# The Kentucky Department of Education

# State Systemic Improvement Plan (SSIP)

# Phase III:4

# April 1, 2020

## ***Executive Summary***

Each year, the Kentucky Department of Education (KDE) submits an update to the U.S. Department of Education's Office of Special Education Programs (OSEP) on its State Systemic Improvement Plan (SSIP) to improve educational outcomes for students with disabilities (SWDs). Below is a description of each phase.

**Phase I**

The KDE conducted a data and infrastructure analysis to determine a focus, or State Identified Measurable Result (SiMR), for improving educational outcomes for SWDs. The KDE's SiMR is: *To increase the percentage of students with disabilities performing at or above proficient in middle school math, specifically at the 8th grade level, with emphasis on reducing novice performance, by providing professional learning, technical assistance and support to elementary and middle school teachers around implementing, scaling and sustaining evidence-based practices in math.*

**Phase II**

The KDE designed a plan to meet the goals of the SiMR. The plan focuses on building the capacity of each level of the education system (state, regions, districts) on the use of implementation science principles to create a system of support for teachers on evidence-based practices (EBPs) in mathematics. Implementation teams are formed within a Transformation Zone (TZ), a representative slice of the system, to learn about effective implementation. The processes learned through the TZ will be replicated to additional regions, districts, and schools within the state.

**Phase III**

The KDE built the capacity of Regional Educational Cooperatives to support districts on developing an effective implementation infrastructure. TZ districts installed training and coaching systems to support teachers. Each district explored with schools and developed Building Implementation Teams (BITs).

**Phase III:2**

The first set of TZ districts moved into Initial Implementation. Teams at each level of the system use implementation data (training, coaching, fidelity, capacity, student benchmark) to engage in continuous improvement cycles and action plans to strengthen the system of support for teachers to effectively implement EBPs in mathematics.

**Phase III:3**

The KDE continued to build the capacity of Regional Educational Cooperatives. A second cohort of regions were mutually selected to participate in the TZ. The new cohort is replicating the work of the first cohort regions by installing training, coaching, and data systems to support new districts and scale sustainable effective practices to address the SiMR.

## ***A. Summary of Phase III, Year 4 (Phase III:4)***

Throughout each phase of the State Systemic Improvement Plan (SSIP), the Theory of Action has remained a central focus to meet the State Identified Measurable Result (SiMR) for the Kentucky Department of Education (KDE).

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

During Phase III:4, the KDE continued to build the capacity of Regional Educational Cooperatives to support districts. A third cohort region was mutually selected and is receiving training and coaching from the State Transformation Specialist (STS) and the State Implementation and Scaling-up of Evidence-based Practices (SISEP) Center. Through the learning from each subsequent regional cohort, the process of applying implementation science principles continues to progress more efficiently.

### *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,*

The Regional Educational Cooperatives continue to train and coach districts to effectively use implementation science principles to support teachers and meet the goal of the SiMR. The first and second cohort of regions engage in Exploration activities to mutually select and scale to additional districts. The third cohort region is continuing to receive support from SISEP and the STS on district selection and will engage in Exploration with districts.

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

As described in Phase II (p. 11), the Instructional Practices and Academic Content (IPAC) team made up of stakeholders from across the state was formed to identify a quality standard for mathematics. This team determined a process for selecting a Usable Innovation and developed a Practice Profile to clearly define and operationalize evidence-based practices (EBPs) for mathematics instruction. Feedback received from regions, districts, and schools indicated the need for a fidelity measure specific to mathematics. As a result, the

IPAC team was repurposed to develop the Kentucky Mathematics Innovation Tool (KMIT). During Phase III:4, the team continued to usability test the tool and developed training materials to build the capacity of districts to conduct fidelity walkthroughs. Five districts have been trained and are currently using the KMIT. Teams at all levels of the system are using the data to inform the system of support for teachers to effectively implement the EBPs identified within the KMIT and mathematics Practice Profile.

***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;***

As a result of scale-up during Phase III:4, districts and buildings are at various stages of implementation. They use data to make informed decisions on developing and refining their infrastructure to support the effective use of EBPs to impact the SiMR.

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

During Phase III:4, the full Theory of Action remains in place. Although there is progress towards the SiMR in mathematics within the Transformation Zone (TZ), there continues to be limited impact on the statewide SiMR targets.

State Identified Measurable Result (SiMR):

*"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."*

Stakeholder Input on SiMR

The KDE's Office of Special Education and Early Learning (OSEEL) sought statewide feedback on the SiMR targets through Beginning of the Year trainings. These sessions take place annually in each of the nine regions across the state. One of the featured topics during the fall 2019 training was the State Performance Plan and Annual Performance Report (SPP/APR). Data from each of the 17 indicators was shared. Focused monitoring data was also presented that included discipline practices and data entry. Participants commented that challenging behaviors are increasing, leading to students with disabilities (SWDs) being removed from the classroom. This results in missed instructional time, thus making it difficult for SWDs to be successful academically. Based on this discussion, when the OSEEL requested feedback on the State Systemic Improvement Plan (Indicator 17), regional and district stakeholders indicated the

SiMR should be changed to reflect a focus on behavior and improving discipline practices. The KDE considered this stakeholder input when reviewing the minimal progress towards the mathematics SiMR targets. A root cause analysis was conducted and identified the lack of fidelity in implementing Positive Behavioral Interventions and Supports (PBIS) was leading to student removals from instruction.

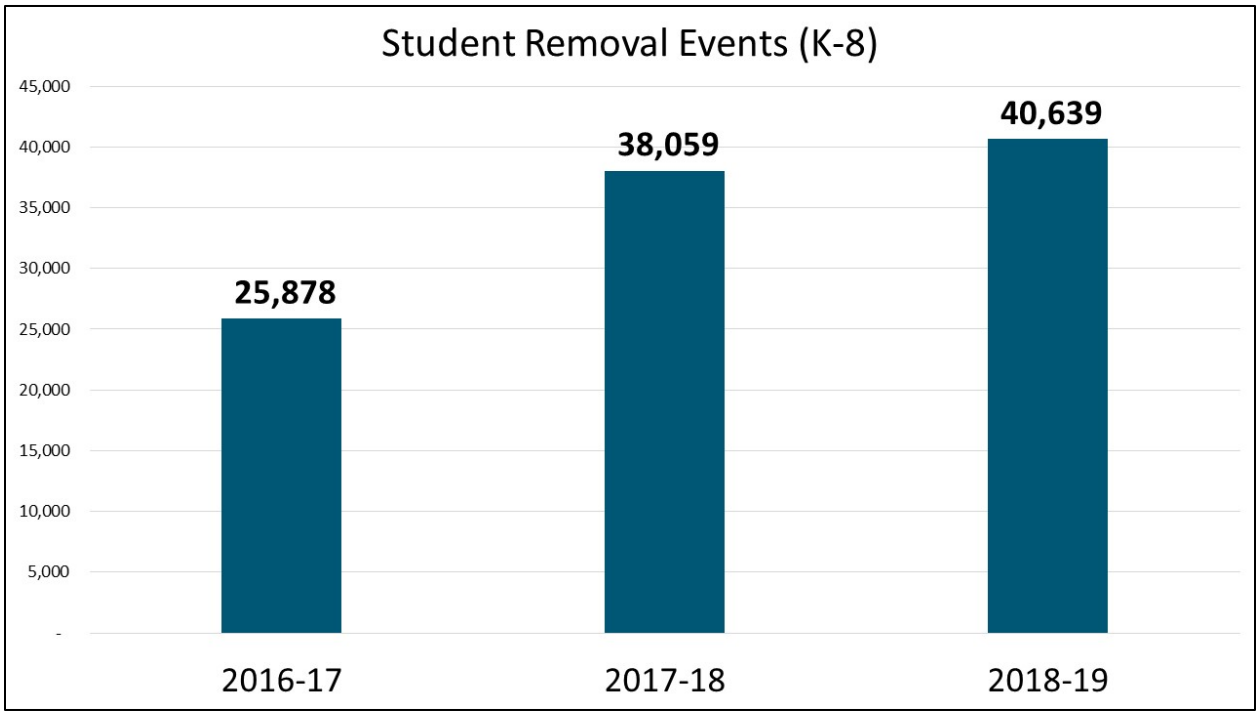
Data Analysis

Due to the data and root cause analysis conducted with regional and district stakeholders at the Beginning of the Year trainings, the KDE convened additional team members to review discipline and behavior data more in-depth. Members included:

- KDE
    - IDEA Part B Data Manager
    - Associate Commissioner, OSEEL
    - Director, Division of IDEA Monitoring and Results
    - Director, Division of IDEA Implementation and Preschool
    - Asst. Director, Division of IDEA Implementation and Preschool
    - Preschool Consultant
    - SSIP State Transformation Specialist
    - Policy Advisor, OSEEL
    - Family Engagement Consultant
    - Branch Manager, IDEA Guidance and Support
- University of Kentucky, Human Development Institute (HDI)
    - Evaluator
    - Project Director
    - Disability Administrator

The team reviewed behavior data from the Safe Schools report, the student information system (Infinite Campus), and results from IDEA monitoring. Through this process, it was discovered that behavior removals for SWDs have been rising persistently for Kindergarten through 8th grade students (see Figure 1).

*Figure 1. Removal events for SWDs grades K-8*




More importantly, districts where less than ⅕ of SWDs (K-8) had behavior events during the school year were 5.3 times more likely to have a mathematics proficiency rate for SWDs that was more than double the state average [2017-18]. This data demonstrates the relationship between behavioral events and mathematics outcomes.

Through the IDEA monitoring process, multiple districts are being cited for not properly entering behavior data (physical restraints, seclusions, removals). The SSIP will support the KDE's ongoing efforts to remove barriers that may have led to past underreporting of discipline data by districts. Despite this, physical restraint and seclusion data clearly show districts and schools need additional support to implement EBPs as a replacement for physical restraint. In the 2017-2018 school year, SWDs K-8 were 10.7 times more likely to be physically restrained than their non-disabled peers. In addition, many of the physical restraints are occurring in elementary grades, meaning that early intervention in preschool is needed.

Infrastructure Analysis

After reviewing behavior data, SWDs are being removed and physically restrained at a greater rate than their non-disabled peers. This shows that districts and schools need additional support on effectively implementing PBIS. Therefore, the team described on page 4 conducted an infrastructure analysis to determine current PBIS resources available to districts and schools across the state.

One resource identified to support the need for early intervention included the network of Early Childhood Regional Training Centers (RTCs). These five centers are located across the state and provide training and coaching to district state-funded preschool sites.

To begin leveraging the RTCs infrastructure, the KDE replicated the capacity building practices used in Phase I and II of the SSIP. Regional teams engaged in learning the Active Implementation Frameworks through the State Personnel Development Grant's (SPDG) Link to Kindergarten (Link2K) project. The Link2K provides district support focused on bridging K-12 PBIS to preschool. This will allow students the opportunity to make a seamless transition to Kindergarten and continue receiving effective behavioral interventions. Through this project, each RTC hired a behavior coach to expand capacity. The coaches and RTC staff have been receiving extensive training and coaching on the Active Implementation Frameworks. Additionally, they participate in monthly training on the Pyramid Model from the Pyramid Model Consortium. The Pyramid Model, also known as Early Childhood Program-Wide PBIS, is a framework of EBPs for supporting the emotional, behavioral, and learning needs of students with persistent needs prior to Kindergarten. The RTCs will follow the Active Implementation processes but will apply effective implementation through the Pyramid Model.

In addition to supporting preschool implementation of PBIS, Kentucky's SPDG focuses on building the capacity of districts to use PBIS effectively for K-12 through Project Link Teaming. The components of Active Implementation are used to develop District Implementation Teams, measure capacity to implement PBIS, and analyze data to improve the system of support for teachers. In addition to the projects funded by Kentucky's SPDG, there are multiple entities across the state that provide support on PBIS implementation. Below is a list, along with a description of their focus:

*Table 1. List of PBIS support providers in Kentucky*

| Resource | Description |
|---|---|
| Special Education Regional Education Cooperatives | Funded by the KDE to support districts and schools on improving educational outcomes for students with disabilities. Each cooperative has a behavior consultant trained on PBIS. |
| Kentucky Academic Behavioral Response to Intervention (ABRI) | A center funded by the KDE to provide support to districts and schools on the effective implementation of PBIS. They offer a tiered support model (universal, targeted, and intensive). |

| Resource | Description |
|---|---|
| Project AWARE (Advancing Wellness and Resiliency in Education) | A grant awarded to Kentucky funded by Substance Abuse and Mental Health Services Administration (SAMSHA) to increase awareness of mental health issues among school-aged youth, to train school personnel to detect and respond to mental health issues, and connect school-aged youth and their families to services. |
| School Climate Transformation Grant (SCT) | Funded by the Department of Education to provide support to districts to develop, enhance, or expand systems of support for schools implementing an evidence-based behavioral framework for improving a school's climate. |

As a result of the infrastructure analysis, there are a variety of resources across Kentucky to support PBIS implementation. The KDE will leverage these entities to scale-up PBIS for students with disabilities across the state.

Theory of Action and SiMR:

Based on the data and infrastructure analysis conducted with a variety of stakeholders, the KDE determined the SiMR should be revised to provide support to districts on PBIS. Below is the proposed Theory of Action and SiMR change:

***If the KDE leverages the infrastructure and systems of support established through the use of Active Implementation; and,***

The KDE will repurpose the linked teaming structure (state, regions, districts, and schools), decision support data system, and communication protocols established for mathematics to support the effective implementation of PBIS.

***If the KDE continues inclusive capacity building with Regional Education Agencies (REAs), Local Education Agencies (LEAs), Schools, and community partners; and,***

The KDE will leverage the capacity built in the regions, districts, schools, and community partners to scale-up and expand PBIS. The capacity assessments from the SISEP Center will be used at each level of the education system to inform the infrastructure needed to effectively implement PBIS and sustain its use.

***If the REAs, LEAs, schools' implementation of Positive Behavioral Interventions and Supports (PBIS) increases towards sustained fidelity through delivering effective evidence-based professional development, ongoing coaching, teams, data systems, and communication systems;***

The data and infrastructure analysis revealed the need to focus on PBIS implementation. There are a variety of resources for professional development across the state to leverage. In addition, the training and coaching tools, Data Dashboard, and communication protocols used for mathematics can be repurposed and applied to PBIS. Teams at each level of the system will use data to inform decisions and lift up barriers to the appropriate level that can solve them.

***Then the KDE will decrease the annual number of removals and/or physical restraints involving students with disabilities at the elementary and middle school levels.***

By repurposing and scaling the infrastructure established through mathematics, the KDE will reduce the number of removals and physical restraints for SWDs in elementary and middle school. Supports will be provided starting at preschool to promote early intervention. These structures will increase the amount of time students are in the classroom to receive instruction.

SIMR: *Decrease the annual number of removals and/or physical restraints involving students with disabilities at the elementary and middle school levels by providing educators a system of support, professional learning and technical assistance in the implementation of Positive Behavioral Interventions and Supports (PBIS) for students in preschool through eighth grade.*

## ***B. Progress in Implementing the SSIP***

The Kentucky Department of Education (KDE) develops milestones for each phase of the State Systemic Improvement Plan (SSIP) to drive change and support the goals of the State Identified Measurable Result (SiMR). Stakeholders were petitioned for feedback and informed of new developments. Each milestone has been completed or is on track to meet the designated completion date. However, there were some minor updates on the date of completion and tools. Listed below are the updated milestones, with changes indicated in red:

**Milestones for Mathematics SiMR**

Scale-up to Additional Regions, Districts, and Schools

- Transformation Zone (TZ) Cohort 1 Regions (n = 2)
    - **Fall 2019—**Selection of innovation in the second cohort of districts
    - **Fall 2019**—Selection of schools within second cohort of districts
        - Two schools mutually selected
    - **Winter 2019—**Installation of training and coaching in the first and second cohort of districts

    - **Winter 2019**—Select third and fourth cohort of districts
        - Two districts mutually selected
    - **Winter 2019**—Selection of innovation with third cohort district
- TZ Cohort 2 Regions (n = 3)
    - **Fall 2019—**Exploration and selection of districts
        - One district mutually selected
    - **Fall 2019 (Spring 2020)**—Selection of innovation with first cohort districts
    - **Winter 2019 (Spring 2020)**—Installation of training and coaching for first cohort of districts
- TZ Cohort 3 Regions (n = 1)
    - **Fall 2018 (Fall 2019)**—Begin Exploration with TZ Cohort 3 regions
        - One region mutually selected to participate as a TZ
    - **Winter 2019/2020** — Train and coach TZ Cohort 3 region
    - **Winter 2020**—Selection of first cohort of districts for initial exploration

Communication Activities

- **Fall 2018 (anticipated Spring 2020)**—The State Management Team (SMT) will usability test and refine communication plan

Build Capacity on Active Implementation within the KDE

- **Fall 2019—**Hired new State Transformation Specialist (STS) to support SSIP
    - Provided training to new STS on the Active Implementation Frameworks
- **Fall 2019—**Trained three additional staff on Active Implementation (AI) to support State Personnel Development Grant (SPDG)

Decision-Support Data Systems

- **August 2018 (October 2019)**—New TZ Regions, Districts, and Schools:
    - Trained on the use of the tools and dashboard
    - Trained on the *Observation Tool for Instructional Supports and Systems* (OTISS)
        - All new schools within TZ Cohort 1 districts (accomplished)
        - All new districts in TZ Cohort 1 (Fall 2019)
    - Following data matrix and using implementation data collection tools
- **Fall 2019**—Established Usability Testing Teams for Implementation Data Analysis Practice Profile and Coaching Tools
    - Usability testing tools throughout 2019-2020 school year
- **Spring 2019**—Establish analysis cycle of Usable Innovation implementation impact on student outcomes:
    - Baseline for scale-up in TZ Cohort 2 schools (2018-19 academic year)
    - Proximal for TZ schools in TZ Cohort 1 (3 times per year)
    - Summative for TZ schools in TZ Cohort 1 (Fall 2018)

- **Summer 2019—**Developed training materials to build the capacity of districts to conduct Kentucky Mathematics Innovation Tool (KMIT) walkthroughs
- **Fall 2019—**Usability Test KMIT in practice with districts
    - Five districts received training on the KMIT and completed Inter-Observer Agreement (IOA)
    - Districts collect data in the dashboard
        - Feedback on KMIT is fed up the linked teaming structure
- **Winter 2020**—Explored options for automated Data Dashboard

State Personnel Development Grant (SPDG)

- **Spring 2018-Spring 2019 (Ongoing)**—Align the SSIP processes with the SPDG
    - STSs and SMT members continue to participate on SPDG Leadership Team and provide trials and learnings from the SSIP to support processes within the SPDG
    - SPDG Coordinator received training on the Active Implementation Frameworks and processes within the SSIP
- **Winter 2020**—STS training new SPDG Coordinator on the Active Implementation Frameworks and processes with the SSIP
    - STS & SPDG Coordinator work together to align SSIP and SPDG processes

**Milestones for Behavior SiMR**

Below are the milestones for behavior that were completed during Phase III:4:

- **Fall 2019—**Conducted Beginning of the Year trainings for regional and district Directors of Special Education
    - Requested feedback on Indicator 17 and the SiMR
    - Conducted data and root cause analysis
        - Fidelity of Positive Behavioral Interventions and Supports (PBIS) leading to student removals was identified as a root cause for not obtaining mathematics SiMR
- **Winter 2019/2020**—Met with stakeholder team to conduct in-depth data and infrastructure analysis for behavior/discipline
    - PBIS was selected as evidence-based practice (EBP)
- **Winter 2020—**Met with Kentucky Academic and Behavior Response to Intervention (ABRI) to request feedback on fidelity measures for the implementation of PBIS
- **Winter 2020—**Met with Regional Education Cooperatives to request feedback on a potential SiMR change and fidelity measures for PBIS implementation
- **Winter 2020**—Drafted proposed SiMR and targets addressing removals and physical restraints with stakeholder team (p. 4)
    - Project Measures, Logic Model, and Timeline were developed to impact proposed SiMR

Future milestones are available on page 61.

Future Evaluation Activities

For consistency of year-to-year analysis, the evaluation plan was not changed during Phase III:4. The usability testing of an additional measure of teacher fidelity, KMIT, more aligned with the Math Practice Profile was completed. Training and coaching of the KMIT is ongoing.

The KDE's evaluation plan for behavior activities was constructed under the parameters established for mathematics (see Phase II, p. 19) and the current SPDG funded by the Office of Special Education Programs (OSEP). Both evaluation plans were created using a collaborative participatory approach. The SSIP will continue to be evaluated by The Evaluation Unit of the University of Kentucky's Human Development Institute (HDI). The SSIP behavior activities have an evaluation plan that is aligned to the updated OSEP Part B Measurement Table for Indicator 17 and the KDE's SSIP Theory of Action for PBIS. The evaluation plan is aligned with the elements of formative, process and summative outcome evaluations.

**Implementation Progress**

State Infrastructure Changes

*State Management Team (SMT)*

The SMT meets monthly to support the use of the Active Implementation Frameworks for the state, regions, districts, and schools. The team consists of executive leaders that can remove implementation barriers for each level of the system.

With the proposed changes to the SiMR, the SMT will adjust its focus to the implementation of PBIS. The established communication plan will be revisited to determine changes for the new SiMR. Through this process, the SMT will review membership on the State Design Team (SDT) to determine if additional members are needed.

*EBP Selection Intra-Agency Team*

Beginning in Phase III:3, an intra-agency team was formed with members from the KDE's Office of Special Education and Early Learning (OSEEL) and the Office of Continuous Improvement and Support (OCIS). The OCIS provides technical assistance to districts identified as Targeted or Comprehensive Support and Improvement. The purpose of the team was to align the EBP selection processes from the SSIP and Every Student Succeeds Act (ESSA). Through this collaborative effort, the team revised the Hexagon Tool in partnership with the National Implementation Research Network (NIRN) to reflect the ESSA evidence levels. The tool was shared during OCSI district trainings as a resource for EBP selection.

*Usability Testing Teams*

Teams were established to complete usability testing on the Data Analysis Practice Profile and coaching tools (Coaching Practice Profile and log). Team membership consists of stakeholders from each TZ region with expertise in Active Implementation, data analysis, and coaching. The teams continue to meet monthly to identify users to test the tools and provide feedback. Using the results, the team engages in Plan, Do, Study, Act Cycles to improve usability. The process is documented and will be used to inform the development of future tools to support the implementation of PBIS.

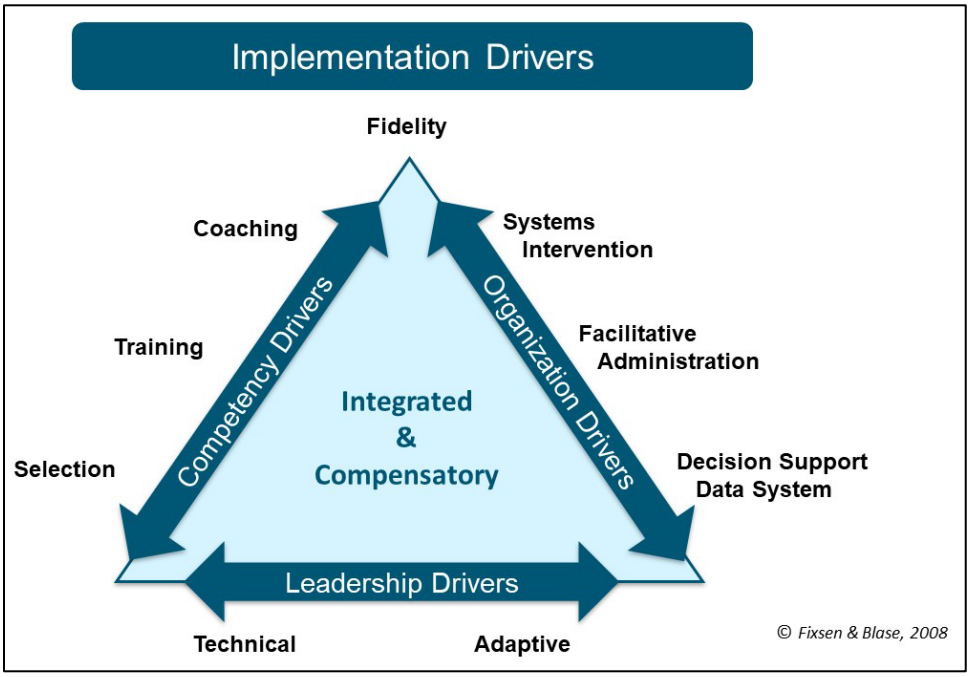
Transformation Zone Changes

The KDE will expand upon the learning from mathematics and leverage the current infrastructure to support PBIS implementation. This includes scaling to all nine Regional Educational Cooperatives at once, utilizing the infrastructure from the SPDG, and aligning with other entities that support PBIS across the state. Because there are a variety of resources available, a tiered model of support to districts will be established for PBIS (universal, targeted, intensive). All districts will receive universal support. Regions will continue to engage in a mutual selection process with districts whose data indicate a need for targeted or intensive support. This multi-tiered Transformation Zone approach will promote statewide engagement in working toward achieving the goals of the proposed SiMR.

Continued Focus on Scale-up and the Implementation Drivers

With each component of the Theory of Action in place, the KDE has been focusing on scale-up and sustainability. Phase III:4 included the addition of districts and schools within each TZ Cohort (1 & 2). As a result, each level of the system (state, region, district, school) are in various stages of putting the Implementation Drivers in place (see Figure 2).

*Figure 2. Implementation Drivers*




## Cohort 1 Regions

The Regional Education Cooperatives continue to meet with TZ Cohort 1 districts monthly to support the use of implementation data (training, coaching, capacity, fidelity) to make informed decisions to support teachers and remove barriers. As districts engage in Initial Implementation, they are scaling to additional schools. Building Implementation Teams (BITs) have formed and are replicating the process established at the District Implementation Team (DIT). The teams engage in Plan-Do-Study-Act (PDSA) cycles using implementation data.

As the TZ Cohort 1 regions scale-up, new districts are receiving support to install training and coaching systems for their selected EBPs. These new districts are also engaging schools in mutual selection and some have formed BITs.

## Cohort 2 Regions

The second cohort of regions has three districts engaging in Installation and Initial Implementation. Scale-up has occurred and fourteen new schools have been added to the TZ. Regions and districts have supported the development of BITs that engage in PDSA cycles using implementation data to make informed decisions.

An additional district mutually agreed to participate in the TZ. They are receiving training and coaching on the Active Implementation Frameworks and are working towards the selection of an EBP.

### Cohort 3 Regions

Exploration with a third cohort of regions occurred in Phase III:4. One region was mutually selected to participate in the TZ. They have developed selection criteria for districts and will engage in Exploration with several districts.

### Training

Regions, districts, and schools within the TZ continue to receive training on the Active Implementation Frameworks. Survey and capacity data are used to continuously improve training content to meet the needs of participants.

In addition, DITs are receiving follow-up training on the EBPs within the mathematics Practice Profile. The Instructional Practices and Academic Content (IPAC) team determined that additional training for DITs on the EBPs would support accurate data collection within the KMIT. Districts reported the training has increased their knowledge on identifying the EBPs in the classroom.

To support the proposed SiMR for PBIS, Kentucky's five Early Childhood Regional Training Centers (RTCs) have been receiving monthly training on the Active Implementation Frameworks. Trials and learnings from the mathematics SSIP are embedded within each training to inform the effective implementation of PBIS.

In addition, the RTC behavior coaches hired to support the LINK to Kindergarten (Link2K) initiative for the SPDG are receiving training on the Pyramid Model through the Pyramid Model Consortium. This will promote alignment of PBIS implementation from preschool through eighth grade, thus impacting the proposed SiMR.

### Coaching

The state, regions, districts, and schools continue to use data to inform follow-up coaching supports. Although there has been a slight decline in each of the coaching survey results, participants are in agreement overall that coaching has been impactful (p. 47). The results of the survey are used to inform follow-up training and supports for coaches at each level of the system.

To enhance the quality of data available to support coaches and teachers, a Usability Testing Team was formed to continue refining the Coaching Practice Profile and Coaching Log based on stakeholder feedback (p.12). This process will strengthen the tools and support the accuracy of data.

To support the effective implementation of PBIS, the RTCs participate in monthly trainings on Active Implementation. Through these sessions, the behavior coaches receive coaching through

modeling and behavior rehearsals. There is also a weekly Professional Learning Community (PLC) for them to receive additional support on the Pyramid Model, Active Implementation, and the effective practices within the Coaching Practice Profile.

**Fidelity**

As described in Phase III:3, the KDE received feedback from districts to develop a walkthrough designed specifically for mathematics. Members from the IPAC team were repurposed to create the instrument, named the KMIT. This past year, the team designed training materials to support DITs on the EBPs identified within the KMIT. The OTISS Inter-Observer Agreement training was adapted to build the capacity of districts to conduct fidelity walkthroughs in schools. Like the OTISS, the data from the KMIT is used with other implementation data (capacity, training, coaching, student benchmark), to assess gaps within the system to support teachers.

Beginning in Phase III:3 and through Phase III:4, three rounds of usability testing were completed to ensure validity for incorporation into the SSIP Data Dashboard. KMIT field testing is ongoing to measure validity. Initial data is included in project measure C.9 on page 37.

As the KDE transitions to the new SiMR, a representative group of stakeholders from across the state with expertise in PBIS will be formed to develop a Practice Profile. This will support the consistent implementation of PBIS across the state. In addition, districts will receive support on how to select research-validated fidelity instruments for PBIS that best fit their needs.

*Communication*

The KDE continues to strengthen communication with regions, districts, schools, and community partners on special education. This includes quarterly newsletters, bi-monthly webinars, and an annual conference for Directors of Special Education (DOSE). These mechanisms have been leveraged to support communication around the SSIP. For example, the feedback on the SiMR from the Beginning of the Year trainings was shared in the quarterly newsletter. The SSIP was also highlighted during a webinar on Results-based Accountability. Districts have reported these additional communication modes to be effective for receiving support on improving special education programming. This communication structure can be used to support PBIS implementation across the state.

*Carnegie Symposium for Continuous Improvement*

The KDE in partnership with the National Implementation Research Network (NIRN)/SISEP center was selected as a Carnegie Spotlight Honoree for Continuous Improvement in 2018. As a result of this award, the State Transformation Specialist was invited to present at the Carnegie Summit for Continuous Improvement in San Francisco (April 2019). The presentation featured how Kentucky installed an implementation infrastructure to support teachers. The audience

included stakeholders from State Education Agencies (SEAs), regions, districts, and schools from across the United States. Participants noted the effectiveness of the linked teaming structure.

*State Design Team (SDT)*

The SDT formed during Phase I of the SSIP (Phase II, p. 5) was a representative team of stakeholders from across the state who were focused on meeting the mathematics goals of the SIMR.

With the potential change to the SiMR, the State Management Team will review the current membership of the SDT to determine which stakeholders need to be added. The new SDT will reconvene in summer 2020 to review and provide feedback on the proposed SiMR, Theory of Action, and evaluation plan. In the absence of a new SDT, the statewide representative group from the Beginning of Year trainings served as stakeholders to inform the KDE on needed support for educators of students with disabilities.

**Decision Support Data Systems**

*Data Sharing System*

The SSIP Data Dashboard was developed during Phase III:2. The dashboard is used by implementation teams at all levels of the system (state, regions, districts, schools) to continuously improve the system of support for teachers. The dashboard includes student benchmark, capacity, training system, coaching system, and fidelity data. During Phase III:4, the KDE received feedback from each level of the system through the linked teaming communication protocol that it was difficult to make timely decisions using data. This is due to the dashboard requiring a manual update, making the data one week behind. The KDE reconvened the District Data Integration Team (Phase III, p. 37) to discuss this barrier. The team determined there was another option available that would allow the dashboard to update automatically and will facilitate sustainability of math implementation. Action steps were developed for converting the Data Dashboard to the new automated platform during summer 2020.

Based on trial and learnings from the Data Dashboard in mathematics, a data system supporting the new SiMR will be developed. The Data Integration Team will conduct a data inventory to determine which collection tools in the dashboard can be repurposed from mathematics and used for PBIS. The team will determine if there are gaps with data collection and coordinate with the SDT to develop additional tools if needed. Also, based on feedback received from regions, districts, and schools, the dashboard for behavior will be automated. The Data Dashboard will support effective implementation of PBIS, thus impacting the proposed SiMR for behavior.

**Stakeholder Engagement**

Below is a table describing the KDE's ongoing communication with stakeholders. The table includes the event title, stakeholder group, method of communication, frequency, information shared, and feedback received.

*Table 2. Stakeholder Communication in Phase III:4*

| Stakeholder Communication in Phase III:4 | | | | | |
|---|---|---|---|---|---|
| **Event/ Meeting Title** | **Stakeholders** | **Method of Communication** | **When/ How Often?** | **Information Shared** | **Feedback Received** |
| Carnegie Summit | Education organizations from across the United States | In-person | April 2019 | Overview of installing an infrastructure in Kentucky to improve educational outcomes for SWDs | Linked teaming structure is effective<br><br>Providing more concrete examples would support understanding of process |
| All TZ Regional Cooperative Meeting | TZ Regional Cooperatives | In-person | May 2019 (Biannual) | Discussed implementation successes and challenges<br><br>Identified problems of practice to receive support from other TZ regions | Having the opportunity to hear from other regions was beneficial to supporting districts |
| 2020 SISEP Active States Forum | STSs and implementation team members from SISEP Active States | In-person (conference) | June 2019 (Annually) | Update on implementation progress from 2018-2019 school year. Presented on the KMIT and a problem of practice | Ideas for intra-agency communication planning and implementation |

| Stakeholder Communication in Phase III:4 | | | | | |
|---|---|---|---|---|---|
| **Event/ Meeting Title** | **Stakeholders** | **Method of Communication** | **When/ How Often?** | **Information Shared** | **Feedback Received** |
| Beginning of the Year Trainings | DOSE from across the state | In-person | August thru October 2019 (Annually) | Overview of the SSIP and feedback on the SiMR | Request to refocus the SiMR on PBIS implementation based on data |
| OSEEL Newsletter | DOSE | Newsletter via email | Quarterly | Shared feedback received on SiMR from Beginning of Year trainings | Newsletter is beneficial for receiving quick updates |
| OSEEL Webinar | DOSE | Webinar | Bimonthly | Overview of Results-based Accountability, SSIP, and SPDG | Enjoy the opportunity to ask questions and provide feedback |
| SISEP Active States Community of Practice | STSs and implementation team members from SISEP Active States | Virtual | November 2019 (Quarterly) | Kentucky presented on how to use data to inform coaching | Received input on how to strengthen integration of fidelity and capacity data |
| District Data Integration Team | TZ district technology staff and data managers | In-person | January 2019 (as needed) | Discussed feedback received from regions, districts, and schools requesting an automated dashboard for collecting math implementation data | There are options for converting the SSIP Data Dashboard to an automated system. This process can be replicated to additional content areas. |

| Stakeholder Communication in Phase III:4 | | | | | |
|---|---|---|---|---|---|
| **Event/ Meeting Title** | **Stakeholders** | **Method of Communication** | **When/ How Often?** | **Information Shared** | **Feedback Received** |
| Follow-up training on EBPs within the Mathematics Practice Profile | TZ DITs<br><br>(TZ RITs facilitated) | In-person | As needed | Provided an overview of the EBPs in the mathematics Practice Profile. Provided examples of how to look for the core components in classrooms | The training supported understanding of the mathematics EBPs |
| KMIT training | TZ district and school staff<br><br>(TZ RITs facilitated) | In-person | As needed | How to use the KMIT to improve the system of support for teachers<br><br>Practiced obtaining inter-observer agreement (IOA) | Consideration should be given to updating the data collection form with time of day and classroom setting |
| State Advisory Council for Exceptional Children (SACEC) | Parents and educators of students with disabilities | In-person | November 2019 (Quarterly—SSIP Update annually) | Update on current implementation progress of the SSIP and results of 2019 summative assessment results Meeting Minutes | Scale SSIP at a faster pace to reach more students to have a greater impact on student outcomes |
| Region team meetings | TZ regional staff | In-person and virtual | Monthly with each TZ region | Sharing of celebrations and barriers<br><br>Provide training and coaching on Active Implementation | Establish guidelines for nontraditional coaches in districts/schools |

| Stakeholder Communication in Phase III:4 | | | | | |
|---|---|---|---|---|---|
| **Event/ Meeting Title** | **Stakeholders** | **Method of Communication** | **When/ How Often?** | **Information Shared** | **Feedback Received** |
| Usability Testing Teams | TZ regional staff | Virtual meetings | Monthly | Design and complete PDSA cycles on the Data Analysis Practice Profile and coaching tools | There are misconceptions on how to use the Data Analysis Practice Profile |

| Stakeholder Communication in Phase III:4 | | | | | |
|---|---|---|---|---|---|
| **Ongoing Development of Stakeholder Teams Focusing on Behavior** | | | | | |
| **Event/ Meeting Title** | **Stakeholders** | **Method of Communication** | **When/ How Often?** | **Information Shared** | **Feedback Received** |
| SPDG Summit | District and school staff from across the state | In-person | June 2019 (annual) | Overview of PBIS, high leverage practices, and Active Implementation | Overview of PBIS supported understanding of application |
| Work session at SPDG Summit | RTC directors | In-person | June 2019 (annual) | Future trainings for Active Implementation to support PBIS in preschool | No feedback received |
| DOSE Institute | DOSE | In-person | September 2019 (annual) | Overview of Project Link Teaming and LINK2K | No feedback received |

| Stakeholder Communication in Phase III:4 | | | | | |
|---|---|---|---|---|---|
| **Ongoing Development of Stakeholder Teams Focusing on Behavior** | | | | | |
| **Event/ Meeting Title** | **Stakeholders** | **Method of Communication** | **When/ How Often?** | **Information Shared** | **Feedback Received** |
| PBIS Alignment | Kentucky Academic and Behavior Response to Intervention (KY-ABRI) | In-person | October 2019 (as needed) | PBIS implementation data | Inventory of district support system for PBIS including data sources and potential fidelity measures. |
| Regional Cooperative Directors Network Meeting | Regional Cooperative Directors | In-person | Monthly | Shared SiMR feedback from Beginning of Year trainings | There is a need across the state to focus on PBIS implementation |
| Link2K Meetings | RTC staff | In-person | Monthly | Use of Active Implementation Frameworks and system of support for Pyramid Model | Behavior rehearsals to support district Exploration meetings were beneficial |
| SSIP Data and Infrastructure Analysis | Data and Infrastructure Analysis team p. 4 | In-person | Fall and Winter 2019 (as needed) | Reviewed state behavior data and resources available to support PBIS implementation | Data shows a need to focus on disciplinary removals and physical restraints |

| Stakeholder Communication in Phase III:4 | | | | | |
|---|---|---|---|---|---|
| **Ongoing Development of Stakeholder Teams Focusing on Behavior** | | | | | |
| **Event/ Meeting Title** | **Stakeholders** | **Method of Communication** | **When/ How Often?** | **Information Shared** | **Feedback Received** |
| SiMR Development | Data and Infrastructure Analysis team p. 4 | In-person | Winter 2019 (as needed) | Reviewed state behavior data to determine SiMR targets | SiMR targets established |

**Outcomes Accomplished**

A Gantt chart has been maintained since Phase II (see Appendix A) to help ensure that short and long-term goals of the coherent improvement strategies are achieved as intended. The Gantt chart provides stakeholders with an overview of a large number of coherent improvement strategies. This year's chart was amended to include KMIT activities.

This Gantt chart has been expanded to reflect the next five years of implementation (see Appendix B). Activities and timelines are rooted in the processes the SSIP has followed since Phase II, but focus on behavior activities. Current protocols and documents will be reexamined and revised based on trial and learning. This Gantt chart is preliminary and will be revised regularly by the State Leadership Team.

## ***C. Data on Implementation and Outcomes***

The Kentucky Department of Education (KDE) and its stakeholders have monitored and measured outcomes to assess the effectiveness of the implementation plan as Phase III:4 milestones were reached. The State Systemic Improvement Plan's (SSIP) evaluation measures serve to demonstrate progress toward achieving improvements to infrastructure and inform next steps in implementation. Since the steps of the Theory of Action have been accomplished in Phase III:4, only project measures that have an "every year" target metric or have had changes in status will be included and discussed. For a complete list of project measures see Phase III pages 9 - 27. Initially the project measures were written to encapsulate stage-based activities from Exploration to Full implementation. With the adoption of a regional cohort model, the KDE had planned that each year a new region would begin Exploration and move quickly to Installation. Where appropriate, data is shared in evidence of this scale-up plan. As the KDE anticipated, scale-up time decreased from 12 months to less than 6 months as a result of the processes, infrastructure and tools being refined during previous phases. Since Transformation Zone (TZ) cohort members are at varying stages of implementation, several project measures are not measurable at this time. Each measure is addressed in the following section.

Phase III:4 has seen TZ region and district teams still using implementation science research to engage schools in supporting teachers throughout grades 4-8 in the effective use of mathematics usable innovations.

Stakeholder engagement functions through the linked teaming structure. Updates regarding implementation data are provided and feedback is communicated through and across the linked-implementation teams. Annually, regional and district implementation teams complete a survey pertaining to the quality of supports they have received in the previous year. The SSIP Data Dashboard also has an embedded feedback feature to collect questions, comments, and requests that are discussed at corresponding implementation meetings. Annually, regional and district

implementation teams come together for All TZ events where they share implementation successes and barriers.

Key Measures with Data Sources and Baseline Data

The SSIP project measures were designed to assess the quality and impact of implementation, as well as 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 quality goal that is expected to be accomplished by a specific group of stakeholders in a set time frame.

Each project measure identifies the timeline for achieving the change and a quantifiable growth measure in behavior or knowledge of a target audience. While these measures and additional evaluation data analyses have highlighted ways the SSIP service delivery model can be made better, Phase III:4 evaluation data does not support the changing of the SSIP itself.

**Progress of Installation Stage Activities**

During Phase III:4, scale-up in TZ Cohort 1 regions included two local education agencies, TZ Cohort 2 included one local education agency, and TZ Cohort 3 included one Regional Educational Cooperative. Two District Implementation Teams (DITs) completed an initial capacity assessment and action plan prior to school buildings entering into their initial implementation stage (see Table 3).

*Table 3. Linked teaming occurs in correct installation progression.*

| Project Measure I.1 | Target Metric | % | Actual Ratio | % | Status |
|---|---|---|---|---|---|
| 100% of implementation teams complete initial capacity assessment and the initial capacity readiness action plan before their buildings enter into Initial Implementation phase. | 3/3 Teams | 100 | 4/4 Teams | 100 | Met |

Project Measures I.2-I.4 are in place to monitor that essential installation stage activities are completed within an appropriate timeline and ensure that SSIP standards are fully adopted during the selection of the Usable Innovation (UI). Since all TZ cohort 1 members met measure I.2 during their installation phase (Phase III, p. 9) this measure is not included this year.

During Phase III:4, all TZ Cohort 2 and TZ Cohort 3 local education agencies selected usable Evidence-Based Practices (EBPs) that had been previously accepted by the State Design Team (SDT) as being a Usable Mathematics EBP (see Table 4).

*Table 4. Usable mathematics evidence-based practices are selected*

| **Project Measures I.3** | **Target Metric** | **%** | **Actual Ratio** | **%** | **Status** |
|---|---|---|---|---|---|
| 100% of Usable EBPs (Usable Innovations) selected by a SSIP TZ district are from the KDE SSIP Menu of Usable Mathematics EBPs or has been accepted by the State Design Team (SDT) as being a Usable Mathematics EBP (modified as needed, to include a clear description, clear essential functions, operational definitions and practical performance assessment). | 4/4 | 100 | 5/5 | 100 | Met |

During Phase III:4, all TZ Cohort 2 and TZ Cohort 3 local education agencies chose to adopt the state's SSIP Mathematics Practice Profile after they concluded that it is teachable, learnable and doable (see Table 5). Before adoption, each district had to independently review the state's SSIP Mathematics Practice Profile to make sure it was representative of the core components of their Usable Innovation.

*Table 5. Usable EBPs have written practice profiles*

| Project Measures I.4 | Target Metric | % | Actual Ratio | % | Status |
|---|---|---|---|---|---|
| 100% of Usable EBPs (Usable Innovations) selected by a SSIP TZ district have a written Practice Profile that according to the SDT is teachable, learnable and doable. | 4/4 | 100 | 5/5 | 100 | Met |

**Progress of Training Activities**

The Active Implementation Frameworks (AIFs) are embedded in ongoing mini-trainings/technical assistance (see Phase III:2, p. 11) throughout the Exploration and Installation phases. Evaluators analyzed the overall effectiveness of training by calculating a team's rate of agreement through averaging each team member's responses to five knowledge-based post-training four-point Likert survey items. One of the cohort 2 regional teams and both of its districts had trainees complete post-AI training surveys this year (see Table 6); they had a composite average above 3.54 ("strongly agree").

*Table 6. Training sessions impact team knowledge of AIFs*

| Project Measure T.1 | Target Metric | % | Actual Ratio | % | Status |
|---|---|---|---|---|---|
| Each year, 100% of implementation teams demonstrate that training sessions had a moderate to large impact on their knowledge of Active Implementation Frameworks. | 5/5 Teams | 100 | 3/3 Teams | 100 | Met |

Tables 7-9 present longitudinal post-training survey results for the past three years. While the participants completing the surveys have changed each year, the data comparison is useful for ensuring that training fidelity is maintained over time. Four of the five survey knowledge items maintained an agreement level above 99%.

*Table 7. Percentage of training participants who agreed or strongly agreed with knowledge-based survey items*

| Post Training Survey Items (% Agree or Strongly Agree) | Phase III:2 (n=25) | Phase III:3 (n=49) | Phase III:4 (n=127) |
|---|---|---|---|
| The event achieved the session goals and objectives. | 100.0% | 100.0% | 100.0% |
| The event/content is highly relevant to my work. | 97.2% | 100.0% | 99.2% |
| The event/content and materials are useful to my work. | 94.4% | 100.0% | 99.2% |
| The event/content helped further my understanding of Active Implementation. | 83.3% | 100.0% | 99.2% |

There was an increase in the percentage of trainees selecting “moderate” or “expert” for the second year in a row for the overall current knowledge item.

*Table 8. Percentage of training participants who selected moderate or expert as their current knowledge on survey*

| Post Training Survey Items (% Moderate or Expert) | Phase III:2 (n=25) | Phase III:3 (n=49) | Phase III:4 (n=120) |
|---|---|---|---|
| How would you rate your current knowledge level regarding the specific terms, frameworks, resources, and materials discussed at these meetings? | 61.1% | 67.3% | 70.1% |

In addition to the AIF post-training survey, a pre-test and post-test are administered to analyze how effective trainings are at increasing participant knowledge. This year’s average participant post-test is higher than Phase III:3, but the small n-size limits the generalizability of the results. Phase III:4 implementation teams did demonstrate a large gain in knowledge growth as a result of their training participation; which follows the pattern of the previous Phase III years.

*Table 9. Training session pre-test to post-test results for each year of Phase III*

| Phase of SSIP | Implementation Team Training Sessions | Average Session Pre-Test (%) | Average Session Post-Test (%) | Growth (% points) |
|---|---|---|---|---|
| Phase III:1 (TZ Cohort 1) | 9 | 64.4 | 91.8 | 27.3 |
| Phase III:2 (TZ Cohort 1) | 3 | 30.3 | 99.0 | 68.7 |
| Phase III:3 (TZ Cohort 2) | 11 | 37.5 | 86.5 | 49.1 |
| Phase III:4 (TZ Cohort 1 scale-up) | 2 | 13.5 | 94.0 | 80.5 |

Project Measure T.2 (Table 10) is in place to monitor that SSIP training development tools are integrated into district training processes during all phases of their EBP professional development, thus ensuring that teachers receive effective training. All TZ districts with established Building Implementation Teams (BITs) have incorporated SSIP effective training development tools into their Mathematics Usable EBPs training process to increase teachers' knowledge, skills and fidelity

*Table 10. SSIP effective training development tools incorporated by districts*

| Project Measures T.2 | Target Metric | % | Actual Ratio | % | Status |
|---|---|---|---|---|---|
| 100% of districts incorporate SSIP effective training development tools (i.e., SSIP Training Service Delivery Plans and the SSIP Training Fidelity Checklists) into their Mathematics Usable EBPs training process. | 4/4 | 100 | 6/6 | 100 | Met |

Project Measure T.3 (Table 11) focuses on training teachers on the core components of the Math Practice Profile (Phase III, p. 14). Districts and regions participated in the creation of the Math Training Components Survey and the matching data submission protocols during the previous years (see Phase III:2, p. 13). There were five training dates during Phase III:4, with each date serving between one to five schools. There were ten Math Training Components Worksheets submitted by trainers and coaches as an element of their pre-training preparation activities (trainers and coaches were often co-facilitators). Evaluators treated each school at each training date as a session of school-based teacher training. Overall, there were 14 units of school-based teacher training represented within the submitted data; which included teachers from six schools within two districts (all regional Cohort 1 members).

*Table 11. Teachers receive training that has high fidelity to the Math Practice Profile*

| Project Measures T.3 | Target Metric | % | Actual Ratio | % | Status |
|---|---|---|---|---|---|
| 80% of all SSIP EBP training sessions for teachers are trained with high fidelity to the core components of the Math Practice Profile | 8/10 School based Training Sessions | 80 | 14/14 School based Training Sessions | 100 | Met |

Each of the five EBP training dates averaged 3.4 activities; just over one-third of activities included all three adult learning strategies. The vast majority (94.1%) of activities included time for teachers to review/reflect on the experience and opportunity to learn from the experience (see Table 12).

*Table 12. Frequency of Adult Learning Strategies employed during EBP training activities*

| Adult Learning Practice | % of Training Activities which Included this Practice |
|---|---|
| review/reflect on the experience | 94.1% |
| conclude/learn from the experience | 94.1% |
| plan/try out what they have learned | 41.2% |

Activities conducted during trainings used on average 5.3 of the National Council of Teachers of Mathematics Eight Mathematics Teaching Practices. The majority of the desired math teaching

practices were embedded in over 60% of the activity's teachers participated in during EBP trainings (see Table 13).

*Table 13. Frequency of Eight Math Practices employed during EBP training activities*

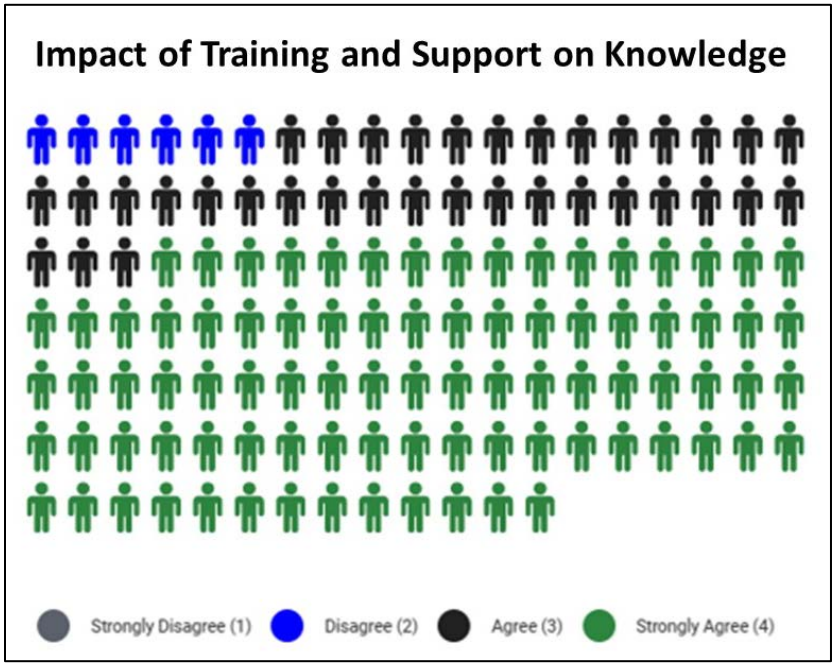
| Teaching Practices from Math Practice Profile | % of Training Activities which Included this Practice |
|---|---|
| Pose purposeful questions | 76.5% |
| Implement tasks that promote reasoning and problem solving | 73.5% |
| Use and connect mathematical representations | 67.6% |
| Support productive struggle in learning mathematics | 67.6% |
| Elicit and use evidence of student thinking | 67.6% |
| Facilitate meaningful mathematical discourse | 64.7% |
| Establish mathematics goals to focus learning | 52.9% |
| Build procedural fluency from conceptual understanding | 44.1% |

Along with those that completed the Math Training Components Worksheets an additional two districts and twelve schools also chose to collect and submit post-training surveys for inclusion on the SSIP Data Dashboard. The survey contains eight four-point Likert scale items and an opportunity to share general comments. Results of the survey showed 121 of the 126 teachers (96%) agreed or strongly agreed with the item, "The event/content helped further my understanding of mathematical practices" (see Table 14 and Figure 3).

*Table 14. Teachers reported that training had a positive impact on their knowledge of their mathematics EBP*

| Project Measure T.4 | Target Metric | % | Actual Ratio | % | Status |
|---|---|---|---|---|---|
| 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). | 70/100 Teachers | 70 | 121/126 Teachers | 96 | Met |

*Figure 3. Impact of training and support on participant knowledge*

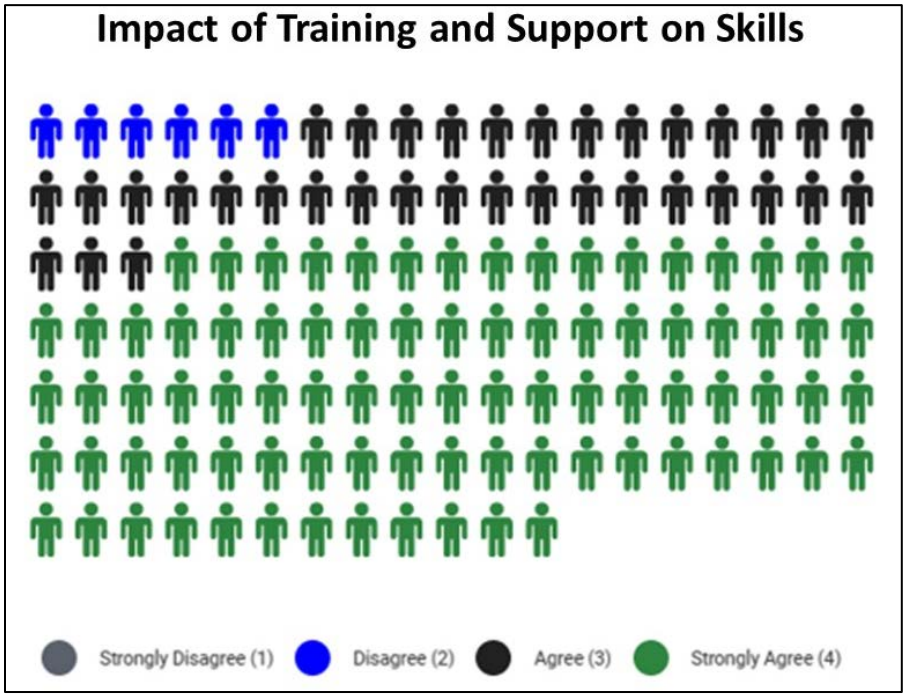



The EBP post-training survey also included the items, "The event/content will help me be more *efficient* at meeting the mathematical needs of students" and "The event/content will help me be more *effective* at meeting the mathematical needs of students." 120 of the 126 teachers had a composite average of agree or better for these skill prompts (see Table 15 and Figure 4).

*Table 15. Teachers reported that training had a positive impact on their skills regarding their mathematics EBP*

| Project Measure T.5 | Target Metric | % | Actual Ratio | % | Status |
|---|---|---|---|---|---|
| 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). | 70/100 Teachers | 70 | 120/126 Teachers | 95 | Met |

*Figure 4. Impact of training and support on participant skills*




**Progress of Coaching Activities**

Project Measure C.1 (see Table 16) is in place to ensure that districts have a written coaching system narrative that includes a plan for service delivery. As scale-up districts have entered the Exploration and Installation Stages, they have been quicker to adopt a written coaching system narrative than districts during earlier SSIP phases. Through all Phases, five districts have a written coaching system narrative that includes a plan for service delivery; a sixth has not yet installed a coaching system.

*Table 16. Districts have a written coaching system*

| Project Measure C.1 | Target Metric | % | Actual Ratio | % | Status |
|---|---|---|---|---|---|
| 60% of Districts have a written coaching system narrative that includes a plan for service delivery | 8/10 | 80 | 5/6 | 83 | Met |

Project Measures C.2-C.4 were initially in place to ensure that coaches within each District's coaching system had the knowledge and skills required to effectively follow the Math Practice. These project measures were developed to coincide with intensive direct support training held for coaches in the initial TZ Cohort 1 and 2 districts (see Phase III, p.17-19). As the state released these support responsibilities to the TZ Cohort 1 and 2 regions, the direct support training as originally developed was adapted into a targeted model. Evaluators determined that the outcomes of these new targeted activities were adequately captured within project measure C.5 and that C.2-C.4 were redundant for reporting.

An online survey was administered to twenty-four district TZ math coaches, with five respondents completing the survey. All of the responding TZ coaches reported the training and support they received had a moderate to large impact on their skills in adherence to the Coaching Practice Profile (see Table 17). To ensure more accurate data, the low response rate will be addressed at a future All TZ meeting.

*Table 17. TZ coaches report that the training and support they received had a positive impact on their adherence to the Coaching Practice Profile*

| Project Measure C.5 | Target Metric | % | Actual Ratio | % | Status |
|---|---|---|---|---|---|
| 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). | 8/10 Coaches | 80 | 5/5 Coaches | 100 | Met |

The survey looked at several areas of coaching practice, over the prior two months, based on the SSIP coaching practice profile; these included coaching communication, development of an effective partnership, observations, feedback, modeling, data analysis, and professional learning (see Table 18). All items had an average between "strong agreement" and "agreement." The project met the target for the project measure; but the low n-size of coaches and participating districts limits the generalizability of the data. Those providing support to coaches saw the largest growth in coaches' agreement in regard to their use of modeling and feedback this year. The largest decline in coaches' agreement from the prior year was seen for the survey item "the coaching support I received positively influenced my coaching practice through Data Analysis."

*Table 18. Coach's agreement of positive influence of district supports on their coaching practice*

| During the past two months, the coaching support I received . . . | Phase IIII:3 (n=3) | Phase IIII:4 (n=5) |
|---|---|---|
| positively influenced my coaching practice through Modeling. | 3.3 | 3.8 |
| positively influenced my coaching practice through Professional Learning. | 4.0 | 3.8 |
| has positively impacted my teachers' learning. | 3.7 | 3.8 |
| has positively impacted my teachers' use of the innovation. | 3.7 | 3.8 |
| positively influenced my coaching practice through Feedback. | 3.3 | 3.8 |
| positively influenced my coaching practice through Coaching Communication. | 4.0 | 3.6 |
| positively influenced my coaching practice through the Development of an Effective Partnership. | 4.0 | 3.6 |
| positively influenced my coaching practice through Observations. | 3.3 | 3.6 |
| positively influenced my coaching practice through Data Analysis. | 4.0 | 3.4 |

An online survey was administered to all TZ Regional Implementation Team (RIT) coaching participants, with 21 participants completing the survey (75% response rate). The survey looked at the State Transformation Specialists' (STS) use of a wide range of listening and questioning skills, observation and guided reflection, feedback, and modeling. The survey also asked if the

STS effectively supported the RITs use of implementation science, application of implementation drivers, and confidence to cooperatively use capacity assessment data to create implementation team action plans. 18 of the 21 survey participants had an average composite score of 3.0 or above on a 4-point Likert scale (see Table 19). For additional analysis of this survey please see page 43. The project met the target for the project measure.

*Table 19. RIT members report high quality support received by the State Education Agency (SEA)*

| Project Measure C.6 | Target Metric | % | Actual Ratio | % | Status |
|---|---|---|---|---|---|
| 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. | 8/10 RIT Members | 80 | 18/21 RIT Members | 86 | Met |

An online survey was administered to the Implementation Team participants in TZ Cohort 1 and TZ Cohort 2 districts, with 43 participants completing the survey about each region's coaching activities (61% response rate). The survey looked at the RITs use of a wide range of listening and questioning skills, observation and guided reflection, feedback, and modeling. The survey also asked if the RIT effectively supported the District Implementation Teams (DITs) use of implementation science, application of Implementation Drivers, and confidence to cooperatively use capacity assessment data to create implementation team action plans. 91% of the survey participants had an average composite score of 3.0 or above on a 4-point Likert scale (see Table 20). For additional analysis of this survey please see page 45. The project met the target for the project measure

*Table 20. DIT members report high quality support received by the RIT*

| Project Measure C.7 | Target Metric | % | Actual Ratio | % | Status |
|---|---|---|---|---|---|
| Each year, 80% of DIT members report that their Kentucky (Regional) Educational Cooperative Implementation Team provided high quality supports to increase their implementation capacity. | 8/10 DIT Members | 80 | 39/43 DIT Members | 91 | Met |

Project Measure C.8 is a biennial measure as a result of the data collection instrument being biennially collected by the State (see Phase III:2, p. 21). During Phase III:4, the working conditions survey partner was changed. The Teaching, Empowering, Leading, and Learning Kentucky (TELL) Survey has been replaced with the Impact Kentucky survey. This change also resulted in a change in the data collection window; surveys were now collected in January-February 2020 instead of Spring 2019. Since survey data was not publicly released during Phase III:4 this measure is not reported here.

In Phase III:4 a total of seventeen teacher cadres (15 schools) installed or continued a fidelity system using the Observation Tool for Instructional Supports and Systems (OTISS) or the Kentucky Mathematics Innovation Tool (KMIT). Six of the cadres were continuing EBP implementation from the previous phase and eleven cadres were new to implementation fidelity measurement this academic year. Analysis of each school's cadre of teachers showed four with higher average OTISS scores year to year, three cadres with higher OTISS scores than their baseline, and seven cadres with higher KMIT scores than their baseline (see Table 21 and Appendix C-D). This year's rate of cadres with increased fidelity was 2.5 times last year's ratio (from 33% to 82%).

*Table 21. TZ teachers increased their level of EBP implementation*

| Project Measure C.9 | Target Metric | % | Actual Ratio | % | Status |
|---|---|---|---|---|---|
| Each year, 80% of TZ School teacher implementation cadres increase their level of implementation and consistency of SSIP EBP instruction. | 8/10 Teacher Cadres | 80 | 14/17 Teacher Cadres | 82 | Met |

**Progress of Implementation Fidelity Activities**

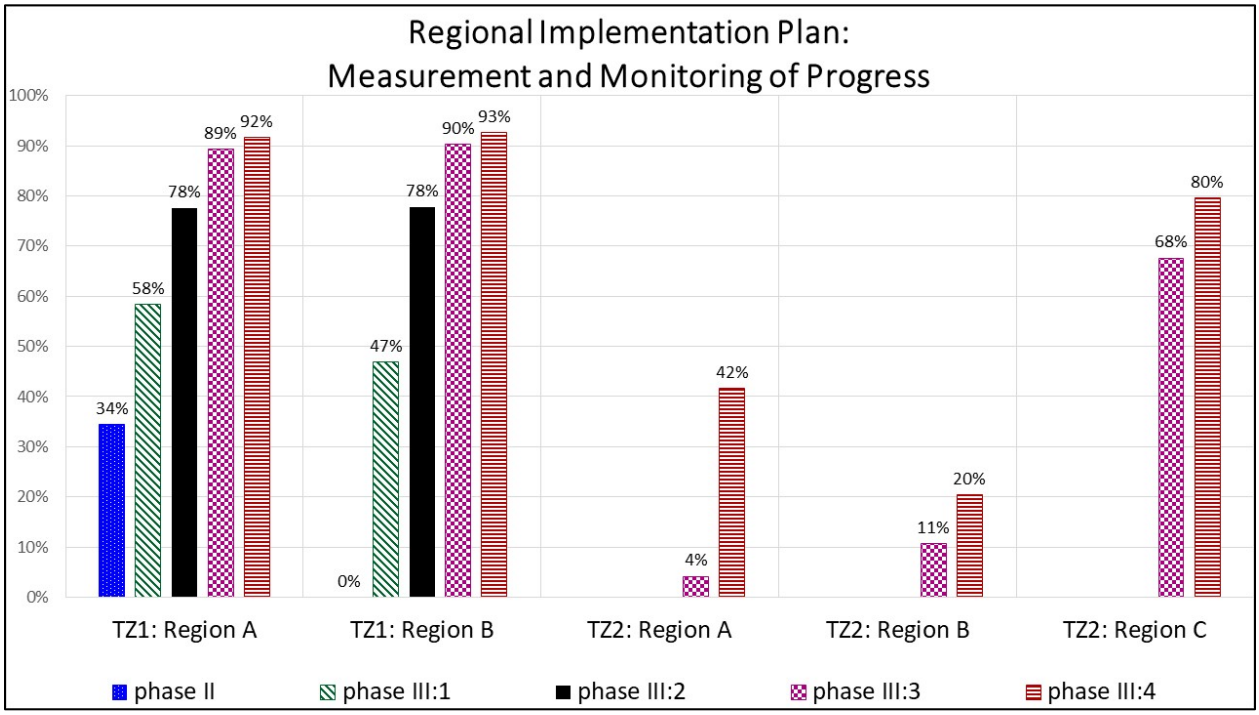
Project Measure F.1 (see Table 22) is in place to monitor that each year, implementation teams meet their data collection needs to ensure continuous improvement efforts are properly supported (Phase III, p. 23). The protocols for this project measure were established last year (Phase III:3, p. 28). A Phase III:3 implementation fidelity target was set at 80% of the *Implementation Plan* tool items being fully in place by the third year of implementation. Three of the four TZ Cohort 1 implementation teams met this target (see Table 22).

*Table 22. Implementation teams meet data collection protocols*

| Project Measure F.1 | Target Metric | % | Actual Ratio | % | Status |
|---|---|---|---|---|---|
| Each year, 70% of TZ implementation teams meet data collection protocols with fidelity. | 7/10 Teams | 70 | 3/4 Teams | 75 | Met |

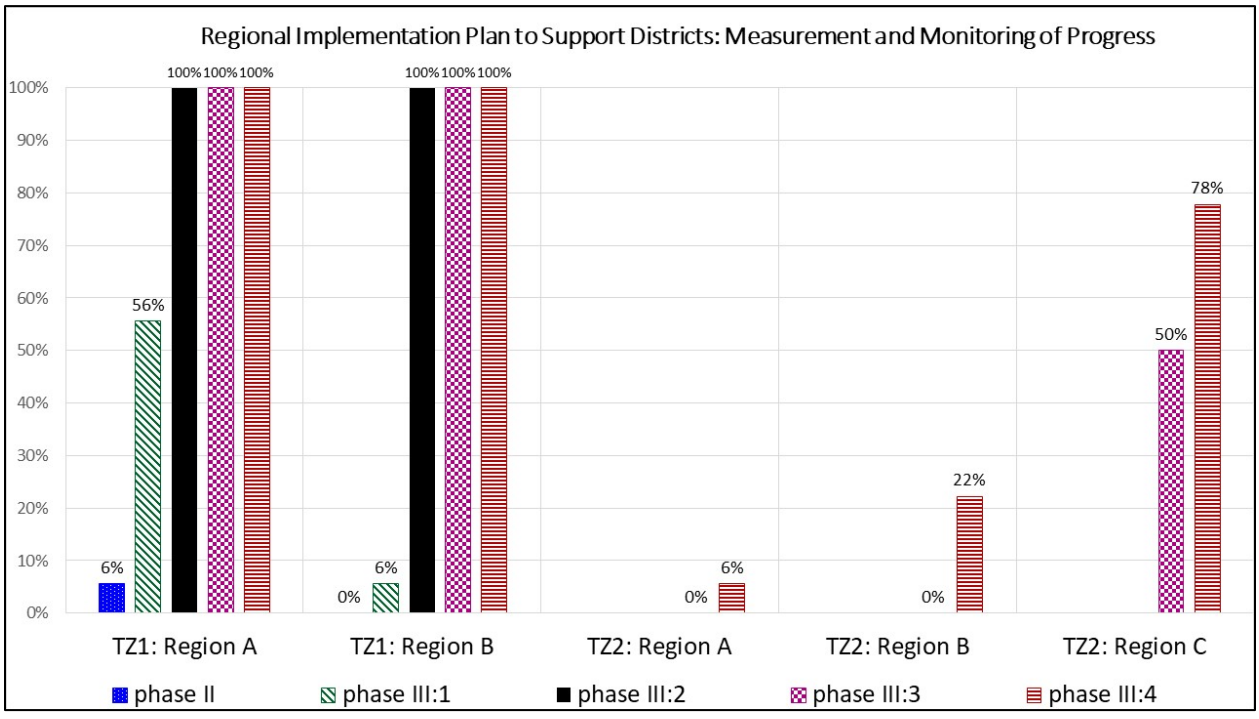
Both TZ Cohort 1 regions have shown progressive growth overall in the area of measuring and monitoring progress within their respective RIT. All of the TZ Cohort 2 (TZ2) regions have also shown growth since their first year of implementation; one region has already reached fidelity (see Figure 5).

*Figure 5. RITs meet data collection protocols*



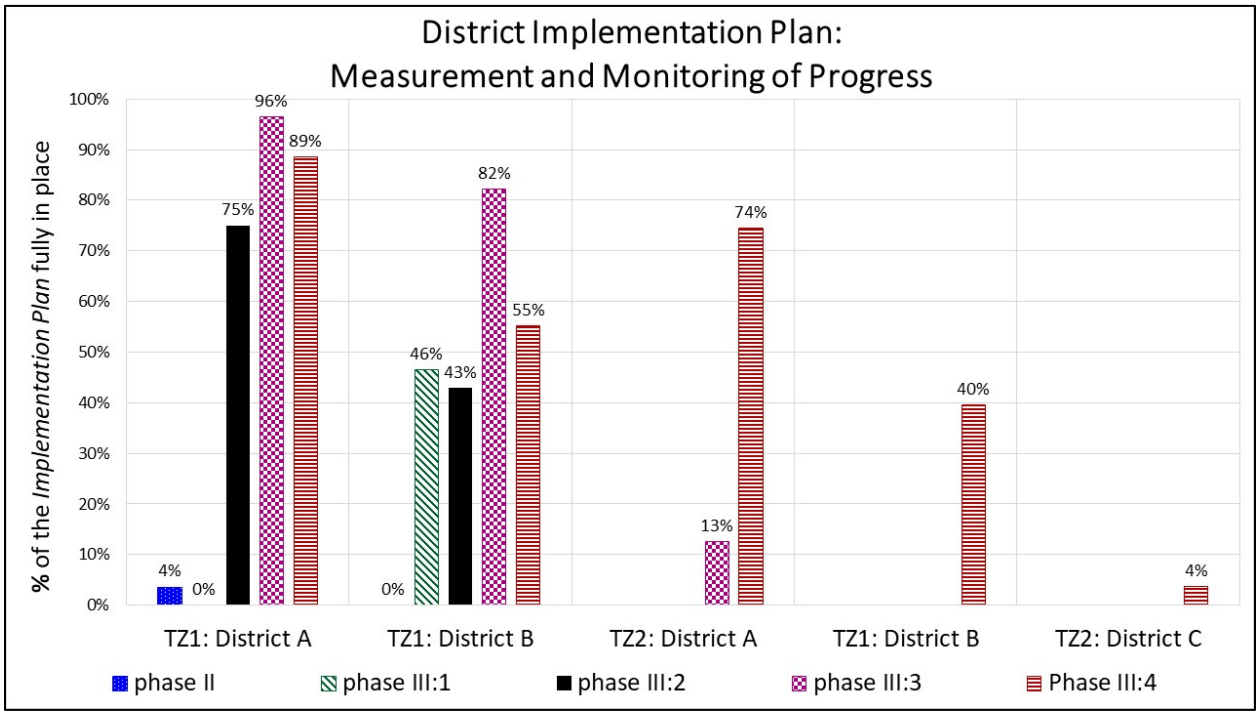

Both TZ Cohort 1 regions also maintained a 100% aggregate score in the area of measurement and monitoring progress as it pertained to supporting their DITs. All of the TZ Cohort 2 regions have also shown growth since their first year of implementation (see Figure 6).

*Figure 6. RITs meet data collection protocols to ensure district supports*



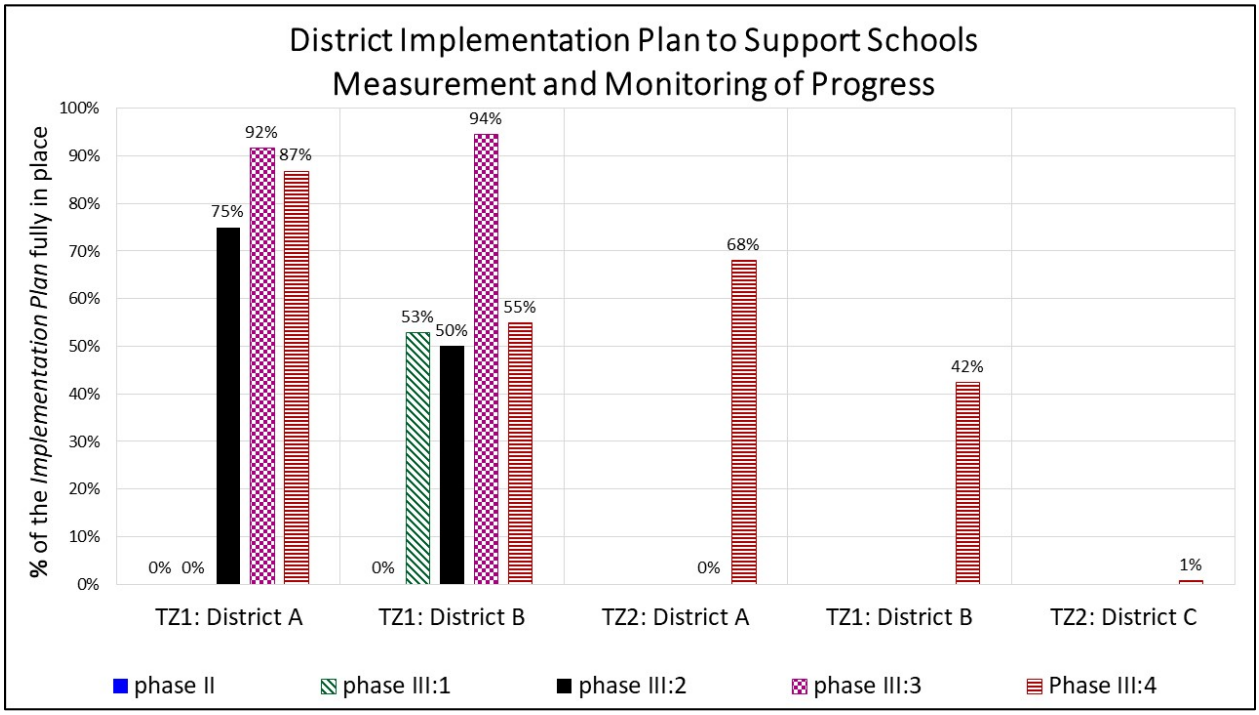
Both TZ Cohort 1 districts have shown a decline in their implementation rate over Phase III:4; though one district team is still at fidelity. A TZ Cohort 2 district has shown large growth since Phase III:3 while the other two districts are in their initial implementation year (see Figure 7). The data will be reviewed by the State Design Team (SDT) to determine action steps for increasing measurement and monitoring of progress to support the proposed SiMR.

*Figure 7. DITs meet data collection protocols*




Both TZ Cohort 1 districts have shown a decline in the area of measurement and monitoring progress as it pertains to supporting their schools over Phase III:4; though one district team is still at fidelity. A TZ Cohort 2 district has shown large growth since Phase III:3 while the other two districts are in their initial implementation year (see Figure 8). The STS will provide retraining to regions on data collection protocols to replicate with districts.

*Figure 8. DITs meet data collection protocols to ensure school supports*



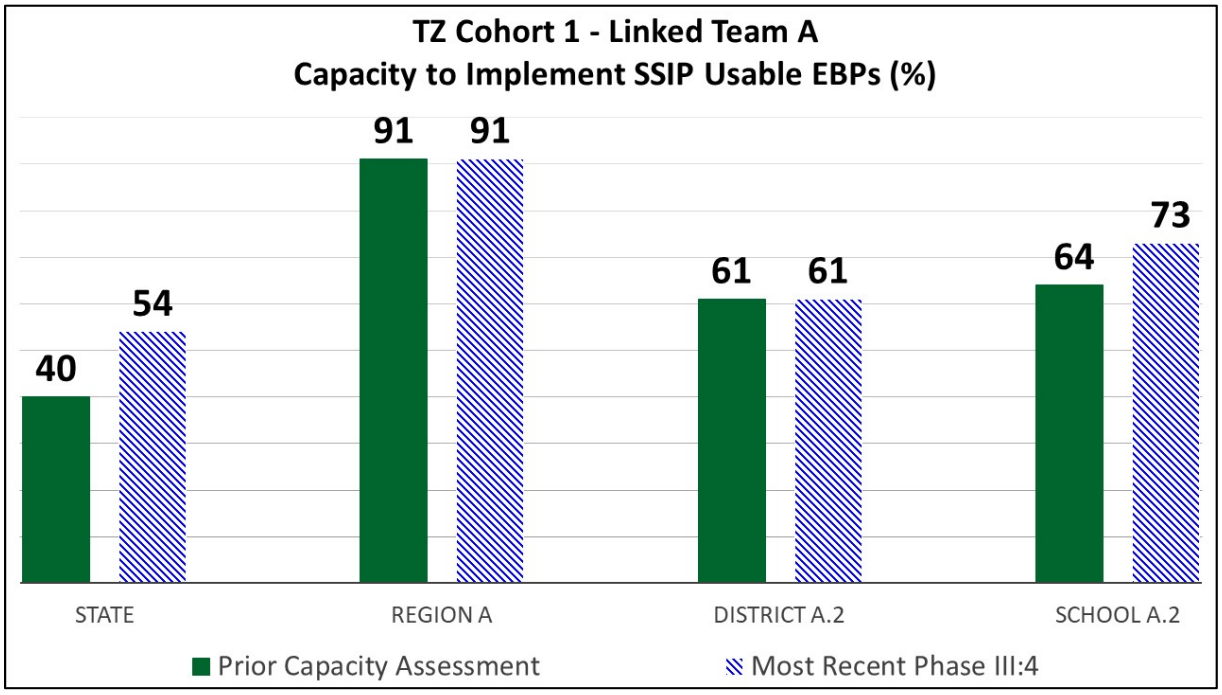

Project Measure F.2 (see Table 23) is in place to monitor that each year, implementation teams have increased their capacity to implement SSIP Usable EBPs. Growth is most important for teams in the first few years of implementation, but once they have reached the 80% capacity benchmark, the focus must be in maintaining their capacity since growth becomes more difficult. Capacity is measured through the State Implementation and Scaling-Up of Evidence-based Practices (SISEP) center's capacity assessment tool for each level of the linked team. Eighteen teams, representing both TZ Cohort 1 and TZ Cohort 2, were analyzed during Phase III:4. Of these eighteen, twelve had increased their capacity score since their previous capacity assessment. This is an increase from 55% in Phase III:3. Two teams maintained the same score and for those that saw a decline, there was never more than a four-percentage point fall. Two teams experienced a small decline but met the target of maintaining their capacity above the 80% benchmark.

*Table 23. Implementation teams increase their capacity to implement SSIP Usable EBP*

| Project Measure F.2 | Target Metric | % | Actual Ratio | % | Status |
|---|---|---|---|---|---|
| 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) and or maintain a capacity score above 80%. | 8/10 Teams | 80 | 16/18 Teams | 89 | Met |

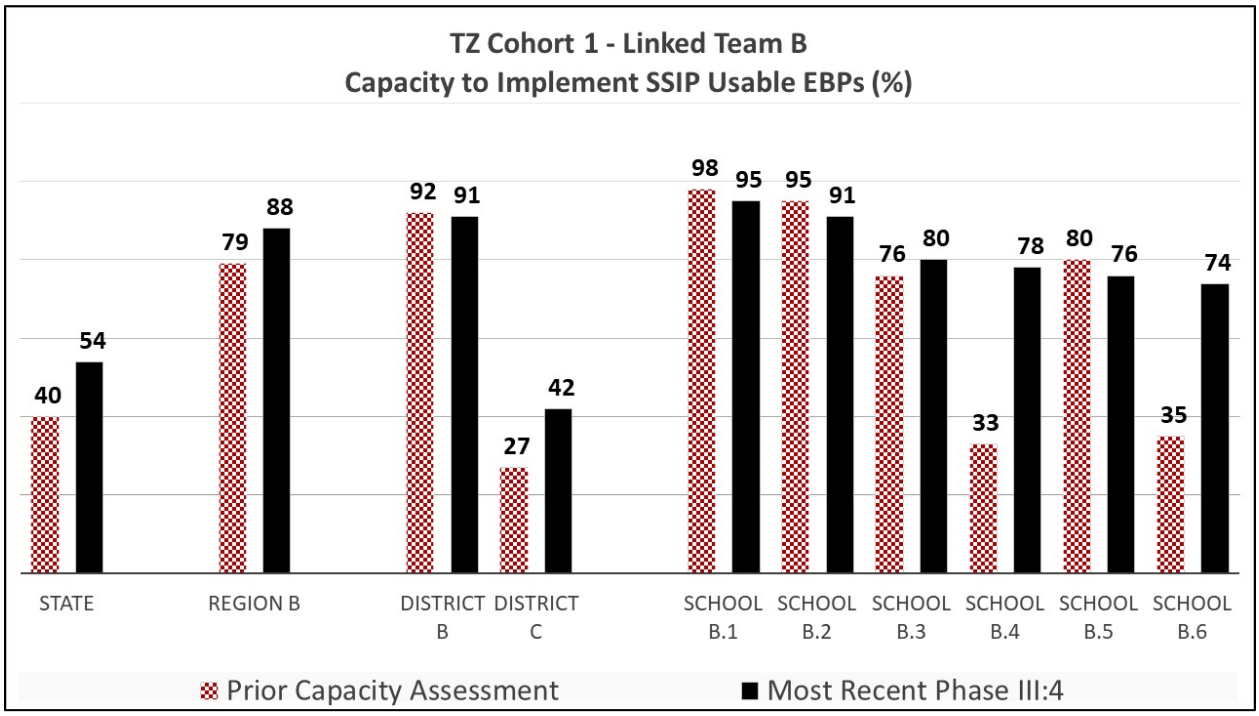
The most recent state capacity measurement represented an increase in the state's capacity to implement SSIP usable EBPs based on the two most recent State Capacity Assessments (SCA, SISEP center) administered in June and January (see Figure 9). Based on the last two Regional Capacity Assessments (RCAs), a TZ Cohort 1 region saw no change in the capacity to support effective implementation of an EBP in this region, but their capacity was well above the 80% benchmark set by SISEP. Based on the District Capacity Assessments (DCAs), the region's district also saw no change in capacity assessment scores. The school in this district saw their capacity grow this year.

*Figure 9. Implementation teams grow in their implementation capacity (TZ Cohort 1-Link Team A)*



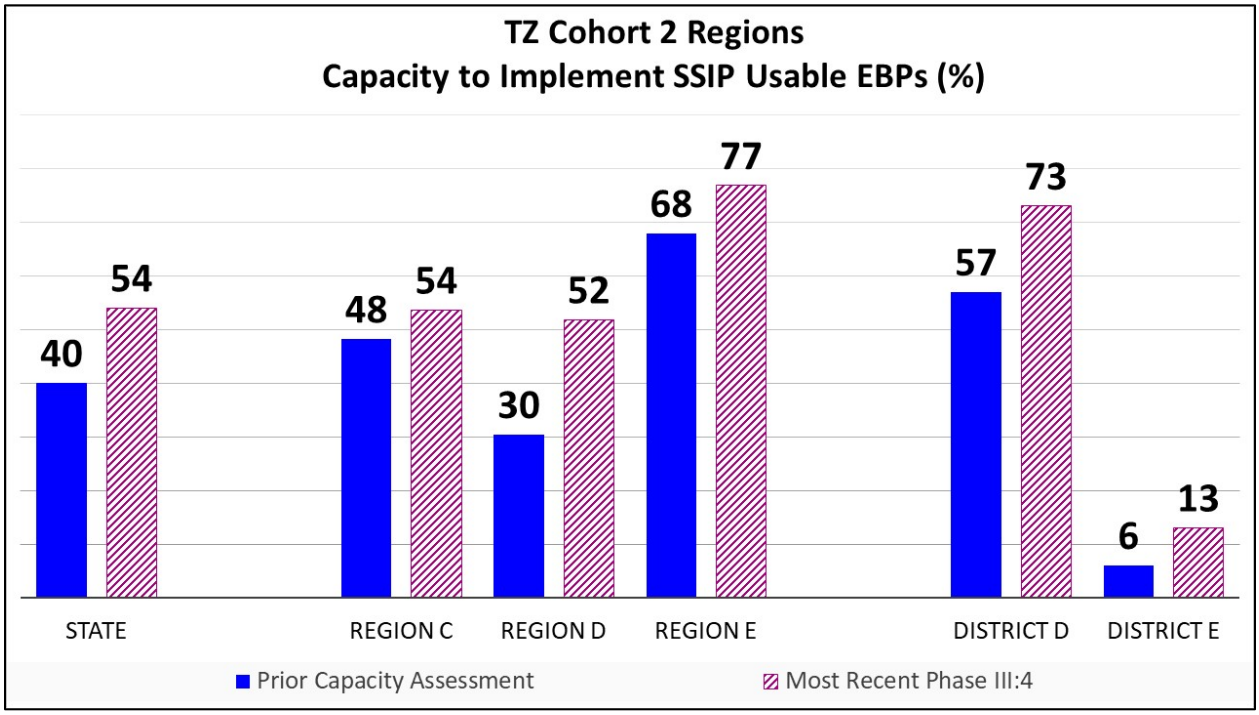
Based on the last two RCAs, the other TZ Cohort 1 region experienced an increase in capacity (see Figure 10). Based on the DCA, the region's newest district saw a similar increase in capacity assessment scores. The other district had a 1% point decline in capacity but was well above the 80% benchmark set by SISEP. This district saw three of their schools increase capacity to implement SSIP usable EBPs, based on the last two Drivers Best Practice Assessment (DBPAs). The other three schools in the district capacity measurement represented a decrease, but two of these were still well above the 80% benchmark set by SISEP.

*Figure 10. Implementation teams grow in their implementation capacity (TZ Cohort 1-Link Team B)*




In TZ Cohort 2, all regions saw increases in implementation capacity (see Figure 11). Also, all districts grew in their capacity from their Exploration stage baseline measure.

*Figure 11. Implementation teams grow in their implementation capacity (TZ Cohort 2)*




Data Collection Procedures and Associated Timelines

Each year the State Implementation Team (SIT) oversees data collection processes (Phase II, p. 21). An updated timeline of the collection of primary data sources is provided as an attachment (See Appendix E). The majority of the implementation teams have completed all items, but often a team is still establishing systems interventions or building facilitative administration capacity to meet a data collection milestone.

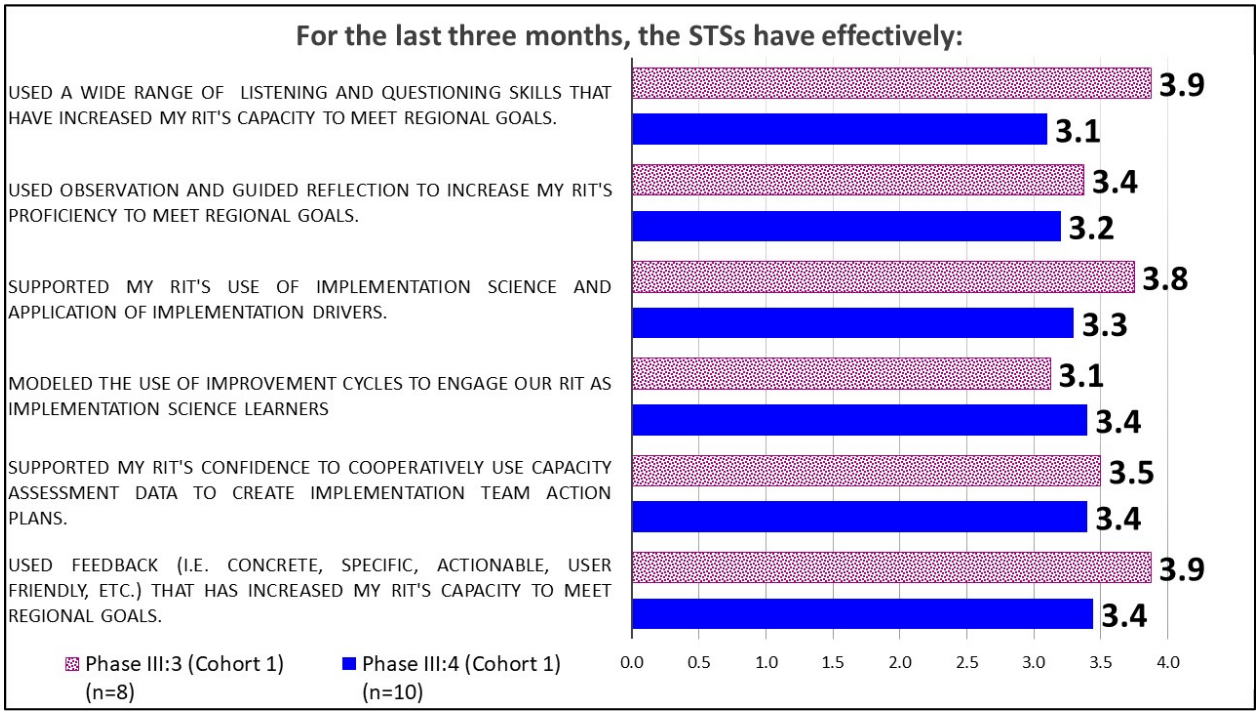
How Data Analysis Influences Intended Improvements

**Use of Regional Implementation Team Feedback on State Implementation Team Supports**

Twenty-one of twenty-eight RIT members from Kentucky's TZs (75% response rate) provided insight on experiences to help the SIT better meet professional development needs and inform work in additional TZ installations. An online survey included open-ended responses and a series of four-point Likert-based questions to capture the SITs impact on RIT knowledge, skills, confidence, and capacity to implement SSIP activities. Overall, 95% of respondents agreed that the SIT provided high quality supports to increase their implementation capacity.

The TZ Cohort 1 RIT members remained very positive about the support they received year-to-year (see Figure 12); the STS's modeling was more influential during this phase. Those surveyed were in less agreement than last year for all other survey items; with the STS effectively using a wide range of listening and questioning skills as the largest decliner.

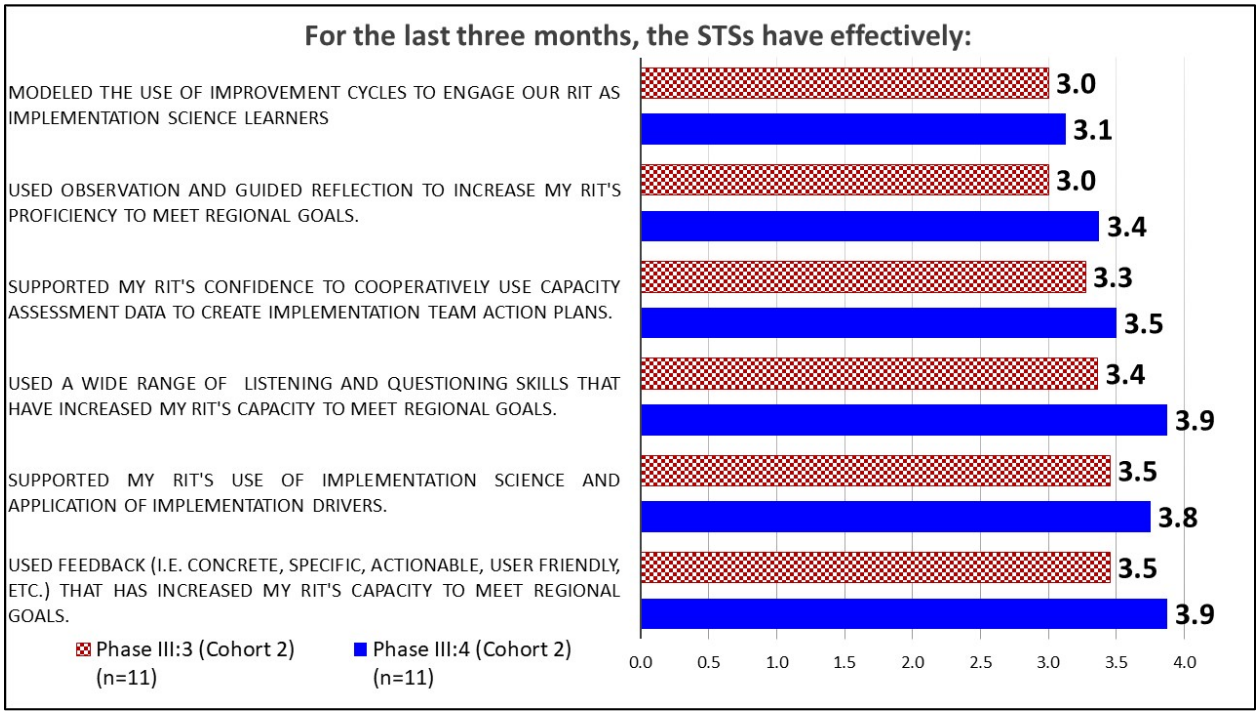
*Figure 12. STSs support TZ Cohort 1 regional implementation*




Analysis of the survey's open-ended responses found that within TZ Cohort 1, the state supports resulted in successes such as improving sustainability, being more efficient in onboarding new region staff, and scaling up in new districts. TZ Cohort 1 RIT members attributed these successes to the STSs allowing each region to set support priorities and being responsive to meeting requests (both in person and virtually); "Prompt and efficient responses to emails and phone calls. Collaborative efforts of both teams have assisted in carrying out the work even with turnover". Two TZ Cohort 1 RIT members shared they would like the state to facilitate more time to collaborate with other TZ regions; "I would like for us to communicate more and learn from the other regions so we might move a little faster". A retreat was scheduled during March 2020 for districts to share trials and learnings. The event was cancelled due to a statewide shutdown.

The TZ Cohort 2 RIT members remained very positive about the support they received year-to-year (see Figure 13). Those surveyed were in more agreement than last year for all survey items; with the STS effectively using feedback and a wide range of listening and questioning skills as the most influential.

*Figure 13. STSs support TZ Cohort 2 regional implementation*

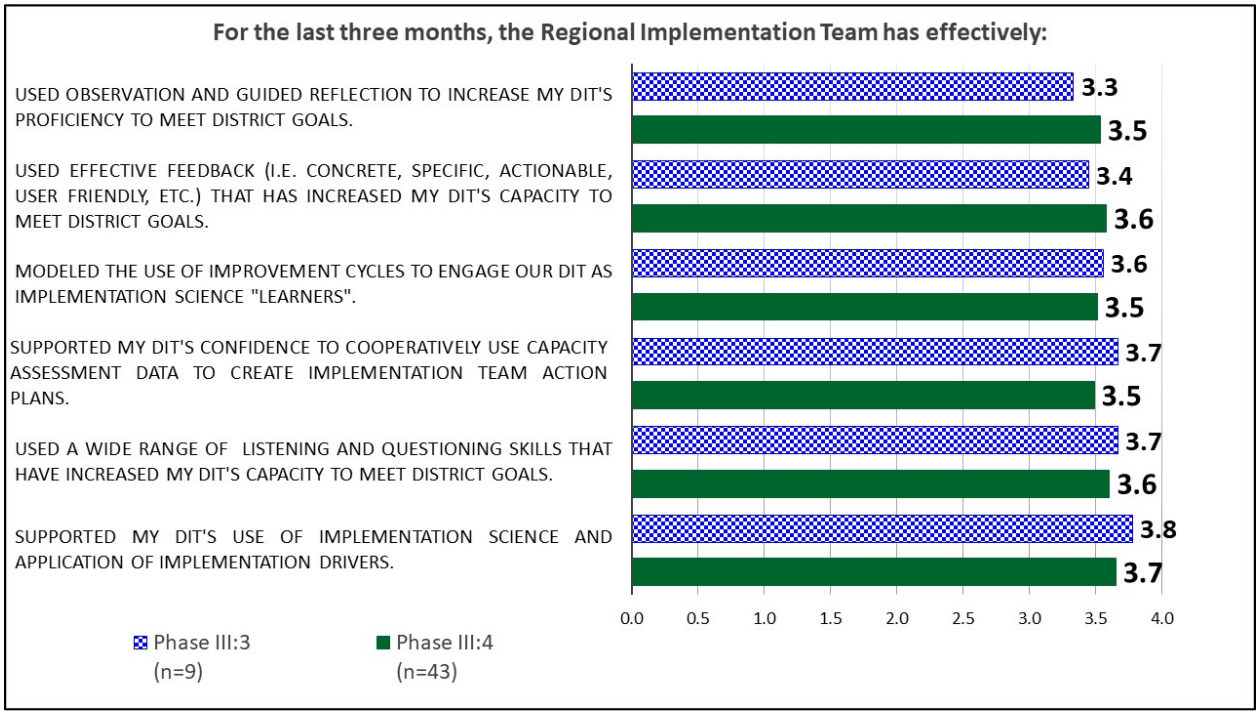



Analysis of the survey's open-ended responses found that within TZ Cohort 2, the state supports resulted in successes in identifying needs across the linked-teaming structure and then creating action plans. TZ Cohort 2 RIT members attributed these successes to the STS being responsive to questions, clarifying information, offering recommendations, and providing resources; "[they] consistently provide support through clarification when we have questions, sharing of resources, and support on site as needed".

### Use of District Implementation Team Feedback on Regional Implementation Team Supports

Forty-three of seventy TZ Cohort 1 and 2 DIT members (61% response rate) provided insight on how their RIT met their professional development needs and to inform best practice for additional TZ installation. The online survey included open-ended responses and a series of four-point Likert-based questions to capture the RITs impact on DIT knowledge, skills, confidence, and capacity to implement the SSIP activities (see Figure 14). While lower than the two prior year's full agreement, 91% of respondents agreed that the RIT provided high quality support to increase their implementation capacity (see Phase III:2, p. 26). The RITs use of observation and effective feedback had mild increases in agreement since the last phase while the other survey items had mild declines; the original low n-size makes generalizability difficult.

*Figure 14. RITs support district implementation*



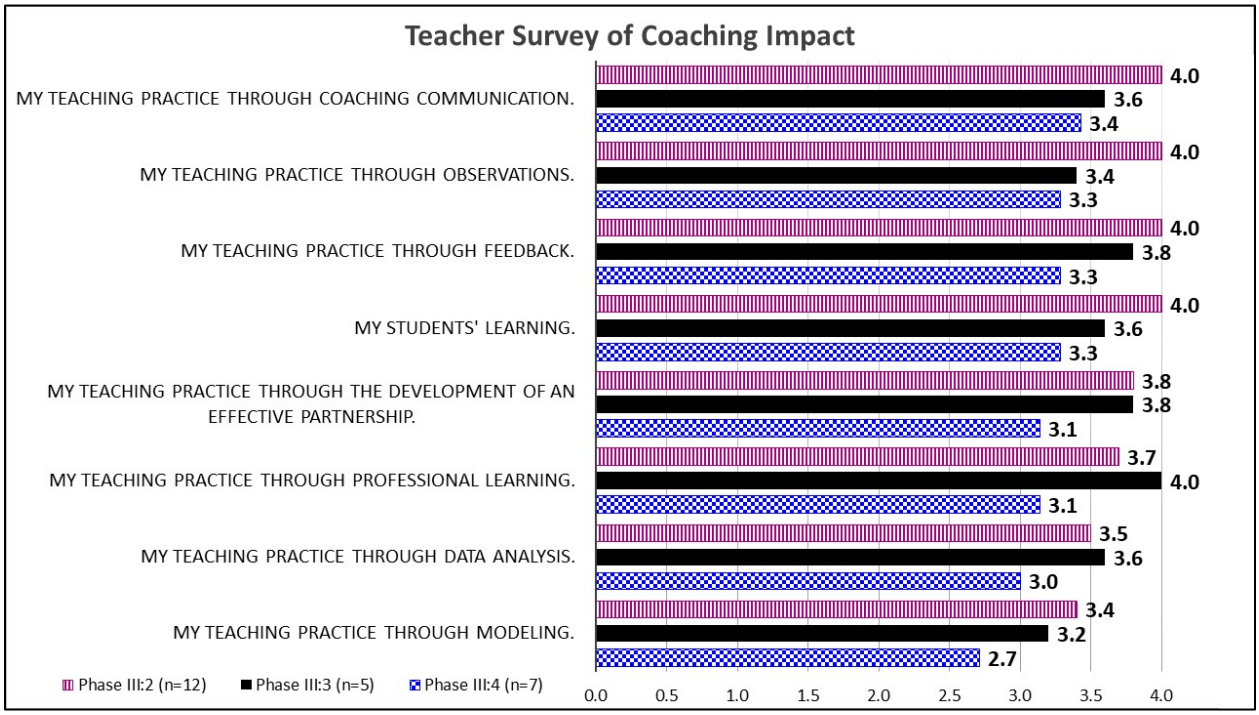

Analysis of the survey's open-ended responses found that within TZ Cohort 1, the region's support resulted in successes in building capacity to support BITs and additional scale-up with new schools. TZ Cohort 1 DIT members attributed these successes to the RITs being responsive to questions, providing insight, assisting in action planning, and modeling the work; "Modeling, walking us through the process of exploration and installation". A TZ Cohort 1 DIT member shared that they would like "more optional training opportunities available for teachers and coaches" and another member requested additional help in making resource allocation decisions during scale-up activities.

Analysis of the survey's open-ended responses found that within TZ Cohort 2, the region's support resulted in successes building capacity to select effective innovations, observing mathematics instruction, and building more effective district-wide communication; "I think the information we are using to choose an innovation is very helpful. The tool allows us to look at the innovations in a variety of ways that will enable us to make better choices for instruction" and "Our communication protocols have also improved ensuring consistency throughout the district". TZ Cohort 2 DIT members attributed these successes to the RITs offering consistent guidance, "By meeting with us and training us on how to roll out information, it helps us troubleshoot and decide how best to move forward". Several TZ Cohort 2 DIT members shared that they would like communication to move at a faster pace across the linked-teaming structure and requested that meetings become more condensed.

**Use of Teacher Feedback on Coaching Supports**

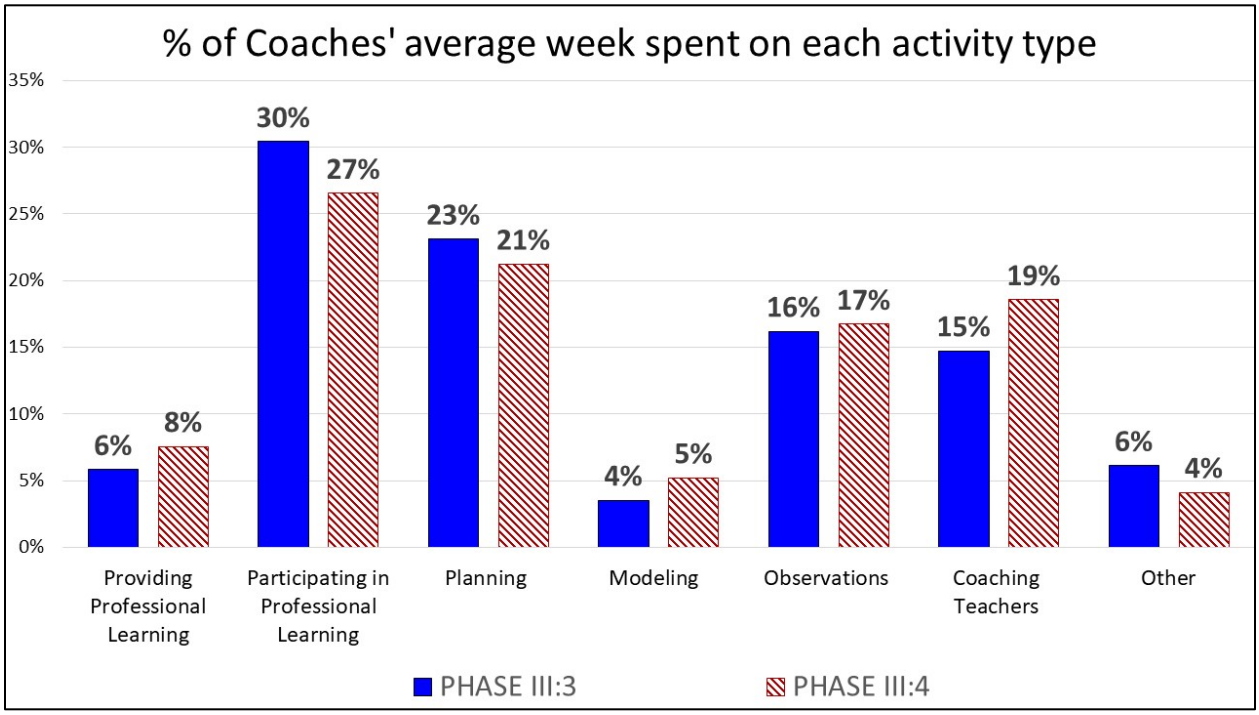
Districts measure the effectiveness of their coaching system with a coaching effectiveness survey (four-point Likert scale; 1-Strongly Disagree to 4- Strongly Agree) completed by teachers (see Phase III:2, p. 27). Figure 15 is an example from a TZ Cohort 1 district within a TZ Cohort 1 region. While the response rate change makes year-to-year comparison less impactful, the overall agreement level of teachers about coaching's positive impact was less strong than the previous phases.

*Figure 15. Coaches support of teacher implementation*




When the teacher survey results are compared to an analysis of the coaches' average week spent on each type of coaching activity (see Figure 16) for this same TZ Cohort 1 district within the same region it is shown that the three areas where teachers had the lowest agreement coincided with the three activities that coaches were least engaged in. The STS will schedule time across the TZ Cohorts to assist in review and action planning based on survey results.

*Figure 16. Coaches average percentage of effort on weekly activities*

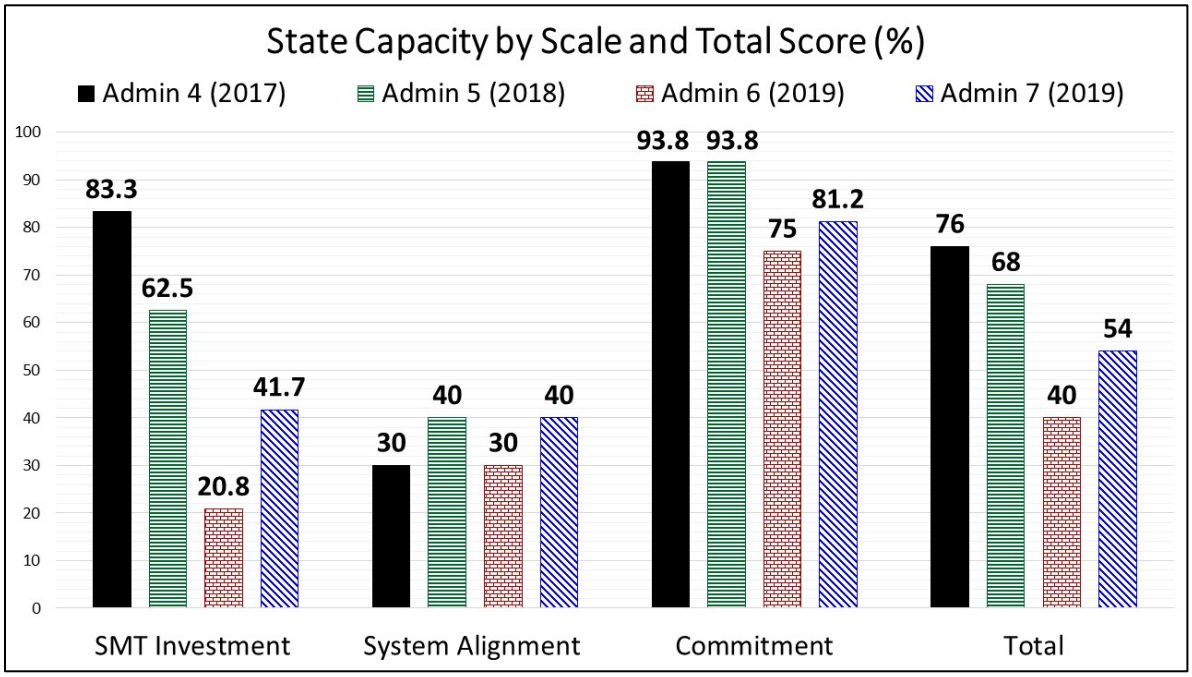



## Capacity Measurement across the Infrastructure

*State Capacity Measurement*

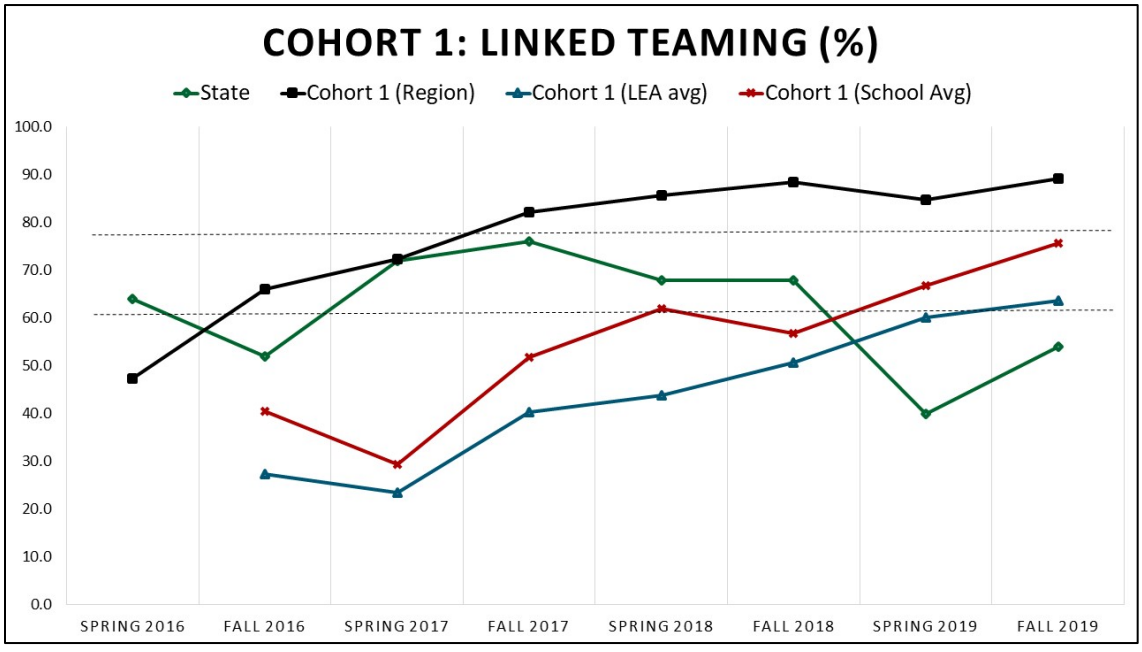
The KDE has engaged in a SCA twice a year since Phase I of the SSIP. The data is utilized to develop Action Plans designed to build capacity to support implementation of EBP. More information about the SCA can be found in Phase III, page 30. The SCA has three subscales that focus on SMT Investment, System Alignment, and Commitment to Regional Implementation Capacity (see *Figure 17*). System Alignment has had continuing barriers throughout the SSIP process that the KDE continues to address in SMT meetings. SMT Investment saw an increase during Phase III:4 from a previously sharp decline due to reorganization activities within the SEA. While the total capacity score was still below the 60% target, the state's capacity grew more than any other 6 month period since the SCA was updated (2016).

*Figure 17. State Capacity growth over the SSIP timeline*



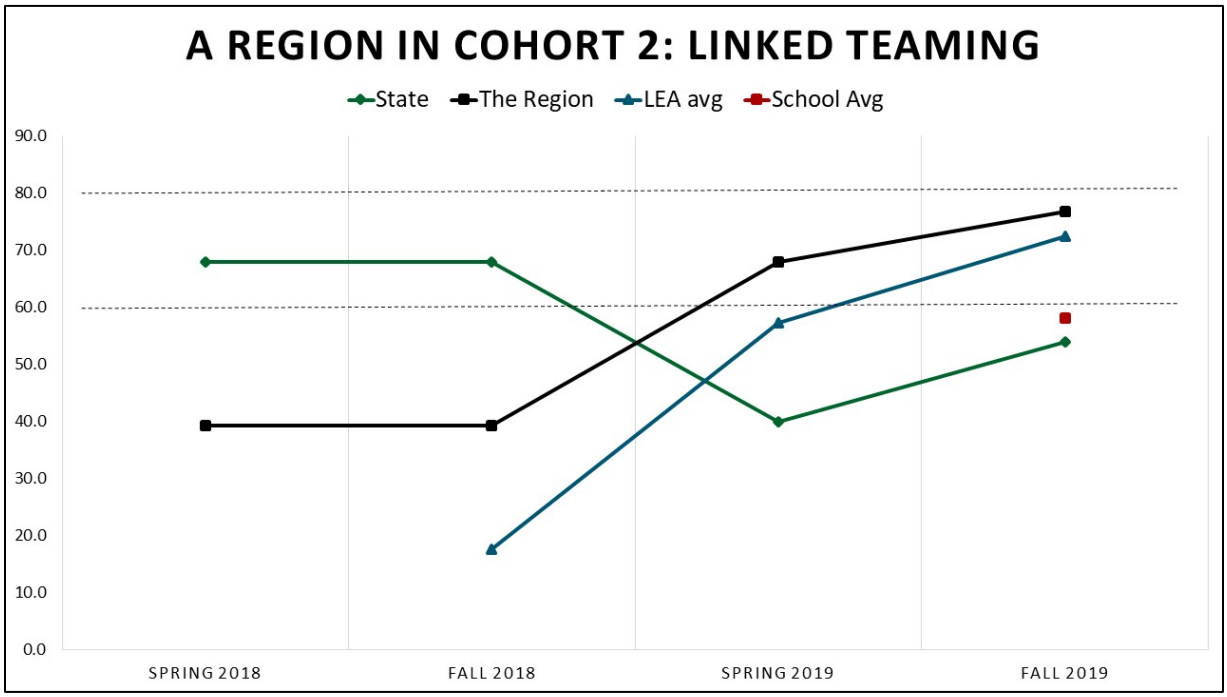

Analysis of TZ Cohort 1 implementation capacity at each level of the linked teaming system over the SSIP is reviewed semi-annually by the STSs and SMT (see *Figure 18*). Through Phase III:3, capacity growth for many TZ Cohort 1 teams was slowing as a result of implementation teams adjusting to expansion activities. During this phase, capacity assessments showed a growing level of infrastructure development as the district and school capacity score average rose above the 60% target.

*Figure 18. Capacity Assessment Scores over the SSIP timeline*



Analysis of TZ Cohort 2's linked-teaming capacity timeline, like TZ Cohort 1, has shown steady growth during Phase III:4 throughout the TZs (see *Figure 1*9). A closer examination of a district within TZ Cohort 2 shows that, as anticipated, capacity has grown quicker than TZ Cohort 1 districts experienced; with the district and school average capacity score reaching the 60% target a full year and a half earlier.

*Figure 19. Capacity Assessment Scores for a Cohort 2 TZ over the SSIP timeline*




## ***D. Data Quality Issues***

*Capacity Assessments*

In previous phases of the State Systemic Improvement Plan (SSIP), completion of the capacity assessments and action plans every six months was identified as a barrier to progress within the Transformation Zone (TZ) (see Phase III:2, p. 29). By adjusting the administration window (see Phase III:3, p. 40), regions and districts greatly improved in consistently administering capacity assessments. However, the school capacity assessment remained a challenge due to the limited time during the school day for administration. To address this barrier, Building Implementation Teams (BITs) are selecting a representative group to score the assessment and report back to the team. The BIT then action plans together. Overall, this has improved the administration of the school capacity assessment because it reduces the number of teachers and staff that have to be away from their classroom. As a result of adjusting the assessment windows and changes to the school scoring team, the majority of TZ Cohort 1 and 2 regions, districts, and schools have improved greatly with consistently administering capacity assessments.

The Kentucky Department of Education (KDE) will continue to use the same capacity assessments with the proposed State-identified Measurable Result (SiMR). The capacity of the state, regions, districts and schools to support the implementation of Positive Behavior Interventions and Supports (PBIS) will be measured.

*SSIP Data Dashboard*

The SSIP Data Dashboard has been a central focus for implementation teams at every level of the system (see Phase III:2 p. 8). The KDE's Chief Digital Officer presented the SSIP dashboard building experience with other states during the April 2019 State Personnel Development Grant (SPDG) Director's Webinar. The presentation focused on how the Data Dashboard has been a low cost, high impact coherent data system that TZ teams have used to make decisions at all education levels (state, regional, district, school).

The Data Dashboard is not currently automated and requires a data manager to upload data on a regular schedule. Please see page 16 more information on data quality.

The Data Integration Team will conduct a data inventory to determine what tools can be repurposed to support PBIS. Please see page 16 for more information.

*Accurate Entry and Analysis of Behavior and Discipline Data*

Through the IDEA monitoring, there is data to show districts need support on accurately capturing behavior/discipline data in the student information system, Infinite Campus (IC). Please see page 5 for information.

*Small n-size*

As referenced previously, the smaller nature of TZ based work limits the n-size of surveys, capacity assessments, and fidelity measures. Generalizability of findings is inhibited by these small n-sizes. Successful rounds of scale-up have diminished the low n-size for many instruments and future trend analysis is expected to be more stable.

This barrier should be less of a factor for the proposed new SiMR since there are multiple components of infrastructure in place to leverage. This will allow greater reach across the state and a larger number of regions and districts to participate within the Transformation Zone.

## ***E. Progress Toward Achieving Intended Improvements***

During Phase III:4, the Kentucky Department of Education (KDE) focused on sustaining the systems of support for mathematics. Simultaneously, based on feedback from Directors of Special Education (DOSEs) from across the state, a data and infrastructure analysis was conducted to determine whether revisions to the State Identified Measurable Result (SiMR) were

necessary to impact student outcomes. Through this process, a new SiMR, Theory of Action, and evaluation plan (see p. 7-8, 62-65) were drafted based on the existing infrastructure and coherent improvement strategies applied within the KDE's State Systemic Improvement Plan (SSIP) focused on mathematics. By repurposing these structures, the KDE will have a greater reach across the state to support the effective implementation of Positive Behavior Interventions and Supports (PBIS), leading to a reduced number of physical restraints and removals for students with disabilities (SWD).

Infrastructure

*Teams*

Implementation teams at each level of the system (state, region, district, and school) continue to use implementation data (capacity, student benchmark, training, coaching, fidelity) to inform the system of support for teachers. They use communication plans to lift up barriers to the appropriate level that can solve them.

The inclusion of principals on District Implementation Teams (DITs) was a focus area during Phase III:3 (p. 41). This has remained a priority in Phase III:4 and is part of the mutual selection process for districts. When principals participate on a DIT there is greater collective commitment from teachers and implementation barriers are removed more efficiently due to district support. As the KDE transitions to a new SiMR, principals will continue to be included on the DIT.

*State Personnel and Development Grant (SPDG)*

As discussed in Phase III:2, the KDE was awarded a new SPDG (Phase III:2, p. 31). Qualitative and quantitative data showed a need to focus on behavior through Positive Behavioral Interventions and Support (PBIS). The systems and structures used in the SSIP have been replicated to support the SPDG.

During Phase III:4, the KDE hosted a SPDG Summit for districts. The summit included a general session on Implementation Science to begin scaling capacity on the use of the five Active Implementation Frameworks and align with the SSIP. This included an introduction to the National Implementation Research Network's (NIRNs) Hexagon Tool that was revised to align the SSIP and Every Student Succeeds Act (ESSA). In addition, the Early Childhood Regional Training Centers (RTCs) also engaged in a work session to begin training on the Active Implementation Frameworks for future PBIS work funded by SPDG. These activities supported readiness development for scaling-up to additional districts within the state.

Following the summit, districts participating in the SPDG have formed DITs and are being trained and coached by the State Transformation Specialist (STS). A SPDG Data Dashboard is

being built under the guidance of the District Data Integration Team to ensure that continuous improvement efforts are guided by timely, transparent, and accurate implementation data.
As the KDE transitions to a new SiMR, there is a solid foundation to support PBIS implementation within the state. The special education Regional Education Cooperatives have received training and coaching on the Active Implementation Frameworks through the SSIP. This has expanded to the RTCs during Phase III:4 through the SPDG. Both regional entities have behavior coaches available to support districts and schools on the effective implementation of PBIS in preschool through 8th grade.

There are also several entities across the state that support PBIS implementation, including Kentucky Academics and Behavioral Response to Intervention (ABRI), Project Link Teaming, and Link to Kindergarten (Link2K). Each of these projects support the KDE's SPDG and align to the SSIP by using components of implementation science to ensure capacity building and sustainability. The State Design Team (SDT) will reconvene to develop a plan for aligning and leveraging resources for PBIS and repurposing the existing linked teaming structure developed for mathematics. This will begin the process for merging the SSIP and SPDG into utilizing one infrastructure to impact the new SiMR.

*Collaboration for Effective Educator Development and Reform (CEEDAR)*

The KDE continues to support the work of the CEEDAR center. The KDE's STS and SPDG Coordinator serve on the State Leadership Team to align the goals of the SiMR to the mission of the Kentucky Excellence in Educator Preparation (KEEP), which is Kentucky's name for the CEEDAR work.

Fidelity

Project measures linked to training fidelity, EBP fidelity and infrastructure development fidelity were monitored as in previous phases (see Phase III:3, p. 28-32). Behavior activities will also be aligned to implementation fidelity instruments that will be regularly monitored and shared through the Data Dashboard.

Progress toward Achieving the SiMR

The KDE is using the tiered model of support as the means for implementing systems change (see Phase III:3, p. 42). Outcome data regarding progress toward short-term and long-term objectives towards achieving the SiMR are still embedded into the evaluation measures. As in past phases, the SSIP logic model (see Phase II, p. 31) was reviewed but no changes from previous phases were necessary (see Phase III:2, p. 38). The SSIP remains on target to meet all necessary steps of the project design.

Kentucky's state assessment uses four scales, Novice, Apprentice, Proficient, and Distinguished. The main objective of the SiMR is to increase the percentage of students with disabilities performing at or above proficient in middle school math, specifically at the 8th grade level (see Table 24). Through the SSIP activities the State also anticipated to experience a decrease in students with disabilities performing at Novice in middle school math, specifically at the 8th grade level (see Table 25).

*Table 24. SiMR Target: KY 8th grade mathematics proficiency for students with IEPs*

| Proficient and Distinguished<br>8th Grade -- Disability-With IEP (not including Alternate) | | | | | | |
|---|---|---|---|---|---|---|
| | baseline 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Goal | 14.0% | 22.2% | 30.9% | 39.5% | 48.2% | 56.8% |
| Actual | | 12.8% | 13.4% | 16.4% | 15.2% | 14.5% |

*Table 25. KY 8th grade mathematics noviceness for students with IEPs*

| Novice<br>8th Grade -- Disability-With IEP (not including Alternate) | | | | | | |
|---|---|---|---|---|---|---|
| | baseline 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Goal | 48.3% | 44.6% | 39.6% | 34.7% | 29.7% | 24.8% |
| Actual | | 45.6% | 51.3% | 47.8% | 48.3% | 48.0% |

Unfortunately, the 2018 SiMR goal target was not achieved as this past year's SiMR proficiency rate declined 0.07 percentage-points from Phase III:3. The state is still encouraged that the longest implementing TZ Cohort 1 schools have exhibited less novice performance and more proficiency by students with a disability.

Summative data from the two longest implementing SSIP Elementary Schools (see Figure 20) shows that students with disabilities had a reduced incidence of novice by 10.6 percentage points within two years; the two longest implementing SSIP Middle Schools (see Figure 21) had a 14.7 percentage-point decline in SWD novice over a three year period. In addition, there is a notable decrease (see Figures 20-21) in Novice performance in other subpopulations including elementary African American, middle school Free and Reduced Lunch. This is preliminary evidence of meeting the first initial goal of reducing novice performance identified within the SiMR.

*Figure 20. Year to year novice rate from summative assessment results from a sample of TZ Cohort 1 Elementary Schools*

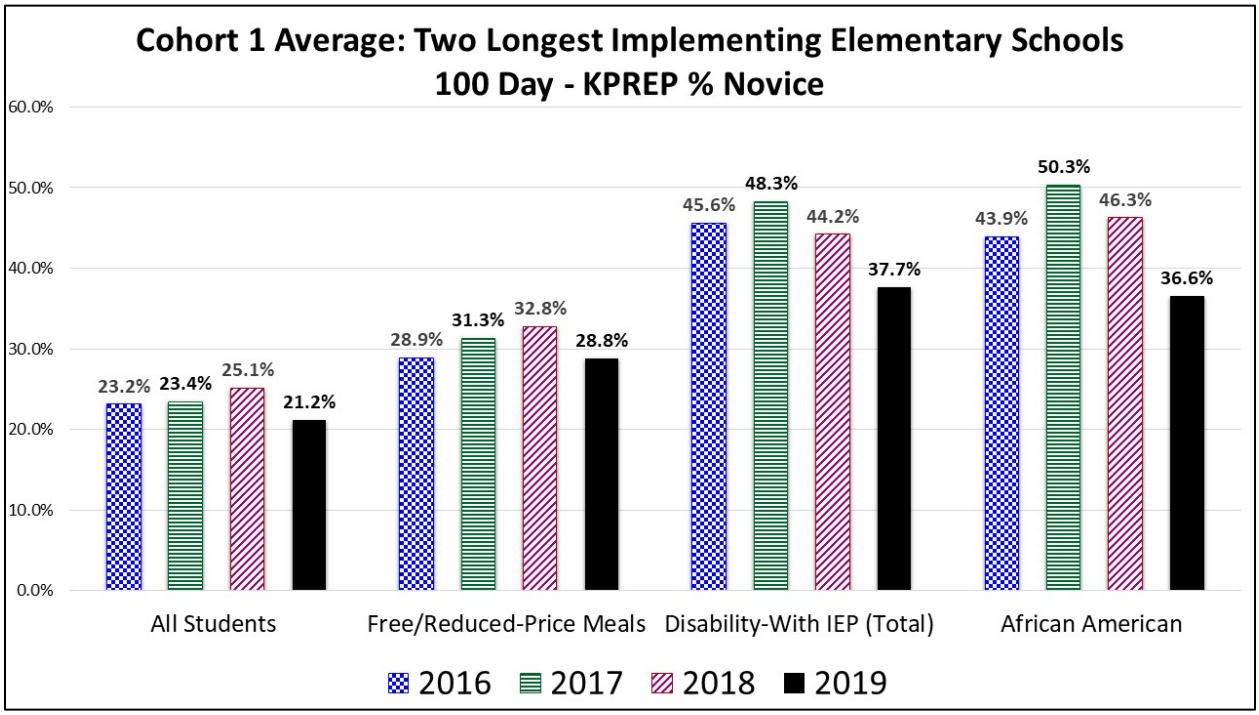
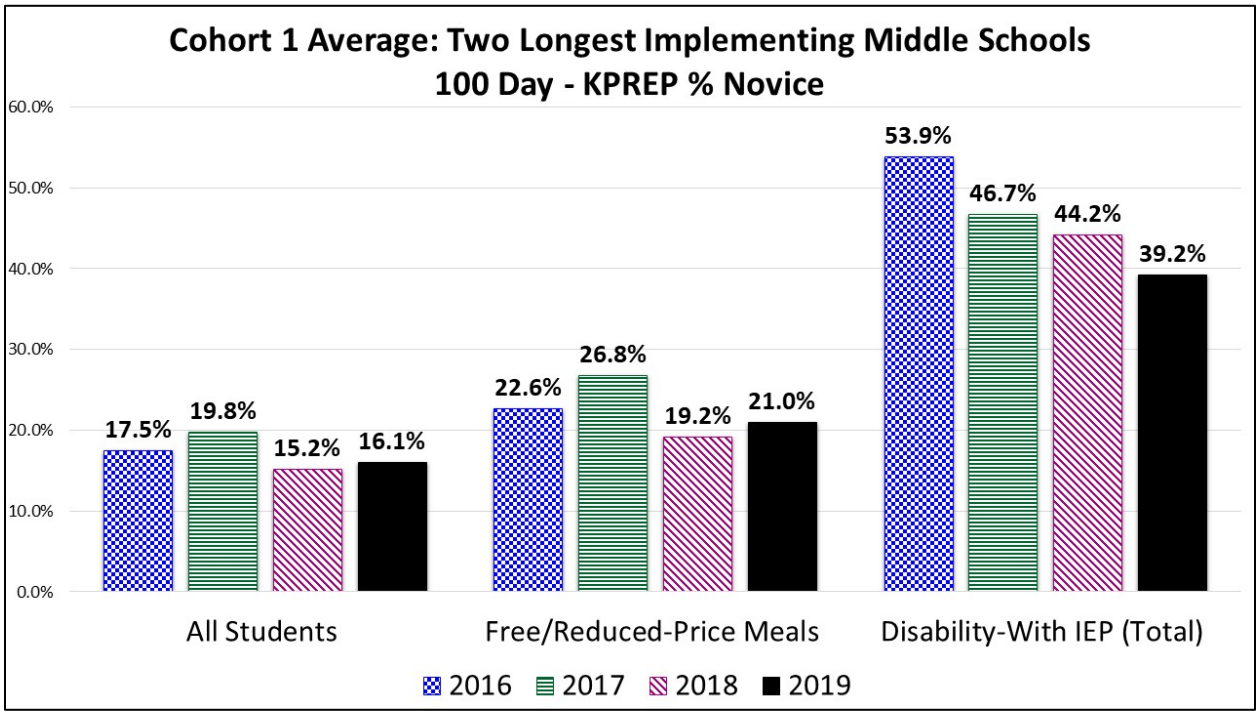



*Figure 21. Year to year novice rate from summative assessment results from a sample of cohort 1 Middle Schools*




The main objective of the SiMR is to increase proficiency. In only one year, with the infrastructure in place, initial evidence from the state summative math data in this same

elementary school sample (see Figure 22) suggests that on average all students increased proficiency from 2018 to 2019 by 5.0%. SSIP Elementary Schools shows that students with disabilities had an increased incidence of proficiency by 11.5 percentage points within two years; the two longest implementing SSIP Middle Schools (see Figure 23) had a 12.7 percentage-point increase in SWD proficiency over a three-year period.

*Figure 22. Year to year proficient and distinguished rate from summative assessment results from a sample of TZ Cohort 1 Elementary Schools*

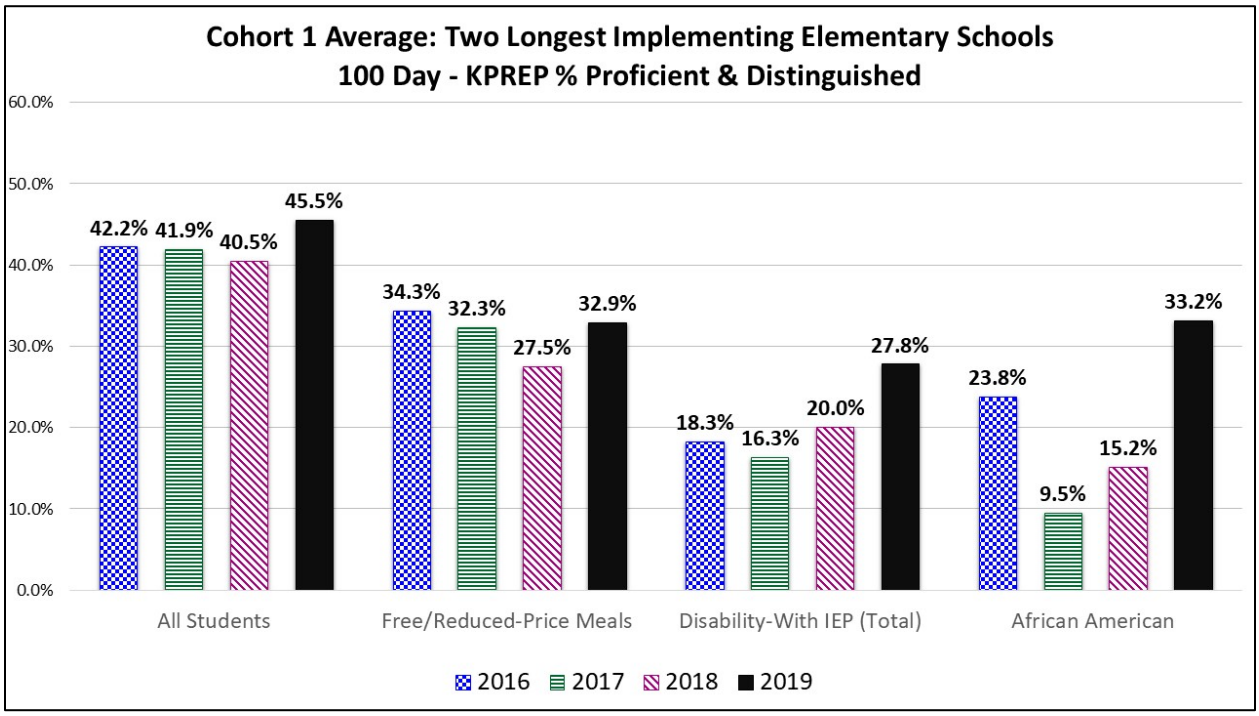
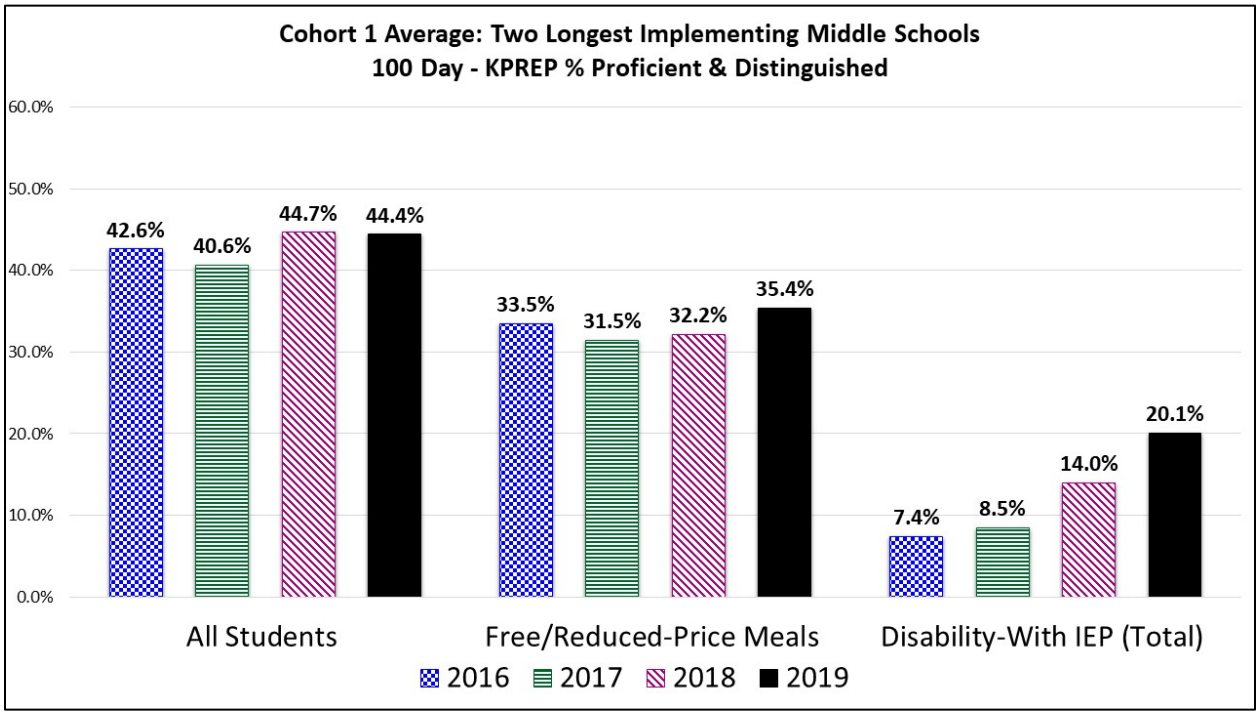


*Figure 23. Year to year proficient and distinguished rate from summative assessment results from a sample of TZ Cohort 1 Middle Schools*




Although there has been progress towards the SiMR within the TZ, there has still been limited statewide impact. Through data analysis with district and regional stakeholders across the state, it was determined that SWDs cannot receive effective mathematics instruction if they are removed from the classroom or physically restrained. Further analysis verified this hypothesis because districts where less than ⅕ of SWDs (K-8) had behavior events during the school year were 5.3 times more likely to have a mathematics proficiency rate for SWDs that was more than double the state average [2017-18]. As a result, districts and schools need additional training and coaching on establishing a system of positive behavioral interventions and supports. By repurposing the infrastructure established for mathematics and combining it with the support offered through the SPDG in Kentucky, there will be a much greater reach across the state. This will allow more districts and schools to benefit, thus impacting the new SiMR.

Proposed Behavior SiMR Targets

As the state progresses into Phase III:5 implementation of its behavior activities will begin, requiring the SiMR target to be adjusted.

To measure the impact on student outcomes, the SiMR target must incorporate metrics that are sensitive to education professionals' successful implementation of PBIS. Therefore, any K-8 student with an IEP in the district who has been physically restrained {PR} or has been assigned certain removals[1] (primarily out of school or in-school suspension) as a behavior event resolution

should be captured within the commonwealth's target. The SSIP objectives align to short, intermediate, and long-term outcomes that will facilitate the implementation of PBIS by schools and teachers. Teachers will also be trained and coached in the use of evidence-based behavior interventions that empower teachers to manage students' negative behaviors in a manner that helps students re-engage in classroom instruction without increased escalation towards physical restraint and removal. To this end, meeting the SiMR target relies on districts supporting teachers as they de-escalate behavior events so that current resolutions (physical restraint and removal) are mitigated and students spend more days engaged in instruction during the academic year. This outcome is quantified using the *Kentucky Ratio of De-escalation* that depends on two inclusion rules and a foundational metric dubbed the *Escalation Rate*.

A district's *Escalation Count* is the combination of all their K-8 IEP students' restraint and removal[1] days since the student's initial unwanted behavior escalated to a resolution that decreased their access to instruction. The *Escalation Count* is then divided by the total number of IEP students served (*Child Count)* to create the district's *Average Escalation Days per IEP Student (DpS)*. The SSIP activities will increase educators' knowledge and skills to de-escalate students, thus preventing student events that currently lead to a physical restraint or removal. The SiMR target has been built to show that the number of districts who have decreased their year-to-year *DpS* at or better than a set benchmark (Rule #1) or lowered/maintained their annual *DpS* to a set floor (Rule #2) must increase through the next five years.

**Rule #1: *%ΔDpS* is at or below -10.0%**

During the baseline year (2018-19) the state's *DpS* increased by 8.4%, so any district that has a decline in *DpS* is to be seen favorably because they have decreased student removals and restraints. For the state to reach a declining *DpS,* the annual goal for district *DpS* decline must be set more aggressively. For Rule #1, a benchmark of an annual decline of 10.0% or greater is established. This goal in a statewide view represents 10,173 less student escalation days per year, 0.125 less days per IEP student. If every district in the commonwealth met this goal for each of the next five years the state would experience 42,506 less student removal days per year, 0.59 less days per IEP student.

**Rule #2: *DpS* < 0.51**

An analysis of the baseline data showed that several districts failed to meet *the Rule #1* goal, because they had a very small *annual DpS* thus making Rule #1 more difficult to achieve. Therefore, a *DpS* floor is necessary and is set at half of a day. This rate was only achieved by 23.1% of all Local Education Agencies (LEAs) in the state for the year 2018-19. The State would have to cut its *DpS* by nearly two-thirds to meet Rule #2.

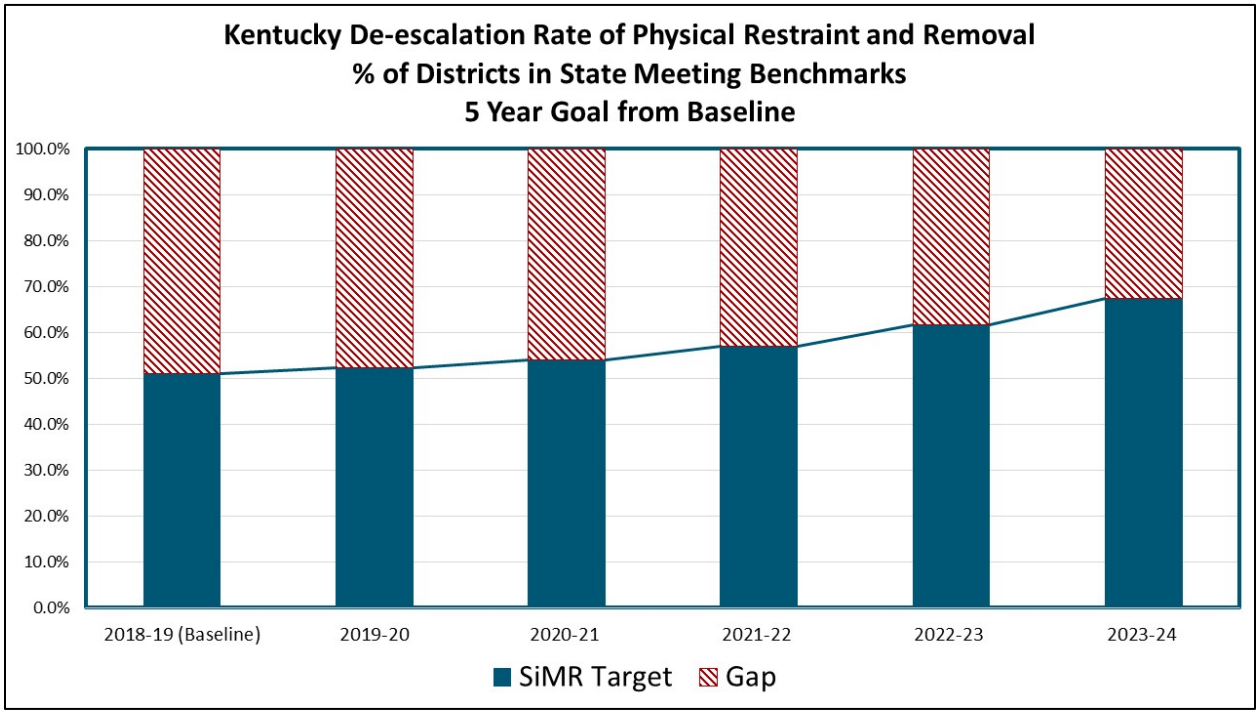
## Update Targets

The baseline (2018-19) Kentucky De-escalation rate was 50.9%. Given the SSIP's anticipated activities and scale-up intentions, the state is establishing the aggressive and achievable goal of splitting the gap of districts not meeting the two-benchmark rules by 1/3 before 2024-25 (See Table 26 and Figure 24).

*Table 26. SiMR targets for next five years*

| ***De-escalation Rate of Physical Restraint and Removal (% of Districts in State Meeting Benchmarks) K-8th Grade -- Disability- with IEP*** | | | | | |
|---|---|---|---|---|---|
| **2018-19 {baseline}** | **2019-20 Phase III:5** | **2020-21 Phase III:6** | **2021-22 Phase III:7** | **2022-23 Phase III:8** | **2023-24 Phase III:9** |
| **50.9%** | 52.3% | 54.0% | 57.0% | 61.6% | 67.4% |

*Figure 24. Graph of SiMR targets for next five years*



*Variables and Formulas*

***P_R*:** Sum of days where an IEP student was physically restrained during the academic year

***Duration*:** For each unique start date[2] of an IEP student removal[1] there is a duration (in fractional days) of the removal.

***Rem_Days*:** Each of these durations is rounded up to the next whole integer and then summed for the district. $\{Rem\_Days = \sum \lceil Duration \rceil\}$

***Escalation_Count:*** The total of *P_R* and *Rem_Days* during an academic year

***Child_Count:*** The total number of students with an IEP served in the district on October 1st of each year

***Average Escalation Days per IEP Student (DpS):*** The *Escalation_Count* divided by C*hild_Count* during an academic year

$\{ \mathbf{DpS} = ( P\_R + (\sum \lceil Duration \rceil) ) / (Child\_Count) \}$

***%ΔDpS****:* The year-to-year percent of change in the *DpS* $\{ \%\Delta DpS = (DpS_k - DpS_j) / DpS_j \}$

**n_meet:** The number of LEAs each academic year who meet either of these two rules:

Rule #1: *%ΔDpS* is at or below -10.0%

Rule #2: $DpS_k < 0.51\%$

***KRD (KY_Ratio of De-escalation):*** *n_meet* divided by the total number of LEAs in the commonwealth during an academic year

[1] Safe School Report – Variable *Type* – Codes Drug, Injury, INSR, SSP1, SSP2, SSP3, and Weapon

[2] When a student has more than one removal on a given date the overall duration is capped at one day

## ***F. Plan for Next Year***

With each component of the Theory of Action in place, the Kentucky Department of Education (KDE) will continue to support effective mathematics instruction to improve educational outcomes for students with disabilities (SWDs). The linked teaming structure, training, coaching, and data systems are all in place to ensure sustainability.

To improve the infrastructure and capacity of the KDE, milestones and timelines were developed to establish benchmarks for systems change for the proposed State Identified Measurable Result (SiMR) focused on behavior.

Infrastructure Development

- **Summer 2020**—Gather a stakeholder team to develop a Practice Profile for Positive Behavioral Interventions and Supports (PBIS)
- **Summer 2020**—Repurpose the District Data Integration Team to conduct a data inventory to determine which data collection tools can be repurposed from the mathematics State Systemic Improvement Plan (SSIP) and identify data collection gaps
    - Use learnings from mathematics Data Dashboard to develop a behavior dashboard
- **Summer 2020**—Determine with the State Management Team (SMT) which members should be added to the State Design Team (SDT) as a result of the SiMR change
- **Summer 2020—**Reconvene the SDT
    - Seek feedback on the proposed SiMR, Theory of Action, and Project Measures
    - Seek feedback on the data inventory and behavior dashboard
    - Develop a plan to align and leverage resources from across the state in PBIS
        - Use the plan to repurpose the linked teaming structure

Communication

- **Spring 2020**—Review infrastructure analysis results to leverage PBIS supports across the state
- **Summer 2020**—The SMT will revise the communication plan to reflect the new SiMR focus
    - Internal stakeholders from across the agency will be identified to support communication
    - External stakeholders will be identified to support communication

Transformation Zone (TZ)

- **Summer 2020**—Mutually select regions and districts to participate as a TZ
    - Use selection criteria to select TZ implementation team members
    - Install teams
- **Fall 2020**—Engage in installation activities with regions and districts
- **Winter 2020**—Engage in Initial Implementation with regions and districts

State Personnel Development Grant (SPDG)

- **Spring 2020**—Leverage SPDG projects (Link Teaming and Link to Kindergarten) to support the SSIP
    - The KDE State Transformation Specialist (STS) and SMT members will support the effective implementation of PBIS
    - The SDT will provide feedback on the SSIP and SPDG processes and how they can begin to merge

Future Evaluation Activities

The KDE intends to continue to analyze the data collected for the mathematics TZ members through capacity assessment cycles, implementation fidelity data, school next step plans, training data and outcome data to continue to refine its sustainability processes. Implementation teams across the Linked Teaming infrastructure will also continue to refine their practices using continuous improvement cycles and the aid of the *SSIP Data Dashboard.* No additional evaluation activities are planned at this time for mathematics activities (see Phase II, p. 19).

Logic Model

For behavior activities, a new logic model has been written to reflect the SiMR and Theory of Action (See Appendix F). The Logic Model supports the state's belief that students will most benefit from evidence-based practices (EBPs) that teachers implement with fidelity and that this fidelity is built on the foundation of supports provided by every member of linked-teaming infrastructure.

The behavior activities leverage 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 PBIS and evidence-based behavioral practices.
- Third, the SSIP leverages its implementation teams and training and coaching infrastructures to provide training and coaching to districts, schools, and teachers, grade preschool 8, within the Transformation Zones.
- Fourth, the SSIP scales up its activities across the state by expanding to additional district Transformation Zones and by increasing the implementation capacity of regional providers.
- Finally, the 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 implementation of PBIS and behavior instruction in grades preschool-8, resulting in a decrease in the duration of SWD being physically restrained and removed in Local Education Agencies (LEAs) across the state.

*SSIP Evaluation Questions*

The behavior activities maintain the SSIP evaluation questions accepted under Phase II (see p.33) and all performance measures still align to the original two evaluation categories. 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 based on the state's past six years of SSIP experience; they have also been cross walked to work in tandem to the project measures already in place for the SPDG. These project performance measures (see Table 27) will continue to be the foundation of the continuous program improvement process.

*Table 27. Project measures for behavior*

| Code | Type | Measure | How measured |
|---|---|---|---|
| T.1 | Training | 70% of Building Implementation Team members will report that the training they received increased their **knowledge** of how to implement PBIS | Surveys |
| T.2 | Training | 70% of District Implementation Team members will report that the training they received increased their **knowledge** of how to support schools in the use of PBIS | Surveys |
| T.3 | Training | 70% of Regional Implementation Team members will report that the training they received increased their **knowledge** of how to support schools in the use of PBIS | Surveys |
| T.4 | Training | 60% of Teachers will report that the training they received increased their **knowledge** of how to implement PBIS and evidence-based behavior interventions | Surveys |

| Code | Type | Measure | How measured |
|---|---|---|---|
| S.1 | Supports | 70% of Building Implementation Team members will report that the supports they received increased their **ability** to implement PBIS | Surveys |
| S.2 | Supports | 70% of District Implementation Team members will report that the supports they received increased their **ability** to support schools in the use of PBIS | Surveys |
| S.3 | Supports | 70% of Regional Implementation Team members will report that the supports they received increased their **ability** to support schools in the use of PBIS | Surveys |
| S.4 | Supports | 60% of Teachers will report that the supports they received increased their **ability** to implement PBIS and evidence-based behavior interventions | Surveys |
| I.1 | Installation | 70% of LEAs report the selection process was helpful to prepare them to implement PBIS | Surveys |
| I.2 | Installation | 70% of LEAs complete Year 1 activities as designed | Installation Checklist |
| I.3 | Installation | 60% of schools complete Year 1 activities as designed | Installation Checklist |
| I.4 | Implementation | 70% of Implementation Team action plans implemented with fidelity | Document Review |
| I.5 | Implementation | 60% of schools effectively demonstrate their PBIS practices are implemented and core features of the practice are in place (in accordance with their stage of implementation) | PBIS Fidelity Measures |

| Code | Type | Measure | How measured |
|---|---|---|---|
| I.6 | Implementation | Annually, 70% of teachers have met benchmark fidelity of implementation for the chosen evidence-based behavior interventions | Observation Tool for Instructional Supports and Systems (OTISS) |
| C.1 | Capacity | Annually, 80% of the non-school Implantation Teams reach the Acquisition benchmark for capacity to support implementation of PBIS | SCA, RCA, & DCA |
| C.2 | Capacity | Annually, 80% of the Building Implantation Teams reach the Acquisition benchmark for capacity to implement PBIS | DBPA |

Anticipated Barriers and Steps for Improvement

Anticipated barriers for the new SiMR include leveraging statewide resources for PBIS and repurposing the linked teaming structure. Below are the steps for addressing these challenges:

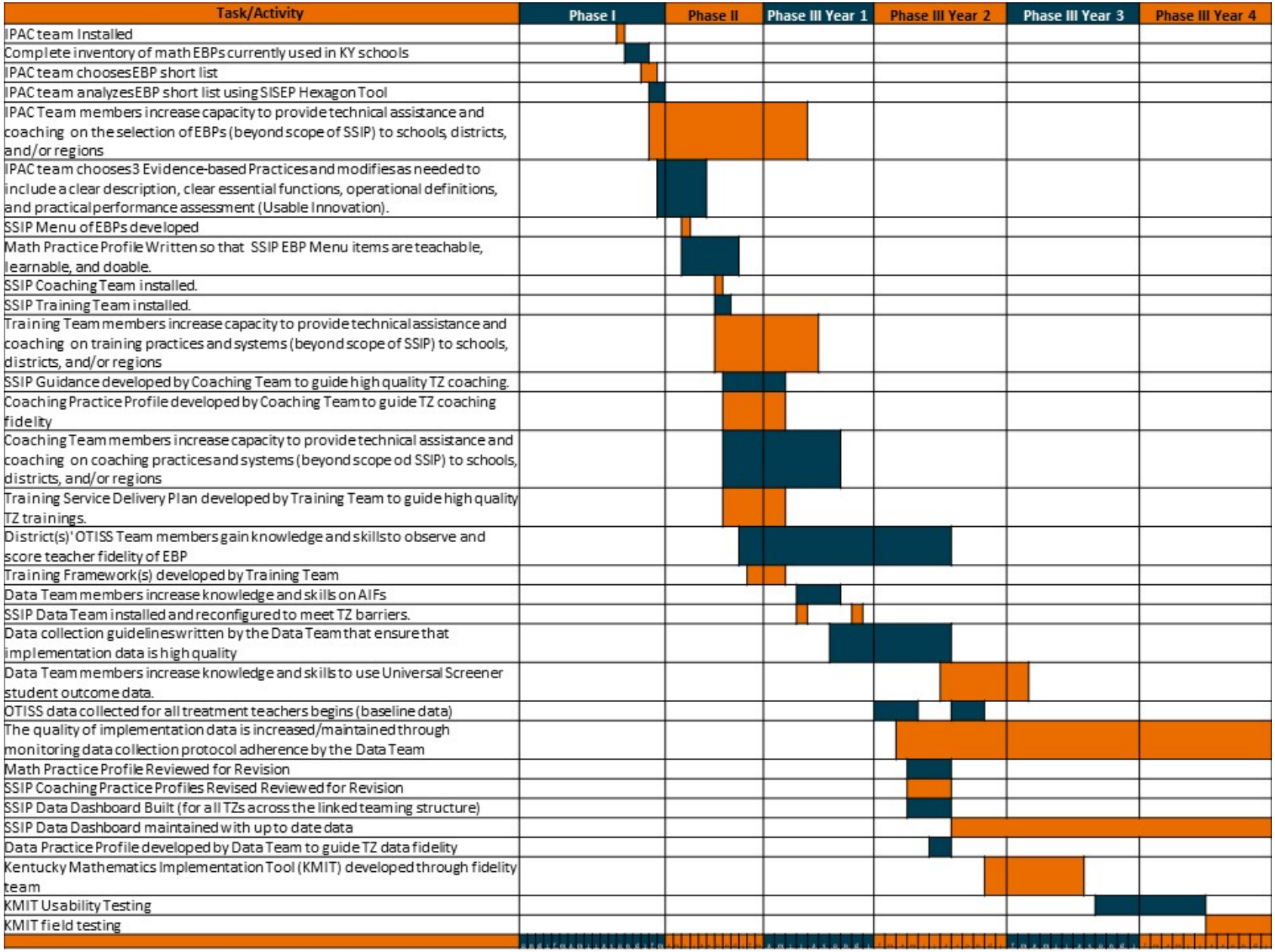
- Leveraging PBIS Resources and Linked Teaming Structure
    - Review the SDT membership with the SMT
        - Add members as needed to address PBIS
    - Reconvene the SDT to review the infrastructure analysis
        - Design a plan for aligning PBIS resources
        - Design a plan for repurposing the linked teaming structure based on how resources align

Need for Additional Support and Technical Assistance

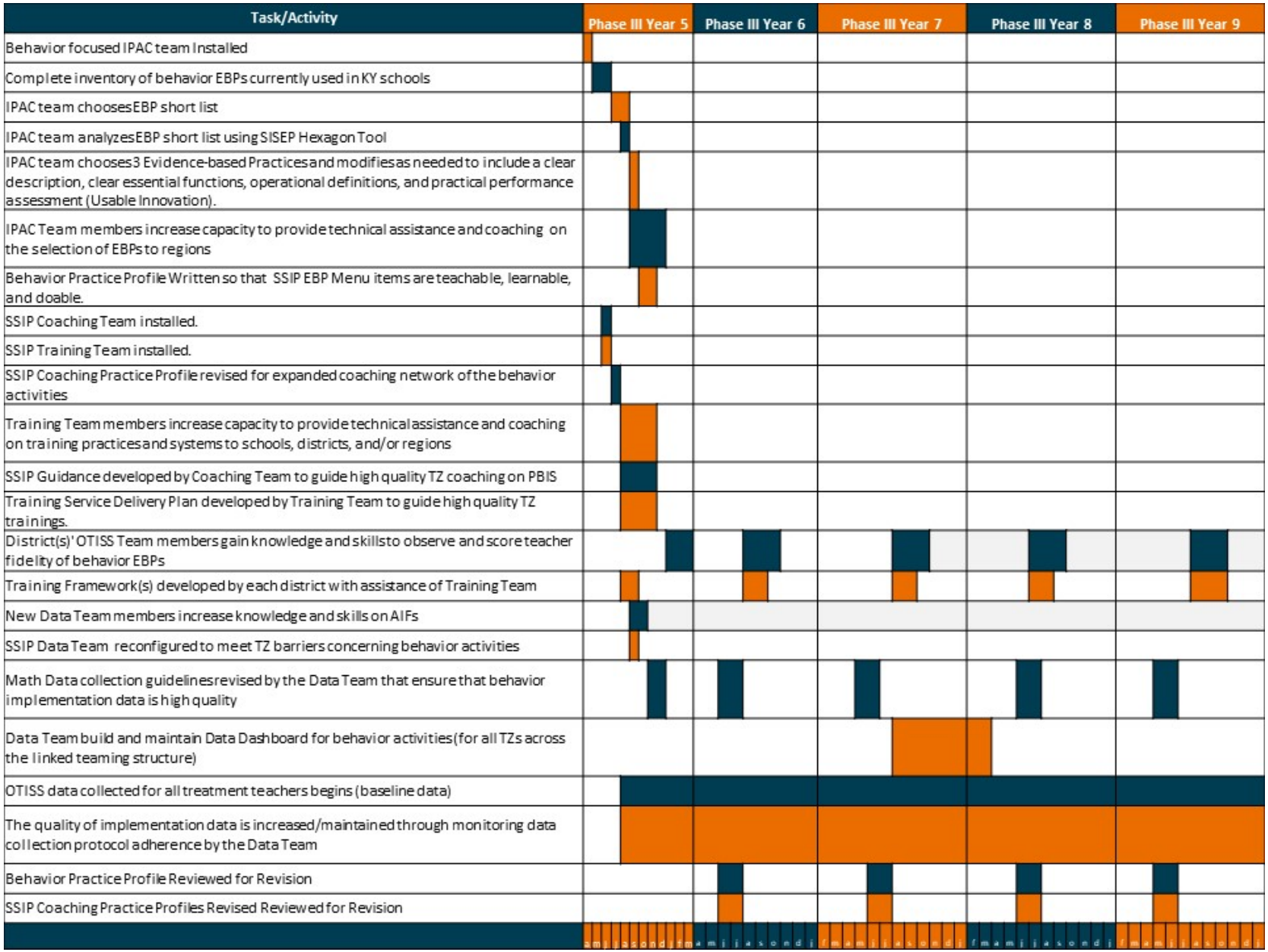
The KDE will continue its partnership with the State Implementation and Scaling-up of Evidence-based Practices (SISEP) center and the IDEA Data Center (IDC). In addition, the KDE has joined a cross-state collaborative with the National Center for Systemic Improvement (NCSI) on Results-Based Accountability. Each technical assistance center will support the KDE to align the systems and structures to improve educational outcomes for students with disabilities to meet the goals of the proposed SiMR.

# *Phase III:4 Appendices*

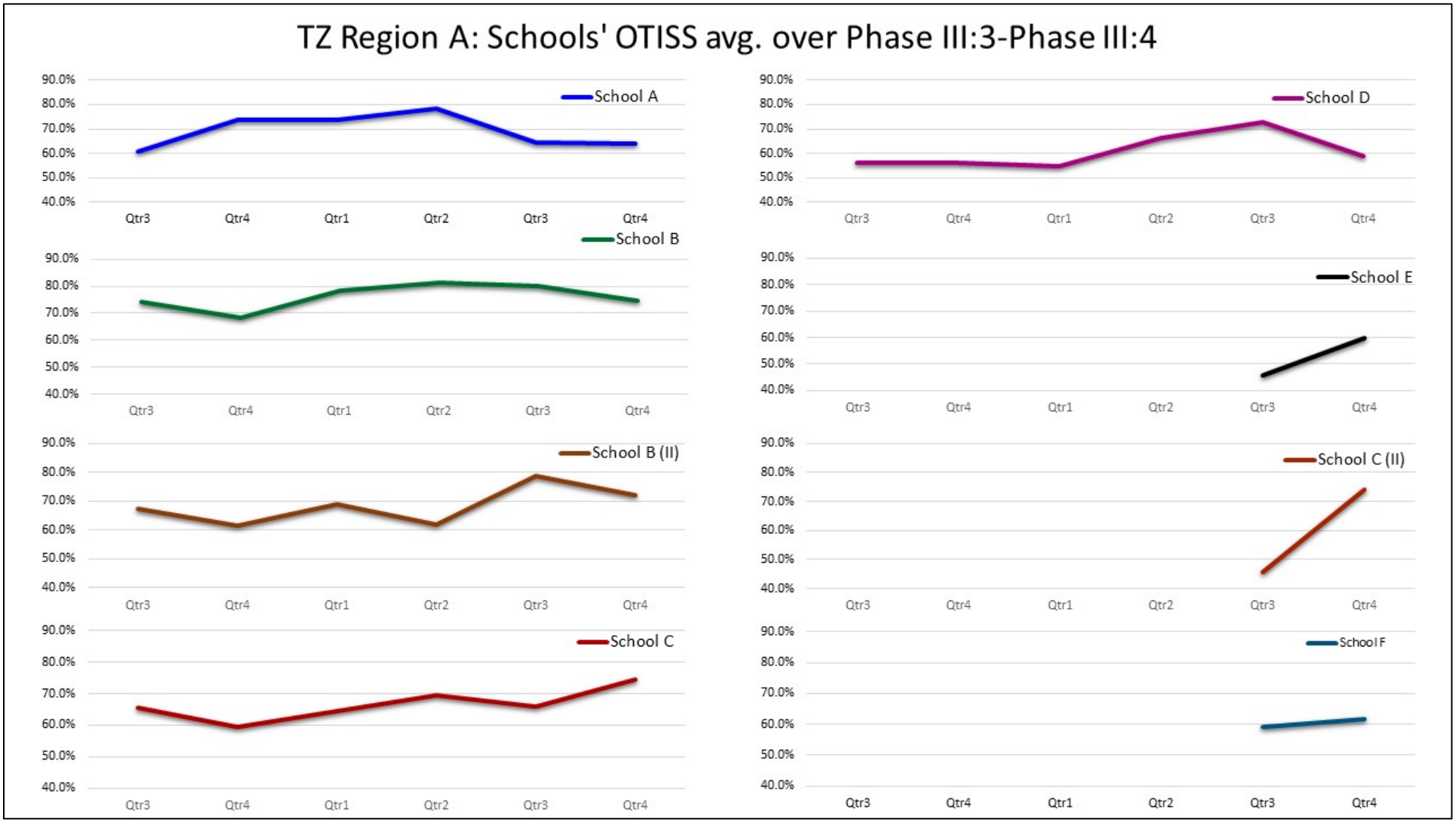
## Appendix A: Gantt Chart for Mathematics Activities



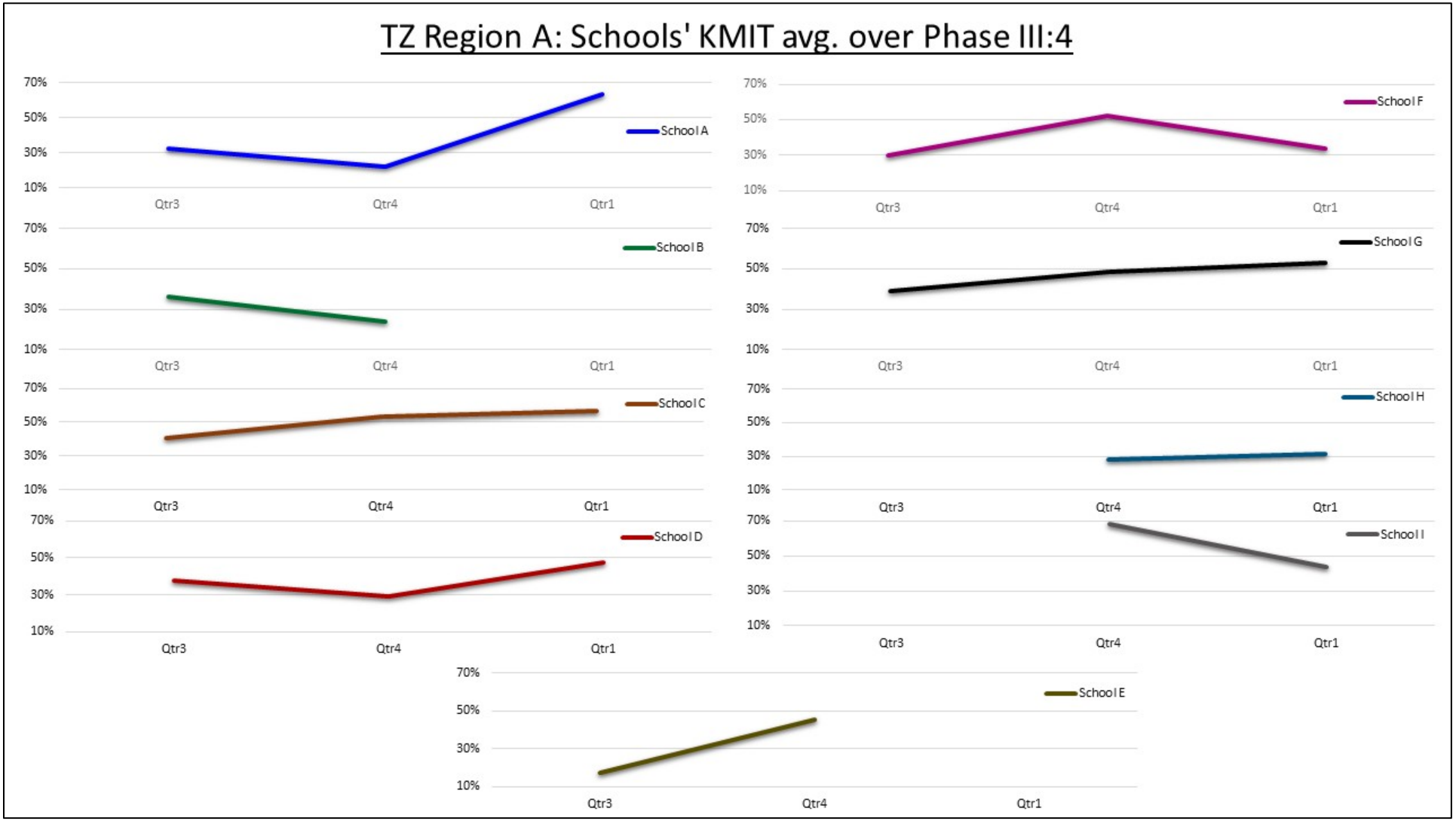
## Appendix B: Gantt Chart for Behavior Activities



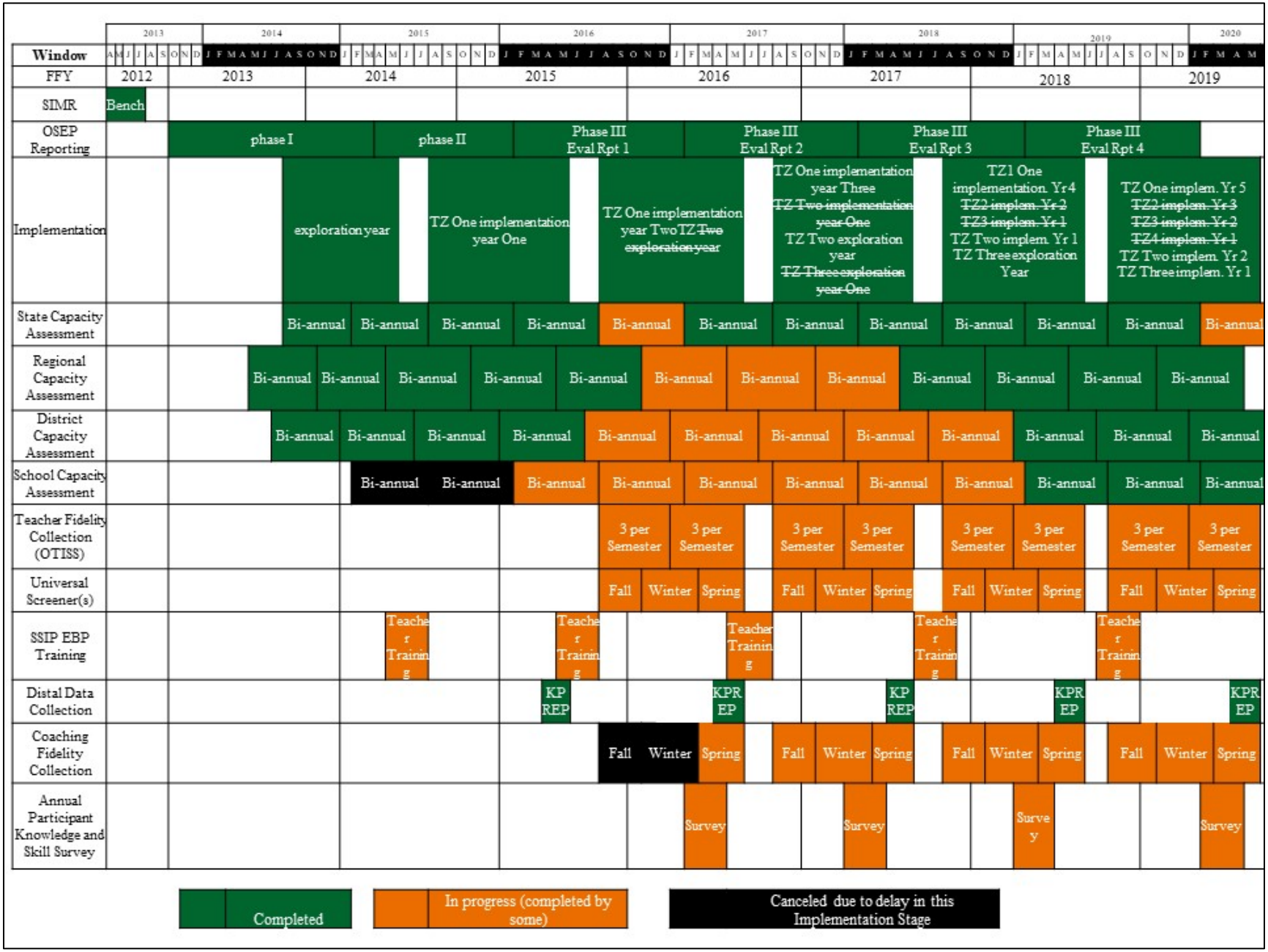
## Appendix C: OTISS Data



**Appendix D: KMIT Data**



## Appendix E: Timeline of Mathematics Activities



## Appendix F: Logic Model for Behavior Activities

| Inputs | Objectives | Outputs | Short-Term Outcomes | Intermediate Outcomes | Long-Term Outcomes |
|---|---|---|---|---|---|
| **KDE Staff**<br>▪ OSEEL<br>▪ LEAs<br>▪ DOSEs<br>▪ KY SPDG<br>▪ Regional Special Education Cooperatives<br>▪ Early Childhood Regional Training Centers<br>▪ Parent Training & Information Center<br>▪ State Advisory Council for Exceptional Children<br>▪ KY Council for Administrators for Special Education<br>▪ IHE faculty & consultants<br>▪ KY-Academic & Behavioral Response to Intervention<br>▪ KEEP (CEEDAR)<br>▪ UKY-Human Development Institute<br>**Fed. Collaborators**<br>▪ State Implementation & Scaling-up of Evidence-based Practices<br>▪ including Active Implementation trainers/coaches<br>▪ Pyramid Model Consortium<br>▪ IDEA Data Center<br>▪ Center on PBIS<br>**Technology**<br>▪ Infinite Campus<br>▪ Google Forms<br>▪ Google Dashboard<br>▪ SharePoint<br>▪ Evaluators | 1: To facilitate the selection of cohorts of school districts within each regional TZ to implement district-level PBIS | ▪ District selection criteria adapted<br>▪ Regional/district-level PBIS application & Mutual Selection adapted<br>▪ Scale up procedures written and targets created | ▪ 70% of LEAs complete Year 1 activities as designed<br>▪ 60% of schools complete Year 1 activities as designed<br>▪ 70% of participating LEAs report the selection process was helpful to prepare them to implement PBIS<br>▪ 70% of LEA and school personnel report training:<br>▪ Was high quality, relevant, & useful<br>▪ Increased their knowledge of:<br>▪ PBIS<br>▪ AIFs<br>▪ Data systems<br>▪ Sustainability<br>▪ 60% of teachers report training:<br>▪ Was high quality, relevant, & useful<br>▪ Increased their knowledge of:<br>▪ PBIS<br>▪ Evidence-based Behavioral Interventions<br>▪ 70% of LEA and school personnel report coaching:<br>▪ Was high quality, relevant, & useful<br>▪ Increased their skills to implement/refine:<br>▪ PBIS<br>▪ PBIS data systems<br>▪ AIFs<br>▪ 60% of teachers report coaching:<br>▪ Was high quality, relevant, & useful<br>▪ Increased their skills to implement/refine:<br>▪ PBIS<br>▪ Evidence-based Behavioral Interventions<br>▪ 70% of action plans implemented with fidelity<br>▪ Data systems provide reliable & useful data<br>▪ Families more aware of PBIS | ▪ 80% of LEAs achieve Acquisition on the DCA<br>▪ 80% of schools achieve Acquisition on the DBPA<br>▪ 60% of schools achieve fidelity on the PBIS fidelity measure<br>▪ LEA-level and school-level PBIS trainers & coaches facilitate professional learning with fidelity<br>▪ Enhanced instructional capacity to core instruction, increased fidelity of implementation of tiered behavior interventions, and more data-based decision making<br>▪ Decreased student behavior events involving physical restraint and removal<br>▪ LEAs staff facilitate school teams to articulate targeted, coordinated sets of implementation strategies<br>▪ Greater alignment of state & LEA's PBIS-related initiatives<br>▪ Communication plan reaches intended audiences<br>▪ Increased family awareness of PBIS<br>▪ Increased family engagement | ▪ 75% of LEAs reach and sustain Fluency on the DCA<br>▪ 70% of schools achieve Fluency on the DBPA<br>▪ 75% of schools sustain PBIS practices with fidelity<br>▪ State, regional, & LEAs structures, system, & capacity are in place to effectively implement & sustain PBIS across the cascade<br>▪ Improved school instructional climate<br>▪ **The number of instructional days where K-8 students with IEPs experience a physical restraint or removal is significantly decreased in each TZ LEA**<br>▪ Students more frequently receive instruction in general education settings<br>▪ Improved performance of students with IEPs on K-PREP assessment<br>▪ Enhanced capacity of state, regional, & LEA personnel to integrate AIFs into existing initiatives at each level of the cascade |
| | 2: To select schools within each TZ district to establish & implement PBIS & Evidence-based Behavioral Interventions | ▪ School selection criteria adapted<br>▪ School application & Give-Get updated for behavior activities | | | |
| | 3: To enhance the knowledge of regional & district administrators to support district-level PBIS implementation | ▪ PBIS training curricula established<br>▪ District-level PBIS trainers competencies identified<br>▪ District-level PBIS trainers trained to fill competency gaps<br>▪ Training provided on the AIF, district-level PBIS, PBIS data systems, & Leadership | | | |
| | 4: To enhance the knowledge of teachers & school staff to implement PBIS & Evidence-based Behavioral Interventions | ▪ School-level training curricula established for each tier of support<br>▪ Content trainers selected & trained<br>▪ Training provided on AIFs & School-level PBIS.<br>▪ Family training in place | | | |
| | 5: To increase the skills of regional & district administrators to support district-level PBIS implementation | ▪ SSIP Coaching practice profile adapted<br>▪ Monthly systems coaching visits<br>▪ Completed LEA action plans | | | |
| | 6: To increase the skills of teachers & school staff to implement PBIS & Evidence-based Behavioral Interventions | ▪ Monthly behavior coaching visits<br>▪ Completed school action plans | | | |
| | 7: To increase regional & district administrators' capacity to use data to support district-level PBIS implementation | ▪ Use Training & coaching fidelity tools already in place<br>▪ Capacity Assessments completed twice/year<br>▪ Data system in place to track implementation, fidelity, & outcomes<br>▪ Data Dashboard created | | | |
| | 8: To support regional & district administrators to sustain PBIS in their regions & districts | ▪ PBIS replication & sustainability plan<br>▪ Sustainability training provided RITs, DITS, and BITs meet monthly<br>▪ New staff onboarding procedures<br>▪ Communication plan | | | |