I. Infrastructure Development

The Kentucky Department of Education (KDE) has utilized the infrastructure analysis from Phase I to further develop and strengthen its ability to support districts in implementing and scaling-up evidence-based practices (EBPs) to increase math proficiency for students with disabilities.

As part of developing its infrastructure, KDE has continued to engage in a partnership with 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 benefiting all students, but especially students with disabilities (SWD). The Center uses "implementation science" as a means of delivering practices that can successfully implement systemic change in a systematic manner.

As the Phase I infrastructure analysis stated, the State Systemic Improvement Plan (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 in Phase II has benefited from aligning and leveraging resources already identified and aimed at achieving Kentucky's strategic goals.

Implementation Action Planning

Throughout Phase II, KDE continued to measure its capacity to implement the SSIP through State Capacity Assessments (SCA). The assessments are facilitated by SISEP and take place twice a year. The results are used to create Implementation Action Plans.

A team approach is utilized to effectively measure and take action to improve KDE's capacity to implement. The State Capacity Assessment (SCA) team is made up of leadership from across the KDE. The SCA team includes the following members:

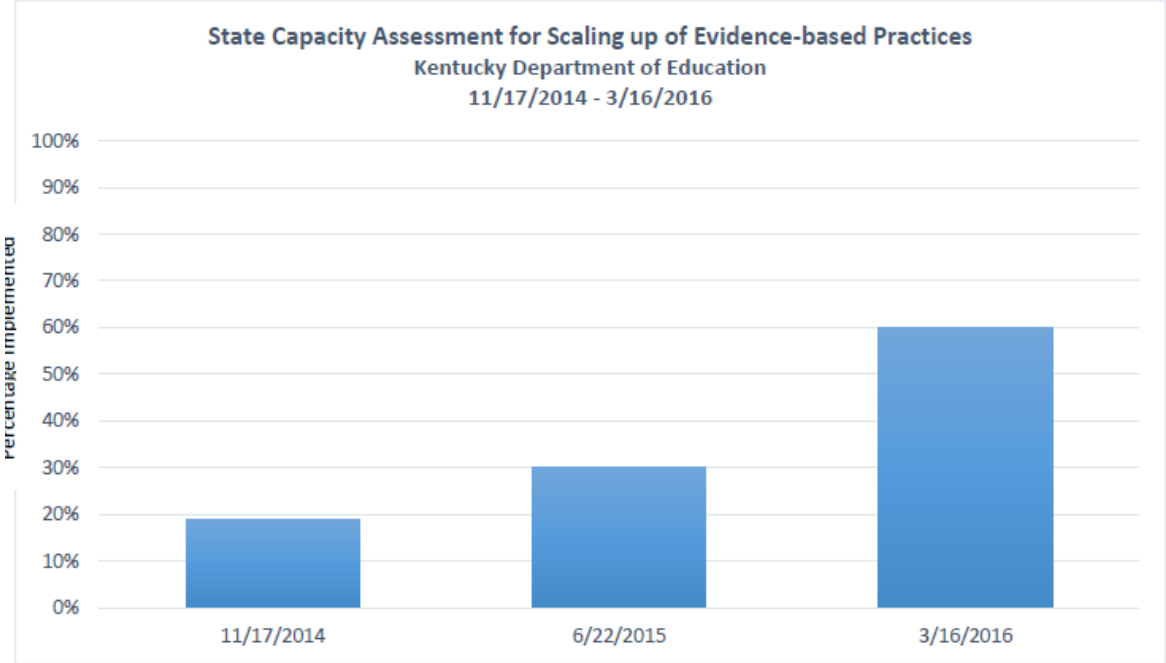
- KDE Commissioner's Delivery Unit (CDU)
- KDE Policy Advisors
- KDE Office of Career and Technical Education
- KDE Office of Next Generation Learners
    - Division of Learning Services
    - Division of Next-Generation Professionals- Professional Growth and Effectiveness System (PGES)
    - Division 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

Before each state assessment, updates on the progress of the SSIP are presented to the SCA team. During the assessment process, the team votes on a series of statements that reflect KDE's capacity to support districts in the implementation of EBPs. The scores from each statement are calculated as a total percentage.

The total percentage is comprised of three-subscales:

- State Management Team Investment
- System Alignment
- Commitment to Regional Implementation Capacity

Currently, the SCA team has participated in three State Capacity Assessments (SCA). The KDE's progress from each assessment is displayed below



Date Completed	Total Percentage
11/17/2014	19%
6/22/2015	30%
3/16/2016	60%

Once the assessment is complete, the Action Planning team analyzes responses to each question by subscale, then develops a six month implementation plan. The implementation plan focuses on specific goals and objectives to improve the state's capacity to support districts in implementing EBPs.

The process of capacity assessments and implementation planning will replicate at all levels of the system through the Regional Capacity Assessments, District Capacity Assessments and School Capacity Assessments. Consistently working to improve implementation capacity from the State Education Agency (SEA) to the classroom will lead to sustainability, by enabling the practices to continue to be effective, even if personnel and administrative changes occur.

Transformation Zones (TZs)

As part of the State Implementation Action Plan and infrastructure development, KDE is focusing on the capacity of the Regional Educational Cooperatives to support districts in improving math proficiency for students with IEPs. To do this, KDE is establishing "Transformation Zones," to begin its work on the State Identified Measurable Result (SiMR). By establishing district TZs in selected cooperatives, evidenced-based practices will be intentionally delivered in a controlled setting or learning laboratory. Once the practices are successfully established in the TZs, they can be "scaled-up" across all districts, ensuring that Kentucky's SSIP will have statewide impact.

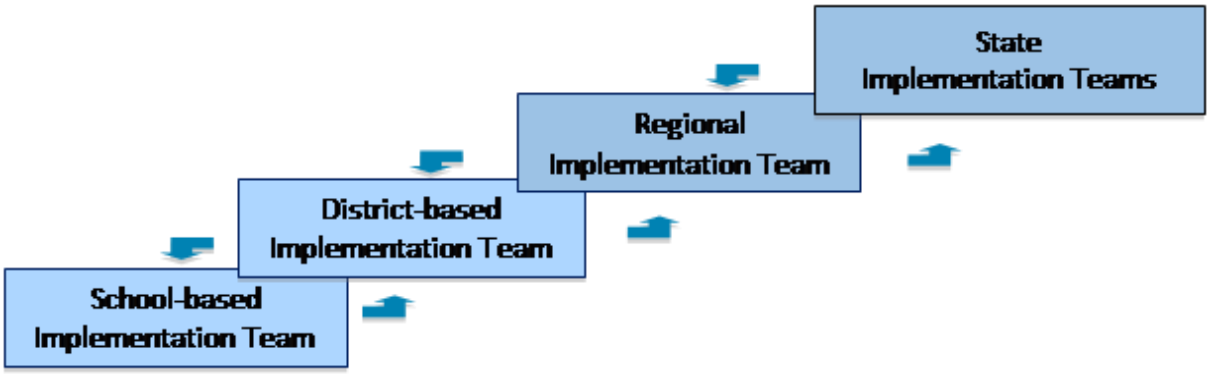
KDE is using the tiered model of support as the means for implementing systems change. All Kentucky districts and cooperatives are receiving broad universal support around the SiMR and implementation science.

At the top of the "tier" is intensive support. Kentucky has provided concentrated technical assistance to three TZ regional cooperatives, with districts within the cooperatives selected as TZ districts. Evidence-based practices in math, technical assistance and coaching from the cooperatives will provide implementation support to districts within the TZs to ensure fidelity, sustainability and the ability to scale-up.

Districts within the TZ have been engaging in exploration activities. These activities are led by Regional Implementation Teams and are designed to improve the district's capacity to implement the EBPs in math they have selected. The districts are now moving into installation, which includes the development of school-based teams. During the installation stage, districts will receive math training and support to establish a coaching plan. The exact timeline for implementation within classrooms depends on each district's capacity. KDE projects all TZ districts will begin initial implementation early in the 2016-2017 school year.

Linked Teaming Structure

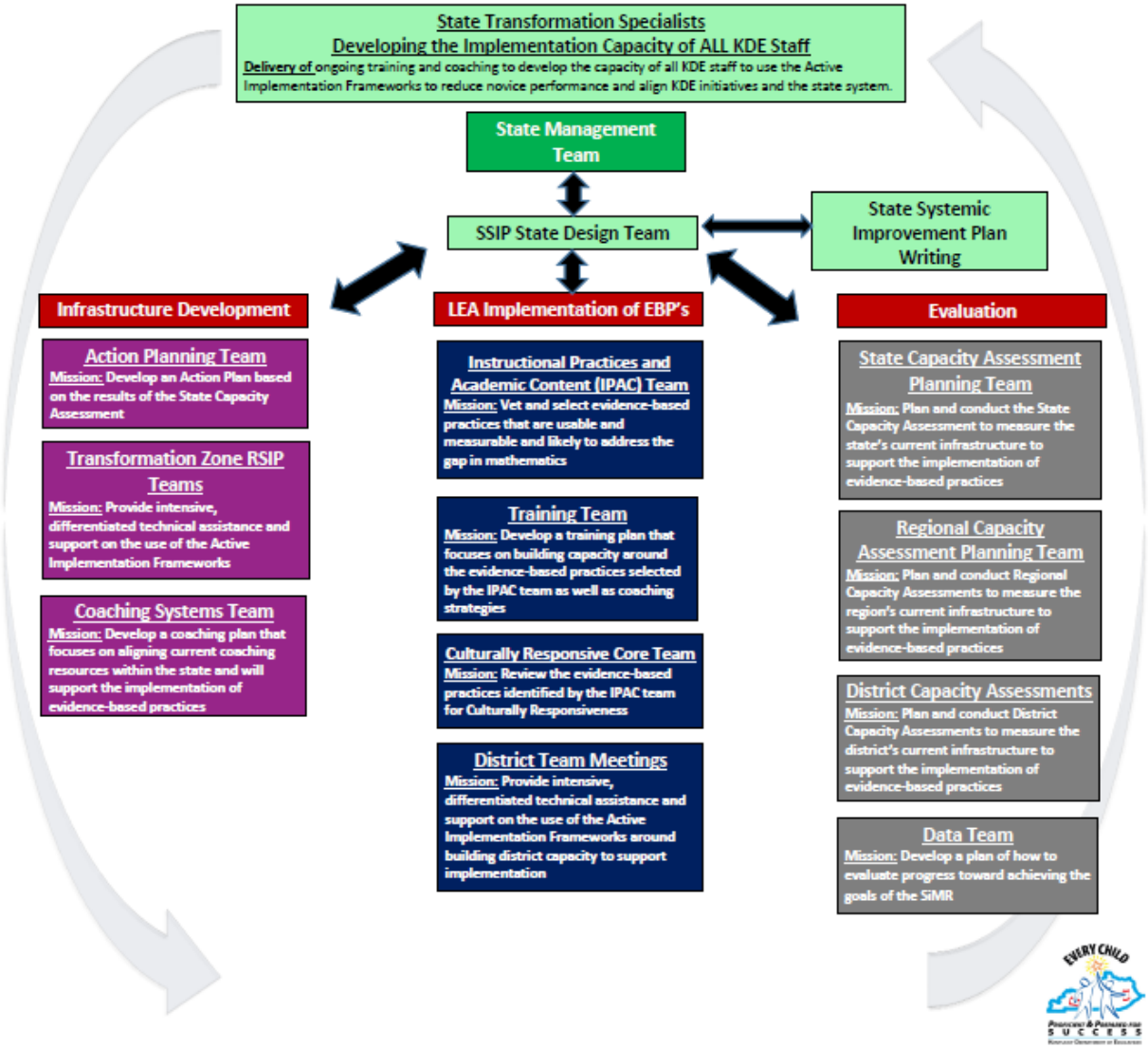
As part of the work within the TZs, a linked teaming structure continues to be developed. A linked teaming structure consists of implementation teams at all levels of the system to create an "enabling context" or a system that effectively removes barriers to achieving the goals of the SiMR. To facilitate the development of the linked teaming structure, KDE has identified two full-time State Transformation Specialists (STSs) within its Division of Learning Services. The STSs are general and special education teachers who are responsible for delivering ongoing training and coaching to improve the capacity of all KDE implementation teams.



With coaching from the STSs, all teams within the linked teaming structure are making implementation decisions using a common framework known as the "Active Implementation Frameworks."

The linked teaming structure not only allows decisions to be made by the right stakeholders at the right level, it also creates a mechanism for effective communication. To ensure consistent communication, each team within the system will have written communication protocols. Communication protocols allow the needs of the classroom teacher to reach the policy makers at the SEA level. SISEP refers to this as a Practice to Policy Feedback Loop. Clear communication ensures effective implementation that leads to student success.

At the regional level, the Regional Educational Cooperatives established Regional Implementation Teams consisting of both special and general education members. The teams are trained and coached by STSs and SISEP to improve their capacity to support districts in reaching the SiMR goals. As part of that support, the Regional Implementation Teams assist districts in developing their own District Implementation Teams. In the future, the districts will assist building administrators in establishing School-based Implementation Teams. The process repeats itself throughout the system and will lead to completion of a sustainable, linked teaming structure for Kentucky.



SSIP State Design Team

As Kentucky moved into Phase II, it was evident, that multiple implementation teams from across offices and agencies were needed to facilitate the changes to infrastructure and the effective use of resources to meet timelines at the SEA level. As outlined in Phase I, Kentucky developed a State Systemic Improvement Plan (SSIP) team, which continued into Phase II as the SSIP State Design Team.

The State Design Team is intended as a mechanism to align with other initiatives across the agency. Internal and external stakeholders are full-time members of the State Design Team. To improve Kentucky's infrastructure and promote collaboration, internal members of the State Design Team were intentionally selected, based on their involvement and leadership in major KDE initiatives. External stakeholders represent the community, districts and agencies beyond KDE.

KDE's State Design Team consists of the following representatives:

- KDE Division of Learning Services
    - Title III
    - Special Education
    - IDEA Part B Data Manager
- State Performance Plan and Annual Performance Report (SPP/APR) team members
- Kentucky's Parent Training and Information (PTI) Center
- Commissioner's Delivery Unit (CDU)
- District Director of Special Education (DoSE)
- State Advisory Panel for Exceptional Children (SAPEC)
- Regional Educational Cooperatives
- State Personnel Development Grant (SPDG)
    - Parent Liaison
    - Co-Teaching for Gap Closure
- KDE Division of Student Success- Focus Districts and Schools
- KDE Differentiated Learning Branch- Response to Intervention (math and literacy)
- KDE Division of Consolidated Plans and Audits - Title I
- KDE Division of Program Standards
    - Early Childhood
    - Math
- Kentucky Council of Administrators of Special Education (KY-CASE)
- Institutes of Higher Education (IHE)
- Committee for Mathematics Achievement (CMA)
- Kentucky Center for Mathematics (KCM)
- Minority Superintendent Internship Program
- External Evaluator

The State Design Team continues to receive monthly trainings from the STSs to improve capacity and strengthen understanding of "implementation science" as it relates to the SSIP. The team is responsible for identifying the changes critical to the implementation of the SSIP.

Transformation Zone activities and implementation decisions are brought before the State Design Team for feedback and approval. Training, coaching, and evaluation plans will all be presented to the State Design Team for consideration before being implemented within the TZs.

The State Design Team is comprised of a diverse stakeholder group and their input has accelerated Kentucky's implementation work by predicting and removing barriers to meeting the goals of the SiMR. Although the team is diverse, there are barriers that go beyond the scope of the team's ability to address, and thus, require support from a higher level of leadership.

State Management Team

In response to the State Design Team's need for support and in an effort to continue aligning with current KDE initiatives, KDE developed a State Management Team (SMT). It consists of executive leaders from across the agency. The SMT meets monthly to receive updates and

information on Active Implementation from the STSs. It also provides support to the State Design Team, regions and districts as needed.

Each month, the SMT is given a Kentucky Capacity Report that includes data from all active teams in the system. This report will include student outcome data, once districts have moved into initial implementation of the math EBPs. In addition, the SMT receives a one-page implementation brief to share with others in their offices.

As part of the teaming structure within the SMT, two members are designated as sponsors. The sponsors update Kentucky's Commissioner of Education, using the capacity report and monthly brief. The SMT serves as the highest level of support in KDE's linked teaming structure and is necessary to cause sustainable changes to meet the goals of the SiMR.

The State Management Team contains executive leadership that represent the following offices and divisions:

- KDE Commissioner's Delivery Unit (CDU)
- 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

<u>Coaching Systems Team</u>

To ensure successful implementation of evidence-based practices, the TZs identified a need for support in the area of effective coaching at the building and district level. As a result, a "Coaching Systems team" was created.

In reviewing KDE's current infrastructure, the State Design Team determined that KDE has a complex system of coaching with multiple existing resources. However, the system needed to be evaluated and aligned before it could be used to meet the goals of the SiMR. Several members of the State Design Team with coaching expertise were repurposed for the Coaching Systems team. This repurposing promotes consistency in the use of the Active Implementation Frameworks (AIFs) and assists in capacity building across KDE.

The Coaching Systems team consisted of coaching leaders from the following:

- SPDG grant initiatives:
    - Co-Teaching for Gap Closure and Academic and Behavioral Response to Intervention (ABRI)
    - Partnership to Support Parent Involvement
- Math Design Collaborative (MDC)
- Novice Reduction for Gap Closure
- Content Coaching-Kentucky Center for Mathematics (KCM)
- Professional Learning for Educator Effectiveness (PLEE)
- Regional Educational Cooperative Math Coaches
- Conceptual Building Blocks for Math
- Jefferson County Public Schools

The Coaching Systems team began its work by conducting an initiative inventory to determine coaching resources and areas for alignment. The team identified gaps in the coaching infrastructure across initiatives, then identified a root cause for the gaps. The team determined a need for a common understanding of coaching, a method of measuring fidelity of coaching and use of common language.

Similar to the work of the Instructional Practices and Academic Content (IPAC) team, the Coaching team wanted to identify a quality standard. In response to the root cause analysis, the team reviewed multiple sources of research to develop a coaching philosophy for Kentucky. Using guidance from SISEP, a "Practice Profile" was developed to operationalize effective coaching at the classroom level. The Practice Profiles will go before the State Design Team for approval, prior to use within the TZs.

The Coaching team is also developing a method of measuring coaching fidelity for use in the TZs. The creation of a common coaching philosophy is just one way in which KDE has aligned current initiatives to improve math outcomes for students with disabilities.

Additional Initiative Alignment

Alignment to major initiatives to support student achievement is an ongoing effort in the SSIP's infrastructure development. KDE has aligned the SSIP with its Novice Reduction for Gap Closure work. Through the novice reduction initiative, KDE is supporting schools and districts in their efforts to reduce the number of students scoring at the novice level and improving overall student achievement.

According to the 2014 Kentucky Performance Rating for Educational Progress (K-PREP), Kentucky's statewide assessment, 45% of all middle school students with disabilities (SWD) performed at the novice level in mathematics. Increased math proficiency for SWD is the long-term goal of the SiMR; however, the K-PREP data demonstrates the first step in increasing math proficiency is to decrease the number of students scoring at the novice level. Aligning the SSIP with KDE's novice reduction goals enhances the work of both initiatives.

Leaders of the SSIP and novice reduction have collaborated on ways to support districts through both initiatives. An example of this collaboration is the use of the math EBPs. The math menu

established by the work of the IPAC team has been released as a novice reduction resource for districts on KDE's Novice Reduction website.

To emphasize the alignment of this initiative for all stakeholders, Kentucky's SiMR specifically addresses the goals of Novice Reduction for Gap Closure:

"*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.*"

The SSIP is also aligned with the work of District 180, another major initiative that impacts student achievement of both general and special education students. District 180 is an organizational unit at KDE that provides support to low-achieving schools through the use of education recovery staff. The mission of District 180 is to build sustainable systems that drive a continuous improvement approach, focusing on student learning in each of Kentucky's priority schools.

During the annual Educational Recovery Institute, the STSs provided Educational Recovery Specialists with a session on the SSIP and the use of Active Implementation Frameworks (AIFs) to increase proficiency in math. As part of District 180, Educational Recovery Specialists support schools by using a focused approach for school improvement that will allow priority schools to persistently look ahead on the road to improving student learning.

Milestones and Timelines for Implementation Infrastructure Development

To improve the infrastructure and capacity of KDE, milestones and timelines were developed to establish benchmarks for systems change.

- **October 2014-2016***: Selection of cooperatives and districts to participate in the first Transformation Zones (TZs) through a mutual selection process.*
    - Use selection criteria to select TZ implementation team members
    - Install Teams at every level of the system
        - Ohio Valley Educational Cooperative
            - 2 districts (Owen, Carroll)
            - 4 schools **(Feb 29, 2016)**
        - Southeast/Southcentral Educational Cooperative
            - 2 districts (Madison, TBD)
            - ___ schools **(May 30, 2016)**
        - Jefferson County Public Schools (JCPS) Educational Cooperative
            - 1 district (JCPS)
            - 3 schools **(Feb 29, 2016)**
    - **Evaluation:** Capacity Assessment Scores every 6 months for the region and the districts.

- **October 2014:** Developed and implemented monthly Active Implementation Framework (AIF) training and on-site coaching plan for TZ cooperatives

    - **Evaluation:** Use *Improvement Cycles* to establish coaching and training effectiveness: Pre/Post, Effort, Satisfaction data

- **December 2014:** Created Instructional Practices and Academic Content (IPAC) team. The IPAC established a method for assessing Kentucky's math programs, applying *Usable EBP* Criteria to identify a Kentucky Math Menu
    - Mission of the IPAC team is to select and vet math programs used in Kentucky that are likely to address the gap in mathematics for struggling learners. The team created a menu of math instructional programs that are evidence-based and will provide districts with math EBPs that are teachable, learnable, doable and easily assessed in practice.
      To ensure internal and external shareholder engagement throughout the process, the IPAC team consisted of 20 mathematics experts from a variety of settings, including the state, region, district and university, as well as program developers.
    - **Evaluation:** Use Improvement Cycles to *Plan-Do-Study-Act* before and after each IPAC team meeting.

- **August 2015:** Established an *SSIP State Design Team* that meets monthly and is comprised of leaders from major KDE initiatives. The team learned to use the *Active Implementation Frameworks* (AIFs) to guide implementation of the SSIP.
    - **Evaluation:** Use Improvement Cycles to establish coaching and training effectiveness: Pre/Post, Effort, Satisfaction data

- **September 2015:** Developed and implemented monthly Active Implementation Framework training plan for all regional cooperative directors
    - **Evaluation:** Use Improvement Cycles to establish coaching and training effectiveness: Pre/Post, Effort, Satisfaction data

- **October 2015:** Established a *State Management Team* that meets every month and uses *Improvement Cycles* to respond to barriers with viable solutions that improve infrastructure alignment, communication and effective practice
    - **Evaluation:** State Capacity Assessment Scores every 6 months

- **October 2015:** Established Coaching team (Instructional coaching)
    - Mission of the Coaching team is to develop a comprehensive coaching plan to focus on aligning current coaching resources within the KDE and support the implementation of EBPs.
    - Assess and establish **(March of 2016)**
    - Infrastructure analysis
    - Alignment: Research-based coaching philosophy
    - Practice Profile Instructional Coaching: What Core Components are necessary for instructional coaching
    - Instructional Coaching **(by June 2016)**
        - State Instructional Coaching team trains a cadre of instructional math coaches in cooperative regions

        - Regional cooperatives train groups of district and building-level instructional coaches to coach IPAC math EBPs
        - Districts develop capacity to re-train and coach district and building staff

- **Capacity Projections:**
    - State Capacity Assessment (SCA): 60% by July 2016
    - Regional Capacity Assessment (RCA): 60% by Jan 2017
    - District Capacity Assessment (DCA): 60% by July 2017
    - School Capacity Assessment(SCA): Administered by July 2017

Infrastructure development will continue as KDE engages in improvement cycles to increase its capacity to support districts in the implementation of math EBPs.

II. Support to District Implementation of Evidence-Based Practices (EBPs)

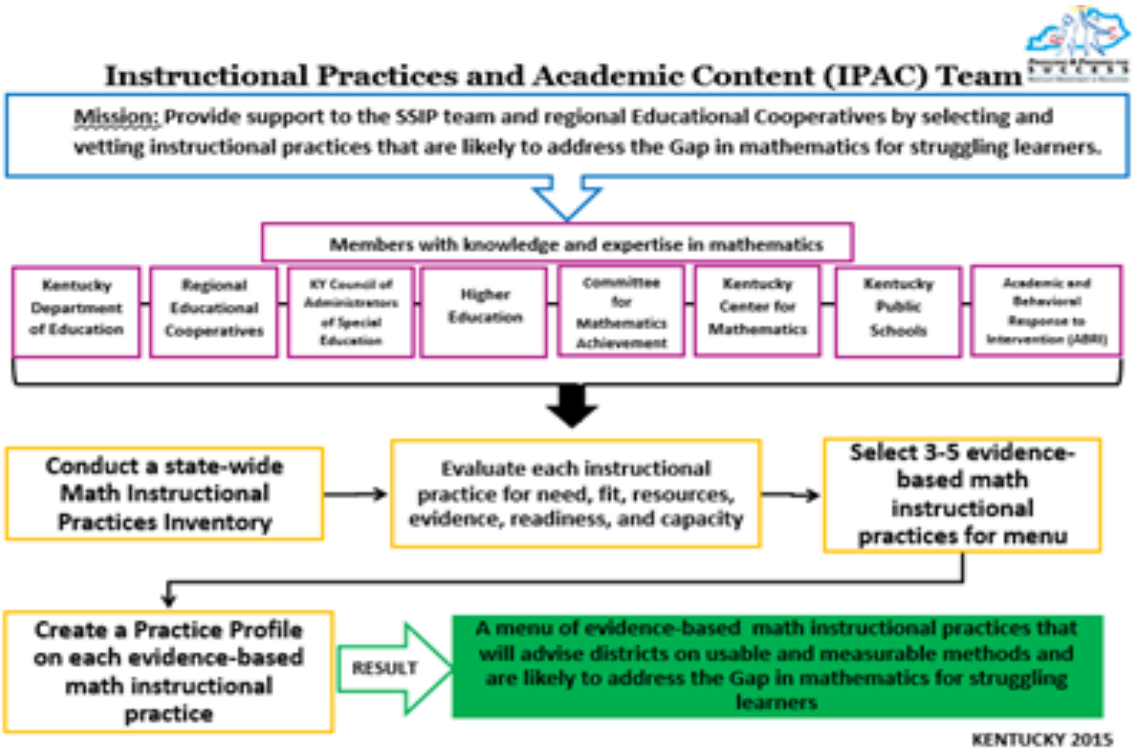
Evidence to Select EBPs

During the Infrastructure Analysis of Phase I of Kentucky's SSIP, the State Design Team determined there was a lack of quality standards for evaluating instructional practices in math. As a result, the Instructional Practices and Academic Content (IPAC) team was formed. The mission of the IPAC team is to provide support to the State Design Team and Regional Educational Cooperatives, by selecting, vetting, and disseminating instructional practices that are likely to address the gap in mathematics for struggling learners.

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:

- KDE Math Consultants
- Regional Educational Cooperative Math Consultants
- KDE 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

Below is a description of the IPAC team process that ensures the EBPs selected were "usable, measurable and can be readily assessed in everyday practice" (National Implementation Research Network—NIRN, 2013).



1. The IPAC team began by reviewing literature on EBPs in mathematics. The literature review process allowed the team to establish Practice Criteria—specific instructional practices that research has shown to make an impact on the achievement for SWD or students struggling in mathematics.

2. The team then collected an inventory of all EBPs in mathematics used across the state. It narrowed the inventory based upon connections to the State Identified Measurable Result (SiMR) and whether the practice contained the established Practice Criteria.

3. Upon narrowing the inventory, the IPAC team used the Hexagon Tool and Hexagon Capture Tool from SISEP's Active Implementation Hub to further evaluate each evidence-based practice. These tools were used to determine whether the EBPs:

    - Met KDE's "needs" for purposes of the SiMR
    - Were a good "fit" for the districts across the state
    - Had plenty of "resources" available to deliver them effectively and as intended
    - Had "evidence" to show they would impact instruction and outcomes
    - Had adequate "readiness" established to ensure they could be replicated
    - Had established enough "capacity" to ensure it could be sustained

    (Blasé, Kiser, & Van Dyke, 2013)

4. Based on the results of the Hexagon Tool and Hexagon Capture Tool, the IPAC team narrowed the EBPs to three practices. Each evidence-based practice met the Practice Criteria, showed promising results based on the Hexagon Tools and supported each grade level indicated within the SiMR.

5. After the IPAC team selected the EBPs, the team began to work on the gaps for each practice that were identified in the Hexagon Capture Tool. A gap identified in all three EBPs was a fidelity measure to ensure that the EBPs were being delivered as intended. As a result, the team developed a Math Practice Profile.

    - The purpose of the Practice Profile is to "operationalize" the EBP in terms that are "teachable, learnable, and doable" (NIRN, 2013). The Practice Profile is divided into three categories—Accomplished, Developmental and Ineffective. Each category shows the indicators for what the practice looks like in the classroom for that specific level of implementation. Ultimately, the Practice Profile promotes consistent use of the EBP and guides the scoring of a fidelity measure.

    - To develop the Practice Profile, the IPAC team established its math instruction philosophy. The IPAC team used the Practice Criteria established during the initial vetting process to get started. The team determined there was new research that surfaced from the National Council of Teachers of Mathematics (NCTM) called *Principles to Actions: Ensuring Mathematical Success for All*.

      Within the research, there are Eight Mathematics Teaching Practices. Each practice is clearly defined on how it looks in the classroom. The team was well-versed on the research presented within the book and all agreed that this was its philosophy of quality mathematics instruction for all students. As a result, the team adopted the Mathematics Teaching Practices and definitions as the Core Components of the Practice Profile. To ensure the Core Components were representative of the EBPs, the IPAC team compared each EBP to NCTM's Mathematics Teaching Practices to guarantee alignment.

    - Once the team established its philosophy of mathematics instruction, it began to draft the Practice Profile indicators. The indicators describe the teacher actions that should occur for each defined Core Component. These indicators are broken down into varying levels: Accomplished, Developmental and Ineffective.

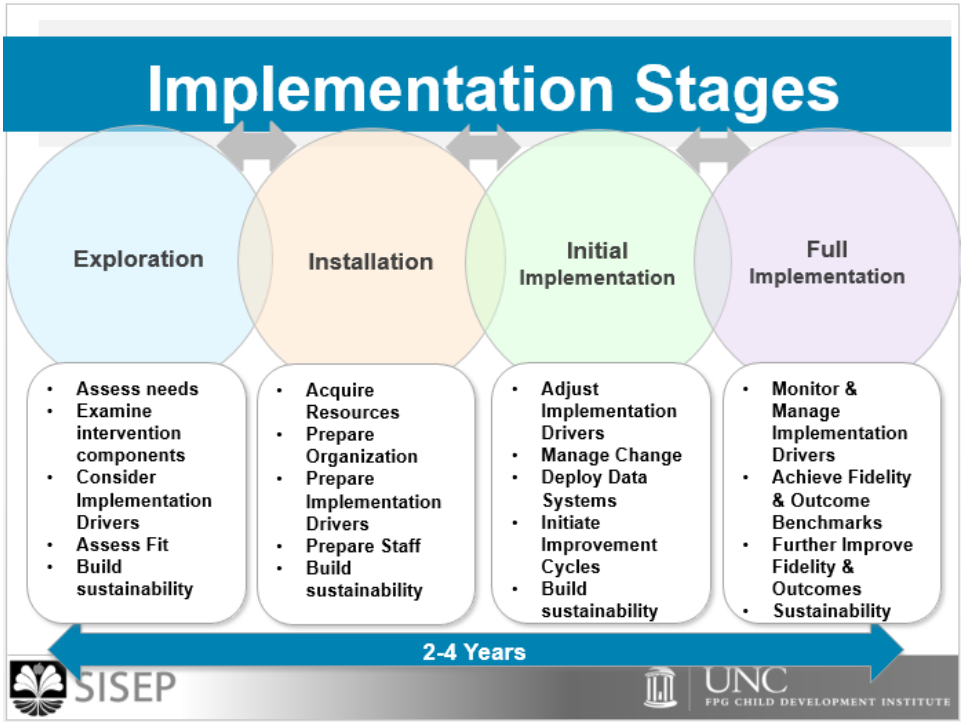
    - To meet the needs of all students, the Culturally Responsive Instruction Core team, created by the KDE, reviewed each component of the Practice Profile for culturally responsive teaching practices. Feedback was provided to the IPAC team.

6. Using the Hexagon Tool during Phase I, an implementation barrier emerged. A fidelity measure did not exist for any of the EBPs reviewed by the IPAC team. As a result, the next step was to identify a fidelity measure to pair alongside a Practice Profile.

    - Because there was not a research-based fidelity measure in existence, the KDE worked with SISEP to begin using SISEP's Observation Tool for Instructional Supports and Systems (OTISS). The OTISS is a research-based fidelity measure. It monitors the system of supports for teachers to use best practices in the classroom. The KDE worked with SISEP to integrate the math Practice Profile components into the OTISS, to ensure alignment between the EBP and the fidelity measure.

District Entry and Support

Continuing to use the Active Implementation Frameworks (AIFs) at all levels of the system, Implementation Stages developed by SISEP are being utilized to support districts.



Exploration

During the Exploration Stage of Implementation, with the support of the State Transformation Specialists (STSs), the Regional Educational Cooperatives engage in meetings with potential TZ districts to determine their readiness. If the districts are interested in moving forward with learning and applying the use of the Active Implementation Frameworks (AIFs), they participate in a District Capacity Assessment (DCA). As described above in the Infrastructure Development of Phase II, the DCA team, with support from the STSs and Regional Educational Cooperatives, will develop an Action Plan focused on specific items identified from the assessment as areas of growth.

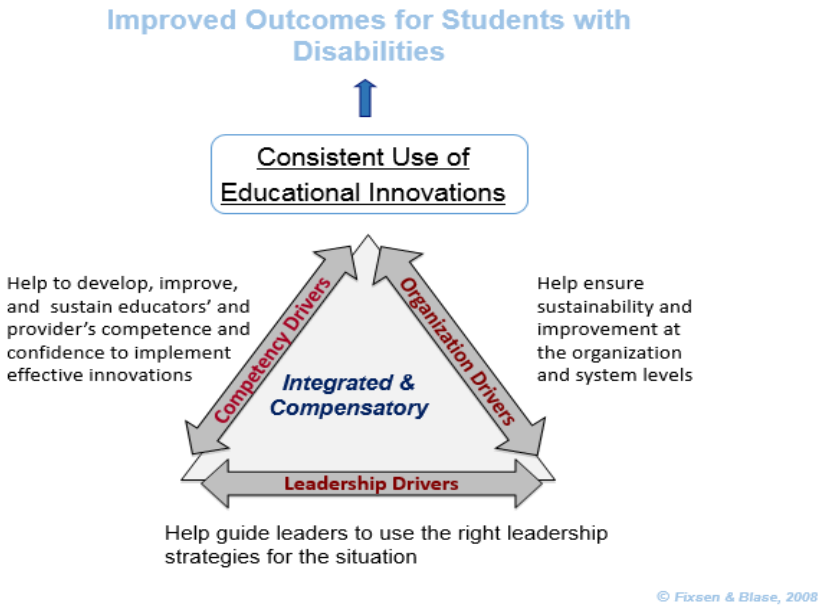
Just like the state and region, the TZ districts engage in learning the Active Implementation Frameworks (AIFs). The DCA baseline data provides a starting point for learning and the Action Plan guides next steps for moving forward. One of the first components of the district Action Plan is the formation of a District Implementation Team (DIT). The DIT is comprised of executive leader(s), the Director of Special Education (DoSE), the curriculum specialist and other stakeholders that know the district and its systems. The Regional Educational Cooperatives, with the support of the STSs, develop a routine meeting schedule with the DIT (at least once per month) to teach the districts about Active Implementation and how to apply the frameworks.

Installation

In the Installation Stage, Communication Protocols are established at all levels of the system, including the district and school level. The Communication Protocol tool highlights *what* will be communicated and *how* it will be communicated. Each level of the system, (state-region-district-school) has a communication protocol to ensure communication flows up and down the linked teaming structure, so that each level of the system is fully supported.

As districts develop and apply protocols, they begin to engage in the IPAC process outlined above to determine whether a specific math EBP will meet their needs. Following this process, districts develop selection criteria for School-based Implementation Teams with the support of the STSs and Regional Educational Cooperatives. They then engage in a mutual selection process, take part in a School Capacity Assessment and an EBPs inventory. These activities allow the schools to measure their capacity to implement and to make space for the implementation of the EBP.

Using the data from the capacity assessments, districts and schools will develop the infrastructure to support the use of the EBP in Initial Implementation. According to SISEP, there are three major components of infrastructure districts will install—Competency, Organization and Leadership. They are referred to as Implementation Drivers.



Competency

One aspect of developing competence is training. Teachers will engage in training on the evidence-based math practice selected by the district. To ensure training is delivered effectively and as intended, the KDE developed a Training team to create tools for this area. Members from the IPAC team were repurposed due to their expertise on math EBPs. The Training team membership consists of:

- KDE Math Consultant
- Regional Educational Cooperative Math Consultants
- KDE Exceptional Child Consultant
- Committee for Mathematics Achievement (CMA) representative
- Kentucky Center for Mathematics (KCM) representative
- Representative from each math EBP

Similar to the work of the IPAC team, a philosophy of training was established. The Core Components of the trainings for each EBP were outlined and matched with a specific practice in the training philosophy and math Practice Profile. The alignment of these components were compiled into a *Training Framework.* A Training Fidelity Checklist, based on the framework, was designed to ensure that every training will be delivered consistently and effectively, and that all components of the EBP will be taught.

In addition to developing the fidelity checklist, the team also created a Training Service Delivery Plan. The plan will be provided to districts to guide them on the preparation and follow-up of trainings. It provides guidance on the process of:

- Preparing teachers for the training
- What data should be collected during the training to inform future trainings/follow-up coaching
- How the data is collected
- How to make use of the data following each training

In addition to training, districts will receive support on coaching. As discussed in the Phase II Infrastructure Development Component, the Coaching team is developing a Coaching Practice Profile and fidelity measure. As part of support to districts, a Coaching Service Delivery Plan is also being developed to provide guidance on:

- The coaching process at the district/building level
- How often coaching should occur based on available resources
- Teacher preparation for coaching
- How coaching data is collected and who receives it
- Timelines for data collection

Members from the Coaching team, with support from the STSs and Regional Educational Cooperatives, will be designing a training for districts on effective coaching (aligned to the Coaching Practice Profile) and each of the tools listed above. The STSs and Regional Educational Cooperatives will be available to provide follow-up support to districts to build capacity, leading to sustainability.

Organization

As data is collected, districts and schools may begin to encounter barriers that require additional support. At the state level, data collection was also identified as an area of need in the Phase I Infrastructure Analysis. As a result, the SSIP Data team was developed by the KDE. The Data team consists of representation from:

- KDE's Division of Learning Services
- KDE's Office of Assessment and Accountability
- KDE's Division of Program Standards
- Commissioner's Delivery Unit
- External Evaluator

The mission of the team is to align data collection for each level of the system (state-region-district-school), develop protocols to ensure data quality and design a training on data analysis. These components will be outlined in an evaluation plan to ensure effective data-based decisions. The Data team will also interpret the data collected and construct a report. The State Design Team will utilize the report to make implementation-informed decisions.

Throughout the implementation process, communication is vital. Each level of the process (state-region-district-school) is developing a written protocol to link communication up and down the system. For example, if the building encounters a problem it cannot solve, it will feed this information to the district, based on the procedures outlined in their protocol. If the district is unable to solve the problem, it will feed this information to the Regional Educational Cooperatives, who may then send the problem to the KDE if needed. The State Management Team (SMT), made up of KDE's executive leaders can begin to develop a solution and feed this information back down the system.

The linked communication process is referred to as a Practice-Policy Communication Cycle. By having linked communication protocols in place, it allows for practices at each level of the system to inform policy and policy to enable practice.

Leadership

Having the support of leadership as part of the systemic change process is essential to sustainability. The implementation teams at each level of the system will include the highest level of leadership to make decisions, provide support and improve outcomes. To assist district and school leadership, the Regional Educational Cooperatives and STSs will provide training and coaching to District Implementation Teams on the Active Implementation Frameworks (AIFs). Guiding districts on the consistent use of effective training, coaching, data collection and communication will result in consistent use of the EBP, leading to improved outcomes for SWD.

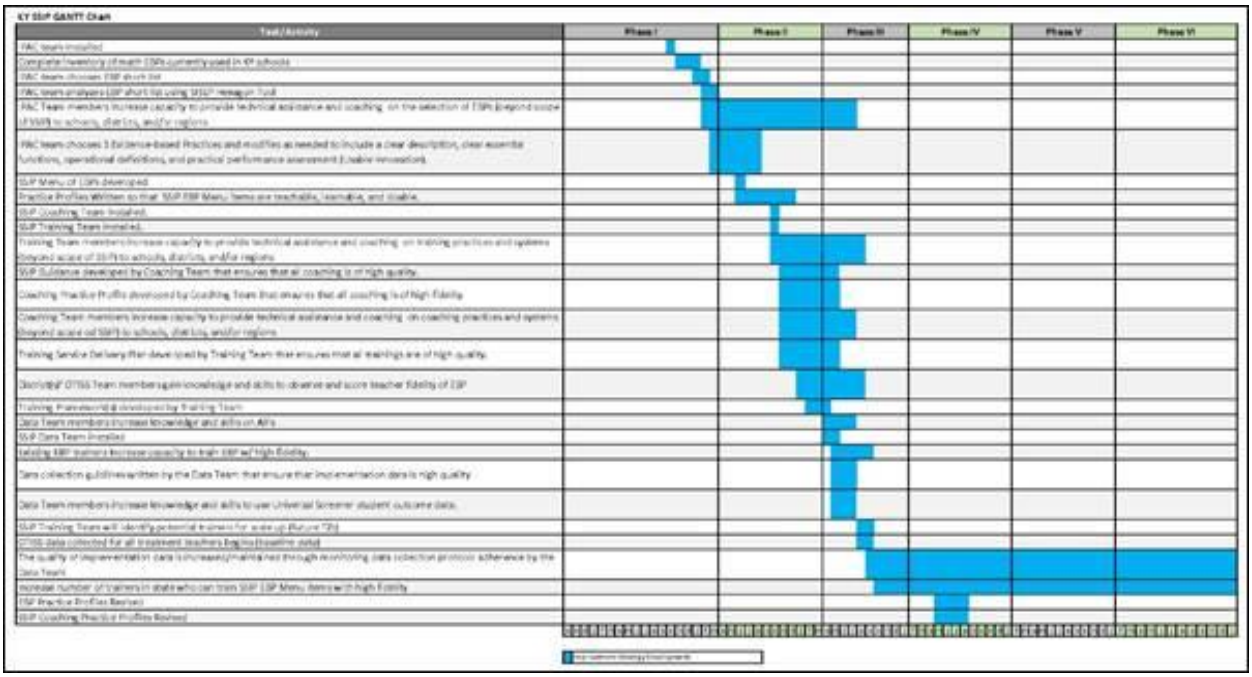
Initial Implementation

Once districts select the EBP, put components of their infrastructure in place and establish communication protocols, they will begin Initial Implementation. During this stage, districts will use the tools developed with them during planning. Each level of the system (state-region-district-school) will review data consistently, as outlined in the training, coaching and evaluation plans, and engage in continuous improvement cycles. As data is analyzed, each level will adjust its practices and improve implementation to meet the goals of the SiMR.

As districts engage in Initial Implementation, they will provide feedback on the effectiveness of the tools developed by the Training, Coaching, Data and IPAC teams by utilizing the linked communication protocols. Each team will engage in continuous improvement cycles to revise the tools based on the feedback provided. This information will be provided to the State Management Team and State Design Team to make decisions on modifying and improving the tools for scale-up across the state.

<u>Timelines of Coherent Improvement Strategies</u>

The Gantt chart below highlights the short and long-term goals of the coherent improvement strategies described in Component II—Support to District Implementation of Evidence-Based Practices (EBPs). The Gantt chart was selected to provide stakeholders with an overview of a large number of coherent improvement strategies. For a complete view, please see the *Gantt Chart* attachment.



III. Kentucky's SSIP Evaluation Approach

Kentucky used a collaborative participatory approach to construct its evaluation plan. The evaluation plan was designed by external evaluators (Human Development Institute at the University of Kentucky) and the SSIP Evaluation team (representatives from different stakeholder groups at KDE). The SSIP Evaluation team includes the STSs, representatives of the KDE Office of Assessment and Accountability, representatives of the KDE Commissioner's Delivery Unit, the KDE PART B data manager, and the Division of Program Standards.

In addition to the evaluators and SSIP Evaluation team, the State Design Team regularly reviewed and provided feedback to the prototypes of the evaluation plan. The State Design Team included representatives from stakeholders within and outside KDE (parent groups, cooperatives and local schools). As a result, the evaluation plan and process described in this document was co-designed by the evaluators, KDE SSIP leaders and representatives who have a stake in the SSIP implementation.

The Evaluation Unit of the University of Kentucky's Human Development Institute (HDI) provided the external evaluation to the SSIP. The HDI Evaluation Unit includes three full-time evaluators and five support staff. The Evaluation Unit has provided evaluation to more than a dozen projects in the last five years. It evaluated programs funded by several agencies—the National Center for Advancing Translational Sciences, Office of Special Education Programs, Health Resources and Services Administration, Office of Elementary and Secondary Education, Office of Post-Secondary Education, Substance Abuse and Mental Health Services Administration, Department of Agriculture and the Administration on Intellectual and Developmental Disabilities. It has worked with state agencies in Kentucky, Tennessee and West Virginia, especially in evaluating the State Personnel Development Grants (SPDGs) for more than a decade, grants which emphasize the use of implementation science and appropriate linkages to intervention outcomes.

The Unit also conducted a national environmental scan project to look at policy and trends concerning the inclusion of students with disabilities in arts education for VSA, The Kennedy Center. It has extensive experience in conducting mixed-methods evaluations of programs implementing evidence- based practices at the local and regional levels. It has presented on evaluation practices and methods at the American Evaluation Association Conference, as well as at the Office of Special Education Program Project Directors annual meeting. The Unit has experience working with a wide range of stakeholders including students, parents, program staff, state and federal program staff, community members and people with disabilities across their life-span.

The designed life-cycle of the SSIP as outlined in the OSEP Part B Measurement Table for Indicator 17 and Kentucky's SSIP Theory of Action are aligned with the elements of formative, process and summative outcome evaluations. Stakeholder participation and feedback was critical for this alignment. The formative evaluation is aligned with the installation of the SSIP coherent improvement strategies. The evaluators have worked with stakeholders to make sure the formative outcomes were feasible, appropriate and acceptable. The process evaluation examines the extent to which the program is being implemented as designed. The summative outcome will

focus on how the SSIP has impacted the outcomes of students with disabilities and focused on the goals of the SiMR.

Kentucky SSIP Evaluation and Alignment to the Theory of Action

If *KDE uses implementation science principles for effectuating systems change within Regional Educational Cooperatives; and,*

If *that systems change provides the Regional Educational Cooperatives with the capability to increase the capacity of districts to implement, scale up, and sustain evidence-based practices; and,*

If *the KDE and the Regional Educational Cooperatives engage stakeholders in vetting, selecting, and disseminating usable and measurable methods of implementing evidence-based math instructional practices; and*

If *Kentucky districts provide professional learning, technical assistance, and support to elementary and middle school teachers around implementing, scaling, and sustaining evidence-based practices in math, with an emphasis on reduction of novice performance;*

Then *the percentage of students with disabilities performing at or above proficient in middle school math, specifically at the 8th grade level, will increase.*

Kentucky's Commissioner of Education, Dr. Stephen Pruitt, in a recent blog post, discussed why the KDE believes the root cause of the achievement gap is the "opportunity gap." Students enter the classroom with different levels of preparedness, but this cannot be mistaken for ability. Quality standards-based education should be big on standards and short on standardization, but course content of low rigor diminishes students' opportunities to learn. He says that teachers need to have the freedom to meet students where they are and engage at their level, but also to hold them to a high standard. Students must be engaged, as it is when a child is disconnected from learning that they lack motivation. He says that an opportunity gap is created in the classroom if this apathy is not addressed in the classroom, which can lead to a greater gap in achievement. The key way to close the opportunity gap is with quality instruction that ensures that every student is provided with a rich learning environment.

Kentucky will decrease the opportunity gap that eighth graders with an Individual Education Program (IEP) experience as they transition to the high school mathematics environment. To decrease the gap, the SSIP focuses on professional learning for elementary and middle school teachers and support to school districts implementing, scaling and sustaining EBPs in math - in other words, "good teaching."

The state will know that its activities are successful if pre-eighth grade SWD receiving Kentucky Academic Standards (KAS) mathematics instruction with or without accommodations (4th-7th) show increased proficiency and eighth grade students receiving KAS mathematics instruction with or without accommodations are designated as "Proficient" at a higher rate on the annual state summative assessment (K-PREP).

Kentucky eighth grade SWD primarily receive KAS math instruction in one of three learning environments—the general education mathematics classroom, a general education mathematics classroom supported by a special education co-teacher or a special education mathematics classroom, also referred to as resource classroom. Each student's educational setting is dependent on the individual decision made by the student's Admissions and Release Committee on the Least Restrictive Environment for the student. Consequently, the SSIP cannot decrease the opportunity gap for transitioning eighth graders by isolated efforts within one educational setting - professional learning must be provided to all mathematics teachers in all three settings in which students with disabilities are taught.

Students cannot be expected to demonstrate increased proficiency in grade-level mathematics standards if their teachers do not consistently use effective mathematics teaching practices. Kentucky's Theory of Action affirms that, for educators to be more effective in their mathematics instruction, they need training and coaching to effectively implement evidenced-based practices. The EBPs will increase the trajectory by which students grow in the development of enduring mathematical understanding, mathematical reasoning and problem-solving skills, procedural fluency and flexibility and engagement in productive academic struggle. Students cannot benefit from such innovative teaching practices if teachers do not use them consistently. Therefore, processes must exist to support educators until they use the evidenced-based practices with high fidelity during every lesson. These support processes must be created by, resourced by, and managed by a dedicated School Implementation Team which uses continuous improvement cycles to expedite teacher growth in the chosen mathematics EBP. Teachers cannot benefit from such support processes if the School Implementation Team does not consistently remove barriers and acquire requisite resources. Therefore, processes must exist at the district level to support the School Implementation Team.

The District Implementation Team must be linked in this way to the school level team to provide developmental support, technical assistance and coaching. The District Implementation Team will need these same supports from their Regional Implementation Team to be effective and, in time, sustainable. In the same way, the Regional Implementation Team must be linked to the state implementation team (known as the State Design Team in Kentucky) to access these same supports. The skills and abilities of the State Design Team and the State Transformation Specialists (STSs) need developmental support from OSEP and SISEP for the system to stay vital.

The establishment of effective implementation teams, infrastructure and continuous improvement processes within and across each of these linked teaming entities will take a scaffolded approach. The KDE decided to employ SISEP's Transformation Zone (TZ) model for initial installation and scale-up because it offered the greatest probability of sustainability, thereby giving the SiMR the best opportunity to be achieved.

Kentucky will know the SSIP has been successful for students if:

Primary Proximal Outcome Measure: All 4th-7th grade students receiving a SSIP EBP increase their mathematical knowledge and skills, as set forth in the Kentucky Academic Standards (KAS).

o *Primary intervention population set*: The subset of all 4th-7th Grade SWD attending a TZ school and receiving mathematics instruction in the general education or resource classroom will have a lower rate of novice performance and a higher rate of proficient performance on the annual statewide assessment in mathematics (K-PREP) than the respective sub-group (SWD: non-alternate) 2014 K-PREP benchmark rates.

o *Primary comparative intervention population set*: The subset of all 4th-7th Grade students not identified as having a disability attending a TZ school and receiving mathematics instruction in the general education classroom will have a lower rate of novice and a higher rate of proficient performance on the annual statewide assessment in mathematics (K-PREP) than the respective sub-group (All Student: non-SWD) 2014 K-PREP benchmark rates.

o *Secondary comparative non-intervention population set:* The subset of all 4th-7th Grade SWD attending a *post-hoc* identified matching school receiving mathematics instruction in the general education or resource classroom and not receiving instruction using a SSIP EBP. Statistical analysis (using propensity scores for making appropriate comparisons) will examine if the primary intervention population set has a higher proficiency growth rate on the annual K-PREP than the counterfactual group.

o *Secondary comparative non-intervention population set:* The subset of all 4th-7th Grade not identified as having a disability attending a *post-hoc* identified matching school receiving mathematics instruction in the general education setting. Statistical analysis (using propensity scores for making appropriate comparisons) will examine if the primary comparative intervention population set has a higher proficiency growth rate on the annual K-PREP than the counterfactual group.

Secondary Proximal Outcome Measure: All 4th-8th grade students receiving SSIP EBP increase their knowledge and skills concerning the KAS for mathematics.

o *Primary intervention population set*: The subset of all 4th-8th Grade SWD attending a TZ school and receiving mathematics instruction in the general education or resource classroom will increase the number of students meeting a proficiency benchmark on a Universal Screener (including the Measures of Academic Progress®) during three annual collection windows.

o *Primary comparative intervention population set*: The subset of all 4th-7th Grade students not identified as having a disability attending a TZ school and receiving mathematics instruction in the general education classroom will increase the number of students meeting a proficiency benchmark on a Universal Screener (including the Measures of Academic Progress®) during three annual collection windows.

Primary Distal Outcome Measure: All 8th grade students receiving a SSIP EBP increase their knowledge and skills as set forth in the KAS.

o *Primary intervention population set*: The subset of all 8th Grade SWD attending a TZ school and receiving mathematics instruction in the general education or resource classroom will have a lower rate of novice and a higher rate of proficient performance on the 2019 state mathematics assessment (K-PREP) than the respective sub-group (SWD: non-alternate) 2014 K-PREP benchmark rates.

o *Primary comparative intervention population set*: The subset of all 8th Grade students not identified as having a disability attending a TZ school and receiving mathematics instruction in the general education classroom will have a lower rate of novice and a higher rate of proficient performance on the annual state mathematics assessment (K-PREP) than the respective sub-group (All Student: non-SWD) 2014 K-PREP benchmark rates.

o *Secondary comparative non-intervention population set:* The subset of all 4th-8th Grade SWD attending a *post-hoc* identified matching school receiving mathematics instruction in the general education or resource classroom. Statistical analysis (using propensity scores for making appropriate comparisons) will examine if the primary intervention population set has a higher proficiency growth rate on the 2019 K-PREP than the counterfactual group.

o *Secondary comparative non-intervention population set:* The subset of all 4th-8th Grade not identified as having a disability attending a *post-hoc* identified matching school receiving primary mathematics instruction in the general education classroom. Statistical analysis (using propensity scores for making appropriate comparisons) will examine if the primary comparative intervention population set has a higher proficiency growth rate on the 2019 K-PREP than the counterfactual group.

<u>Kentucky will know the SSIP has been successful for teachers if:</u>

Primary Training Fidelity Milestone: All 4th-8th grade mathematics teachers in a TZ school receive introductory SSIP EBP trainings that is of high training fidelity as measured by that EBP's Training Fidelity Checklist. The creation of the checklist and its subsequent scoring requirement will conclude spring 2016 under the leadership of the SSIP Training team.

Secondary Training Fidelity Milestone: All 4th-8th grade mathematics teachers in a TZ school increase their knowledge and skills concerning the mathematics content EBP selected by their School Implementation Team as measured by the pre & post EBP training assessments. The adoption/creation of the pre and post EBP training assessments will conclude under the leadership of the SSIP Training team prior to teacher training.

Primary Proximal Outcome Measure: All 8th grade teachers receiving intervention increase their knowledge and skills concerning the mathematics content EBP selected by their School Implementation Team.

o *Primary population set*: The subset of all 8th grade teachers (designated in a general or special education role) in a TZ school and having received introductory SSIP EBP training and on-going coaching will increase capacity to implement their district's chosen mathematics EBP as measured by the OTISS 6 times per academic year.

o *Secondary population set*: The subset of all 4th-7th grade teachers (designated in a general or special education role) in a TZ school and having received introductory SSIP EBP training and on-going coaching will increase capacity to implement their district's chosen mathematics EBP as measured by the OTISS 6 times per academic year.

Primary Distal Outcome Measure: All 8th grade teachers receiving intervention increase their knowledge and skills concerning the mathematics content SSIP EBP selected by their School Implementation Team.

o *Primary population set*: The subset of all 8th grade (designated in a general or special education role) in a Transformation Zone school and having received introductory SSIP EBP training and on-going coaching will show full capacity to implement their district's chosen mathematics EBP by receiving an 85% or higher score on their 2019 year-end OTISS.

<u>Kentucky will know the SSIP has been successful for schools if:</u>

Primary Training Fidelity Milestone: All TZ School Implementation Team members who support teachers receive implementation science training that is of high training fidelity, as measured by the implementation science Training Fidelity Checklist. The creation of the checklist and its subsequent scoring requirements will conclude spring 2016 under the leadership of the State Transformation Specialists.

Secondary Training Fidelity Milestone: All TZ School Implementation Team members who support teachers will increase their knowledge and skills concerning implementation science as measured by the pre and post training assessments.

Primary Proximal Outcome Measure: The number of all Kentucky schools serving 4th-8th graders using a SSIP EBP with high fidelity for all students during mathematics instruction is increased.

o *Primary population set*: The subset of all TZ schools instructing 8th graders will increase capacity to implement their district's chosen mathematics SSIP EBP as measured by their bi-annual Drivers Best Practices Assessment (school capacity assessment).

o *Primary population set*: The subset of all TZ schools instructing 4th-7th graders will increase capacity to implement their district's chosen mathematics SSIP EBP as measured by their bi-annual Drivers Best Practices Assessment (school capacity assessment).

Primary Distal Outcome Measure: The number of all Kentucky schools serving 8th graders using a SSIP EBP with high fidelity for all students during mathematics instruction is increased.

o *Primary population set*: The subset of all TZ schools instructing 8th graders will show capacity to implement their district's chosen SSIP EBP with minimal supports by receiving a 60% score on the Drivers Best Practices Assessment (school capacity assessment) before 2020.

Kentucky will know the SSIP has been successful for districts if:

Primary Training Fidelity Milestone: All TZ District Implementation Teams supporting a TZ school receive implementation science training that is of high training fidelity as measured by the implementation science Training Fidelity Checklist. The creation of the checklist and its subsequent scoring requirement will conclude spring 2016 under the leadership of the State Transformation Specialists.

Secondary Training Fidelity Milestone: All TZ District Implementation Team members supporting a TZ School will increase their knowledge and skills concerning implementation science as measured by the pre and post training assessments.

Primary Proximal Outcome Measure: The number of all Kentucky districts with schools serving 4th-8th graders using a SSIP EBP with high fidelity for all students during mathematics instruction is increased.

o *Primary population set*: The subset of all TZ districts instructing 4th-8th graders will increase capacity to implement their district's chosen SSIP EBP as measured by their bi-annual District Capacity Assessment.

Primary Distal Outcome Measure: The number of all Kentucky districts with schools serving 8th graders using a SSIP EBP with high fidelity for all students during mathematics instruction is increased.

o *Primary population set*: The subset of all TZ districts instructing 8th graders will show capacity to implement their district's chosen mathematics SSIP EBP with minimal supports by receiving a 60% score on the District Capacity Assessment before 2020.

Kentucky will know the SSIP has been successful for regions if:

Primary Training Milestone: All TZ Regional Implementation Teams supporting a TZ district receive implementation science training that is of high training fidelity as measured by the implementation science Training Fidelity Checklist. The creation of the checklist and its subsequent scoring requirement will conclude spring 2016 under the leadership of the State Transformation Specialists.

Secondary Training Milestone: All TZ Regional Implementation Team members supporting a TZ district will increase their knowledge and skills concerning implementation science as measured by the pre and post training assessments.

Primary Proximal Measure: The number of all Kentucky (Regional) Educational Cooperatives serving Kentucky districts using a SSIP EBP with increasing fidelity for all students during mathematics instruction is increased.

o *Primary population set*: The subset of all Kentucky (Regional) Educational Cooperatives will increase capacity to implement their district's chosen SSIP EBP as measured by their bi-annual Regional Capacity Assessment.

o *Secondary population set*: The subset of all non-TZ Kentucky (Regional) Educational Cooperatives will increase capacity to implement their districts' evidence-based interventions as measured by their bi-annual Regional Capacity Assessment.

Primary Distal Measure: The number of all Kentucky (Regional) Educational Cooperatives serving Kentucky districts using a SSIP EBP with high fidelity for all students during mathematics instruction is increased.

o *Primary population set*: The subset of all TZ Kentucky (Regional) Educational Cooperatives will show capacity to implement their districts' chosen SSIP EBP(s) with minimal supports, by receiving a 60% score on their Regional Capacity Assessment.

<u>Kentucky will know the SSIP has been successful for the KDE if:</u>

Primary Training Milestone: The KDE State Design Team supporting the TZ regions receive implementation science training that is of high training fidelity, as measured by the implementation science Training Fidelity Checklist. The creation of the checklist and its subsequent scoring requirement will conclude spring 2016 under the leadership of the State Transformation Specialists.

Secondary Training Milestone: The State Design Team members supporting the TZ regions will increase their knowledge and skills concerning implementation science as measured by the pre and post training assessments.

Primary Proximal Measure: The KDE has increased capacity to support Kentucky (Regional) Educational Cooperatives as they support Kentucky districts that support Kentucky schools using a SSIP EBP with high fidelity for all students during mathematics instruction as measured by their bi-annual State Capacity Assessment.

Primary Distal Measure: The KDE has full capacity to support Kentucky (Regional) Educational Cooperatives as they support Kentucky districts that support Kentucky schools using a SSIP EBP with high fidelity for all students during mathematics instruction, as measured by receiving a 80% score on their State Capacity Assessment.

Kentucky will accomplish the SiMR through the following:

The KDE began its SSIP infrastructure development by adopting implementation science, under the guidance of SISEP, as its first Coherent Improvement Strategy. The State Implementation & Scaling-up of Evidenced-based Practices (SISEP) Center is an OSEP-funded technical assistance center that supports education systems in creating implementation capacity for evidence-based practices benefiting all students, but especially SWD. The Center uses "implementation science" as a means of delivering practices that can be successfully implemented as systemic changes in a systematic manner.

The KDE then began to analyze its baseline capacity to support the Active Implementation Frameworks (AIFs), conduct implementation science awareness trainings, and create action plans to increase the state's capacity to support implementation. Original action planning included the identification of State Transformation Specialists (STS) and the formation of a dedicated State Design Team (SDT).

The KDE had already solicited feedback and engaged a variety of stakeholders, both internal and external, in the early development of the SSIP Phase I work. Therefore, it was decided the SDT should have a diverse representation of internal and external stakeholders. The SDT collected and reviewed feedback, analyzed data and infrastructure, leading to the development of the SiMR and have been co-developers of the SSIP process (inclusive of the SSIP evaluation design) with the State Management Team (SMT).

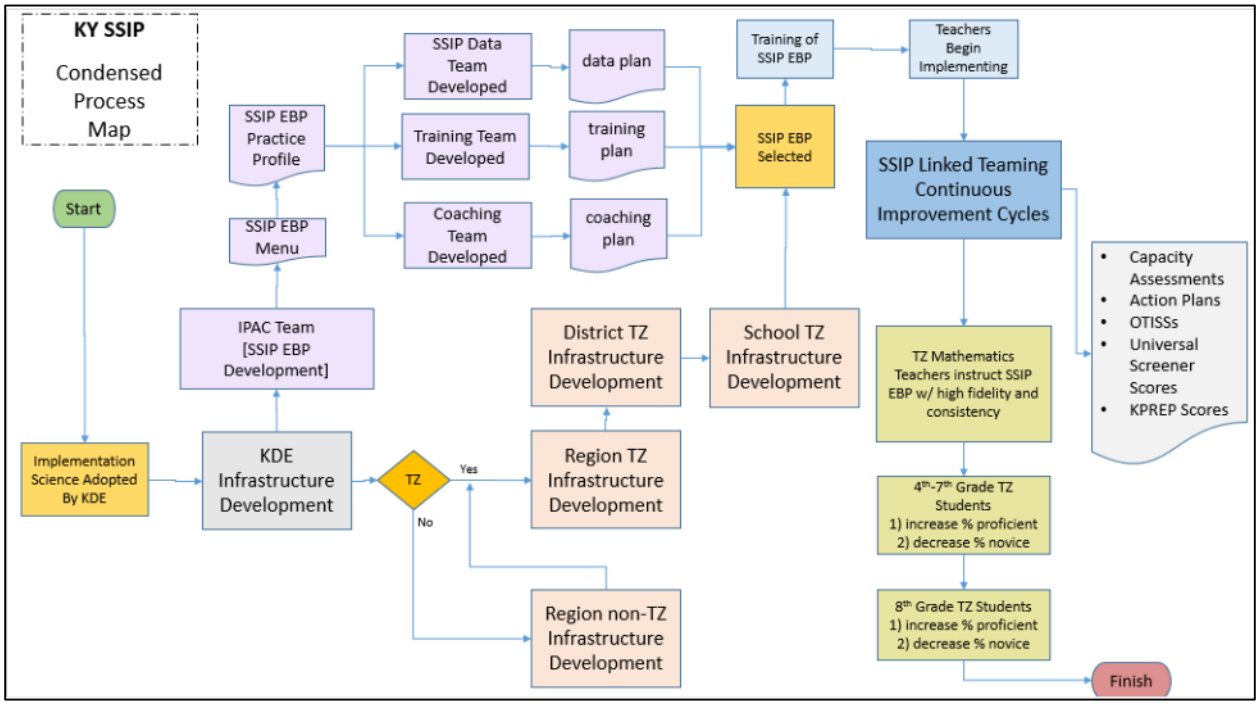
Membership on the SDT has included representatives of the following external stakeholders:

- Kentucky (Regional) Educational Cooperative leadership
- Kentucky (Regional) Educational Cooperative consultants
- District Directors of Special Education
- Kentucky State Personnel Development Grant (KY SPDG)
- Kentucky's Council of Administrators of Special Education (KY-CASE)
- Kentucky's Parent Training/Information (PTI) Center
- Kentucky's Instructional Support Network (ISN)
- Committee for Mathematics Achievement (CMA)
- Kentucky Interagency Transition Council (KITC)
- State Advisory Panel for Exceptional Children (SAPEC)
- State Interagency Council (SIAC)
- Kentucky Minority Superintendents Network
- Kentucky's University Center on Developmental Disabilities (UCEDD; UKY-HDI)

As the SDT 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 districts. It did this by forming "*Transformation Zones"* (TZs) within the state to initiate the work of the SiMR. All Kentucky (Regional) Educational Cooperatives will receive universal support; however, KDE will provide intensive technical assistance to the *Transformation Zone* districts in three of Kentucky's (Regional) Educational Cooperatives. Evidence-based practices in math, implementation experts, and technical assistance and coaching from the cooperatives will provide implementation support to districts within the TZs to ensure fidelity, sustainability and

the ability to scale-up. The following is a synopsis of the process the KDE is following to put its Theory of Action into practice. A comprehensive State SSIP Process Map is provided as an attachment.

Condensed Kentucky SSIP Process Chart



KDE's infrastructure development branches into two broader process pathways. The first path focuses on the implementation science Coherent Improvement Strategy, and the second path focuses on the Evidenced-Based Mathematics Coherent Improvement Strategy.

The first path focuses on the implementation science Coherent Improvement Strategy by creating linked teams for the TZs (light orange in color); the Kentucky (Regional) Educational Cooperatives selected as TZs start their infrastructure development to build implementation science capacity. Kentucky (Regional) Educational Cooperatives identify their partner TZ districts and assist them in their infrastructure development to build implementation science capacity. Subsequently, the districts identify their partner TZ schools and assist them in their infrastructure development to build implementation science capacity.

The Kentucky (Regional) Educational Cooperatives not originally chosen as TZs build capacity until the KDE has the capacity to expand TZs. Kentucky (Regional) Educational Cooperatives will continually build their capacity to support districts in the Active Implementation Frameworks (AIFs) through their Regional Systemic Improvement Plan (RSIP) efforts. The purpose of the RSIPs is to allow cooperatives the ability to differentiate technical assistance according to regional needs, thus increasing the capacity of districts to implement, scale-up and sustain evidence-based practices to improve educational results and outcomes for SWD.

The second path focuses on the pre-installation requirements of the Evidenced-Based Mathematics Coherent Improvement Strategy and embeds elements of the AIFs into the Mathematics EBP itself (pink in color). The Instructional Practices and Academic Content (IPAC) team is then created and chooses evidenced-based mathematics practices, adds the elements necessary for the EBP to become usable, creates a Usable EBPs Menu and writes the Usable EBPs Practice Profile.

Once the Practice Profile is written, three distinct work branches begin: SSIP Data team development, Training team development, and Coaching team development. The Data team will ensure that implementation data is high quality through a data plan and will increase key stakeholders' understanding of how the data is collected and used. The Training team will develop the essential practices, processes, measurement tools and guidance documents to ensure training of the Mathematics Usable EBP is high quality. The Coaching team will develop the essential practices, processes, measurement tools and guidance documents to ensure coaching at each tier of the linked teaming structure is high quality and consistent.

The two paths of the SSIP process must be completed so that schools can begin implementation as soon as they choose a Usable EBP. While TZ schools are encouraged to choose from the SSIP Usable EBP Menu, they may choose their own EBP, as long as their district creates their own IPAC team, to ensure the evidenced-based mathematics strategy meets SISEP's definition of "usable." Making sure an EBP is usable can be a labor intensive process; the KDE's SSIP Menu reduces this burden for the majority of districts and schools. After the Usable EBP has been selected, teachers are trained in the EBP and begin implementation.

As teachers build their capacity to implement the Usable EBP with high fidelity and high consistency, each tier in the linked-teaming structure works collaboratively through a continuous improvement cycle infrastructure. Each implementation team from the KDE to the school level provides technical assistance, resources, problem-solving assistance and coaching to the implementers they support. The implementation data collected, conclusions of data analysis, action planning reports and outcome results are shared throughout the linked teaming structure to build capacity to accelerate implementation and to strengthen the state education network. As needed, the Data team, Coaching team, and Training team are brought in to assist and support the completion of action step items.

Once teachers have built their capacity to implement the Usable EBP with high fidelity and high consistency, the KDE will have evidence of a decreased percentage of 4th-7th grade students scoring novice and an increased percentage scoring proficient on the K-PREP statewide assessment. It is assumed in the Theory of Action that this compounding of high quality instruction will also lead to the KDE accomplishing its SiMR (decreased percentage of eighth grade students scoring novice and an increased percentage scoring proficient on the K-PREP statewide assessment).

The SSIP Evaluation Logic Model

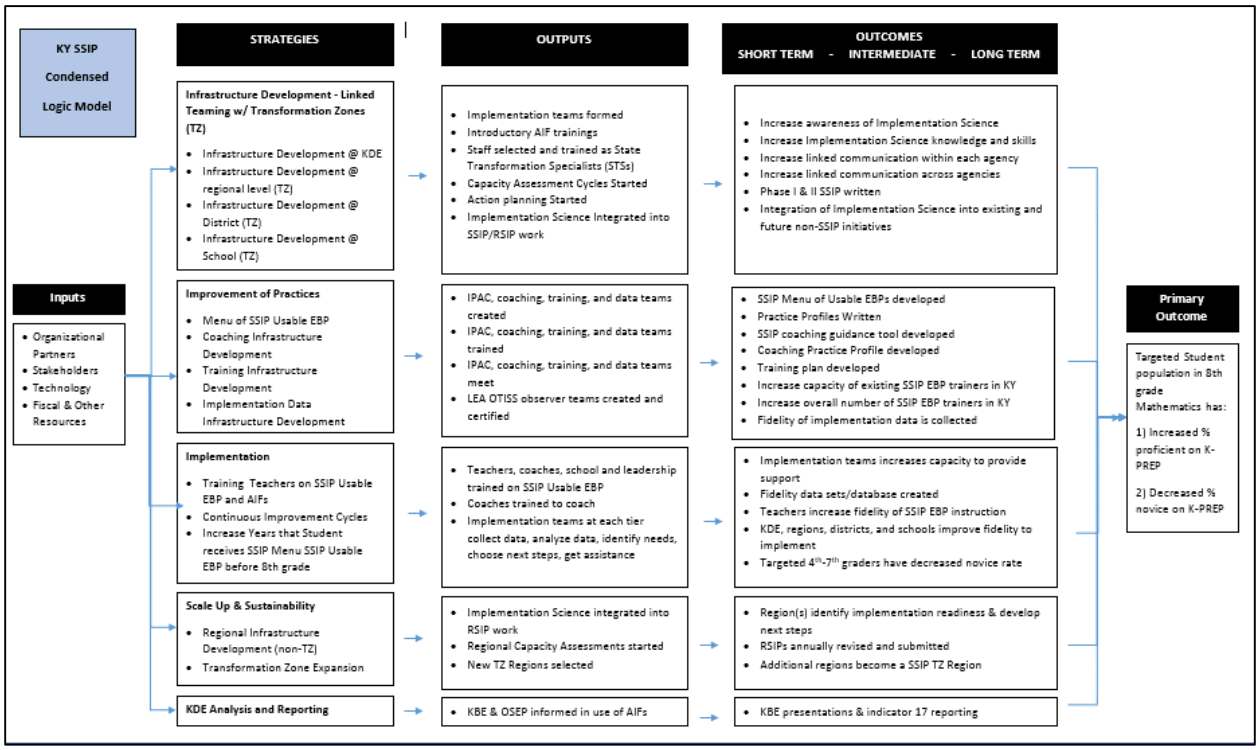
The Kentucky State Systemic Improvement Plan (SSIP) leverages the efforts of a diverse group of organizational partners and stakeholders, a collection of evidence-based practices and a variety of technological and fiscal resources to support five broad groups of strategies/activities.

- First, it uses linked-teaming and Transformation Zones to further develop and improve a vertically-aligned infrastructure for sustainable implementation at state, regional and local levels of the education system.
- Second, the SSIP develops an infrastructure of training and coaching for teachers within the Transformation Zones in the use of evidence-based mathematics instructional practices.
- Third, the SSIP leverages its implementation teams and training and coaching infrastructures to provide training and coaching to teachers, grade 4-8, within the Transformation Zones.
- Fourth, the SSIP scales up its activities across the state by expanding to additional Transformation Zones and by increasing the implementation capacity in additional regions.
- Finally, KDE will engage in analysis of data gathered through capacity assessment cycles, implementation fidelity data, school next step plans, training data and outcome data to continue to refine its processes and report to the Office of Special Education Programs.

These activities are expected to lead to the increased use of implementation science throughout the state's education system and improved mathematics instruction in grades 4-8, resulting in a decreased percentage of eighth grade SWD scoring novice and an increased percentage scoring proficient on the K-PREP statewide assessment. A comprehensive State SSIP Logic Model is provided as an attachment.

The SSIP leverages the efforts of a diverse group of organizational partners and stakeholders, a collection of evidence-based practices and a variety of technological and fiscal resources. Organizational partners are comprised of diverse stakeholders inclusive of those previously mentioned on page 32. These "people resources" are combined with evidence-based instructional strategies for teaching mathematics, research-based coaching practices and evidence-based teaching and training practices, along with technological and fiscal resources provided by the various organizational partners.

Condensed Kentucky SSIP Logic Model



The SSIP utilizes these inputs (stakeholders and resources) to put five broad, inter-related strategies into effect. First, it uses linked-teaming and Transformation Zones to further develop and improve a vertically-aligned infrastructure for implementation at state, regional and local levels of the education system. A strategically small number of districts are grouped into a Transformation Zone to focus a broad level of supports into a narrow geographic region to accelerate the process of change in that region. Over time, additional Transformation Zones are created to scale-up the SSIP EBPs and lessons learned statewide.

An implementation team is developed at the state level and is trained in implementation science. This team is then linked to implementation teams at the regional, local and school levels, to provide training and support in the content and use of implementation science at each level. Each team completes bi-annual capacity assessments to drive a continuous improvement process and creates action plans. In the short run, it is expected that these linked-teams within the Transformation Zones will increase the awareness of implementation science in all levels of the education system, will increase communication across levels and will identify implementation installation needs.

Second, the SSIP develops an infrastructure of training and coaching for teachers within the Transformation Zones in the use of evidence-based mathematics instructional practices. An inventory of math EBPs currently used in Kentucky schools is analyzed using the SISEP Hexagon Tool. Three evidence-based practices are selected and modified to create a menu of Usable EBPs. Next, a Training team is created and will be trained in implementation science.

The Training team will be tasked with the development of a Training Plan to provide instruction to teachers that will increase their knowledge and skill to implement the SSIP EBPs with fidelity.

At the same time, a Coaching team is established to develop SSIP coaching guidance and a coaching plan to support teachers in the implementation of the training content. Additionally, a SSIP Data Team (DT) is created to develop data collection and analysis protocols, to measure the fidelity of implementation of the Usable EBPs. District OTISS observer teams will also be trained and certified to use the OTISS Fidelity Tool to observe and score teachers' fidelity of implementation of the EBPs. It is expected that the rigorous application of this training and coaching strategy will increase the capacity of trainers and coaches to support teachers in the learning and use of implementation science and the SSIP EBPs, and will increase the quality of implementation data to assist further development and improvement.

Third, the SSIP leverages its implementation teams and training and coaching infrastructures to provide training and coaching to teachers, grades 4-8, within the TZ Schools. Teachers are trained in both the SSIP EBP and the connection between implementation science and their successful professional development. Training data is analyzed by implementation teams across levels to shape coaching for teachers and remove barriers to implementation as they are identified. In the short run, it is expected the use of these strategies will increase the knowledge and skills of teachers to implement the SSIP EBPs. This will lead to increased fidelity of use of the EBPs in TZ classrooms.

Fourth, the SSIP scales up its activities across the state by expanding to additional TZs and by increasing the implementation capacity in additional regions. Kentucky (Regional) Educational Cooperatives and districts who were not selected in the previous TZs are selected and complete an agreement to participate. The KDE will use lessons learned from the original TZs as the implementation team at the regional level is linked to implementation teams at the district and school levels and provides training and support in the content and use of implementation science. Each implementation team develops capacity assessment cycles to drive a continuous improvement process and creates action plans to increase implementation capacity. In addition, teachers in the new TZs are trained in both implementation science and a SSIP EBP.

Fifth, KDE will analyze the data collected through capacity assessment cycles, implementation fidelity data, school next step plans, training data and outcome data to continue to refine its processes and report to the Office of Special Education Programs. The Kentucky Board of Education will also be informed on the use of implementation science within the state's educational system and on the other outcomes of the SSIP work.

These outcomes are inter-related and mutually reinforcing. In the short run, systems are created: continuously improving multi-level **implementation teams** to build the capacity to implement SSIP EBPs statewide, **professional development systems** to provide training and coaching to educators in the use of SSIP EBPs and **monitoring and data collection systems** to create feedback loops for improving implementation of SSIP EBPs. In the longer run, the systems are expected to lead to the increased use of implementation science throughout the state's education system and improved mathematics instruction in grades 4-8. This will result in a decreased

percentage of eighth grade students scoring novice and an increased percentage scoring proficient on the K-PREP state assessment.

Evaluation Questions and Project Measures

This section outlines the processes and methods the KDE will use to examine the extent to which the activities are implemented in accordance with the SSIP Theory of Action and the subsequent effects of the activities on outcomes for Kentucky students. The evaluation questions focus on the degree to which the project uses evidence-based professional development practices to support the attainment of the SiMR. It also concentrates on the measure of how well the implementation team/teachers participants in SSIP professional development demonstrate improvement in implementation of SSIP-supported EBPs over time.

SSIP Evaluation Questions

1. To what extent did the implementation of training (SSIP Training Service Delivery Plan and Training Framework), coaching (SSIP Coaching Guidance and Coaching Practice Profile) and capacity building supports (Multi-Tiered Linked Teaming Structure and Continuous Improvement) expand the regional and local infrastructure capacity to implement usable SSIP EBPs?

2. What was the impact of the implementation of the training (SSIP Training Service Delivery Plan and Training Framework), coaching (SSIP Coaching Guidance and Coaching Practice Profile), and capacity building supports (Multi-Tiered Linked Teaming Structure and Continuous Improvement) on teacher's ability to implement usable SSIP EBPs with high fidelity and thereby influence the outcomes of students with disabilities?

The SSIP's project measures were designed to help assess the quality and impact of implementation as well as the progress made on the implementation plan. As such, the measures can be broadly divided into two categories:

1. Measures whose targets include completion of a critical implementation milestone, and
2. Measures whose targets include a specific quality goal that is expected to be accomplished by a specific group of shareholders in a specific time frame.

Each project measure specifies the timeline for achieving the change and a quantifiable growth measure in behavior or knowledge of a specific target audience. The following chart shows the types of changes expected to be observed by various stakeholders involved in the delivery of SSIP activities. The timelines of change and percent of change for each measure has been determined in collaboration with SMT and SDT members.

The project performance measures will be used as a part of the continuous program improvement process. Rather than reporting and discussing these measures once a year, the evaluators will

report on these in quarterly progress meetings to the SDT. This will help program staff and stakeholders to identify and provide specific supports that will help achieve the SiMR.

SSIP Project Measures

Project Measures
100% of implementation teams complete initial capacity assessment and the initial capacity readiness action plan before their respective teachers are trained in their chosen SSIP EBP.
The SEA will engage internal and external stakeholders with 80% adherence to the *SMT Communication Plan*.
Each year, 100% of implementation team members demonstrate that mini-training sessions had a moderate to large impact on their knowledge of AIFs.
By FFY 2015, KDE SSIP Menu of Usable Mathematics EBPs developed.
100% of Usable EBPs selected by a SSIP TZ district are from the KDE SSIP Menu of Usable Mathematics EBPs or have been successfully vetted by the SDT (modified as needed to include a clear description, clear essential functions, operational definitions and practical performance assessment).
100% of Usable EBPs selected by a SSIP TZ district have a written Practice Profile that according to the SDT is teachable, learnable and doable.
100% of districts have a written coaching implementation plan that, according to the SDT, encompasses the *SSIP Coaching Practice Profile* and *Coaching Guidance* with fidelity.
100% of districts have a written training implementation plan that, according to the SDT, encompasses the *SSIP Training Service Delivery Plan* and *Training Framework* with fidelity.
100% of all SSIP EBP training sessions for teachers are trained with high fidelity.
100% of all SSIP EBP trainers train teachers with high fidelity to the *SSIP Training Framework.*
By FFY 2018, the list of SDT-endorsed SSIP EBP trainers has increased by 3.
Each year, 80% of OTISS team members report the training and support they received had a moderate to large impact on their knowledge of "look-fors" for the SSIP EBP Practice Profile (an average of 3 and above on a 4-point Likert scale).
Each year, 80% of OTISS team members report the training and support they received had a moderate to large impact on their skills to identify teacher fidelity for the SSIP EBP Practice Profile (an average of 3 and above on a 4-point Likert scale).
Each year, 100% of district OTISS observer teams reach and maintain inter-rater reliability [Certified by SISEP].

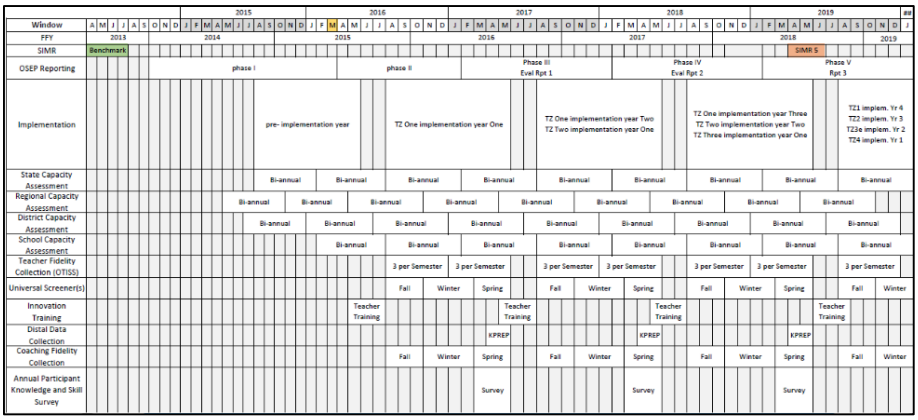
Each year, 80% of Data team members report the training and support they received had a moderate to large impact on their knowledge to assist SSIP implementation teams to collect high quality data and analyze their data appropriately (an average of 3 and above on a 4-point Likert scale).
Each year, 80% of Data team members report the training and support they received had a moderate to large impact on their skills to assist SSIP implementation teams to collect high quality data and analyze their data appropriately (an average of 3 and above on a 4-point Likert scale).
Each year, 70% of TZ implementation teams meet data collection protocols with fidelity.
Each year, 70% of TZ teachers report the training and support they received had a moderate to large impact on their knowledge of the SSIP EBP (an average of 3 and above on a 4-point Likert scale).
Each year, 70% of TZ teachers report the training and support they received had a moderate to large impact on their skills to use the SSIP EBP in their instruction (an average of 3 and above on a 4-point Likert scale).
Each year, 80% of TZ coaches report the training and support they received had a moderate to large impact on their knowledge of the SSIP EBP Practice Profile (an average of 3 and above on a 4-point Likert scale).
Each year, 80% of TZ coaches report the training and support they received had a moderate to large impact on their skills to coach the SSIP EBP practices (an average of 3 and above on a 4-point Likert scale).
Each year, 80% of TZ coaches report the training and support they received had a moderate to large impact on their knowledge of the Coaching Practice Profile (an average of 3 and above on a 4-point Likert scale).
Each year, 80% of TZ coaches report the training and support they received had a moderate to large impact on their skills in adherence to the Coaching Practice Profile (an average of 3 and above on a 4-point Likert scale).
Each year, 80% of Kentucky (Regional) Educational Cooperative Implementation Team members report that the KDE Implementation Team provided high quality supports to increase their implementation capacity.
Each year, 80% of District Implementation Team members report that their Kentucky (Regional) Educational Cooperative Implementation Team provided high quality supports to increase their implementation capacity.
Each year, 80% of School Implementation Team members report that the District Implementation Team provided high quality supports to increase their implementation capacity.

Each year, 80% of TZ teachers increase their level of implementation and consistency of SSIP EBP instruction between their annual baseline and year-end fidelity observations.
Each year, 80% of implementation teams (state, regional, district, and school) within the TZ(s) increase their capacity to implement SSIP Usable EBPs (including AIFs).
By FFY 2015, the KDE has completed the SISEP-recommended milestones for the installation of additional TZs.
By FFY 2018, 60% of teachers with two or more years of implementation instruct the SSIP EBP with high fidelity and consistency.
Each year, 100% of Kentucky (Regional) Educational Cooperative(s) write and submit their annual RSIP to KDE demonstrating how they will increase district capacity to implement evidence-based instructional practices.

Data Collection Timeline

The State Implementation Team will oversee the SSIP Data team's efforts to collect implementation data (related to both process and intervention) at regular intervals that is applicable to the SiMR and is valid and reliable. The Data team will provide oversight and technical assistance to each of the implementation teams at every tier of the TZ multi-team linked infrastructure. The Data team will write the SSIP Data Collection Guidelines in the summer of 2016 and will involve a joint effort between the KDE, the external evaluator and SISEP. The KDE will help in data extraction and provide the de-identified data to the evaluators for longitudinal analysis. The external evaluation team will assist the Data team in the creation of fidelity databases that supplement those already in place. The SDT and SMT will also enlist the help of the IDEA Data Center to ensure that collected data is valid, reliable and useful for the State's evaluation of the SSIP and SiMR. A timeline of the collection of primary data sources is provided in the following table; a comprehensive timeline is provided as an attachment.

Data Collection Timeline



Implementation Milestones

As the KDE analyzed its infrastructure to support improvement and build capacity at the local level in relation to its SiMR, it chose to initiate the work by forming TZs within the state. The initial focus was on a limited number of districts (within the TZ). The TZ process put forth by SISEP helped KDE influence the results for SWD, by directing its focus on a small number of school districts. According to SISEP and the National Implementation Research Network (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.)."

By establishing district TZs (Zone 1) in three regional cooperatives, SSIP EBPs will be systematically delivered in a controlled setting. Training on evidence-based practices in math and implementation science, as well as technical assistance and coaching from the Kentucky (Regional) Educational Cooperatives will help TZ districts to implement and scale with high fidelity. Once the practices are successfully implemented in the TZ1 districts, they will be systematically "scaled-up" across all districts within the TZ region, ensuring that Kentucky's SSIP will have statewide impact. This phased roll-out builds a local education infrastructure that is able to effectively ensure the implementation of evidence-based practices, even in light of personnel and administrative changes.

Furthermore, TZs allow participants to identify areas for growth prior to implementing evidence-based instructional practices across the state. While KDE has elected to focus on a subset of Kentucky (Regional) Educational Cooperatives and districts for the first TZ in relation to the SiMR, the State Implementation Team plans to add an additional TZ annually, if it has the capacity to do. The decision will be made by the SMT as it monitors the completion of SISEP's recommended scale-up capacity milestones. The following figures represent the KDE's desired "best-case scenario" for the expansion of TZs and the population estimates for those receiving SSIP EBPs.

Forecast of LEAs receiving SSIP EBPs

SSIP Forecast: Best Case Scenario Number of Districts				
TZ: Region	**Academic Year**			
	2016-17	**2017-18**	**2018-19**	**2019-20**
TZ1: OVEC	2	0 (2)	0 (2)	0 (2)
TZ1: SESC	2	1 (3)	0(3)	0(3)
TZ1: JCPS	1	0 (1)	0 (1)	0 (1)
TZ 2: 4th region	-	2	1(3)	0(3)
TZ 2: 5th region	-	2	1(3)	0(3)

TZ 3: 6th region	-	-	2	1(3)
TZ 3:7th region	-	-	2	1(3)
TZ 4: 8th region	-	-	-	2
TZ 4: 9th region	-	-	-	2
TOTAL	5	10	14	18

Forecast of Schools receiving SSIP EBPs

SSIP Forecast: Best Case Scenario Number of Schools				
TZ: Region	**Academic Year**			
	2016-17	**2017-18**	**2018-19**	**2019-20**
TZ1: OVEC	4	4	4	4
TZ1: SESC	4	8	10	12
TZ1: JCPS	3	4	5	6
TZ 2: 4th region	-	4	6	6
TZ 2: 5th region	-	4	6	6
TZ 3: 6th region	-	-	4	6
TZ 3:7th region	-	-	4	6
TZ 4: 8th region	-	-	-	4
TZ 4: 9th region	-	-	-	4
TOTAL	11	24	39	54
Eighth Grades	7	14	22	30

Forecast of Teachers receiving SSIP EBPs

SSIP Forecast: Best Case Scenario				
Number of Teachers				
TZ: Region	**Academic Year**			
	2016-17	**2017-18**	**2018-19**	**2019-20**
TZ1: OVEC	30	30	30	30
TZ1: SESC	30	60	75	90
TZ1: JCPS	36	48	60	72
TZ 2: 4th region	-	30	45	45
TZ 2: 5th region	-	30	45	45
TZ 3: 6th region	-	-	30	45
TZ 3:7th region	-	-	30	45
TZ 4: 8th region	-	-	-	30
TZ 4: 9th region	-	-	-	30
TOTAL	96	198	315	432

Forecast of Students receiving SSIP EBPs grades 4-8

SSIP Forecast: Best Case Scenario								
Number of Students								
TZ: Region	Academic Year							
	2016-17		2017-18		2018-19		2019-20	
	All	IEP (non-alt)	All	IEP (non-alt)	All	IEP (non-alt)	All	IEP (non-alt)
TZ1: OVEC	1,108	116	1,108	116	1,108	116	1,108	116
TZ1: SESC	1,108	116	2,216	232	2,770	290	3,324	348
TZ1: JCPS	3,102	252	4,136	336	5,170	420	6,204	504
TZ 2: 4th region	-	-	1,108	116	1,662	174	1,662	174
TZ 2: 5th region	-	-	1,108	116	1,662	174	1,662	174
TZ 3: 6th region	-	-	-	-	1,108	116	1,662	174
TZ 3:7th region	-	-	-	-	1,108	116	1,662	174
TZ 4: 8th region	-	-	-	-	-	-	1,108	116
TZ 4: 9th region	-	-	-	-	-	-	1,108	116
TOTAL	5,318	484	9,676	916	14,588	1,406	19,500	1,896
Percent of SEA	3.5%	3.2%	6.5%	6.1%	9.7%	9.4%	13.0%	12.6%

Summary of Phase I Changes

Updated Targets

The KDE continues to strive to improve its accountability system. In making those improvements, new proficiency targets were set in the spring of 2015. Because the goals of the SiMR include 8th grade SWD who take the regular statewide assessment with or without accommodations, proficiency targets for the SiMR were revised by the Evaluation team in Phase II to reflect this population. The proficiency targets below continue to align with KDE's broader accountability model.

Baseline: 2013	2014	2015	2016	2017	2018
14.0%	22.2%	30.9%	39.5%	48.2%	56.8%

Description of Measure

Aligned to Indicator 3C (Proficiency for students with IEPs), Grade 8:

Proficiency rate percent = ([(# of 8th Grade students with IEPs scoring at or above proficient against grade level) divided by the (total # of children with IEPs who received a valid score and for whom a proficiency level was assigned and calculated separately for math)]. The proficiency rate includes both children with IEPs enrolled for a full academic year and those not enrolled for a full academic year.

Updated Theory of Action

The theory of action language was revised to better illustrate the logical progression to meet the goals of the SiMR. Only the language has changed - the intent of the theory of action remains the same.

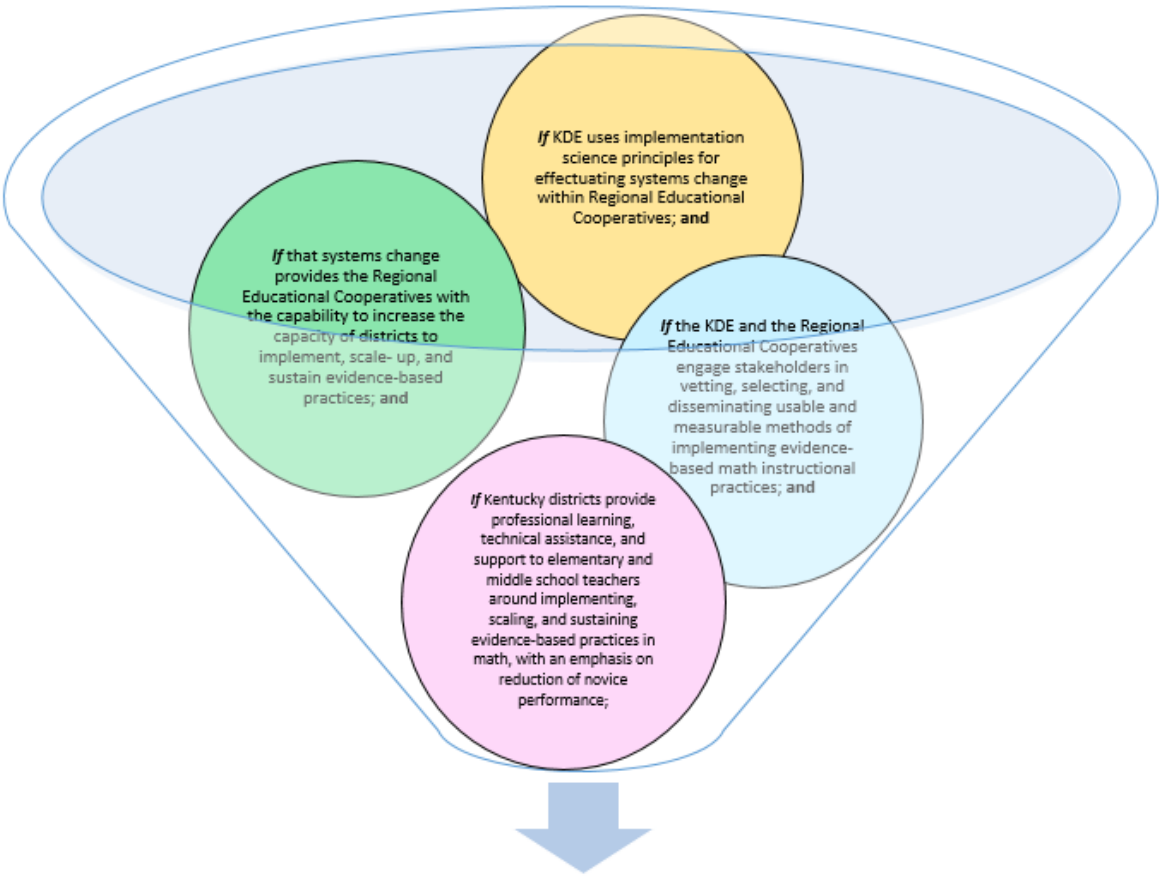
If KDE uses implementation science principles for effectuating systems change within Regional Educational Cooperatives; and,

If that systems change provides the Regional Educational Cooperatives with the capability to increase the capacity of districts to implement, scale-up and sustain evidence-based practices; and,

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

If Kentucky districts provide professional learning, technical assistance and support to elementary and middle school teachers around implementing, scaling and sustaining evidence-based practices in math, with an emphasis on reduction of novice performance;

Then the percentage of students with disabilities performing at or above proficient in middle school math, specifically at the 8th grade level, will increase.



Then the percentage of students with disabilities performing at or above proficient in middle school math, specifically at the 8th grade level, will increase.