

## **Interconnected Systems Framework: School Health and Interventions for Nurturing Excellence (ISF-SHINE)**

Lake County Regional Office of Education (LCROE), in partnership with Midwest PBIS (Positive Behavior Intervention and Support), the country's leading Interconnected Systems Framework (ISF) technical assistance provider, the University of Illinois-Chicago (UIC) (a minority serving institution [MSI]), Katabasis, and WestEd propose Interconnected Systems Framework: School Health and Interventions for Nurturing Excellence (ISF-SHINE), an EIR Mid-Phase project to refine and scale the ISF. The ISF is an evidence-based systems change approach to incorporate school-based mental health (SMH) into a multi-tiered system of supports (MTSS) to improve the social and emotional well-being of all students, with a focus on promoting students' social, emotional, behavioral, and academic functioning (SEBA; Freeman et al., 2019). The ISF is currently implemented in hundreds of sites around the nation; however, extensive support is typically provided by the National PBIS Center or university researchers, making it difficult to scale. *Project ISF-SHINE aims to expand the reach of ISF across the U.S. by (a) making the ISF professional learning (PL) model replicable and scalable through the development of a free web-based PL platform, (b) implementing PL through a regional technical assistance agency, (c) bringing ISF to a new region of the U.S. (Midwest), and (d) implementing a randomized control trial (RCT) with more schools than any prior study.*

### **Absolute and Competitive Preference Priorities**

This proposed project meets **Absolute Priority 1—Moderate Evidence**. Rigorous research has demonstrated that key components of the ISF meet What Works Clearinghouse (WWC) standards for moderate evidence, including Positive Behavioral Interventions and Supports and Team-Initiated Problem Solving (TIPS) (see Evidence Form). This project also

addresses **Absolute Priority 4—Meeting Student Social, Emotional, and Academic Needs** by implementing SEBA prevention and intervention activities within a MTSS framework to improve students’ SEBA functioning and overall well-being. Additionally, through our partnership with the UIC, this project will address **Competitive Preference Priority 1—Promoting Equity in Student Access to Educational Resources and Opportunities: Implementers and Partners**. UIC, a federally designated MSI, will work with WestEd to collect all project data directly from districts and schools independent from LCROE and Midwest PBIS. UIC will be a critical evaluation partner with WestEd and provide additional support for the analysis and dissemination activities. Finally, ISF-SHINE will address **Competitive Preference Priority 2—Addressing the Impact of COVID-19 on Students, Educators, and Faculty**. All students were impacted by the pandemic, but particularly students in underserved communities where inequities in educational opportunity and outcomes existed previously. Through ISF-SHINE, we will help these schools build prevention, screening, and access to targeted and intensive mental health (MH) interventions for students in need to better enable students to access educational opportunities to succeed in school. Our team brings immense expertise, experience, and excitement to ensure ISF-SHINE exceeds all expectations.

### **A. Significance**

Schools are struggling to meet the social, emotional, and behavioral (SEB) needs of students, especially in the post-pandemic environment (Jones et al., 2022). Before the COVID-19 pandemic, between 13–22% of school-aged youth experienced a MH challenge to a degree warranting a formal diagnosis (NCSMHI, 2016). Alarming, data suggest that upwards of 80% of those children and youth have unmet treatment needs (McCance-Katz & Lynch, 2019; Reinert et al., 2021). This was exacerbated by the COVID-19 pandemic—87% of public schools

indicated that the pandemic negatively impacted students' SEB development during the 2021–22 school year and 84% agreed that students' SEB development had been negatively impacted (NCES, 2022). These impacts are likely to affect students for years to come, underscoring the need for school-based MH support at scale (U.S. Department of Education, 2021).

In response to this dire need, the U.S. Department of Education (ED), many state agencies, and many organizations that intersect trauma and adversity, child development, and education (e.g., National Child Traumatic Stress Network, 2021; National Association of School Psychologists, 2017; National Association of School Nurses, 2021) are advocating for multi-tiered approaches to scale evidence-based MH prevention and intervention into schools. This step is critical as children and youth are six times more likely to complete MH treatment in schools compared to community settings (Jaycox et al., 2010; Wilk et al., 2022), and MH services are most effective when integrated into students' academic instruction (Sanchez et al., 2018). *Notably, a recent guidance document from ED explicitly called for schools to consider building ISF into their regular practices to address this need (U.S. Department of Education, 2021).* We believe that ISF-SHINE has the potential to realize this call.

### **A.1. Demonstration of Promising Strategies That Build on Existing Strategies**

PBIS and SMH are helping to address SEB needs in schools, but each have their limitations. PBIS is a behavioral skills-focused MTSS emphasizing data-based decision making, effective teaming, and evidence-based practices over three tiers of prevention and intervention: Tier 1, or universal prevention for all children; Tier 2, or early identification and intervention for students with emerging problems or risks; and Tier 3, or intensive intervention for students with established problems, including those with disabilities (Sugai & Horner, 2020). There have been significant investments in PBIS, primarily through the ED's OSEP, which has supported the

PBIS National Center since the mid-1990s. Additionally, there is a growing evidence base supporting PBIS as a foundation for effective academic, social, and behavioral instruction (e.g., [REDACTED] et al., 2017) and a recent meta-analysis found that schools implementing PBIS with fidelity had fewer disciplinary issues, including fewer office discipline referrals and suspensions, and increased schoolwide academic achievement (Lee & [REDACTED], 2020). Research has also found benefits to school staff, including reduction in staff turnover, improved organizational efficiency, and increased perception of teacher self-efficacy (Charlton et al., 2021).

Similarly, SMH programs have evolved as it has become increasingly clear that clinic-based MH services are inaccessible to many students in need (Wilk et al., 2022). Like PBIS, there have also been significant federal investments in SMH (President’s New Freedom Commission on Mental Health, 2003; White House, 2023), including the National Center for School Mental Health (NCSMH) funded since the mid-1990s. Benefits of effective SMH include significantly improved access to MH services (Green et al., 2013), improved academic performance (Suldo et al., 2014) and attendance (Lim et al., 2023), reduced behavioral problems (Bohnenkamp et al., 2021), and improved emotional skills (Durlak et al., 2022).

An important concern with SMH is that it often involves a co-located approach, with clinicians implementing treatment separate from the schools’ MTSS or PBIS teams (Barrett et al., 2013). Research has shown that even when PBIS and community supported SMH are co-located and operating in the same school building, in almost all cases there is no functional collaboration, with near complete “parallel play” by these two efforts ([REDACTED] et al., 2017). Limitations of the co-located approach include clinicians not being involved in Tier 1 or Tier 2 programs and providing Tier 3 treatment services in isolation of school staff and teams—factors that degrade the impact of these services (Eber et al., 2019). Under this model, SMH services are

provided reactively, without the benefit of universal prevention, screening, or monitoring. As a result, students are often in crisis when referred (Dowdy et al., 2010), resulting in more intensive and costly interventions that have a lower likelihood of achieving desired outcomes (██████ et al., 2018). Together, these challenges lead to ineffective SMH programs that fail to improve outcomes valued by families, schools, and communities (Weist et al., 2014).

While PBIS and SMH models have individually demonstrated positive outcomes for students when implemented with fidelity, operating them in isolation can lead to overlaps, gaps, and inefficiencies. Moreover, the competing initiatives schools face, inadequate ongoing job-embedded professional learning related to SMH (Santiago et al., 2014), and a lack of true coordination and collaboration within an integrated framework often result in suboptimal implementation of either model (Langley et al., 2010). Although PBIS and SMH are prominent initiatives within the United States, a gap persists in both interagency coordination and demonstrable impact on addressing students' SEB needs.

***The ISF addresses limitations of both PBIS and SMH and improves the quality of services within and between the three tiers of MTSS by providing specific guidance on their systematic interconnection.*** In the early 2000s, the parallel functioning of PBIS and SMH began to be widely noted, and efforts began to join these two frameworks. This collaboration led to the development of the ISF, which augments essential aspects of PBIS and aligns education and MH systems to establish a single set of interagency teams who, together with families, develop a plan to support the SEBA needs of every student.

The ISF is a structure and process that maximizes effectiveness and efficiency by integrating and capitalizing on the strengths of (1) school and community MH supports and (2) the multi-tiered, evidence-based framework of PBIS. Through ISF, core features of PBIS (e.g.,

teaming, universal screening, data-based decision making) are enhanced and integrated with SMH initiatives and service providers, particularly at the Tier 2 and Tier 3 levels. In this way, the ISF provides a structure and process for establishing a single system of evidence-based practice (EBP) delivery across education and MH systems that can target students' SEBA needs in unison rather than in disconnected silos. The ISF approach emphasizes prevention; early identification; and universal, targeted, and intensive interventions with coordinated service delivery.

ISF has demonstrated promise for cohesively addressing the SEBA needs of students in schools. A recently completed RCT funded by the National Institute of Justice (NIJ), tested the impact of the ISF as compared to PBIS alone, or PBIS with SMH clinicians, operating separately, which is the norm (██████ et al., 2017). Statistically significant differences were found across several important outcomes in treatment schools, including an increase in student access to Tier 2 and Tier 3 supports, increased delivery of interventions by community MH clinicians, and reduced office discipline referrals and in-school suspensions (Weist et al., 2022). The results of this work are exciting but are tempered by concerns about replicability and scalability given the strong connection to university-based support and complex PL requirements. The current PL is resource intensive, particularly related to staff time, and typically requires university and community agency partnerships to deliver. **ISF-SHINE seeks to capitalize on these promising results and the limitations by developing a PL system to support ISF at replicable scale.**

Building on the research and experiences to date for the ISF, this project will test an ISF with a set of core components and the creation of an innovative PL Platform that supports continuous learning and implementation at replicable scale. ISF-SHINE will include the following core ISF features listed in Table 1.

**Table 1. Core features of ISF-SHINE**

<b>Core Component</b>	<b>Brief Description</b>
<b>DCLT</b>	A District-Community Leadership Team (DCLT) comprised of leaders from the district, youth-serving systems, and family groups that create a foundation for later districtwide implementation and dissemination (Swain-Bradway et al., 2015)
<b>PBIS</b>	PBIS is the foundation that ISF is built upon. Over 26,000 schools currently implement PBIS and evidence demonstrates positive impacts on students. Schools should be implementing or in the process of implementing PBIS.
<b>Family Partnership</b>	Family–school partnerships that seek to actively involve families in the planning and implementation of interventions and supports for their children
<b>Contractual</b>	Detailed memorandum of understanding (MOUs) between schools and collaborating MH centers
<b>EBPs</b>	Integration of PBIS and MH EBPs, ensuring that MH support is embedded within the broader PBIS framework and aligned with the school’s PBIS practices
<b>MH Integration</b>	The inclusion of community MH clinicians who work one full day per week in each school and meaningfully participate in MTSS teams
<b>TIPS</b>	PBIS teams that meet twice per month using the TIPS program (Newton et al., 2012) to monitor and refine EBPs across all three tiers of PBIS
<b>Universal Screening</b>	Universal screening of students’ SEB well-being, as well as disciplinary exclusion data (e.g., Office Discipline Referrals, Out of School Suspension) and results of statewide academic testing
<b>DBDM</b>	Data-based decision making using a systematic combination of screening data and data on school and academic functioning for students with and without disabilities using the Pathways model, a current EIR Early Phase project at WestEd
<b>Equity Review</b>	Student-level discipline and intervention data disaggregated by racial/ethnic group status, with any emerging inequities (Blake et al., 2011; Smolkowski et al., 2016) addressed through iterative problem-solving approaches (McIntosh et al., 2017)
<b>Fidelity</b>	Team fidelity measures taken at the start and end of each school year, augmented with monthly fidelity monitoring of Tier 2 and 3 services
<b>CoP</b>	A Community of Practice (Snyder & Wenger, 2010) among the ISF schools, with lessons learned shared between them
<b>PL Platform</b>	The development of a cutting-edge online platform designed to support continuous teacher learning and training to ensure the effective implementation of evidence-based practices and interventions in relation to the above activities

## **B. Strategy to Scale**

### **B.1. Strategies to Address Barriers to Sustaining and Scaling**

This project will address and overcome four barriers preventing the scaling of ISF: (1) The current PL model is not ready for replication and scaling; (2) Schools struggle to implement PBIS with fidelity; (3) Schools have been unable to partner with necessary external MH professionals; and (4) School teams often lack the knowledge and skills needed to implement evidence-based MH prevention and interventions.

**Sustaining and Scaling Strategy (SSS) 1. *Create the ISF-SHINE PL Platform, a free web-based resource.*** The ISF is complex, and school-based systems change is a process that must involve administrators, leadership teams, teachers, and all school staff. The ISF adds an additional layer of complexity: external MH staff and practices. The ISF Implementation Guide (Eber et al., 2019), co-authored by the ISF-SHINE co-PD, is a step-by-step guide to help schools develop ISF and address the complexity. However, it lacks standardized PL materials (e.g., presentations, worksheets) and resources (e.g., how-to videos, fillable forms, digital dashboards) to support PL and the implementation process. With the support of Katabasis, a non-profit organization of computer scientists focused on improving educational outcomes for youth, we will create the free ISF-SHINE PL Platform that will provide all PL materials and resources for ease of adoption and scaling and be a one-stop resource for all things ISF.

**SSS 2. *Help schools implement PBIS with fidelity.*** PBIS is the bedrock foundation for ISF. Yes, over 26,000 schools in the U.S. implement PBIS with varying levels of support from the National PBIS Center and its partners. However, not all the schools implement Tier 1 with fidelity and even fewer implement Tiers 2 and 3 with fidelity. Unlike many other systems change initiatives, PBIS has several fidelity measures with evidence of reliability and validity. Currently,



the Tiered Fidelity Inventory (TFI; Algozzine et al., 2019) is the most widely used and measures all three PBIS tiers, with fidelity defined as having 70% or more of the items in place at a school. A recent national study found mean TFI fidelity scores of 83% at Tier 1, 76% at Tier 2, and 68% at Tier 3 (Nese et al., 2023). In another study, Grasley-Boy et al. (2022) found that only 20% of schools implemented Tiers 1 & 2 with fidelity and only 14% implemented all three tiers with fidelity. These data are encouraging, but also suggest many schools struggle to implement the full PBIS continuum with fidelity. Prior ISF studies have either not included or ignored PBIS fidelity in their PL. The ISF-SHINE PL will not, and instead will include resources, training, and coaching alongside ISF PL focused on PBIS to ensure all schools are able to successfully implement **both** PBIS and ISF together.

***SSS 3. Create regional inventories of external MH professionals on the PL Platform.***

Some districts and schools have existing partnerships with external MH agencies. However, these partnerships are often the exception, not the norm (██████ et al., 2017). Many schools do not have partnerships or do not know the MH agencies in their communities. Further, when MH and education agencies do work together, they need to have formal processes that include contracts and working agreements, such as MOUs. The ISF PL will teach districts and schools how to establish partnerships and MOUs. To further address this barrier, we will create regional inventories of community-based MH agencies hosted on the PL Platform.

***SSS 4. Evidence-based PL and full access to the ISF PL Platform.*** Teacher and administrator preparation programs only have time to focus on primary job activities. Thus, few school staff outside of a school psychologist or school counselor receive much pre-service instruction in evidence based SMH prevention and intervention. In-service training occurs, but too often it is one-and-done or “sit and get” (Hunzicker, 2010). Thus, school staff need PL,

coaching, feedback, and easy-to-digest materials to successfully do ISF. Quality PL for educators embodies several crucial components. Firstly, it transcends being a singular event, evolving into a continuous process with ongoing support and follow-up (Darling-Hammond et al., 2017). This model facilitates the seamless integration of novel strategies into teaching practice, fostering adaptability to evolving educational landscapes. Secondly, effective PL relies on evidence-based approaches and data (Hill et al., 2019), empowering educators to pinpoint areas necessitating improvement and implement proven strategies for efficacy. Lastly, it encourages educators to actively participate in their own learning journey (Penuel et al., 2017). ISF-SHINE will do all these things and more. Further, the PL Platform will serve as *the* PL resource center with access to videos, tutorials, infographics, data dashboards, and resources to help school staff learn how to implement evidence based SMH prevention and intervention and successfully do ISF.

***B.1.1. Strategy to Overcome Barriers that Prevent Scaling***

The ISF Implementation Guide (Eber et al., 2019) provides actionable guidance to help schools and districts begin the ISF process. In fact, ISF-SHINE PDs [REDACTED] and [REDACTED] are currently running an OSEP-funded Model Demonstration grant using the ISF Implementation Guide with four schools and conducting a comprehensive PL approach. During the first year of this project (see timeline below), the ISF-SHINE team will refine this current PL model, standardize the materials, and build videos and interactive resources for the new PL Platform. Table 2 provides the changes to this current PL model. We believe that the adjustments and the PL Platform will make the ISF model replicable to scale, and result in ISF fidelity and impact.

**Table 2. Proposed Adjustments to the Current ISF PL Model**

Original PL Activity	Duration and Format	Year	Proposed Adjustments
Training for district leaders and coaches: overview of the	1 day in person; use of Chapter 4 of the ISF	1	1 day in person; all tools and resources, as well as

ISF, assess status, develop shared understanding, develop initial action plan.	monograph and the Installation Guide with supporting tools and resources.		fillable forms and interactive features, now in PL Platform.
Training for school teams and coaches: overview, assess status with resource mapping and review of data, examining teaming structures	1 day in person; use of Chapter 5 of the ISF monograph, the Installation Guide, and the ISF training manual	1	1 day in person; all tools and resources, now in PL Platform.
Technical assistance virtual meetings with coaches	1X per week for one hour	1	2X per month for one hour
Virtual training for school team and coaches: topics based on need (family engagement, changing role of clinician, using data for decision making, TIPS)	Monthly for 90 minutes	1	Monthly for 60 minutes
Technical assistance to complete assessments: ISF-Implementation Inventory (ISF-II); Tiered Fidelity Inventory (TFI)	2-hour virtual meeting; fall and spring of the school year	1	1-hour virtual meeting in fall; 30-minute meeting in Spring. Videos and resources on PL Platform.
School learning walks	2 days in person; fall and spring of the school year	1	1 day in person in the winter or early spring of the school year
Training booster	1/2 day in person	2	1/2 day in person or virtual
District and community leadership team meeting	1/2 day in person	2	1-hour virtual check-in
Technical assistance virtual meetings with coaches	1X per week for one hour	2–3 <sup>1</sup>	1X per month for one hour
Virtual training for school team and coaches: topics TBD based on need	Monthly for 90 minutes	2–3	Every other month for 60 minutes

<sup>1</sup> Only the first group of randomly assigned treatment schools (Cohort 1) in this study will get all three years of PL. These schools will provide important information for scale-up.

Technical assistance to complete spring assessments ISF-II, TFI	2-hour virtual meeting; spring	2–3	30-minute virtual meeting; spring
School learning walks	1 day per school in person, spring	2–3	1 day per school in person, spring
Technical assistance for action planning	Ongoing	2–3	On-demand, use PL Platform videos
Technical assistance virtual meetings and capacity building	90 minutes per month	3	90 minutes virtual end-of-school year

The total number of PL hours for the 1st year of implementation in the current model is 77.5 hours, while the total for the refined PL is 44.5 hours per school. This represents a 43% reduction during year 1. The total number of hours for subsequent years in the current model is 67.5 during year 2 and 81 during year 3. The refined PL is 27 hours in year 2 and 28.5 in year 3, a 60+% reduction. The reduction in PL hours, alongside the new PL Platform, will make the PL more efficient and scalable for an EIR Expansion project assuming positive treatment effects.

***B.1.1.2. The Unique Value of Our Solution and Pathways to Scale Impact***

The ISF-SHINE innovation will provide a new means to support ISF systems change across the country. The ISF-SHINE PL Platform will be a *free* resource to help districts and schools interested in ISF begin the installation process and connect with leading PL providers and MH agencies in their region to move from installation to realization.

WestEd and UIC will lead a scaling-up study as part of the evaluation. They will collect quantitative and qualitative data from the first cohort of schools as they will receive ISF PL for three consecutive years during the RCT. Through the scale-up study, we will learn how ISF-SHINE addressed the four barriers to scale and any necessary adjustments for future expansion. Quantitative data will include PL rosters, fidelity measures (see below), screening data, and school records. WestEd and UIC will conduct virtual listening sessions with ISF team members,

school and district administrators, families, and school staff. The listening sessions will include semi-structured interview protocols, but also multi-modal, collaborative activities with virtual whiteboard tools, such as Miro. Through listening sessions, we will learn about their experiences and co-design solutions to remaining challenges and barriers.

## B.2. Adequacy of the Management Plan

Each ISF-SHINE partner has demonstrated the capacity to collaborate successfully to bring this project to scale and exceed all project objectives. The goal of ISF-SHINE—to refine, test, and rigorously evaluate the ISF PL to improve schools’ implementation of ISF and positively improve the MH functioning of all students—will be achieved through iterative refinement, improvement, and evaluation processes that follow the plan outlined in Table 3. LCROE will lead the project, including all federal reporting; Midwest PBIS will work in close collaboration with LCROE to refine and conduct all PL; Katabasis will create the web-based PL Platform; WestEd will lead all evaluation activities; UIC will work alongside WestEd and do data collection activities given their proximity to schools and expertise connecting with diverse communities. Table 3 provides a description of goals, objectives, activities, who, and timeline.

**Table 3. Timeline of Activities**

			Y1		Y1–Y2				(Y2–Y5)					Y5
<i>Activities &amp; Milestones</i>	<i>Goal &amp; Objective (Table 6)</i>	<i>Who</i>	W	Sp	Su	F	W	Sp	Su	F	W	Sp	Su	F
			<b>Phase 1: ISF Refinement</b>							x	x			
Refine ISF PL	1.1, 1.4	LC, MP, S	x	x	x									
Pilot test ISF PL	1.2, 1.3	LC, MP			x	x	x	x						
Develop PL Platform	1.1, 1.4	Kat	x	x	x	x	x	x	x					
<b>Milestone: ISF PL ready for Phase 2</b>	1	LC, MP, S						x	x	x				
<b>Phase 2: ISF Implementation</b>														
PL and Coaching	2.2	LC, MP							x	x	x	x	x	

Schools implement well-being screening	2.3	School partners										X		X				
Schools implement ISF	2.3, 2.4, 2.5, 2.6, 2.7	School partners										X	X	X				
MH organizations support schools	2.4, 2.5	MH										X	X	X				
<b>Milestone: ISF and PBIS with fidelity</b>	2	School partners																X
<b>Phase 2: RCT</b>																		
Recruit districts, schools, staff	2.1	LC, MP, W						X	X	X					X	X		
Milestone: Randomize and MOUs	3	W									X							X
Data collection and analysis	3.1, 3.2, 3.3, 3.4, 3.5	W, UIC										X	X	X				
<b>Phase 3: Sustainability, Scaling, and Dissemination</b>																		
Scale and sustainability study	4.4	W, UIC													X	X		X
Refine ISF PL Platform	4.4, 4.6	Kat, LC, MP																X
Dissemination	4.1, 4.2, 4.5	W, UIC, MP						X							X			X
Note. LC is Lake County, MP is Midwest PBIS, [redacted] is [redacted], Kat is Katabasis, W is WestEd, UIC is University of Illinois. Y is year, W is Winter, Sp is Spring, Su is Summer, F is Fall.																		

LCROE will ensure that the project plan is completed on-time and on-budget. They have the history and capacity to execute large-scale projects and federal grants of this size. All teams will use a shared project management software (Monday.com) and meet weekly or bi-weekly (depending on Phase) throughout the project. LCROE and Midwest PBIS will maintain weekly Zoom meetings throughout the life of the project. LCROE will meet with WestEd bi-weekly to discuss all evaluation and data collection activities. WestEd and UIC will meet weekly to discuss data collection, evaluation activities, and data analysis. LCROE and Midwest PBIS will meet with Katabasis monthly to discuss PL Platform development, maintenance, and support.

### B.3. Our Team’s Capacity to Bring the Project to Scale

The ISF-SHINE team has many years of experience working with school and district staff and research teams across the nation building MTSS, PBIS, and ISF. The team includes leading experts in ISF, PL, staff and team development, educational technology innovations, and evaluation. We have strong track records of bringing systems change to scale and sustaining that change by working in partnership with local and regional education leaders. We have conducted multi-state RCTs, quasi-experimental designs, single-case designs, and case studies using quantitative and qualitative methods. We have published our work on MTSS, PBIS, and ISF extensively, advancing the rigor and reach of MTSS, PBIS, and ISF. Our qualifications and roles are in Table 4 (also see Appendix B. Resumes).

**Table 4. Key Personnel: Roles, Responsibilities, and Qualifications**

Person, Role	Responsibilities & Qualifications
██████████, Project Director, Lake County Regional Office of Education	PD ██████████ will work closely with project staff and school sites on the successful development and implementation of ISF-SHINE. He is currently implementing model demonstrations of the ISF and is a partner with the PBIS Center. ██████████ coordinates the evaluation of the Center’s Technical Assistance.
██████████, Co-Project Director, Midwest PBIS	Co-PD ██████████ will provide leadership, guidance, and coordination of content development, and development of PL. She will lead the delivery of PL. ██████████ is a Licensed Clinical Social Worker and provides PL and coaching for the PBIS Center. She also led PL for NIJ- and IES-funded ISF projects.
██████████, ISF PL Consultant, University of Florida	██████████ will provide external support and consultation on the PL approach. ██████████ is an Associate Professor of School Psychology at the University of Florida. She has served as principal investigator for all ISF RCTs to date, including those funded by the National Institutes of Justice (NIJ) and the IES.
██████████ Chief Technology Officer, Katabasis	██████████ is a Research Director and co-founder of Katabasis. He has over a decade of experience developing educational technology, websites, and AI systems such as intelligent tutoring systems and dialogue systems.

<p>██████████, Evaluation Lead, WestEd</p>	<p>██████████ is a Research Director at WestEd and leads a team of highly qualified quantitative and qualitative researchers. He and his team will conduct all evaluation activities. ██████████ has conducted numerous RCTs, including an EIR MidPhase and an EIR Expansion project. ██████████ was also the statistician on NIJ ISF RCT.</p>
<p>██████████, MSI Data Collection Lead, UIC</p>	<p>██████████ is the Associate Dean of Research, Special Education Chair, and Professor of Special Education at UIC. He will lead all local data collection activities. UIC will be a subcontractor to WestEd to ensure evaluation independence.</p>

All project partners are committed to encouraging applications for employment from persons who are members of groups that have traditionally been underrepresented in research and evaluation. We routinely analyze all position descriptions for biased language, include Equal Opportunity and support for reasonable accommodations statements in job postings, describe our commitments to supporting a diverse workforce, and circulate opportunities widely and to targeted audiences such as minority-serving institutions. For example, 48% of WestEd staff identify themselves as non-white or two or more races.

**B.4. Dissemination Mechanisms to Support Further Development or Replication**

Midwest PBIS, UIC, and WestEd will co-lead dissemination activities. We will assign one staff member from each team to be the dissemination lead. The leads will meet weekly and plan dissemination efforts (Table 5). Activities will include (a) monthly social media posts on new ISF-SHINE pages (X, Facebook); (b) quarterly submissions to digital outlets such as practitioner websites (e.g., Edutopia), webinars, and podcasts (e.g., the Leading Equity Podcast; Teach by Design); (c) webpages on existing ISF-SHINE team websites; (d) annual presentations at national and regional conferences (e.g., AERA); (e) annual submission of scholarly research articles to peer-reviewed journals; and (f) downloadable infographics and publications for practitioners hosted on the publicly available and free ISF PL platform. We will share accessible ISF implementation information needed for exploration, adoption and scaling, technical support,



PL, study findings, implementation testimonials, and lessons learned. We will also disseminate the costs of ISF-SHINE to inform future efforts.

**Table 5. Dissemination Activity Goals.**

Social Media Posts	Digital Outlets (e.g., podcasts)	Webpage Hosting	Conference Presentations	Peer-Reviewed Publications	Infographics on PL Platform
Monthly	Quarterly	Partner websites	Annually	Annually	Bi-annually

Additionally, Midwest PBIS will leverage their relationship with the PBIS National Center to disseminate ISF-SHINE learnings through Practice Briefs and presentations at the National PBIS Forum in Chicago. Midwest PBIS organizes the Forum for the PBIS National Center, providing our team with access to hundreds of school and district administrators and teachers **every year**. The WestEd team will leverage its extensive outreach resources to disseminate evaluation findings, including dissemination through the National Center for Systemic Improvement (NCSI) at WestEd. NCSI works directly with all state education agencies and will disseminate ISF-SHINE to their network.

**B.5. Utility of Products That Result From ISF-SHINE**

ISF-SHINE will develop and provide, for free, the resources necessary for ISF implementation to a diverse range of audiences, including researchers, policymakers, and practitioners. We will accomplish this through the ISF PL Platform, team websites, practice and policy briefs, conference presentations, publications, and webinars. The ISF-SHINE evaluation will examine the impact of ISF PL on ISF implementation, efficacy, scalability, and, ultimately, students’ MH functioning. Further, this project will identify in which educational contexts ISF-SHINE PL are most efficacious and under what conditions, providing information about how the PL can be used more broadly in a variety of settings and conditions to support local needs.

## C. Quality of the Project Design

### C.1. Logic Model

Our logic model provides a roadmap of how ISF PL is hypothesized to improve school, staff, and student outcomes (see Appendix G). We predict that schools assigned to the ISF will experience three intermediate advantages. First, ISF schools will have better functioning MTSS teams than schools in the business-as-usual (BAU) condition as evidenced by greater inclusion of partners (e.g., clinicians, family members) and improved data-based decision making. These changes will emerge as a function of fidelity to teaming principles and training. Teaming is a common practice in school settings and, when done well, produces strong, positive effects on student behavior and progress toward goals (Horner et al., 2018). But teams often fall short of best practices; for example, meeting at low frequencies with vague agendas and with poor follow-up on decisions (Rosenfield et al., 2018; ████████ et al., 2017). Coaching models focusing on teaming practices (e.g., TIPS; Horner et al., 2018) and practices that reinforce members' roles and responsibilities, such as organizing data before meetings and setting clear agendas, have been shown to improve team functioning (Bastable et al., 2020). We hypothesize that strong MTSS teams doing ISF, using TIPS, will lead to improved identification of students experiencing SEBA challenges. Second, we predict that ISF schools will demonstrate superior performance in student screening and identification, as evidenced by frequent and effective SEBA data review, increased monitoring of school discipline, and improved accuracy of student identification for Tier 2 or Tier 3 services. These changes will emerge as a function of high-quality progress monitoring and training. Finally, we predict that ISF schools will experience better delivery of EBPs as evidenced by an expanded continuum of services.

We believe these improvements will lead to four distal outcomes: improved student SEBA functioning; reductions in student disciplinary practices; greater alignment of Tiers 2 and 3 services to screener results; and cost-effectiveness over BAU schools. We expect discipline and tier alignment outcomes to be moderated by student characteristics, particularly disability status and race. Further, we believe that ISF can reduce the racial/ethnic gap in MH care by removing barriers that disproportionately affect historically marginalized diverse youths' access to school-based services (e.g., exclusionary discipline). The ISF will also raise the cultural awareness of decision makers, enhanced by increased involvement of families and other partners, and address problems related to inequities through explicit problem solving around disparate discipline outcomes, referrals, and service use. Finally, the ISF will reduce biases in referrals to MH and special education services through systematic screening.

**C.2. Project Goals, Objectives, and Outcomes**

Table 6 describes the goals, objectives, outputs, and outcomes guiding ISF-SHINE.

**Table 6. Measurable Goals and Objectives**

<b>Goal 1. Refine ISF Professional Learning for Scale-Up and Replicability</b>	
<b>Objectives</b>	<b>Outputs and Outcomes</b>
<b>Objective 1.1.</b> Refine the ISF PL model by streamlining the content, creating PowerPoints (PPTs), videos, and resources for a new ISF PL platform.	<b>1.1</b> Full suite of training PPTs, videos, checklists, resources (e.g., ISF guides), and other Portable Document Format (PDF) documents. <b>1.1</b> ISF PL Platform completed.
<b>Objective 1.2.</b> Recruit pilot schools, MTSS teams, and school staff.	<b>1.2</b> MOUs with ISF pilot school’s district office.
<b>Objective 1.3.</b> Gather data and feedback from pilot schools and staff.	<b>1.3</b> Identify additional refinements to the ISF PL based on pilot data and results.
<b>Objective 1.4.</b> Incorporate pilot feedback into the ISF PL and learning platform.	<b>1.4.</b> Finalize ISF PL. <b>1.4.</b> Finalize ISF PL Platform.

<b>Goal 2. Improve ISF Systems Implementation</b>	
<b>2.1.</b> Recruit 80 elementary schools in three successive cohorts and randomize to treatment and control conditions	<b>2.1.</b> Lists of schools by assignment condition. <b>2.1.</b> Signed MOU with all district offices.
<b>2.2.</b> Implement ISF PL with schools in treatment condition.	<b>2.2.</b> PL attendance rosters. <b>2.2.</b> PL fidelity checklists. <b>2.2.</b> PL platform clickstream data.
<b>2.3.</b> Support a school’s installation and implementation of Tier 1 universal features.	<b>2.3.</b> Collect Tier 1 universal features fidelity of implementation data using the ISF-II. <b>2.3.</b> Collect Tier 1 TFI data.
<b>2.4.</b> Support a school’s installation and implementation of Tier 2 selective features.	<b>2.4.</b> Collect Tier 2 selective features using the ISF-II. <b>2.4.</b> Collect Tier 2 TFI data.
<b>2.5.</b> Support a school’s installation and implementation of Tier 3 indicated features.	<b>2.5.</b> Collect Tier 3 indicated features using the ISF-II. <b>2.5.</b> Collect Tier 3 TFI data.
<b>2.6.</b> MTSS teams use the TIPS process to make Tier 2 and Tier 3 decisions.	<b>2.6.</b> Collect Decision Observation, Recording, and Analysis–II (DORA-II).
<b>2.7.</b> MTSS teams use the equity-focused Blind Spots process to ensure equitable access to Tier 2 and Tier 3 interventions.	<b>2.7.</b> Collect Blind Spot fidelity checklist from all MTSS Teams.
<b>Goal 3. Improve Student Well-being, Behavior, and Academic Achievement</b>	
<b>Objective 3.1.</b> Students and teachers participate in fall and spring student well-being screening data collection.	<b>3.1.</b> Collect fall and spring screening data from all schools (treatment and control).
<b>Objective 3.2.</b> Students that screen as at-risk or above for SEBA challenges receive appropriate intervention.	<b>3.2.</b> Collect Intervention Receipt Form (IRF) from each MTSS team twice each year.
<b>Objective 3.3.</b> Students that screen as at-risk or above for SEBA challenges and receive Tiers 2 and 3 interventions demonstrate decreased discipline exclusions, and increased attendance, academic achievement, positive school climate, and well-being at the end of the school year.	<b>3.3.</b> Collect school records data for all students, including ODR, suspensions, attendance, grades, and achievement test scores. <b>3.3.</b> Students receiving the Tiers 2 and 3 interventions in treatment schools demonstrate a .20 standard deviation (SD) improvement on all outcomes when compared to students in the business-as-usual condition.

<p><b>Objective 3.4.</b> All students in schools implementing ISF demonstrate decreased discipline exclusions, and increased attendance, academic achievement, positive school climate, and well-being at the end of the school year.</p>	<p><b>3.4.</b> Collect school records data for all students, including ODR, suspensions, attendance, grades, and achievement test scores.  <b>3.4.</b> All students in treatment schools demonstrate a .15 SD improvement on all outcomes when compared to students in the business-as-usual condition.</p>
<p><b>Objective 3.5.</b> Teachers and other school staff participate in ISF PL and report more positive perceptions of school climate, MH in schools, and MH intervention-related self-efficacy.</p>	<p><b>3.5.</b> PL staff rosters  <b>3.5.</b> Collect school climate measure, MH perception measure, and MH self-efficacy measure from at least 80% of school staff at all schools (treatment and control).  <b>3.5.</b> School staff demonstrate a .20 SD increase in positive perceptions compared to school staff in business-as-usual condition schools.</p>
<p><b>Goal 4. Develop Mechanisms for Sustainability and Scale</b></p>	
<p><b>Objective 4.1.</b> Build district and school capacity for sustaining ISF.</p>	<p><b>4.1.</b> Schools and districts establish MOUs with community-based MH organizations.  <b>4.1.</b> Train district coaches through the DCLT.  <b>4.1.</b> Train school based MTSS teams.</p>
<p><b>Objective 4.2.</b> Build national capacity for providing ISF PL.</p>	<p><b>4.2.</b> Train 15 national ISF facilitators through the PBIS National Center to support ISF implementation.</p>
<p><b>Objective 4.3</b> Conduct scaling and sustainability study.</p>	<p><b>4.3.</b> WestEd and UIC collect qualitative and quantitative data from cohort 1 schools supported for 3 years.  <b>4.3.</b> WestEd and UIC analyze data that address all four barriers to scale.</p>
<p><b>Objective 4.4.</b> Publish and market ISF web-based Learning Platform.</p>	<p><b>4.4.</b> The National PBIS Center, Midwest PBIS, and WestEd disseminate ISF PL using social media channels, websites, webinars, and newsletters.  <b>4.4.</b> The ISF PL Platform is freely available.</p>
<p><b>Objective 4.5.</b> Disseminate ISF-SHINE and ISF PL to researchers and policymakers.</p>	<p><b>4.5.</b> Submit 1 manuscript to peer-reviewed journals annually.  <b>4.5.</b> Present 1 session at national conferences annually.  <b>4.5.</b> Create and distribute infographics for policymakers and school leaders.</p>

<b>Objective 4.6.</b> Further refine the PL model to increase affordability and scalability.	<b>4.6.</b> Based on evaluation, identify necessary and optional components of ISF PL.
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**C.3. Appropriateness of Project to Needs of Our Target Population**

In ISF-SHINE, we operationally define the high-needs population as students experiencing MH challenges and not receiving the SMH supports they desperately need, including students from diverse racial/ethnic backgrounds, households with low-income, and students with disabilities. These students will be identified from the universal screener and demographic data. As noted earlier, data suggest that 13–22% of school-aged youth experience a MH challenge to a degree warranting a formal diagnosis (NCSMHI, 2016). Therefore, we anticipate that at least 15% of the students in our study will meet our definition of high needs.

The pilot study and rigorous RCT will be conducted in partnership with schools and districts served by LCROE in Illinois. There are 117 traditional elementary schools in 37 school districts in Lake County, IL. Based on Table 7, the schools are racially and ethnically diverse, and heterogeneous in student enrollment and the percentage of students receiving free or reduced-price lunch. We believe these elementary schools are the ideal place to conduct ISF-SHINE and discover generalizable knowledge. We will help these schools improve PBIS implementation and build a sustainable ISF.

**Table 7. Demographic Characteristics of Lake County Elementary Schools**

<b>Statistic</b>	<b>Enrollment</b>	<b>FTE Teachers</b>	<b>FRL</b>	<b>Native American</b>	<b>Asian</b>	<b>Hispanic</b>	<b>Black</b>	<b>White</b>
<i>M</i>	433.6	34.4	52.1%	0.4%	9.1%	35.9%	8.0%	41.9%
<i>Min</i>	152.0	14.5	8.1%	0.0%	0.0%	1.5%	0.0%	1.2%
<i>Max</i>	1425.0	118.0	99.7%	2.3%	61.4%	88.3%	41.2%	92.0%

## D. Quality of the Project Evaluation

WestEd will lead an independent evaluation of the impact of ISF-SHINE on school and student outcomes (see Table 8). The cluster RCT is designed to meet the WWC Standards Without Reservations. The study is guided by research questions described in Table 8.

**Table 8. Evaluation Research Questions and Data Sources**

Research Question	Primary Data Source(s)
<b>Impact Analyses</b>	
1. What is the impact of ISF-SHINE on all elementary-aged students’ school outcomes, including (a) well-being, (b) perceptions of school climate, (c) discipline (e.g., office discipline referrals, suspensions), and (d) academic achievement?	School records; Behavior Intervention Monitoring Assessment System (BIMAS); Georgia Student Health Survey: Elementary Survey-Student (GSHS-Stu); NWEA MAP
2. What is the impact of ISF-SHINE on elementary-aged students who received Tier 2 and Tier 3 interventions based on universal screening data (“high needs”) school outcomes, including (a) well-being, (b) perceptions of school climate, (c) discipline (e.g., office discipline referrals, suspensions), and (d) academic achievement?	School records; BIMAS; GSHS-Stu
3. Are students experiencing MH challenges as measured by universal screening more likely to receive Tier 2 or Tier 3 MH intervention in ISF schools compared with business-as-usual?	BIMAS; Intervention Receipt Form (IRF)
4. What is the impact of ISF-SHINE on elementary teachers’ perceptions of school safety and school climate, job satisfaction, self-efficacy, and burnout?	Maslach Burnout Inventory: Educator Survey (MBI-ES); Georgia Student Health Survey: Elementary Survey-Staff (GSHS-Sta); Teacher Self-Efficacy Scale
<b>Implementation Analyses</b>	
5. To what extent do schools in the treatment condition implement ISF components with fidelity relative to the business-as-usual condition?	ISF-II
6. To what extent do schools in the treatment condition implement PBIS with fidelity relative to the business-as-usual condition?	TFI

7. To what extent do PBIS Teams implement TIPS and the equity-focused Blind Spots process relative to the business-as-usual condition?	DORA-II Blind Spots Fidelity Checklist
8. What are teacher/staff/admin perceptions of ISF-SHINE (social validity)?	IRP-15
<b>Exploratory Analyses</b>	
9. To what extent are the student impacts of ISF-SHINE moderated by school, teacher, and student characteristics?	RQ 1–2 data School/teacher/student demographics
10. To what extent are the student impacts of ISF-SHINE mediated by teacher perceptions of school safety and climate, job satisfaction, self-efficacy, and burnout?	RQ 1–2 and RQ 4 data
11. To what extent are the student impacts of ISF-SHINE mediated by fidelity of implementation?	RQ 1–2 and RQ 5–6 data
12. Do schools in the ISF-SHINE condition reduce disproportionality as measured by risk ratios by race and disability status on disciplinary outcomes?	RQ 1–2 data

The impact study will evaluate the effects of ISF on school, staff, and student outcomes in 80 elementary schools, ~2,720 school staff, and ~34,688 students in kindergarten to fifth grade. Schools will be randomly assigned into 3 cohorts (C), with randomization occurring in June prior to the start of each school year (C1: 2026–2027, C2: 2027–2028, C3: 2028–2029). We will recruit 30 schools for C1, 30 schools for C2, and 20 schools for C3. Half (n = 40) of the schools will be randomly assigned to the treatment condition (ISF-SHINE) and half will continue with business-as-usual. We anticipate that each school will have approximately 34 staff and 433.6 elementary-aged students, resulting in 2,720 staff and 34,699 students in total. We anticipate that at least 15%, or 5,205 students, will experience MH challenges. We will collect student and staff rosters for each school in June prior to randomization. We exclude joiners because they could have joined after randomization due to access to the independent variable. Impact analyses will focus on one school year of ISF implementation. Longitudinal data will be collected for exploratory analyses described below. Recruitment and randomization will be at the



school-level; we will account for the number of districts via fixed-effects in the analytic models as described in Appendix J.

### **D.1. Evaluation Design to Meet WWC Evidence Standards Without Reservations**

The confirmatory and implementation research questions address key program components, main proximal outcomes, and school- and student-level impact outcomes aligned to the logic model. The cluster-level RCT is designed to meet WWC 5.0 Standards Without Reservations. WestEd will randomly assign 80 schools to the treatment (ISF-SHINE) or control (business-as-usual) condition. Randomization will block by school-level characteristics, which may include the percentage of students in the school by race/ethnicity, Title I status, and school-level discipline data, to ensure the schools and students in them are equivalent on key characteristics in each condition at baseline. We will exclude all joiners to the schools after randomization per WWC 5.0. Contamination will be monitored by LCROE and Midwest PBIS using a reporting and observation form developed during year 1. Additionally, the district leadership teams will agree to only provide ISF information to treatment schools in the MOUs. We also will monitor contamination with the ISF-II. We do not expect school-level attrition because of district buy-in and LCROE's relationship to schools. We do anticipate attrition at the staff and student level due to job shifts and students moving to new schools. We explored different school, staff, and student attrition scenarios in our power analysis (Appendix J). We are confident the study will be below WWC attrition thresholds.

After randomization, the team will begin implementing ISF-SHINE (reduced ISF PL and PL Platform) in the treatment schools. Treatment schools will receive full access to all the resources outlined above in A.1.2 and B.1. The control schools will implement business-as-usual, which may include PBIS, restorative justice, MTSS, or other specific interventions.

WestEd will collect extensive data on treatment condition schoolwide programs at baseline and through ongoing DORA-II and staff surveys during the RCT. We will also collect information for differentiation and cost of PL support each control school receives during the RCT.

**Statistical Power.** WestEd evaluated the minimum detectable effect size (MDES) for confirmatory impacts on proximal student outcomes (see above) assuming a school-level RCT, with 80 schools, a harmonic mean of 433.6 students, and 65 high needs students in each school. We used a two-level model (students nested in schools) because treatment effects are not related to individual teachers or staff, but instead schoolwide systems impact. We explored multiple scenarios based on several plausible assumptions about variance partitioning. We assumed .80 power, Type-1 error rate .05, and specific values of the ICC and R2 at levels 1 and 2 as described in Appendix J. The MDES ranges between 0.15 and 0.18 for all students, and 0.15 and 0.19 for all high need students. These effect sizes are like effect sizes observed in previous studies of ISF on student outcomes (Weist et al., 2022).

**Impact Measures.** In Table 9 we provide the logic model component and corresponding measure, the population and research questions each measure addresses, and the timing of each measure. A complete description of each measure, including reliability, is in Appendix J.

**Table 9. Description of Measures**

Logic model component	Measure	Level	RQ	Timing
Increased team-based effective problem solving	DORA-II, Blind Spots Fidelity Checklist	PBIS Team	7	Bi-monthly
Increased access to Tier 2 and Tier 3 interventions	BIMAS, IRF	Students and Team	3	BIMAS: Fall/Spring, IRF: monthly
Increased ISF fidelity of implementation	ISF-II, TFI, IRP-15	PBIS Team and Staff	5,6,8,11	Fall/Spring

Fewer students identified as at-risk for MH concerns	BIMAS	Students	1,2,3,9,10,11	Fall/Spring
Increased positive school climate	GSHS-Stu GSHS-Sta	Students and Staff	1,2,4,9,10,11	Fall/Spring
Decreased office discipline referrals	School Records	Students	1,2,3,9,10,11	Spring
Decreased suspensions	School Records	Students	1,2,3,9,10,11	Spring
Increased attendance	School Records	Students	1,2,3,9,10,11	Spring
Increased academic achievement	NWEA MAP, GPA	Students	1,2,3,9,10,11	MAP: Fall/Spring, GPA: Spring
Job satisfaction and burnout	MBI-ES	Staff	4,10	Fall/Spring
Self-efficacy	TSES	Staff	4,10	Fall/Spring

**Impact Analysis.** WestEd will use hierarchical linear models (HLM) (Raudenbush & Bryk, 2002) applied to cluster-level RCTs (Bloom, 2005) for estimates of intent-to-treat (ITT) impacts for outcomes. The standard form of the 2-level benchmark impact model for students (detailed in Appendix J) will include an indicator of school treatment status, school-level baseline covariates (e.g., baseline ISF-II and TFI, % of race/ethnicity, Title 1 status), student-level baseline covariates (e.g., baseline outcomes, race/ethnicity, disability/English learner status), a fixed-effect for cohort and district<sup>2</sup>, and student and school random effects. To address missing data, we will use the sequential modeling imputation approach (Grund et al., 2021), which uses Markov chain Monte Carlo methods to estimate the parameters of the imputation models and sample imputations for the missing data from the conditional distributions of the variables (Gelman et al., 2014). For the confirmatory impact analyses, we will follow WWC

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<sup>2</sup> We are unsure if there will be enough districts to include as an additional nesting structure in the HLM. Therefore, we anticipate including a fixed-effect to address the district.

topic-area review protocols to report all necessary statistics, including obtaining sample sizes at each stage in executing the study design, determining baseline equivalence on demographics and pretests, and calculating covariate-adjusted standardized mean difference effect sizes. We will use a similar modeling approach for school staff outcomes (e.g., two-level models) and a regression model for school-level outcomes (Implementation Analyses), with district fixed effects and demographics in the models.

For exploratory analyses, we will assess differential impacts on confirmatory outcomes for important student (e.g., race/ethnicity, gender, disability status, English Language Learner status, Free and Reduced-price Lunch status, age/grade), staff (e.g., certification, years of experience, race/ethnicity, gender) and school (e.g., % of race/ethnicity, SWD, ELL) moderators. Moderation models will include interaction effects at the appropriate level. Questions of mediation (see above) will be estimated using a multilevel structural equation modeling (ML-SEM) framework and include school-level fidelity at level 2 and student outcomes at level 1.

**Generalizability and Scalability.** Given the partnership with LCROE, WestEd will evaluate ISF-SHINE across a wide variety of schools, including those serving economically disadvantaged and high-minority populations. This diverse sample allows for generalizability of results as ISF-SHINE is scaled across Illinois and other states with similar schools. To further assess generalizability, we will include a series of moderator analyses (RQ9) to determine how the impacts of ISF-SHINE are moderated by school, teacher, and student characteristics. The results of the moderator analyses will further inform scaling efforts specific to where ISF-SHINE is effective given the population's characteristics, along with developing targeted strategies for improving the framework for populations for whom it was less effective. WestEd will conduct

mediator analyses to determine the effect of teacher job satisfaction, burnout, self-efficacy, and school climate, and a school's fidelity of implementation on student outcomes.

**Cost Effectiveness.** WestEd will conduct a cost analysis based on the Resource Cost Model (Levin & McEwan, 2002) to provide information about the cost of implementing ISF, including associated PL, and whether it is cost effective relative to the BAU condition. Costs will be identified in both the ISF and BAU conditions using the ingredients method (Levin et al., 2017). Analyses will identify the costs associated with each component of the program, distinguish start-up costs from ongoing costs, and convert total costs to per-school and per-student costs. We will then combine the cost information and effect size estimates to describe the impact on a per dollar basis following cost analysis recommendations (Hollands et al., 2021).

## **D.2. Guidance About Effective Strategies Suitable for Replication or Testing**

Our research questions directly explore how, when, and for whom ISF-SHINE works. The current project builds on the growing evidence base demonstrating that ISF positively impacts students, staff, and schools. Critically, this study refines the PL and builds a new PL Platform to increase the likelihood of future scaling. As described above, WestEd will conduct a Scale-Up study with the treatment schools randomly assigned to Cohort 1 because they will participate in PL for three consecutive years. WestEd and UIC will conduct qualitative listening sessions with school staff, MTSS team members, families, district staff, and ISF PL staff. This qualitative data will provide insights about what worked, what didn't work, and create a narrative to triangulate with the quantitative data about the ISF implementation process and adjustments necessary to continuing to build the most effective and efficient PL. This study will set the stage for future research on scaling the ISF across multiple states in an Expansion project, along with opportunities to adapt the framework to ensure it is contextually relevant and effective.

### **D.3. Key Components, Mediators, Outcomes, and Thresholds**

The evaluation plan is informed by clearly articulated key components, mediators, and outcomes as illustrated in the logic model in Appendix G. The impact analyses (RQ 1–4) utilize reliable and valid measures (see Table 9 and Appendix J). We will also conduct moderation and mediation analyses (RQ 9–11) to explore how school, teacher, student, and implementation characteristics impact effectiveness. These data will be collected from several sources (see Table 9). In addition, WestEd and UIC will create checklists and observation protocols to collect information about the ISF PL and use the PL Platform clickstream data. Thresholds of acceptable PL will be developed during the Refinement phase and will include 90% or greater implementation of each core PL component and at least one PL Platform log-in from all MTSS Team members at each school. These thresholds will be paired with established ISF and PBIS fidelity thresholds. Schools must implement 70% of ISF-II and TFI items.

### **D.4. Performance Feedback and Assessment**

During the ISF Refinement Phase, WestEd and UIC will use formative evaluation methods to provide performance feedback and periodic progress assessment to LCROE and Midwest PBIS. WestEd will conduct usability studies with two school based MTSS teams to learn about the useability and feasibility of the new PL Platform developed by Katabasis. The results will be relayed to Katabasis to refine and improve the user experience. WestEd and UIC will also collect satisfaction surveys from all staff participating in PL sessions with the LCROE and Midwest PBIS and relay feedback within one week of a PL session. Finally, WestEd and UIC will conduct listening sessions with staff to provide insights and feedback about their experience participating in ISF-SHINE. These data will inform adjustments to improve RCT success. Overall, we collectively believe that ISF-SHINE will positively impact well-being.