

Introduction

The Kentucky Department of Education's (KDE) vision is to ensure that all students reach proficiency and graduate from high school ready for college and careers. Kentucky has much to celebrate and is moving in the right direction toward its goals. At the same time, there is still much work to do.

- Nearly 70% of students with disabilities (SWD) are not proficient in reading in elementary school;
- Almost 80% of SWD are not proficient in reading in middle school; and
- Over 80% of SWD are not proficient in reading in high school.

The results in math are more alarming.

- Over 70% of SWD are not proficient in math in elementary school;
- More than 80% of SWD are not proficient in math in middle school; and
- Almost 90% of SWD are not proficient in math in high school.

And, while nearly 70% of SWD graduated from high school in 2014, only 22% were ready for college and careers.

Two years ago, KDE did an in-depth review of its data on proficiency and College and Career Readiness. While many Kentucky students have experienced substantial growth in these areas, not all students have experienced the same success. Kentucky's "gap" groups, particularly SWD and English Learners, had made small gains but the "gap to (proficiency) goal" had not decreased.

Based on the review of data, Kentucky's Education Commissioner, Dr. Terry Holliday, called for a restructuring of KDE's strategic efforts, with an emphasis on supporting students in the gap groups and providing earlier interventions to struggling students. A year later, again after reviewing student data in the context of student "dropout" predictors, Commissioner Holliday called for a renewed focus on math, particularly at the eighth grade level.

KDE recently began refining an approach to support schools and districts in the reduction of novice student performance. After analyzing the data, KDE determined that, despite increases in college and career readiness, increases in graduation rates and more students taking Advanced Placement courses and attaining qualifying scores, achievement gaps still exist.

In planning for novice reduction, KDE identified core work processes that will inform how the work is delivered to practitioners. The eight core work processes are:

- Design and deliver curriculum
- Design and deliver instruction
- Design and deliver assessment literacy
- Review, analyze and use data results
- Design, align and deliver support processes
- Establish learning culture/environment
- Align community support partners; and,

- Monitor legal requirements

The outlined processes reflect that the work of novice reduction will be the work of the entire agency. In February 2015, at the Commissioner’s behest, the Kentucky Board of Education adopted “novice reduction” of student performance on the statewide assessment as an addition to the KDE’s accountability system.

Given the new requirements from the federal Office of Special Education Programs (OSEP) around *Results Driven Accountability* and the development and implementation of a State Systemic Improvement Plan (SSIP), there was no doubt that Kentucky’s SSIP focus would include increasing proficiency of SWD as measured by the statewide assessment, and reducing the number of students performing at the “novice” level. Consequently, the SSIP is not an “add-on” but is in the mainstream of the KDE’s strategic plans. KDE has ensured that the SSIP aligns to, supports, and leverages the work of the entire agency.

The KDE is also in the process of aligning the SSIP as one of the “intentional and aligned acts of improvement” in the [KDE Comprehensive Strategic Research Plan](#).

KDE’s efforts to improve educational results and outcomes for SWD are a key focus in Kentucky’s ESEA Waiver Request and are highlighted multiple times throughout the application. The SSIP is referenced most extensively on pages 48-52, but is also cited elsewhere in the Waiver Request.

The ESEA Waiver Request was submitted to the U.S. Department of Education (USED) on January 30, 2015. On March 31, 2015, USED issued a [letter of approval](#) to extend the state’s flexibility waiver through the 2018-19 school year. For more information please see [ESEA Waiver Request](#).

The remainder of Kentucky’s efforts in completing Phase I of the SSIP - the data and infrastructure analyses leading to the development of the State Identified Measurable Result (SiMR), the development of Coherent Improvement Strategies and the Theory of Action, as informed by stakeholder involvement- are set forth in the subsequent sections of the SSIP.

Data Analysis

The Commonwealth of Kentucky has a robust [Student Information System \(SIS\)](#) that works in conjunction with the online [Continuous Instructional Improvement Technology System \(CIITS\)](#), online [Professional Development system](#), online [School and District Report Card](#), and the [state’s longitudinal data system](#). KDE has also developed a “One Stop Shop” for Kentucky’s publicly available education data, called [Open House](#).

Each year, School and District Report Cards are posted on the KDE website under the [Kentucky School Report Card](#). These report cards provide information about each Kentucky school and district, including test performance, teacher qualifications, student safety, awards, and parent involvement. The School and District Report Cards were established by statute, [KRS 158.6453](#), and regulation, [703 KAR 5:140](#). The Report Cards also incorporate the requirements of the federal [No Child Left Behind \(NCLB\) Act](#).

Kentucky has a four-stage process for data validation that includes guidance and training, technical assistance, pre-submission data validation, and post-submission data validation. The four-stage process is used to ensure data quality. As part of the process to ensure data quality, the KDE has established clear expectations for effective data use across both the State Education Agency (SEA) offices and the Local Education Agencies (LEAs) through the use of the [Data Standards](#).

Data standardization is the process of making all data of the same type or class conform to an established convention or procedure to ensure consistency and comparability across different databases. The Data Standards are linked to KDE's website and to the SIS. The standards are intended to promote the use of procedures, establish guidelines for consistency when implementing new initiatives, and to improve data quality.

As part of Phase I of the SSIP, the KDE conducted a series of activities around the analysis of data related to student outcomes as the first step in determining the SiMR. The KDE, with stakeholder input, determined the SiMR must align with the work of the department and focus on improved proficiency for SWD. As a result, the development of the SiMR and implementation of the SSIP is consistent with Kentucky's [Restructured Delivery Plans](#)' emphasis on supporting students in the gap groups.

To assist the SSIP team in broad data analysis, data maps were created by the CDU. The data maps displayed all LEAs in the state and the difference between the LEAs' proficiency scores in relation to the SEA's proficiency target by level (Elementary, Middle School, and Secondary) for reading and math. The data maps were initially analyzed by the SSIP team to identify math and reading proficiency rates of LEAs that missed the district's proficiency target for SWD by more than 5%.

Using the data maps, the SSIP team looked for statewide patterns. The review of the maps led to discussions around regional clusters of low performance, grade level patterns, performance by disability category, and content focus. Math emerged as a potential focus even at the broad analysis level. With that discovery, additional external and internal stakeholders were invited to participate in continued discussions and assist in a deeper analysis of data. Math specialists, Title I, Title III, the Early Childhood branch, KDE's Division of Student Success, KDE's Regional Data and Improvement Strategist, and an external evaluator became an integral part of the SSIP team.

With a more informed and established SSIP team, a focused analysis was conducted. Data were gathered and analyzed from various sources such as IDEA Section 618 Data, the Annual Performance Report (APR), School Report Cards, and CIITS. Data sets available on the KDE website were used to assist with analyzing state, regional, district, and school data. For each LEA, School Report Card data was gathered for student performance in reading and math. The data were also disaggregated by grade level, grade band, gender, race, Limited English Proficiency (LEP), Migrant, SWD, and Free and Reduced Price Meal status.

KDE's The State Performance Plan (SPP) compliance indicators (Indicators 4B, 9, 10, 11, 12 and 13) for FFY 2013 demonstrate a high level of compliance with IDEA, with all but one indicator within less than one percentage point from full compliance. Therefore the SSIP team

concluded its compliance data posed no potential barrier to improving results for SWD.

KDE's Indicator 10- *Disproportionate Representation of Racial and Ethnic Groups in Specific Disability Categories that is the Result of Inappropriate Identification*- showed slippage in FFY 2013. KDE's Coherent Improvement Strategies address the Indicator 10 noncompliance, which is based on inappropriate identification of racial/ethnic groups in specific disability categories. The KDE believes the Strategies that will lead to a measurable improvement in the SSIP State-identified result, will also enable Kentucky to come into full compliance for Indicator 10.

SPP Indicator 5 educational environment data were reviewed. Kentucky has historically had a high percentage of SWD served in the regular classroom for 80% or more of the day, with the current percentage for Indicator 5 standing at more than seventy percent (70%). Because most SWD have access to the general education curriculum, the SSIP team determined that issues SWD have with achieving proficiency were not related to restrictive educational settings.

The SPP Indicator 3 Proficiency data were collected and analyzed for each LEA in conjunction with Section 618 Data. The review included:

- Children with Disabilities Not Participating in Assessments
- Mathematics Participation Status
- Reading/Language Arts Participation Status
- Academic Achievement in Mathematics
- Academic Achievement in Reading
- Assessment Participation in Mathematics
- Assessment Participation in Reading/Language Arts

The Kentucky Education Data System (KEDS) data is used to report Kentucky's performance on SPP Indicator 7 (outcomes for SWD participating in Kentucky's preschool program). KEDS data were reviewed to identify alignment to reading and math performance. However, KEDS data only identifies the acquisition of knowledge and skills, not pre-academic skills related specifically to math and reading.

Additionally, the data used for this Indicator was changed from an age-level anchor to a grade-level anchor. Some LEAs use age-appropriate measures for incoming students and grade-appropriate measures for exiting students, while other districts use grade-appropriate measures for both incoming and exiting students. Until all LEAs are using the same measures, Indicator 7 data will not be used as part of the SSIP data analysis. The concerns over data consistency for Indicator 7 will correct over time, as all incoming students who had been assessed using the former age-level anchor transition from the preschool program.

Student level data from CIITS was collected for academic performance in reading and math. Data was also collected on reading and math from Kentucky's statewide assessment, the Kentucky Performance Rating for Educational Progress (K-PREP). End of Course assessments in English II and Algebra II were reviewed for high school. Data were collected by LEAs for SWD that included gender, grade, disability category, raw score and K-PREP performance level (i.e., novice, apprentice, proficient, and distinguished).

Reports were generated from CIITS to compare trend data to scores by LEA, school, and student,

as well as scores by grade, gender, and disability category. The CIITS system is new and had student-level data for only the 2011-12 and 2012-13 school years at the time the SSIP team conducted the Phase I data analysis. Data for the 2013-14 school year was not available until November 2014, which means the SSIP team initially analyzed a two-year trend using CIITS data. Each year, as more data becomes available, the ability of CIITS to establish student-level trends will strengthen.

The SSIP team concluded from the data analysis that SWD showed growth toward proficiency in math until grade 5. At grade 6, all students, including SWD, experienced a dramatic drop in assessment performance. Statewide students began to recover by grade 7; however, SWD continued to decline in math performance each subsequent year of assessment.

The team began an analysis of the root cause for the decline in math performance. Activities to narrow possible root causes were conducted with the SSIP team leading to patterns in teacher effectiveness emerging as a possible root cause. Ultimately, teacher preparation and effectiveness in mathematics instruction for SWD were hypothesized as potential root causes.

In an effort to validate the results of the root cause analysis, the bi-annual [Teaching, Empowering, Leading and Learning \(TELL\) Kentucky Survey](#) (Kentucky's Working Conditions Survey) was reviewed. The TELL Kentucky survey collected responses from 43,761 educators in March 2013. The survey questions provided valuable feedback on the perceptions of all school-based educators about teaching, learning and working conditions. The data were analyzed for each survey item by school, LEA, SEA, and [Educational Cooperative](#).

Results of the TELL Kentucky survey were categorized by demographics, time, facilities, community support, managing student conduct, teacher and school leadership, professional development, and instructional support and practices. The results showed that closing the achievement gap, differentiating instruction, integrating technology, and training on special education (SWD) were identified as the largest areas of need by Kentucky educators.

The data analysis, which began at a broad, statewide level and moved to a focused student level, combined with internal and external stakeholder perspectives and educator voice from the TELL Kentucky survey, supported the focus of the SiMR on the performance of SWD in math.

Analysis of State Infrastructure to Support Improvement and Build Capacity

The KDE has an established commitment to an ongoing focus on analysis of its infrastructure, support, and continuous improvement. Senate Bill 1 (SB 1), from the 2009 Kentucky General Assembly, called for a number of improvements in education, including a new assessment and accountability system. SB1 addressed many areas – what students should learn, what would be tested, how subjects would be tested, when tests were given, what should comprise the public school accountability system, and how exceptional children's needs would be met through the student assessment process.

SB 1 also called for revising academic content standards in all areas, aligning those standards with entry-level college course requirements and including them in teacher preparation programs. Moreover, SB 1 required Kentucky's Council on Postsecondary Education (CPE) and the KDE to develop a unified strategy to reduce college remediation rates, and increase college

completion rates. SB 1 (2009) has truly defined Kentucky's work that is continuing to lead to a strong, effective system of public education in Kentucky for every child.

Understanding that structures and practices had to change in order to achieve KDE's goals, several events occurred to help the KDE organize for the success it wanted to see. It was a time to *renew*, *refocus*, and *reorganize* so that Kentucky could chart a course leading to all students being *ready* for college and careers.

Kentucky has been fortunate to have a state board of education, commissioner of education, and other leadership with a deep understanding of and innovative vision for teaching/learning and developing leaders. Soon after the passage of SB 1 (2009), the KDE was reorganized to facilitate its goals for all students, including SWDs.

The reorganization was designed to facilitate improved outcomes for all learners, by placing the KDE divisions that relate to special education, program standards, and effective teachers/ leaders within the Office of Next Generation Learners. The reorganization established collegial working relationships across divisions that have been critical to the Phase I work of the SSIP. It also serves as a model of collaboration for LEAs, in that collaboration must occur between general and special education to realize improved educational results and outcomes for SWD.

Organizing for success also meant Kentucky had to look at how it would provide statewide support around its strategic priorities.

- To build the capacity of district leadership teams, including both general and special educators, to implement SB 1 (2009), Kentucky established a system of [Leadership Networks](#);
- To facilitate a more efficient and effective model for regional and integrated service delivery, including more focus on professional learning opportunities that include teachers of students with disabilities and general education teachers, in 2012, Kentucky aligned the State's former 11 special education cooperatives to the eight regional educational cooperatives.

As the KDE infrastructure demonstrates, the SSIP is not an "add-on," but is in the mainstream of KDE's strategic plans, aligning to and supporting KDE's broader efforts to close achievement gaps. As a result, the SSIP will benefit from aligning and leveraging resources already identified and aimed at achieving Kentucky's strategic goals.

In terms of Kentucky's fiscal infrastructure, grants funding current initiatives are within a single system. The Commonwealth of Kentucky utilizes eMARS (Management Administrative and Reporting System) as its statewide fiscal system. The Office of Statewide Accounting Services is responsible for maintaining and operating a centralized statewide accounting system for state government. The KDE is able to provide oversight of its own grants in the eMARS system by tracking budgets and expenditures for each grant awarded regardless of fund source. The KDE's Division of Budget and Financial Management can be consulted on the most effective way to leverage existing grant funds, if additional fiscal resources are needed to achieve the SiMR.

The SSIP requires the SEA to lead meaningful change in LEAs to improve results for SWD. Due to the constraints of state government, KDE's staff is housed in the capital city of

Frankfort. Frankfort's location and the size of KDE's central office staff makes it difficult for it to work directly with all 173 Kentucky school districts.

Fortunately, Kentucky's system of Regional Educational Cooperatives is designed to provide comprehensive educational services and programs that support member districts and schools.

Each cooperative has a special education division, which KDE supports with IDEA discretionary funds. Pursuant to their receipt of IDEA funds for the 2014-15 school year, the cooperatives were charged by KDE to develop Regional Systemic Improvement Plans (RSIPs). The RSIPs are the key to KDE delivering on the SSIP requirement that *systemic improvement* be focused at the LEA level.

The RSIP will use the same phases as the SSIP, with the Regional Identified Measurable Result (RiMR) aligned with KDE's SiMR. The premise of the RSIP is to allow cooperatives the ability to differentiate technical assistance according to regional needs, thus increasing the capacity of LEAs to implement, scale up and sustain evidence-based practices to improve educational results and outcomes for SWD. The regional cooperatives and their special education divisions have operated in Kentucky for many years. They have built close relationships with LEAs when providing technical assistance and are well positioned to continue this work with the RSIP.

As KDE analyzed its infrastructure to support improvement and build capacity at the local level in relation to its SiMR, it chose to intensely focus on a limited number of LEAs by forming "*Transformation Zones*" within the state to initiate the work of the SiMR. All districts will receive universal support; however, Kentucky will provide intensive technical assistance to the *Transformation Zone* districts in three of Kentucky's regional cooperatives. Evidence-based practices in math, implementation experts, and technical assistance and coaching from the cooperatives will provide implementation support to districts within the *Transformation Zones* to ensure fidelity, sustainability, and the ability to scale-up.

KDE's key partner, along with the regional cooperatives, is the [State Implementation & Scaling-up of Evidenced-based Practices \(SISEP\) Center](#). The SISEP Center is an OSEP-funded technical assistance center that supports education systems in creating implementation capacity for evidence-based practices benefitting all students, but especially SWD. The Center uses "Implementation Science" as a means of delivering practices that can successfully implement systemic changes in a systematic manner.

The importance of SISEP as a partner to KDE is reflected by its name. The Center assists states in implementing and scaling-up evidenced-based practices, which is paramount in results driven accountability. A new process -the previously mentioned *Transformation Zones*- was put forth by SISEP as a way KDE could improve results for SWD by directing its focus on a small number of school districts. By establishing district *Transformation Zones* in a few cooperatives, evidenced-based practices will be intentionally delivered in a controlled setting. Once the practices are successfully established in the *Transformation Zones*, they will be "scaled-up" across all districts, ensuring that Kentucky's SSIP will have statewide impact. The practices will continue to be effective, even if personnel and administrative changes occur.

To establish a baseline of the KDE's infrastructure, a State Capacity Assessment (SCA), facilitated by SISEP, was conducted. The SCA is completed twice annually by SEA staff

selected for their implementation knowledge and leadership. On November 17, 2014, a KDE cross-agency team completed the initial SCA. The State Capacity Assessment (SCA) team members included the following:

- KDE Commissioners Delivery Unit
- KDE Policy Advisors
- KDE Office of Career and Technical Education
- KDE Office of Next Generation Learners
 - Division of Learning Services
 - Division of Next-Generation Professionals- Professional Growth and Effectiveness System (PGES)
 - Division of Program Standards- Curriculum and Content
- KDE Office of Next Generation Schools and Districts
 - Division of Consolidated Plans and Audits;
 - Comprehensive School Improvement for districts and schools
 - Strategies for Closing Gaps
 - Division of Student Success- Focus Districts

The SCA provided a measure of the KDE's capacity for implementation. A smaller team was then established to review and analyze the results. An Action Plan was developed with support from SISEP. The plan included state capacity building goals to be achieved within the next six months. The SCA assisted in establishing a systematic process to analyze the KDE infrastructure and to support improvement.

To scale up the systematic approach to infrastructure analysis, the Regional Cooperatives received training from the KDE and SISEP on conducting District Capacity Assessments (DCA). Although all *Transformation Zone* districts have not been identified, one district has completed a DCA and is in the process of completing an Action Plan.

In addition to DCA training, KDE has provided ongoing professional learning, coaching, and technical assistance to the cooperatives since May 2014. The purpose was to build capacity of the cooperatives around the SSIP and in developing their RSIPs. These supports included:

- Providing all Regional Educational Cooperative staff with professional learning on High Impact Instruction in May of 2014.
- Meeting monthly with the special educational divisions of the cooperatives to explain the SSIP and KDE's expectations around the RSIP.
- Developing an *RSIP Implementation Guide* for the cooperatives' use, modeled upon OSEP's *SSIP Implementation Guide*.
- Presenting a, half-day Phase I training to assist the cooperatives in developing their RSIPs. This training included KDE staff modeling how the SSIP team was using a *Plan, Do, Study Act (PDSA)* process. The on-site training was provided to all cooperatives in September and October 2014 by SSIP work group members.
- Hosting the cooperatives in November 2014 for training from the SISEP Center on Implementation Science.
- Reviewing the cooperatives' RSIP quarterly status reports with feedback calls to each region.

- The Cooperatives will also receive training on coaching district-level coaches in April 2015.

These trainings will support the implementation, scaling-up, and sustainability of the SSIP. As the SSIP work continues and targeted areas for professional learning are identified, additional targeted professional learning will be defined.

Although the KDE initially began the work of infrastructure analysis with the SCA team, the SSIP team assisted in a deeper analysis of the state’s capacity to support improvement and build capacity at the local level. Early in 2014, Kentucky developed an SSIP team to begin the work of Phase I and continue into Phase II. Internal and external stakeholders became full time members of the SSIP team. The KDE determined that creating a diverse SSIP team was the best way to ensure transparency and high levels of participation of stakeholder engagement.

The KDE SSIP team consists of the following representatives:

- KDE special education staff, literacy and math specialists, and other program staff
- SPP/APR team members
- Kentucky’s Parent Training and Information (PTI) Center
- Commissioners Delivery Unit (CDU)
- District Director of Special Education (DoSE)
- State Advisory Panel for Exceptional Children (SAPEC)
- Educational Cooperatives
- KDE Division of Student Success- Focus Districts and Schools
- KDE Differentiated Learning- Response to intervention
- KDE Division of Learning Services - Title III
- KDE Division of Consolidated Plans and Audits - Title I
- KDE Division of Program Standards - Early Childhood
- Kentucky Council of Administrators of Special Education (KYCASE)
- Institutes of Higher Education (IHE)
- Committee for Mathematics Achievement (CMA)
- Kentucky Center for Mathematics (KCM)
- Kentucky Interagency Transition Council (KITC)
- External Evaluator

The SSIP team members have received monthly trainings from the SISEP Center to strengthen understanding of “implementation science” as it relates to the SSIP. Throughout the development of the SSIP, team members demonstrated increased awareness and understanding of implementation.

The SSIP team, in the development of the SiMR, utilized a Plan-Do-Study-Act (PDSA) process to manage the development of the SSIP, to track ongoing progress, and make adjustments as necessary. Utilization of the PDSA assisted the SSIP team in *designing, developing, and deploying* several processes and protocols, with a laser-like focus on continuous improvement. The SSIP team’s ability to apply the principles of implementation science will continue to grow as the work of Phase II begins.

Through an analysis of the State’s data and infrastructure, an area of improvement emerged. The

SSIP team discussed the lack of data and evidence collected related to quality math instruction. The SSIP team deemed it necessary to form an additional team, the Instructional Practices and Academic Content (IPAC) team. The IPAC team was tasked with establishing a quality standard by identifying and vetting evidence-based practices (EBPs) in mathematics that are usable, measurable, and acknowledged to improve student outcomes at the elementary and middle school level. (More information on the IPAC can be found under *Selection of Coherent Improvement Strategies*.)

Statewide initiatives currently supported through the KDE or the Regional Educational Cooperatives were reviewed and analyzed. The goal was to identify strong mathematics-based initiatives the KDE may leverage as a potential connection to the work of the SSIP and the SiMR. The IPAC team is currently reviewing initiatives to establish a menu of evidence-based math instructional practices to offer additional support to LEAs.

Another area of infrastructure improvement addressed was aligning the public reporting of math proficiency data for SWD. The SSIP team analyzed the disaggregation reported within the Kentucky School Report Card, which meets requirements of the ESEA waiver and the State Performance Plan and Annual Performance Report (SPP/APR). The School Report Cards provide *grade band* reporting for accountability in third through eighth grade. Indicator 3, as reported in the SPP/APR, provided an *overall percentage* for proficient performance on the state assessment in reading and mathematics, thus making it difficult to recognize the relationship between the two methods of reporting.

Through feedback and advice provided by the State Advisory Panel for Exceptional Children (SAPEC), Kentucky revised its method of reporting for SPP Indicator 3 for the FFY 2013 reporting year. Aligning the Indicator 3C reporting method with the reporting within the Kentucky School Report Card provides a common and consistent method for reporting across the KDE and allows data to be easily compared and analyzed across offices and divisions.

The DLS collects data for federal reporting requirements through various means of data collection. An identified strength within KDE's infrastructure is its system of monitoring for IDEA programs through participation in the onsite [Consolidated Monitoring Process](#).

In an effort to reduce the impact on district time and services, the KDE began coordinating the monitoring of its state and federal programs during the 2011-12 school year. The Division of Learning Services (DLS) collaborates with multiple offices and divisions across the KDE through onsite Consolidated Monitoring visits to selected schools and districts.

Indicators for the SPP/APR are monitored through the consolidated process and desk audits. The verification of compliance and results driven indicators through the onsite consolidated monitoring visits have helped define the work of the SSIP. It has also informed the KDE of the status of IDEA compliance by school districts when considering the scope of the SiMR.

A combination of ten programs from the KDE, arrive onsite to conduct necessary audits for the reporting of data and verification of federally required implementation and action. The district receives a report from the individual program within two weeks of the onsite visit.

Regional Educational Cooperative Special Education Directors also receive a copy of the

program report for schools and districts within their regions. Subsequently, the cooperatives offer targeted support to districts if a corrective action plan (CAP) is required.

The programs that participate in the KDE Consolidated Monitoring Process are:

- IDEA
- Title I, Part A
- Title II
- Title III
- Career and Technical Education
- Preschool
- Gifted and Talented
- Alternative Programs

Consolidated monitoring provides districts the opportunity to review state and federal programs with an eye toward effective implementation and collaboration. In addition to record reviews and staff interviews, classroom observations were added to the IDEA consolidated visits this year. The intention was to provide districts with feedback and resources aimed at increasing student outcomes, thus, including an emphasis on results, in a process formerly focused solely on compliance.

An additional infrastructure strength the SSIP team identified was [The AdvancED® Adaptive System of School Improvement Support Tools \(ASSIST\)](#). The improvement planning process in Kentucky requires all schools and districts to complete and submit Comprehensive School and District Improvement Plans (CSIPs/CDIPs). ASSIST is the statewide tool used to collect data and information for school and district CSIPs and CDIPs. As the state moves to Phase II of the SSIP, the CSIPs and CDIPs will be valuable tools for tracking data and measuring change in LEAs. The SSIP and RSIPs will enable Kentucky to deliver differentiated technical assistance and will support schools and districts in their comprehensive improvement planning (CSIP/CDIP).

The KDE solicited feedback and engaged a variety of stakeholders, both internal and external, in the development of the SSIP Phase I work. Stakeholders providing input and feedback to the KDE with regard to the development of the SSIP and the SiMR include:

- District Directors of Special Education
- Teachers
- Kentucky's Council of Administrators of Special Education (KYCASE)
- Kentucky's Parent Training/Information (PTI) Center
- Kentucky's Instructional Support Network (ISN)
- Committee for Mathematics Achievement (CMA)
- Jefferson County Public Schools Exceptional Children Education (JCPS ECE) Department
- Opening Session of the KY Council for Exceptional Children (CEC) conference (1000 attendees)
- Institution of Higher Education Consortium
- Kentucky Board of Education (KBE)

- Kentucky Interagency Transition Council (KITC)
- State Advisory Panel for Exceptional Children (SAPEC)
- State Interagency Council (SIAC)

The team collected and reviewed feedback, analyzed data and infrastructure leading to the development of the SiMR. The exploration, planning, and stakeholder engagement throughout Phase I will continue as the KDE moves into Phase II.

State Identified Measurable Result

Kentucky’s systematic process of data and infrastructure analysis led to the development of its State-identified Measurable Result (SiMR). The SiMR is aligned to and is in support of broader agency efforts to close achievement gaps and will lead to improved educational results and outcomes for students with disabilities in the area of mathematics.

Kentucky’s SiMR is,

“To increase the percentage of students with disabilities performing at or above proficient in middle school math, specifically at the 8th grade level, with emphasis on reducing novice performance, by providing professional learning, technical assistance and support to elementary and middle school teachers around implementing, scaling and sustaining evidence-based practices in math.”

As referenced above in the data analysis and infrastructure components, the SiMR was developed by a dedicated team of diverse stakeholders. The SSIP team held meetings every other week. All team members were encouraged to attend. Minutes were taken at each meeting and a Plan-Do-Study- Act (PDSA) process was updated at the conclusion of each meeting. Meeting minutes, updated PDSA, and all materials shared at the meeting were emailed to all team members throughout Phase I.

KDE also sought additional input and comments on the SiMR from a wide array of stakeholders, which are mentioned on page 11 of the SSIP. Presentations were given to established groups, followed by question and answer sessions. The KDE also reached out to larger audiences for potential feedback on the SSIP. For example, presenting information on the SSIP at the opening keynote speaker session of the KYCEC conference, this included over 1000 participants, as well as through the use of social media using Twitter feeds.

Stakeholder involvement occurred at all levels in the development of the SiMR, including data analysis, infrastructure analysis, target setting, and selection of coherent improvement strategies. An intentional effort was made by KDE to select SSIP team members that were already connected with existing KDE initiatives, to ensure that the SSIP aligns to, supports, and leverages the work of the entire agency.

In February 2015, the Kentucky Board of Education adopted “novice reduction” of student performance on the statewide assessment as an addition to the KDE’s accountability system. The focus on novice reduction emerged after KDE determined that, despite progress in improving

college and career readiness, and graduation rates, achievement gaps still existed.

The SSIP team discussed how the SiMR could integrate the new requirements from the federal Office of Special Education Programs (OSEP) around *Results Driven Accountability*, increased proficiency of SWD as measured by the statewide assessment, and reducing the number of students performing at the “novice” level.

The SiMR was developed through the SSIP team’s analysis, of data, infrastructure and discussions around intentional alignment to the focus of KDE. During a broad analysis, the SSIP team looked at statewide assessment data at all educational levels. Amid discussions of the data, the team determined that a closer look at math and reading was warranted. The team recognized that reading performance was low for students with disabilities (SWD) across the state; however, math was even lower.

The SSIP team reviewed the SPP to identify relationships between indicators and the SiMR. The data for Indicator 3C proficiency for students with an IEP mirrored the findings of the SSIP team during the initial assessment data analysis. Although, KDE did not meet the targets in either math or reading, math performance was lower.

Math data were further reviewed to identify patterns such as regional pockets of lower achievement, particular patterns in disability categories, and patterns of grade level growth and decline. A pattern of growth in math from grade 3 to grade 5 emerged, with a subsequent drop in performance from grade 5 to grade 6. This mirrored the performance of all students in Kentucky. Additional analysis led the team to conclude that, although both SWD and all students had a similar drop in performance at grade 6, SWD did not recover and continued to decline at each subsequent grade level.

As the data below suggests, it is clear that Kentucky’s SiMR must focus on increasing proficiency and reducing novice performance in math since:

- Of the 73% of SWD not proficient in elementary math, 38% scored novice
- Of the 83% of SWD not proficient in middle school math, 45% scored novice
- Of the 87% of SWD not proficient in high school math, 55% scored novice

Discussions continued about research and eighth grade performance, as well as identified predictors for students dropping out of school. The SSIP team discussed the range of grade levels to target and all team members agreed waiting until grade 8 to provide intervention would not be effective and would be too late. However, ensuring growth by grade 8 was important based on the current research on dropout prevention. To ensure growth occurred and was sustained by grade 8, work must begin in earlier grade levels.

The SSIP team discussed interventions as early as preschool. Through discussions of the infrastructure analysis, it was discovered the collection of data prior to grade 3 would not be possible at this time, since Kentucky currently has no uniform data collection system for math until the third grade statewide assessment. The SSIP team wanted an emphasis on early intervention and decided to start at the earliest possible level within the current infrastructure, which established the first level of intervention for the SiMR at grade 3.

As stated in the Data Analysis above for SPP Indicator 5 (educational environment), the SSIP team drew the conclusion that a high percentage of SWD are taught math in the general education setting. Any activities related to the SiMR must be focused on both general and special education teachers. Thus, the SiMR and Kentucky’s Professional Growth and Effectiveness System (PGES) must be strongly aligned in the upcoming phases of the SSIP.

In an effort to continue alignment with current initiatives and leverage potential future initiative development, the SSIP team reviewed the [KDE Delivery \(Strategic\) Plans](#). There are four strategies within the Delivery Plans that push on closing gaps: *Integrated Methods for Learning, Learning Systems, Continuous Improvement, and Professional Learning and Support*. The SSIP, with its SiMR focused on increased proficiency and reduction of novice performance in math, as well as teacher professional learning, has been identified as a key activity within the *Integrated Methods for Learning* and the *Professional Learning and Supports* strategies.

Several SSIP meetings were devoted to completion of the infrastructure analysis template provided on the GRADS 360 website. The SSIP team continually tracked conversations that revolved around infrastructure analysis. One team member was assigned the task of highlighting in the meeting minutes any discussions about infrastructure and applying them to the infrastructure analysis template for the team’s review. A strength identified in the analysis was the existing technical assistance and training system through the Regional Educational Cooperatives that could support and sustain the work of the SSIP.

Because of its statewide system of regional educational cooperatives, Kentucky determined that its potential to deliver on OSEP’s charge to increase the capacity of local school districts to improve educational results and outcomes for students with disabilities would be significantly increased by intentionally including the cooperatives in the SSIP process.

When setting targets for the SiMR, the SSIP team considered the accountability system currently in place. Since the Kentucky assessment accountability system is in the process of being revised to include not only proficiency goals but novice performance reduction goals, the SiMR was presented to the Kentucky Board of Education (KBE) for feedback. The emphasis of the SiMR to reduce novice performance and the alignment to the revisions in the accountability model was well received by the board. In an effort to continue to align with the accountability model the SiMR targets were set to mirror the statewide proficiency targets identified for Indicator 3C (Math), grade 8.

Baseline: 2013	2014	2015	2016	2017	2018
32.10%	40.60%	49.10%	57.60%	66.10%	74.60%

The KDE met with the SAPEC for feedback when setting targets for the FFY 13 to FFY 18 SPP/APR. The collaborative process focused on improving compliance and outcome-based results for SWDs in Kentucky. SAPEC was provided with a PowerPoint that displayed the historical performance of each SPP/APR indicator. Indicator performance trajectories were considered when setting targets through the FFY 18 year. Targets were rigorous but relevant to improving results for SWDs.

For the FFY 13 reporting of SPP Indicator 3C, the KDE aligned with the Kentucky [Unbridled](#)

[Learning Assessment and Accountability System](#). The targets were aligned to public reporting under the ESEA. Rather than report a single proficiency target for reading and a proficiency target for math, the KDE aligned to reporting data disaggregated by grade level bands. Targets were set for combined levels as follows:

- Elementary: Grades 3, 4, 5
- Middle: Grades 6, 7, 8
- High School: End-of-course English II, End-of-course Algebra II

The KDE has elected to focus on a subset of districts or a *Transformation Zone* in relation to the SiMR. The KDE is still in the exploration phase with *Transformation Zone* districts. Once the final selections occur, the KDE, with stakeholder input, will set individual targets for each district within the *Transformation Zone*.

Selection of Coherent Improvement Strategies

After completing the data and infrastructure analysis and developing its SiMR, the SSIP team determined the need for a focus in mathematics, specifically at the elementary and middle school level. The data showed that twenty-seven percent (27%) of SWD are proficient in math at the elementary level, which decreases to seventeen percent (17%) in middle school. It is evident that as students progress through school, there is a decrease in proficiency. Furthermore, based on research from Balfanz and Herzog (2005), failing eighth grade math is a key predictor for dropping out of school. To assist students prior to reaching middle school, the SSIP team established the need for professional learning around evidence-based math instructional practices in the general education setting at the elementary and middle school levels.

Quality Standards in Math Instruction

After completing the infrastructure analysis, the State Capacity Assessment (SCA), and a review of the State Performance Plan (SPP) data, the SSIP Team determined that a history of low performance in mathematics and a lack of quality standards for evaluating classroom instructional practices were correlated. To establish a method for assessing these practices, a second team, the Instructional Practices and Academic Content (IPAC) Team, was created as a Coherent Improvement Strategy (see attachment).

The mission of the IPAC team is to provide support to the SSIP team and Regional Educational Cooperatives by selecting and vetting instructional practices that are likely to address the gap in mathematics for struggling learners. Ultimately, the team will create a menu of math instructional practices that are research-based and will advise districts on initiatives that are usable and measurable. The menu of practices will create flexibility for LEAs to choose an initiative to best address the needs of its students.

To ensure internal and external stakeholder engagement throughout the process, the IPAC team consists of 20 mathematics experts from a variety of settings. The IPAC Team Membership included:

- State Math Consultants
- Regional Math Consultants

- Education Program Consultant with a specialty in differentiated instruction
- Exceptional Child Consultant
- Math Intervention Consultant
- Kentucky Council of Administrators of Special Education (KY-CASE)
- Effectiveness coach for Professional Growth and Effectiveness (PGES)
- Committee for Mathematics Achievement (CMA) representative
- Kentucky Center for Mathematics (KCM) representative
- Elementary teacher
- Academic and Behavioral Response to Intervention (ABRI) representative from the University of Louisville
- Institute of Higher Education (IHE) representative from the University of Kentucky

The IPAC team meets twice a month consistently. Terms of Reference, are used to establish guidelines for the team. According to the State Implementation and Scaling-up of Evidence-based Practices (SISEP) and the National Implementation Research Network (NIRN), [Terms of Reference](#) allows for “Implementation Teams...to provide clarity about the work of the team, help the team stay on mission, and orient new members.” This process has allowed the IPAC team to maintain focus and document its progress.

Following each meeting, the Terms of Reference document was updated according to the accomplishments and decisions of the IPAC team. Furthermore, all meetings were carefully documented with detailed notes, agendas, and PowerPoint presentations. All documents were posted on an online workspace provided by the SISEP Center, called the Active Implementation (AI) Hub. The workspace allowed for online discussions on documents and helped the IPAC team stay engaged between meetings.

Based on the root cause analysis, the SSIP team determined that many initiatives in Kentucky were not being implemented with fidelity. To ensure this concern was addressed, the IPAC team reviewed modules on the Active Implementation (AI) Hub and received additional training from SISEP on Usable Interventions. According to SISEP and NIRN, [Usable Interventions](#) must be, “teachable, learnable, doable, and be readily assessed for practice.” This requires, “clear description of the program, clear essential functions, operational definitions, and a practical performance assessment.”

The IPAC team conducted a Statewide Math Instructional Practices Inventory to gather the number of initiatives available and to determine whether the guidelines for Usable Interventions could easily be met. To ensure all practices were gathered, all Regional Educational Cooperatives were encouraged to participate and provide comments on each initiative.

Once the inventory was conducted, the IPAC team dedicated time to review articles from reputable sources regarding best practices in mathematics. All resources reviewed by the team were carefully documented and summarized on a Research Log. This enabled each team member to quickly view the content from an article or book.

Although the research for SWD is limited, the IPAC team established a set of Practice Criteria based on the available research. The Practice Criteria are specific instructional practices that research has shown to make an impact on the achievement for SWD or students struggling in mathematics. All initiatives chosen for the menu will contain the Practice Criteria to ensure they

are fully effective. Practices identified by the team were: explicit instruction, student discourse, modeling, problem solving, activating prior knowledge, formative and diagnostic assessment, active learning/engagement, cooperative learning, growth mindset, self-learning, progressions/professional noticing, and Concrete, Representational, Abstract (CRA).

Once the Practice Criteria were developed, the IPAC team narrowed the Statewide Math Instructional Practices Inventory. Math Instructional Practices that were not focused on improving educator effectiveness and did not address core instruction, the Practice Criteria, and all grade levels as presented through the SiMR were immediately eliminated. The team was left with eight instructional practices to explore further through a more intense vetting process.

The IPAC team is currently evaluating each practice by using the Hexagon Tool and Hexagon Capture Tool provided by SISEP. The Hexagon Tool is a hexagon-shaped diagram divided into six categories: need, fit, resources, readiness, evidence, and capacity. According to Blasé, Kiser, and Van Dyke (2013), each of these terms are defined as:

- ***Needs** of students; how well the program or practice might meet identified needs.*
- ***Fit** with current initiatives, priorities, structures and supports, and parent/community values.*
- ***Resource Availability** for training, staffing, technology supports, curricula, data systems and administration.*
- ***Evidence** indicating the outcomes that might be expected if the program or practices are implemented well.*
- ***Readiness for Replication** of the program, including expert assistance available, number of replications accomplished exemplars available for observation, and how well the program is operationalized.*
- ***Capacity to Implement** as intended and to sustain and improve implementation over time.*

The Hexagon Capture Tool is an additional support that works in unison with the Hexagon Tool. It provides 3-10 discussion questions for the initiative based on each category of the Hexagon. With permission from SISEP, the IPAC team used the definitions above to modify the Hexagon Capture Tool to fit the needs of the KDE. After the team made final edits to the tool, the revisions were submitted to SISEP to ensure it still operated in the same, accurate manner.

As each initiative is discussed using the Hexagon Tools, the IPAC team will determine which are likely to improve educator effectiveness and meet the needs of students with disabilities as identified by the SiMR. Once identified, the team will begin to “repurpose” initiatives based on the results of the Hexagon Tools and Practice Criteria.

Once the initiatives have been improved, the IPAC team and task group will receive training from SISEP on [Practice Profiles](#). According to Metz, Bartley, Blasé, and Fixsen (2011), “Practice profiles enable a program to be teachable, learnable, and doable in typical human service settings.” Practice Profiles provide explicit guidelines for each initiative and promote consistency and fidelity across all levels of implementation.

Following the creation of the practice profiles, teams will develop fidelity assessments for each initiative on the menu to ensure they are implemented as intended. The development of this

assessment and ensuring multiple stakeholders are engaged through this process will build capacity across the state and address the root cause.

As the menu, practice profiles, and fidelity assessments are developed, the *Transformation Zone* Regional Educational Cooperatives will receive training from SISEP and the KDE on how to engage districts and develop District Implementation Teams (DIT). Once DITs have been established, the Regional Implementation Teams (RIT) will provide training and technical assistance at the district level on the implementation of evidence-based math practices.

As districts become proficient in implementation science, they will develop and train their Building Implementation Teams (BIT). This cycle is referred to as a Cascading Logic Model. This model of communication and implementation fosters capacity building and ultimately sustainability to improve educator effectiveness, leading to higher achievement for SWD as identified by the SiMR.

Regional Systemic Improvement Plan

The second coherent improvement strategy is the development of the Regional Systemic Improvement Plans (RSIPs). Kentucky has the unique feature of a regional infrastructure – the Regional Educational Cooperatives – that deliver technical assistance throughout the state. Kentucky determined its potential to deliver on OSEP’s charge to increase the capacity of local school districts to improve educational results and outcomes for students with disabilities would be significantly increased by intentionally including the cooperatives in the SSIP process.

The KDE has been working with the cooperatives to develop RSIPs for improving results for SWD in their regions. The RSIP contains the same components as the SSIP, including a Regional Identified Measurable Result (RiMR), aligned to the SSIP and SiMR, that focuses on educator effectiveness and improving results for SWD, specifically at the eighth grade level. This structure will support capacity building and promote sustainability.

Within the regional structure, the KDE has selected *Transformation Zones*. Through its work with the SISEP, KDE has developed a plan for differentiated technical assistance and support that will be provided to school districts by their regional cooperative. LEAs’ elementary and middle school teachers will be provided with professional learning, technical assistance, and coaching around the implementation of evidence-based practices.

As part of the assistance to the *Transformation Zone* districts, implementation experts and the cooperatives will provide implementation support to ensure fidelity, sustainability, and the ability to scale-up. This process includes the identification of quality evidenced-based practices.

According to SISEP and the NIRN, a [*Transformation Zone*](#) is, “a vertical slice...small enough to be manageable but large enough to be representative of the system as a whole (e.g., urban, suburban, rural, frontier, high needs, etc.)” *Transformation Zones* will enable the KDE and cooperatives to work with a relatable group of LEAs. Furthermore, *Transformation Zones* allow for participants in the Cascading Logic Model to identify areas for growth prior to implementing evidence-based instructional practices across the state. Regional math consultants within the *Transformation Zones* were intentionally included on the IPAC team, to provide them immediate access to the work of the IPAC team.

Resources such as training materials on the AI Hub workspace, technical assistance calls on the progression of the RSIPs, and monthly updates on the development of the SSIP have been provided to the cooperatives. Additionally, access to all materials developed by the IPAC team will be available.

As noted earlier, when reviewing its IDEA compliance data, KDE experienced slippage for SPP Indicator 10. Indicator 10 measures disproportionate representation, due to inappropriate over identification of racial/ethnic groups in certain categories of IDEA disabilities. The IPAC team, as a coherent improvement strategy, will assist the regions in which disproportionate representation occurred, by preventing the inappropriate identification of struggling students whose difficulties with math are related to language, not disability.

The vehicle for increasing Indicator 10 compliance will rest with the RSIP, as regional cooperatives will be disseminating evidenced-based practices to increase proficiency and reduce novices for all students, not only SWD. Thus the KDE expects an improvement in Indicator 10 compliance rates through its implementation of the SSIP's coherent improvement strategies.

Emphasis on Novice Reduction

As referenced in the Introduction, novice reduction goals are being established and made part of the KDE accountability model. Once goals are set and the revisions to the accountability system finalized, the SSIP team will establish targets and begin to track progress toward reducing novice performance in math at the eighth grade level.

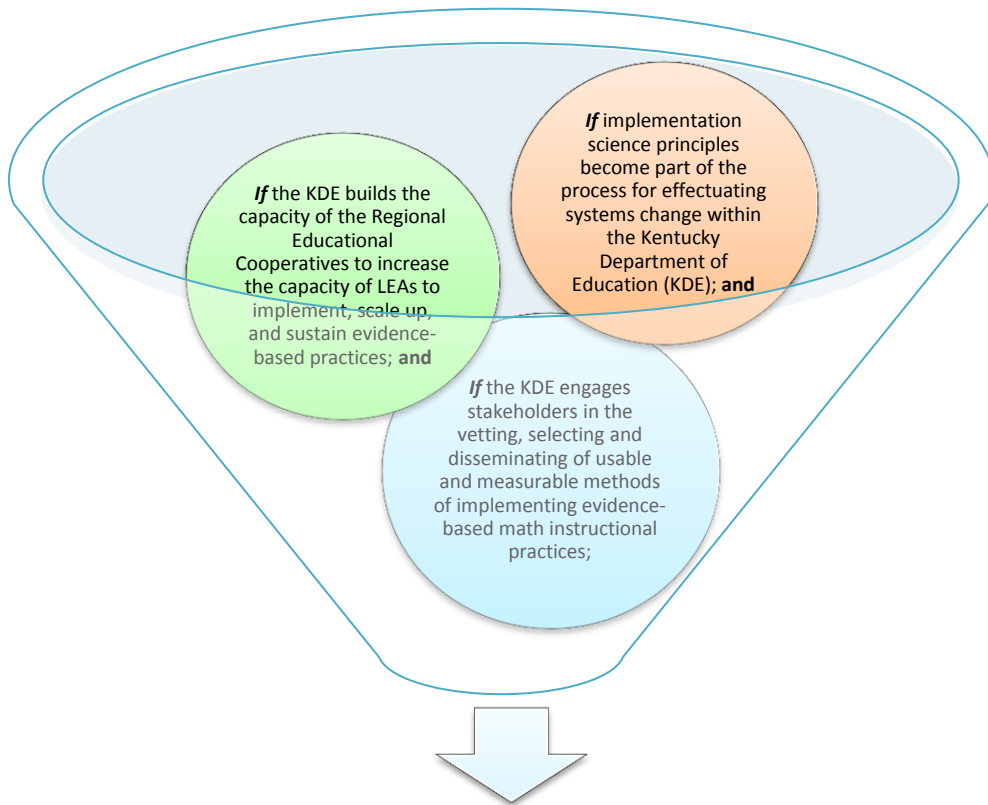
Theory of Action

If implementation science principles become part of the process for effectuating systems change within the Kentucky Department of Education (KDE); **and,**

If the KDE builds the capacity of the Regional Educational Cooperatives to increase the capacity of LEAs to implement, scale up, and sustain evidence-based practices; **and,**

If the KDE engages stakeholders in the vetting, selecting and disseminating of usable and measurable methods of implementing evidence-based math instructional practices;

Then Kentucky will, by providing professional learning, technical assistance and support to elementary and middle school teachers around implementing, scaling and sustaining evidence-based practices in math, and an emphasis on the reduction of novice performance, increase the percentage of students with disabilities performing at or above proficient in middle school math, specifically at the 8th grade level.



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Rationale

Throughout the development of the SSIP, improved educational outcomes for SWD were the primary focus. The KDE recognized the value of implementation science to effectuate systems change, which resulted in its partnership with SISEP. Through this partnership, KDE intended to ensure the principles of implementation science would be embedded into the SSIP. Therefore, the SSIP team has received extensive training to expand their knowledge on implementation practices.

The SSIP team consists of internal and external stakeholders from various organizations. The diversity of the SSIP team members will ensure the building of capacity, sustainability, and scaling- up of effective implementation practices to successfully achieve the SiMR.

As a result of the trainings and infrastructure analysis, it was determined there was not enough state-level capacity to support the implementation of the SiMR statewide. Therefore, the SSIP team selected a representative sample of Regional Educational Cooperatives and LEAs based on

demographics, assessment scores, and achievement gap. These areas are known as *Transformation Zones*. The regions selected for the *Transformation Zones* are receiving intensive technical support from the KDE and SISEP to develop their depth of knowledge on implementation. As the cooperatives progress, they will have the ability to develop capacity within the LEAs. Ultimately through this model, all levels of the system will be trained and practicing implementation science principles.

After the structure of *Transformation Zones* was established, the SSIP team realized that quality standards for evaluating instructional practices were missing. As a result, a team of math experts from the state, region, district, and school level were assembled. The mission of the team is to vet and select math instructional practices that are usable and measurable. The team will select a set of evidence-based math practices that will increase educator effectiveness to improve outcomes for SWD. Once the practices are selected, clear guidelines and fidelity measures will be established. The development of a fidelity measure and building the capacity at all levels across the system will address the root cause of math practices being implemented with a lack of fidelity. These changes will support the SiMR and improve results for SWD in mathematics.