OTISS, there is great demand for the OTISS as a way to assess support for teachers. A web-based training program for OTISS observers to learn the measure and achieve high levels of interobserver agreement is envisioned and will be developed as time and resources allow.

Universal supports for educators

The methods, materials, and measures used to support SISEP work at the intensive level are made available on three websites. The NIRN website (http://nirn.fpg.unc.edu/learn-implementation) provides an overview of implementation science and the Active Implementation Frameworks. The scalingup.org website provides an overview of the SISEP approach to developing implementation and scaling capacity. The concepts and methods described in these two websites are further defined and operationalized on the Active Implementation Hub (Ai Hub) website (http://implementation.fpg.unc.edu/).

Web site content is made available to educators free of charge. Table 5 summarizes data for the "sessions" on each website for the past six years. A session starts when a user logs onto the website and ends when the user leaves the website. During a single session, a user may visit multiple pages, so sessions is a conservative measure of the use of a website. The data show increasing use of the websites reflecting the increasing interest in implementation and scaling in departments of education across the nation.

> The NIRN website provides an overview of implementation science and the Active Implementation Frameworks. The scalingup.org website provides an overview of the SISEP approach to developing implementation and scaling capacity. The concepts and methods described in these two websites are further defined and operationalized on the Active Implementation Hub (Ai Hub) website.

Table 5: Website sessions as defined by Google Analytics.

	2012	**2013**	**2014**	**2015**	**2016**	**2017**
Scalingup.org	13,433	13,261	11,326	13,621	14,836	14,654
Ai Hub	Began 4/1/2013	15,486	35,987	54,896	60,271	61,374
NIRN	25,295	29,612	38,733	43,594	52,670	58,552
Total	38,728	58,359	86,046	112,111	127,777	134,580

Table 6 shows the growth in the number of users and the greater growth in sessions. Thus, more educators are visiting the Ai Hub and, once they are on the website, they are making more extensive use of the information.

Table 6: Ai Hub users and sessions since its inception
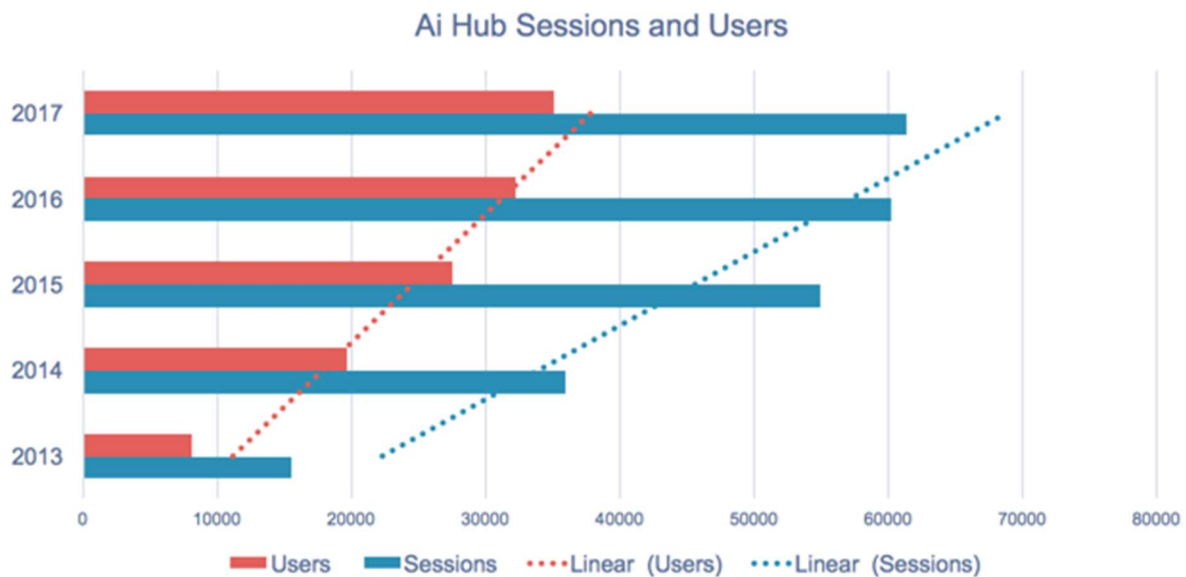
Other indicators of universal use of the Ai Hub information are pageviews and downloads. Google Analytics counts each page that is visited on a web site and documents any files that are downloaded. The data shown in Table 7 indicate that educators are making extensive use of the materials in their own work to improve student outcomes.

Table 7: Pageviews and downloads on the Ai Hub.

	2013	2014	2015	2016	2017
Pageviews	89,009	174,699	334,084	296,885	269,744
Downloads	12,103	22,742	48,750	51,279	44,790
Total	101,112	197,441	382,834	348,164	314,534

Summary

The OSEP investment in developing implementation capacity in state education systems is important for several reasons.

1. The information in this report affirms OSEP's decision to include implementation best practices and science in its efforts to improve outcomes for students with disabilities and for all students;

2. Intensive active implementation-informed work can be effective for developing implementation capacity and for initiating and managing systemic change;

3. A clearly stated and operationalized approach to doing the work of initiating and managing systemic change processes can be replicated across states;

4. Measures of capacity development and systemic change at all levels of a state education system are available and useful for action planning and progress monitoring;

5. The methods and materials needed to support teaching and learning the Active Implementation Frameworks (e.g. Ai Hub) are available for use by SISEP staff and by implementation teams in states as they expand and mature;

6. Including purposeful and effective implementation supports in federal planning and funding provides greater return of investments in mandates and assistance centers;

7. The products of intensive work in states can be used by others in state education systems, TA Centers, and associated organizations.

Current SISEP II states benefit from the learning from SISEP I states. As a learning organization, lessons for SISEP include:

1. Intensive implementation-informed support for state systemic change requires time:
   a. Time every month to initiate and manage change processes while developing implementation capacity at each level and all levels (at a minimum, 1.0 FTE per state for liaison work)
   b. Time in years to support states as they develop new implementation supports in the context of a system that continues to provide education as usual until the new supports are strong enough to function on their own and replicate their team structures in new regions and districts (5 – 7 years per state from Installation Stage activities to Full Implementation in three or more regions of the state)
2. Systemic change requires engaged leadership
   a. The active involvement of the State Superintendent and Cabinet are essential for reviewing and approving systemic change and voicing their approval in public ways
   b. The top levels of the state education bureaucracy are essential for managing change within the system and managing change at the Executive Leadership and State Board of Education levels
3. A critical mass is needed to maximize learning and cope with increasing demands on expertise and time
   a. Implementation teams and SISEP need sufficient staff to cope with staff departures, and new staff entering and needing to learn an increasingly sophisticated array of methods
   b. Stability is a product of implementation teams carrying on in spite of turbulence in the environment around them

There are cautions as well:

1. Using the phrase "implementation science" and developing statements about the use of implementation best practices is not the same as doing the work of implementation as intended
   a. Like other fields (Wiegand, Belting, Fekete, Gutenbrunner, & Reinhardt, 2012), education is full of catch phrases that come and go without producing meaningful outcomes
   b. Implementation requires changes in structures, roles, and functions – that is, changes in behavior and changes in the status quo

2. Forming a so-called "implementation team" is not the same as having a team where each member knows the Active Implementation Frameworks and has the skills to do the work of implementation and scaling in challenging environments
   a. Education spends hundreds of millions of dollars on assessing student achievement, and spends next to nothing on what educators are doing that might produce current or improved student learning
   b. Using the capacity assessments provides essential evidence to support any claim that an implementation team exists and is doing the work of implementation
3. There is limited access to external facilitation to develop implementation capacity and a cascading system of supports for teacher instruction and student learning
   a. The demand for improving education is great and the implementation-informed resources are limited
   b. An estimate is to allocate $500,000 per state for 10 states at a time to fund the development of a national center with sufficient skilled and accomplished state liaisons to do produce the outcomes described in this report
   c. Working with 10 states at a time allows the usability testing to continue and keeps SISEP in the learning organization mode

Next Steps

In just a few years, OSEP and SISEP have developed collaborations with states, TA Centers, and affiliated education organizations to accomplish the original purposes of SISEP, that is, to test the value of including implementation practice and science in education improvement efforts. The next task (underway in SISEP III) is to demonstrate the broad impact on teacher instruction and student outcomes in each active scaling state.

Given the success of OSEP and SISEP, future resources can be directed more precisely to purposeful development of implementation capacity in more states and in more funded TA Centers. The OSEP Results Driven Accountability and State Systemic Improvement Plan provide the guidance states need to initiate change. The SISEP approach to capacity development and systemic change provides evidence-based methods that are teachable, learnable, doable, and assessable in state education systems. Together, OSEP and SISEP provide a pathway to improve education practices and outcomes and have those changes sustain and continue to improve for generations to come.

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