Essential Components of Student Learning Objectives Implementation: A Practice Brief

May 2015

Lisa Lachlan-Haché
Marina Castro
Lauren Matlach
Ellen Cushing

Contents

Acknowledgements: The authors would like to thank Robert Stonehill of American Institutes for Research, Bradley Carl of the Value Added Research Center, Jane Blais of Maine Schools for Excellence, William Sternberg of Ohio TIF and Matthew Finster of Westat for their reviews of earlier drafts of this document.

Introduction

Student Learning Objectives are a set of goals that measure educators' progress in achieving student growth targets.[1]

Student learning objectives (SLOs) have become the preferred measure of student growth in many new systems of teacher evaluation and compensation. The SLO approach to measuring student growth is evolving and taking on new forms throughout the United States, and most states and districts would probably agree that SLO implementation is a challenging endeavor. From communicating business rules to monitoring systems for continuous improvement, Teacher Incentive Fund (TIF) districts must anticipate needs, refine thinking, and deliver quality. To support TIF districts in these critical steps, this document offers a framework for thinking strategically through the core components of SLO implementation.

By articulating the critical steps of SLO implementation and providing examples from TIF states and districts, this document aims to provide a vision for TIF grantees to improve SLO quality, enhance assessment rigor, and promote scoring consistency. This document outlines the importance of considering the variety of implementation supports that are available and the options for states and districts that have limited resources.[2] Appendix C provides a series of resource examples developed by leading states and districts.

This SLO practice brief builds upon a companion document titled *Essential Components of Student Learning Objectives Implementation: A Checklist*. Both documents aim to assist states and districts in the implementation of SLOs by providing practical steps for building a sustainable system of developing and measuring student growth.

The following implementation elements support rigor, comparability, and sustainability in the SLO process. Each element is described in greater detail in the following pages.

Engage Stakeholders and Develop a Vision of Sustainability—Recognize that the use of SLOs may represent a shift in educator practice. To build a sustainable culture that supports implementation, consider the obstacles that lie ahead, develop teacher confidence in the SLO process, and create a coherent vision of the value of the SLO process in an effort to build a sustainable culture of SLO use.

Provide Policies, Examples, and Resources—Effective implementation requires resources that promote rigor, consistency, and clarity across schools or districts.

Pilot and Scale Up With Training and Rater Calibration—Offer ongoing training to assure rigor and consistency throughout schools and districts.

Communicate and Monitor for Continuous Improvement—Monitor, triangulate, and communicate the implementation process to promote the rigor, discussion, and reflection that lead to insightful, systemic revisions.

Engage Stakeholders and Develop a Vision of Sustainability

Any large-scale implementation effort requires thoughtful planning and strategic preparation. While some TIF grantees will have many elements of the process already in place, others will require additional supports for successful SLO implementation.

---

[1] SLOs can be developed by individual teachers, teacher teams, principals, and principal teams. We use the term "educator", to encompass all possible approaches to SLO development.

[2] Appendix C provides a series of resource examples developed by leading states and districts."

Grantees can assess their schools or districts for:

- Level of stakeholder engagement in general reform efforts and in educator evaluation reforms
- Degree of commitment to the shared vision of the district
- Quality of student and assessment data available to teachers and leaders (the foundation for quality SLOs)
- Existence and skillsets of data teams, professional learning communities, and other collaborative teams that may analyze student data to inform instruction
- Existence and effectiveness of general infrastructure and mechanisms for implementing, monitoring, and improving procedures over time

Taking the Pulse. Because teachers and evaluators (most often principals and other building administrators) are the primary drivers of the SLO process, their understanding of SLOs ensures that they will be able to set accurate targets and goals for student learning. Prior to implementation, knowledge building may be required. Knowledge-building activities may include:

- Collecting data on teacher, principal, and evaluator understanding of measuring student growth
- Assessing teacher and evaluator data analysis and assessment literacy skills
- Taking inventory of assessments that are available and used in the district or state
- Gathering feedback from teachers and evaluators and addressing their questions
- Examining evaluation timeline policies and procedures and determining ways to integrate SLOs into structures or initiatives that foster educator collaboration and communication
- Using the aforementioned information to inform the implementation process and the development of needed supports

To successfully implement SLOs to assess student learning, states and districts can provide the following critical elements:

Standardized forms, timelines, and guidance to assure consistency

Resources to help teachers estimate growth expectations that are aligned to student trends, formative assessments, and summative assessments

Guidance for the use of appropriate assessments that may include lists of required, vetted, or approved assessments or direction on how teachers can develop their own assessments

Training for teachers, evaluators, and leaders involved in SLO development and implementation

Timely student assessment results for the development and review of SLOs

Processes for improving test security and reducing unintended incentives

By regularly taking the pulse of those charged with SLO development and implementation, districts and schools may be better positioned to know what supports and resources are needed in the field, to anticipate and address challenges, and to communicate effectively with all stakeholders. These efforts take planning and require time prior to implementation. Done well, they can help inform long-term planning and sustainable systems of educator evaluation.

SLOs are only as good as the baseline and assessment data on which they are built. TIF grantees will want to assess school readiness by exploring teacher and administrator skill in the analysis of student data and in the development of high-quality assessments. Teachers and administrators need to have access to and confidence in the review and analysis of student data as well as in the selection and development of quality assessments. In some cases, this will require additional training for assessment and data literacy. Without these resources and skills, teachers and principals may become overwhelmed. Districts can examine schools for their readiness to implement through surveys and

focus groups. The continuum highlighted in Appendix A can be used to gauge district and school readiness for SLO implementation and to identify resources and training for more sustainable implementation.

Creating a Sustainable Vision

Teachers, evaluators, and leaders need a coherent vision that shows how SLOs fit into and support the overall education vision of the district or state. For example, several early implementers began this process by using SLOs as the guiding framework for understanding student growth and implementing best teaching practices (Lachlan-Haché, Matlach, Reese, Cushing, & Mean, 2013). The strategies and resources noted in the following discussion have been used successfully in early-adopting states and districts (see Appendix B).

Communicating. Districts and states that have successfully implemented SLO-based evaluation procedures often cite "communication, communication, communication" as their mantra for sustainability. In fact, effective communication is a critical but often overlooked element of successful SLO implementation. Experience from TIF grantees suggests that attention to communication may reduce anxiety and build confidence around the new system (Lachlan-Haché, Matlach, Reese, Cushing, & Mean, 2013). In the absence of effective communication, other elements of implementation can falter. Evidence from the Charlotte-Mecklenburg (North Carolina) Schools (CMS), an early SLO implementer and past TIF grantee, reported that school leaders did not have the resources necessary to consistently communicate their expectations. This gap may have contributed to CMS's decision to discontinue SLO use (Lachlan-Haché et al., 2013). Creating clear talking points and documents that identify the key messages of SLO implementation is a necessary starting point. Sharing how SLOs integrate into the larger system provides context for the work and helps to ensure that all stakeholders receive the same information around expectations and content. If possible, in-person communication on the details of the implementation timeline and process is a solid next step. Regularly updated "frequently asked questions" and easily accessible libraries of resources are useful mechanisms for communication. Additional materials that support communication efforts are noted in Appendix C.

Implementing Feedback Loops. Focus groups, in-person meetings, and other mechanisms for collecting teacher and principal feedback on SLO implementation are critical for making important refinements during early and continuing implementation. Feedback loops can help district and state leaders dispel myths and promote accurate information about implementation while also collecting important information about what is and is not working on the ground. Analysis of this feedback can be important in cultivating stakeholder buy-in and needs for refinement to the system. Austin (Texas) Independent School District (AISD), for example, publishes an annual report on participant feedback that articulates lessons learned and bolsters support for continuous improvement.

Staggering the Implementation Schedule. Another way to facilitate the culture change is to establish strategic implementation timelines that phase in different components over time. There are various ways to stagger implementation as follows:

Piloting Without Stakes: One approach to implementation is to delay attaching human capital decisions to results during the first year of SLO implementation. This format enables teachers and evaluators to gain experience with the process in the context of a low-stakes environment. Denver (Colorado) Public Schools (DPS) and AISD followed a similar approach to implementation; that is, both districts excluded SLOs from compensation decisions during the first year of implementation (Lachlan-Haché et al., 2013).

Sample Piloting: Another approach is to stagger implementation in subsets of grades or schools based upon the needs of the school staff and students. The Maine Schools for Excellence (MSFE) TIF cohort 3 winners, for example, piloted their system for the first year in only five school districts (Lachlan-Haché et al., 2013). This structure allows trainers to target their supports to new adopters before implementing SLOs across a district or state.

Another option is to select schools that are most likely to implement successfully. By first implementing in a best-case context, states and districts can determine challenges to be addressed prior to full-scale implementation and, possibly, best practices to be replicated across the district.

Responsive Implementation: A third approach to implementation is to continually refine the SLO process over time based upon district information and needs. For example, in AISD, educators in nine schools began implementation by creating individual SLOs. Over the course of the three-year implementation process, the district chose to expand to 15 schools. After recognizing that teachers already were collaborating and acting as teams informally and in response to principal requests for more shared accountability, AISD modified its requirements so that one individual SLO could be targeted (i.e., focus on a specific subset of students) and one team SLO would be required to cover all students in a course. A responsive approach to implementation can reassure stakeholders that the district values their input and, ideally, can improve the quality of educators' work.

Piloting without stakes, sample piloting, and responsive implementation need not be mutually exclusive. An approach that combines two or more of these methods may be most effective in certain district contexts if time and resources permit. For example, AISD piloted with both a sample of schools and without stakes during the first year of implementation (Lachlan-Haché et al., 2013; Lamb & Schmitt, 2013).

Allocating Teacher and Principal Time. Providing teachers and evaluators with adequate time to fully engage in the SLO process is critical, especially during the early years of implementation.Teachers need time to write SLOs[3], and evaluators need time to support teachers, assess the quality of the SLOs, and build confidence in the scoring process. States and districts should consider developing processes that capitalize on available noninstructional blocks of time, including pre-existing teacher collaboration time, staff meetings, teacher–principal conferences, professional development, induction, and leadership team meetings. For example, the Ohio districts that received TIF awards (collectively known as "Ohio TIF") prepared for their first year of implementation by writing SLOs, attending trainings and workshops, and calibrating evaluators during the summer prior to full implementation (Lachlan-Haché et al., 2013). Strategically integrating these activities can help maximize teacher and principal time while demonstrating connections across initiatives.

Provide Policies, Examples, and Resources

If SLOs are to be credible and meaningful measures of student growth, then districts and states must develop consistent, rigorous processes to ensure that the SLOs they develop are of high quality. Supporting documents and resources (e.g., templates, checklists, videos, examples) can provide teachers and evaluators with resources that communicate consistent expectations across schools and provide support for implementation.

SLO Policy Guidebooks. Policy manuals are often used to provide consistency and guidance to teachers, principals, and other educators and typically include an introductory explanation of how SLOs fit into the overall system, step-by-step guidance to the SLO process, and forms and documents needed (e.g., templates, checklists, conference protocols, timelines). Other useful materials occasionally included in policy manuals are FAQ documents, lists of key messages, glossaries, and reference guides. Some districts have developed targeted guidebooks for teachers and evaluators.

Many guidebooks contain the operating "business rules" that inform critical policies. These policies may determine factors to be included or excluded from an SLO, such as data on student mobility, teacher assignment changes,

[3] Teachers participating in the Indiana Department of Education's RISE pilot reported that working on SLOs can take between 4.0 and 6.5 hours. See TNTP. (2012, July). *Summer report: Creating a culture of excellence in Indiana schools.* Indianapolis, IN: Indiana Department of Education.

and specialized student populations. For example, Pointe Coupe Parish, a part of Louisiana TIF, has business rule exceptions relative to absenteeism: a student who is absent more than 20 percent of the school year may be removed from a student learning target (SLT); similarly, a student who is absent 20 consecutive days between October 1 and the beginning of the state testing period may be removed from an SLT. The parish has also developed rules governing the use of student mobility data. Students who enter the classroom before October 1 and who remain through the second week in April, for example, are considered part of the teacher's roster that is included in the state's educator evaluation data system. These rules are designed to mitigate bias introduced during the SLO process. They build flexibility into what is ideally a consistent process across all teachers and students. Districts will need to determine what business rules and exceptions are necessary and most applicable in their respective contexts. Examples of such rules may be reviewed in the document *Flexibility for Fairness: Crafting Business Rules for Student Learning Objectives*.

Determine Policy for the Use of Professional Judgment. TIF grantees must rely on trained evaluators to make accurate judgments of teacher performance based on the multiple measures used in these new systems. SLOs and other performance measures are forms of evidence; ideally they should not be used as primary factors when determining a teacher's effectiveness. Evaluators must administer and assess student growth measures with reliability in order to ensure fairness and consistency for all teachers. Typically, then, strategic investment in the training and calibration of evaluators on all measures is money well spent. In addition to training, leaders must also know when professional judgment is warranted and to what degree it can be used in making compensation decisions.

Templates and Forms. An SLO template provides a consistent document format for all teachers to use. While templates come in all shapes and sizes, common elements include writing space for the following:

- Summary of student data including baseline and trend data, student strengths and weakness
- Interval of instruction explaining the time period of student growth covered by the SLO
- Content and standards addressed by the SLO
- Assessment(s) that will be used to measure student progress
- Instructional strategies, professional development goals, or other instructional plans
- Growth target explaining how much growth is expected of all students
- Rationale for the amount of growth anticipated for all students in the SLO
- Signatures of teacher and evaluator

Some states and districts provide additional forms to ensure that teachers and evaluators document each step of the process. Sample forms include documentation of mid-year and end-of-year conferences and worksheets demonstrating the appropriateness of assessments. In many cases, these forms are available electronically or are built into existing electronic evaluation platforms.

Checklists and Rigor Rubrics. Checklists and rubrics help teachers and evaluators ensure that SLOs are complete and rigorous. Typically, these documents highlight key information that must be included in the SLO and provide specific guidance to reinforce and clarify the general template. Teachers use checklists and rubrics as guides, while evaluators use checklists to organize and structure their reviews and approval processes.

Timelines. The SLO cycle is generally a multistep, year-long endeavor. Timelines are valuable because they provide teachers and administrators with clear expectations for where they should be in the process throughout the year. Timelines are often the resource that makes the SLO process "click" for teachers and principals: Visualizing the cycle based on a timeline that is integrated with the school calendar translates a typically complicated process into an achievable sequence of milestones. Key dates should include the initial submission date, the final date for revision, deadlines for holding midcourse and end-of-year conferences, and scoring and reflection dates.

Examples. Providing high-quality SLO examples and descriptions during the training process can help educators establish a vision for their own SLO development. Examples and descriptions should highlight and articulate how specific components combine to build a strong SLO. This process will help educators identify desirable characteristics in their own SLOs and develop a deeper understanding of the expectations. Examples are needed for a variety of subjects and grades, although too many examples may have the unintended consequence of promoting educator dependence on samples instead of fostering teacher reflection and thoughtful planning. Many state and district examples have been compiled and are available for viewing at the Center on Great Teachers and Leaders SLO Resource Library.

Example Sets. In addition to providing exemplars, providing "sets" of SLOs—e.g., an SLO in need of revision, the same SLO with comments from an evaluator, and the revised SLO—can illustrate the difference between low-quality and high-quality SLOs and support teachers in establishing anchors for SLO development. Sets can also be useful training tools to promote discussion and to help evaluators calibrate their expectations.

Vignettes. To illustrate the abstract concept of SLOs to educators, districts and states can consider providing illustrations or vignettes of teachers completing the steps of the development process. For example, vignettes can be used to illustrate: (1) a review of data highlighting critical features and the development and approval of an SLO; (2) the development of unit or lesson plans based on an SLO; (3) the use of formative data for midcourse corrections; and (4) an evaluation conversation in which summative data is used to examine whether or not the SLO was met. Illustrations such as these can support successful implementation by providing explicit, concrete examples and models.

Assessment Guidance. Selecting assessments that support effective evaluation is a critical but challenging step for teachers. In many schools and districts, teachers and administrators have little background or confidence in their own assessment literacy. This can be problematic because SLOs are only as good as the baseline and assessment data on which they are built. Without solid baseline data and assessments that are aligned to instruction, SLOs are little more than shifting targets. Teachers and administrators must be confident in their understanding of what constitutes a quality assessment and in their ability to create quality assessments if or when standardized instruments are unavailable.

State and district plans to implement the SLO process will vary depending on teacher and administrator skill in analyzing student data and selecting or developing quality assessments. Some states and districts (e.g., New York State) require specific tests for teachers by grade and subject. Others, such as AISD, offer lists of approved or recommended assessments and allow teacher-made assessments that meet state or district requirements. Still others, such as Ohio TIF, emphasize assessment literacy trainings designed to support educators as they develop SLO assessments for grades and subjects in which no district or state assessment is available.

In many ways, implementation success rests upon teacher and administrator assessment literacy. Locally developed tests are not meant to replace standardized tests; but high-quality teacher-, team-, or district-developed tests are necessary to ensure that SLOs are successfully implemented with appropriate levels of validity and comparability. As a general rule, guidance should identify and explain the elements of a valid, reliable, and rigorous assessment that is aligned to standards; should provide a recommended approach to SLO-related assessment development; and should offer suggestions for locating high-quality, externally produced assessments. For further discussion on assessments, see Appendix D.

Target Setting Guidance. Districts should also provide teachers with support around setting growth targets for their students. This is particularly important to ensure the accurate measurement of student growth, and it can play a significant role in the teacher's professional development around SLOs. Growth targets should be developmentally appropriate, as well as rigorous yet attainable. This means that teachers may need guidance on translating their students' data into reasonable goals for each student or student subset. Reports from the beginning stages of SLO implementation at DPS suggested that educators struggled with target setting. The district responded by creating more trainings and resources in this area

and by developing a database of student assessment data (Community Training and Assistance Center, 2004). Another way to address target setting needs is by setting growth targets for teachers, most often using a common growth formula. These formulas can produce targets that make comparing SLOs and meeting district requirements easier. AISD noted that common growth formulas allowed educators more time to focus on other aspects of SLO implementation, since target setting is often the most time consuming part of SLO development. Many districts report, however, that there are limitations to this approach, including inflexibility to contextual or student factors and decreased buy-in from teachers (Lachlan-Haché et al., 2013). For more information on SLO target setting guidance, see the Center on Great Teachers and Leaders Professional Learning Module: An Introduction to Student Learning Objectives.

Scoring Guidance and Rubrics. If SLOs are to be fair and comparable measures of student growth, administrators and teachers need a clear understanding of the scoring process. Scoring can take multiple forms ranging from a holistic approach to detailed analysis and benchmarking. The scoring methodology should be simple, transparent, and fair and should be connected to improvements in teacher practice and student growth. Teachers and administrators should share a common understanding of how the scoring process works. In addition, scoring methodology should foster consistent and fair ratings across teachers and evaluators and should produce scores than can be easily combined with other measures to create a final summative rating. For more information on specific scoring types, see the Center on Great Teachers and Leaders, SLO Scoring Professional Learning Module.

Combining SLO Scores with Other Effectiveness Measures. The overall SLO score must be combined with other measures of educator effectiveness to create a summative rating. In some cases, this is done by combining weighted averages. In other cases, a matrix may be used to incorporate the SLO score into a final effectiveness rating. Massachusetts employs this latter technique using its District-Determined Measures (DDMs) to define the type of professional growth plan a teacher will follow in subsequent years. Regardless of the method used, districts and states should clearly articulate the process so that all teachers understand how their ratings are determined. For more information on combining measures for a final effectiveness rating, see Leo and Lachlan-Haché (2012), *Creating Summative Educator Effectiveness Scores: Approaches to Combining Measures*.

Videos. Video development and production can be time-consuming and costly, but effective videos can help increase buy-in and provide on-demand training options. Videos of teachers and administrators talking about the benefits of SLOs can promote commitment among educators. Training videos can provide easily accessible information to teachers and administrators that can guide them through each step of the SLO process. Suggested video topics include an overview of the SLO process, procedures for selecting assessments, and an overview of the review and scoring processes, including modeling of teacher-evaluator conversations. A narrated slide presentation containing screenshots of important resources might be a low-cost alternative to video production. While slide presentations may be less effective than an in-person narration, they can be useful tools for communicating information consistently to large audiences.

Hotline. Effective training lays the foundations for successful implementation. Even with the best training, however, questions will arise when educators are back in their schools and working to implement SLOs. An e-mail or telephone hotline staffed by SLO leaders provides educators with access to information when they need it. Online help desks have also been used in some states to offer stakeholders a series of chat-room times during which questions can be answered. Sharing information through a centralized source ensures that educators will receive accurate, up-to-date information that is consistent with state or district guidelines.

Transition Plans. Transition plans can provide road maps for how districts or states will shift from their previous systems to new systems that incorporate SLOs. Districts and states will need to determine how districts will ultimately take ownership of their SLO processes. Articulating how districts will build sufficient expertise—and allocating resources needed to support implementation, such as time and materials for trainers and staff—should not be an afterthought.

Pilot and Scale Up With Training and Rater Calibration

Ongoing training and evaluator calibration are critical components in the successful implementation of a reliable system. Like high-quality observation systems, sustainable SLO use requires on-going and deliberate training, which requires significant scheduling, time, and resources. Video modules and webinars exist as alternate options, but are often used only as a follow-up resource for in-person training. In fact, many districts have conducted webinars and offer training modules on their websites. For specific examples, see the Center on Great Teachers and Leaders SLO Resource Library.

Training. The formal use of SLOs as a valid measure of evaluation requires the delivery of training on multiple topics to multiple audiences. All stakeholders need a basic overview and an introduction on how SLOs align with the overall system (Table 1). District staff, particularly principals and other evaluators, will need training to both understand the development and implementation processes as well as lead the approval and final scoring of SLOs during the academic year (Table 2). Teachers will need training around setting quality growth targets for students and, in some cases, how to turn their goals into actionable instructional practices (Table 2). Facilitators will require training in the topics noted above, as well as resources and skills development around facilitating adult learning.

In many cases, states opt for a train-the-trainer approach in which state leaders attend trainings and later lead the same trainings for district leaders. Utilizing a train-the-trainer delivery model can help build local implementation capacity and maximize limited resources by reducing travel and training costs. That said, a poorly implemented train-the-trainer model may often resemble a game of telephone because the information that teachers receive may ultimately be inaccurate and substantially different than the information communicated to training facilitators. Consistent, high-quality training, then, is essential if the delivery is to succeed. In 2010, for example, AISD trained principals and SLO facilitators to provide campus-level support to teachers. In the course of a focus group review of the training, the district found that some facilitators and principals could not correctly answer questions or provided conflicting or inaccurate information about the program. Changes to AISD's training aimed at improving the quality of facilitator and principal knowledge around SLOs were made as a result of these findings (Lamb & Schmitt, 2012).

Early TIF grantees have used other avenues for training in addition to train-the-trainer models. For example, DPS and CMS hosted summer training institutes for new teachers, and McMinnville (Oregon) School District (MSD) conducted trainings online. In addition to trainings such as those described above, MSD and Achievement First, a network of charter schools and TIF grantees with sites in the northeastern U.S., held information sessions to provide overviews of their SLO initiatives. They also hosted trainings focused on leaders' roles in facilitating the larger evaluation and compensation programs at their sites (Lachlan-Haché et al., 2013).

Effective training and turnkey presentations can help ensure that trainers have the knowledge and tools needed to successfully present information. Trainings should be designed both to address the SLO process and to build confidence in school and teacher leaders who will continue implementation at the school level. Supplemental online modules and documents and ongoing troubleshooting can help to ensure that educators receive timely and accurate information. For specific TIF grantee examples of such support, see Appendix D.

Table 1. SLO Training for a Sustainable System

Title	Audience	Content
Aligning SLOs With the Overall System	Teachers, principals and other school and district leaders	When introducing SLOs through training, it is important to start by illustrating how they fit into the overall system. Further, it is critical to demonstrate that SLOs are intended to support greater student learning. Training should facilitate stakeholder support of the system and assure stakeholders that creating SLOs is not simply another task that must be completed without benefit to the teacher. Design training to ensure that evaluators, teachers, and other stakeholders: • Learn how SLOs fit into the overall system and align with district, school, and team goals • Acknowledge that measures of student growth will improve over time • Understand the SLO cycle and the steps for effective SLO development • Develop strategies for embedding SLOs in the professional culture with directed actions that include: – Addressing the need for data and assessment literacy with additional training, as needed – Incorporating SLOs into existing data review cycles when possible (e.g. data teams, PLCs, grade level teams) – Introducing SLOs in teacher preparation programs and student teaching experiences – Using SLOs in mentoring and induction programs – Providing professional development that addresses teacher needs to monitor progress and achieve growth targets for all students

Table 2. Evaluator and Teacher Training

Title	Audience	Content
Guidance on Selecting and Developing Assessments	Evaluators and teachers	High-quality assessments are required in an SLO system because student learning is judged in large part on the use of assessments. In order to improve comparability of SLOs and SLO scores, many districts use common assessments in SLOs. Regardless of approach, it is generally useful to determine where assessment gaps exist (e.g., world languages, health, fine arts, physical education). Where gaps exist, additional training for assessment development may be required. To support evaluators and teachers in building assessment literacy, trainings can: • Build skill to identify assessment validity, reliability, and alignment to content standards and SLO content, and consider whether the assessment is developmentally appropriate • Practice reviewing assessments for alignment and appropriateness • Build knowledge of item types and assessment blueprints and evaluate the quality of assessment items • Receive training on assessment scoring reports and other available resources and tools For concrete examples of assessment literacy training, please see the TIF TA Assessment Literacy Modules: • Module 1: Welcome to TIF assessment training modules • Module 2 assessment development: Unpacking the standards • Module 3 assessment development: Planning an assessment • Module 4 assessment development: General item development • Module 5 assessment development: Developing items • Module 6 formative assessment

Assessing the Rigor of SLOs	Evaluators and teacher leaders	In most districts, principals or specialized evaluators will judge and approve the quality and rigor of SLOs. Qualitative research suggests that principals and evaluators often find providing feedback on the rigor of SLOs to be the most challenging aspect of implementation (TNTP, 2012). Thus, clear guidance to assure consistency in this role is required. During this training, evaluators should: • Review the parts of an effective SLO • Learn how to use available resources (checklists, rubrics) to assess the rigor of the SLO • Build capacity to provide supportive feedback for the improvement of SLO writing • Practice gauging teacher understanding of the process and measure through conversation • Learn strategies for building teacher capacity to set rigorous SLOs • Gain clarity around the critical use of professional judgment • Develop strategies for managing the volume of SLOs • Develop strategies to cope with and resolve implementation issues • Articulate expectations for supporting, monitoring and evaluating SLOs
Scoring SLOs	Evaluators	An SLO system that is comparable across teachers in like subjects and grades will rely on a credible, consistent scoring process. Training evaluators in the scoring process helps them develop a common understanding of scoring procedures. During this training, administrators and evaluators can: • Review scoring policies and timelines • Discuss unique circumstances that may impact a teacher's scores • Practice scoring SLOs • Integrate SLOs with other measures of the evaluation
Calibration	Evaluators	Calibration sessions, used frequently in sectors other than education, can be a crucial step in maintaining SLO comparability and rigor and are intended to provide a medium for discussion among evaluators. Sessions aim to promote consistency among evaluators, serve as a means of retraining evaluators after their initial training, hold evaluators accountable to their peers, and promote rigor and fairness of evaluator approval and scoring. Calibration can focus on SLO approval and/or SLO scoring. All approaches require that evaluators share and review multiple SLOs to determine how their ratings align. Some calibration sessions start with evaluators writing reviews of their teachers' SLOs prior to the session. During the session, evaluators post the SLO ratings they intend to assign their teachers. Each principal is responsible for explaining the rationale behind his or her rating and also for reviewing the ratings proposed by other evaluators. As the evaluators share their rationales with each other, they are allowed to adjust their ratings based on the alignment with those of their colleagues. In some cases, an evaluator may have been too lenient or may have set the bar too high.
Analyzing Baseline Student Data	Teachers	Many teachers are insufficiently trained to use student achievement data in meaningful ways. However, teachers may need support in locating potential sources of baseline data and determining how data from past students can inform targets for current students. During this training, teachers might: • Identify sources of data • Improve their data analysis skills • Practice reviewing, interpreting, and analyzing data • Practice identifying trends in data • Consider ways to ensure that most students are covered by at least one SLO • Determine how to use data to inform classroom practices
Developing Teacher-Designed Assessments	Teacher teams	In some cases, teachers might not have previously-developed assessments available to them and thus must create their own assessments. During training on developing assessments, teachers might work together to: • Learn about the different types of assessments in their content area: their strengths, their weaknesses, and their potential uses • Practice designing assessment blueprints and/or item analyses • Learn strategies for ensuring teacher-designed assessments are appropriate • Develop skills in item writing and assessment design, including but not limited to pilot testing, reviewing and testing for adequate reliability and validity

Developing Rigorous and Realistic SLOs	Teachers and evaluators	A common challenge is determining whether an SLO is rigorous yet realistic. During training on this step, teachers and evaluators might: • Learn how to determine appropriate growth targets for students including general education, special education, and English language learner students • Practice identifying high- and low-quality SLOs and engage in conversations about why they are high- or low-quality
Turning SLOs into Actionable Instruction	Teachers and evaluators	An SLO is nothing more than an aspirational goal if educators do not know what concrete steps to take to help students meet their growth targets. Some educators may need additional guidance on the actions they can take to help ensure their growth targets are met. During this training, teachers might: • Locate potential sources of instructional support in the building • Practice using data to monitor student progress • Discuss ways in which a professional learning community may be a source of support • Develop strategies for using coach and evaluator feedback to inform instruction • Develop action plans for students who are struggling in class • Practice talking with parents and students about student goals
Training Refresher in the SLO Process	Teachers and evaluators	States and districts must ensure that teachers and evaluators continue to implement SLO best practices. This assurance will require the retraining of teachers and evaluators over time. Refresher training should be informed by results of ongoing monitoring and evaluation. Trainings for new teachers and evaluators will also support educators new to the district or state.

Resolving Conflicts between Teachers and Evaluators. Ideally, teachers and evaluators will agree on the final scoring of their SLO(s). However, districts and evaluators must be prepared to resolve differences when they occur. Establishing a fair appeals protocol adds credibility to the process. In Rhode Island, for example, the state has established district review committees that serve as independent review boards for teachers who disagree with their evaluation scores, including disagreements on teacher SLOs (Rhode Island Board of Regents Elementary and Secondary Education, 2012). Evaluators and members of review boards in many districts are required to participate in trainings that support coaching around student data analysis; review, selection and development of assessments; goal-setting and professional development planning; and scoring and rating procedures.

Communicate and Monitor for Continuous Improvement

During the initial stages of SLO implementation, states and districts may need to adjust the many aspects of the SLO process to ensure that it reflects best practices, is being implemented with fidelity, and results in valid measures of student growth. Communicating these changes can illustrate commitment to continuous improvement, while ongoing monitoring essential information that can be used to inform meaningful changes to the new system. Specific research questions and monitoring examples from TIF grantees are highlighted in Appendix E.

Monitoring for Fidelity of Implementation. Monitoring for fidelity typically addresses whether the system is being implemented consistent with system intentions, goals, and values, and whether key stakeholders (e.g., teachers, evaluators) perceive implementation as being effective. This type of monitoring can help TIF grantees better assess what quality improvements should be prioritized while considering time and budget constraints.

TIF grantees have monitored fidelity of implementation using focus groups, interviews, and surveys to collect feedback from stakeholders. In many cases, grantees have used this feedback to inform modifications to the SLO system. Modifications have included:

- Revising the SLO template and implementation timeline
- Improving communication between the district and teachers, especially in areas identified as needing of reinforcement
- Streamlining requirements to increase efficiency and decrease confusion

- Clarifying the approval process and the use of the SLO checklist
- Raising expectations to improve the quality of evidence participants are expected to provide at the end of the year for scoring SLOs
- Recalibrating common growth targets
- Providing time and structure for the development of common assessments (Lachlan-Hache, et al., 2012).

Monitor for Rigor and Comparability. Monitoring can take place at multiple levels of the system. When monitoring for rigor and comparability, SLO reviews or audits are used to assess the development, approval, and implementation of SLOs to gauge the quality of approved SLOs, highlight common mistakes, and indicate additional training needs. Communicating results of these reviews can instill a sense of fairness if results are used for continuous improvement rather than high stakes. For example, AISD reads all submitted SLOs at the beginning of the school year to ensure they meet quality standards. At the end of the year, the district conducts a random audit to verify results. In MSFE, SLO audits were used to support piloting districts by articulating common errors and areas for improvement.

SLO scores should also be monitored to assure that SLOs are differentiated between various levels of teacher effectiveness. While differentiation alone does not assure rigor or validity, it can convey an essential principle of evaluation by providing clear direction for teacher development in the varying levels of effectiveness. SLO scores should differentiate significant student impacts from insignificant student impacts and when that is the case, the results (along with observation and other measures) can be used to compensate teachers accordingly. If very few teachers meet their SLO targets, or if all or most teachers consistently meet all their targets, there is a lack of differentiation. Monitoring can pinpoint what refinements may be required to increase differentiation. It may be that assessments chosen were not aligned with course content or instruction or that evaluators were not successfully calibrated. Some of these issues can be identified by doing a basic review and comparison of SLO score distributions by school, grade, and subject. Without a monitoring plan, it would be difficult to address the lack of differentiation limiting authentic improvements in teacher effectiveness and student progress.

Triangulate Data to Promote Discussion and Reflection. Districts can also monitor implementation by triangulating SLO data with other effectiveness measures, such as classroom observations, student surveys, or other measures of student growth (classroom or school-level). For example, AISD issues an annual research brief that informs stakeholders of the key findings of district monitoring efforts and addresses research questions (e.g., "Did setting and meeting growth targets in SLOs correspond to better Texas Assessment of Knowledge and Skills growth?").

Triangulating data can draw attention to instances of misalignment of school or evaluator results that consistently demonstrate high SLO ratings but low scores on other measures (or vice versa). Results should not be used to make quick judgments about schools or evaluators, as data are not causal. However, such results can indicate if a school's teachers and leaders need additional training on setting rigorous and realistic growth targets, better aligned assessments, or more effective scoring methods. AISD, for example, found that teachers who met their SLO targets scored higher on teacher observations and achieved higher overall appraisal scores than did teachers who did not meet their SLO targets, lending credibility to their SLO implementation (Lamb & Schmitt, 2013). During Indiana's first year of implementation, researchers found no relationship between SLO scores and observations scores, an outcome that provided leadership with evidence that observation scores were being inflated (TNTP, 2012). Triangulation may also inform differentiation as discussed above. That is, in addition to monitoring, triangulating data may help to provide evidence for differentiation (or lack thereof). Triangulation should be used as a mechanism to promote discussion and to support school leaders' efforts to address differences and improve practices. Guiding questions to promote evaluator discussion and reflection represent a valuable resource and should focus the conversation on solutions for building validity across all effectiveness measures.

The extent to which a district allows for professional judgment to influence evaluation scores may be another important consideration when triangulating data. Alignment issues in this area are especially critical during the initial stages of implementation, when leaders and evaluators are continually improving their professional judgment to better support the new evaluation system's goals and procedures. Summative matrices, for example, may allow a greater degree of professional judgment, which can result in less differentiation in summative ratings. Triangulation can be used to examine such trends over time.

Research and Evaluate Implementation. To assure maximum learning and refinement results from early implementation efforts, research into the processes and outcomes of implementation is necessary. Data can be collected during the pilot phase of SLO implementation to help districts learn from the process and to revise and improve their systems. A variety of research plans can lead this effort.

It may be cost- and resource-effective for districts and states to collaborate on such research to examine common themes. Furthermore, districts and states would do well to consider partnering with regional educational laboratories and other research organizations to streamline research efforts and take advantage of large sample sizes.

Conclusion

As districts design and implement unique SLO systems that fit their regional contexts, they should be alert to innovations and opportunities for collaboration and efficiency. SLOs have potential for improving the way we assess teaching effectiveness; but implemented poorly, they can represent a false promise couched in a complex reform agenda. To reach their potential, SLOs must be used within a system of trust that focuses on teacher development and professional growth. SLOs often require a shift in culture, specific structures, and detailed training to assure rigor and comparability. Devoting sufficient time to communicating, training, and monitoring SLO implementation may lead to critical improvements in instruction, teacher effectiveness, and student growth.

References

Community Training and Assistance Center. (2004, January). *Catalyst for change: Pay for performance in Denver* (Final report). Boston, MA: Author. Retrieved from http://www.ctacusa.com/wp-content/uploads/2013/11/CatalystForChange.pdf

Community Training and Assistance Center (2013, February). *It's more than money: Teacher Incentive Fund—Leadership for educators' advanced performance, Charlotte-Mecklenburg Schools*. Boston, MA: Author. Retrieved from http://ctacusa.com/wp-content/uploads/2013/11/MoreThanMoney.pdf

Freed, D. (2015). Welcome to TIF assessment training modules. Retrieved from https://www.tifcommunity.org/index.php?q=resources/tif-assessment-training-module-1

Freed, D. (2015). Module 2 assessment development: Unpacking the standards. Retrieved from https://www.tifcommunity.org/index.php?q=resources/assessment-development-unpacking-standards-module-2

Freed, D. (2015). Module 3 assessment development: Planning an assessment. Retrieved from https://www.tifcommunity.org/index.php?q=resources/assessment-development-planning-assessment-module-3

Freed, D. (2015). Module 4 assessment development: General item development. Retrieved from https://www.tifcommunity.org/index.php?q=resources/assessment-development-general-item-development-module-4

Freed, D. (2015). Module 5 assessment development: Developing items. Retrieved from https://www.tifcommunity.org/index.php?q=resources/assessment-development-developing-items-module-5

Freed, D. (2015). Module 6 formative assessment. Retrieved from https://www.tifcommunity.org/index.php?q=resources/formative-assessment-module-6

Gandha, T., & Baxter, A. (2014, November). *Oklahoma teacher and leader evaluation systems—Focus group findings*. Southern Regional Education Board. Retrieved from http://www.ok.gov/sde/sites/ok.gov.sde/files/documents/files/SREB%20Focus%20Group%20Report.pdf

Indiana Department of Education. (2012). *Sample student learning objectives*. Retrieved from http://www.riseindiana.org/sites/default/files/files/Student%20Learning/Example%20SLOs%201_0.pdf

Lachlan-Haché, L., Matlach, L., Reese, K., Cushing, E., & Mean, M. (2013, August). *Student learning objectives: Early lessons from the Teacher Incentive Fund*. Washington, DC: Teacher Incentive Fund Technical Assistance Network.

Lamb, L. M., & Schmitt, L. N. T. (2012, January). *AISD REACH program update, 2010–2011: Participant feedback* (DRE Report No. 10.86 RB). Austin, TX: Austin Independent School District. Retrieved from http://www.austinisd.org/sites/default/files/dre-reports/rb/10.86RB_AISD_Reach_Participant_Feedback_2010-2011_0.pdf

Lamb, L. M., & Schmitt, L. N. T. (2013, January). *AISD pilot teacher appraisal system, 2011–2012* (DRE Report No. 11.80). Austin, TX: Austin Independent School District. Retrieved from https://www.austinisd.org/sites/default/files/dre-reports/11.80_AISD_Pilot_Teacher_Appraisal_System_2011_2012.pdf

Leo, S. F., & Lachlan-Haché, L. (2012, March). *Creating summative educator effectiveness scores: Approaches to combining measures*. Washington, DC: American Institutes for Research. Retrieved from http://educatortalent.org/inc/docs/Creating Summative EE Scores_FINAL.PDF

Milanowski, A. (2012, June 5). *Overview on measurement*. Presentation given at the Teacher Incentive Fund Incentive Measurement Issues Conference, Fort Lauderdale, FL.

Rhode Island Board of Regents Elementary and Secondary Education. (2012). *Rhode Island model: Teacher evaluation & support system* (2nd ed.). Providence, RI: Author. Retrieved from http://www.ride.ri.gov/Portals/0/Uploads/Documents/Teachers-and-Administrators-Excellent-Educators/Educator-Evaluation/Education-Eval-Main-Page/Teacher-Model-GB-Edition-II-FINAL.pdf

TNTP. (2012, July). *Summer report: Creating a culture of excellence in Indiana schools*. Indianapolis, IN: Indiana Department of Education. Retrieved from http://www.riseindiana.org/sites/default/files/files/Summer%20Report.pdf

Appendix A. *Taking the Pulse:* District Readiness Continuum for SLO Implementation

Developed by American Institutes for Research, Taking the Pulse is a self-assessment tool intended to help district leaders determine where additional efforts may be needed before their district is ready to implement SLOs. It can be used as a paper-and-pencil tool or as an online survey titled the SLO Implementation Scorecard.

District leaders can consider which of the three indicators in each row best describes the district and can then use this information to define areas that need improvement before implementing SLOs.

District Readiness Continuum for SLO Implementation

Not Yet Ready to Implement	Building Toward Readiness	Ready to Implement SLOs
Stakeholder Engagement		
• Educators exhibit limited awareness of and interest in student growth measures.	• Educators discuss student growth measures, often in their own circles and not participating in a larger discussion.	• Educators engage in ongoing discussions about student growth measures. Discussions dispel myths and misunderstandings while demonstrating educator interest in improving growth measures.
• The district offers few if any opportunities for educators to participate in setting district policies around compensation/ evaluation.	• The district provides a few teachers and leaders with opportunities to serve on committees or provide input through focus groups or similar mechanisms focused on compensation/evaluation.	• The district engages nearly all educators in opportunities to discuss and shape district policies regarding compensation and evaluation through multiple feedback mechanisms on an ongoing basis.
Shared Vision		
• The district articulates broad goals for improving educator effectiveness and student achievement.	• Educators, parents, and the community are aware of goals for improving educator effectiveness and student achievement, but district initiatives and programs are not aligned to the goals.	• Educators, parents, and the community exhibit a shared commitment to increasing educator effectiveness and student achievement as well as district initiatives and programs aligned to the goals.
• The district has a limited number of high-quality assessments available and is unclear where gaps in assessment exist. Teacher and leader assessment literacy is not yet a priority.	• The district is committed to working with teachers over time to develop more high-quality preassessments, postassessments, and formative assessments for subjects where assessment gaps exist.	• The district has high-quality common preassessments, postassessments, and formative assessments available for all grades and subjects and structures teacher time for the continued development of assessment literacy skills.
• A limited number of district staff understand the benefits and challenges of implementing SLOs.	• District staff make limited efforts to communicate the benefits and challenges of implementing SLOs to the community.	• District staff and educators share a common understanding of what implementing SLOs will entail and demonstrate a shared commitment to implementing with fidelity.
Culture of Data-Driven Planning		
• Teachers and administrators have limited access to student data.	• The district is working to develop systems to provide teachers and administrators with greater access to data.	• The district has fully developed data systems that provide teachers and administrators with opportunities to access and analyze current data and data trends for the development of growth targets.
• Teachers and administrators have little or no experience with the analysis of student data.	• Teachers and administrators have some experience with the analysis of student data.	• Teachers and administrators have experience and common planning time devoted to the analysis of student data.
• The district lacks sufficient resources to support educators' use of assessments and data to inform instruction.	• Educators have some experience using data to inform instruction. The district offers some professional development opportunities to further educators' use of assessments and data.	• Educators have strong foundations in assessment literacy. Job-embedded professional development opportunities exist at all schools to help teachers augment their assessment and data literacy skills.

Infrastructure		
• The district has limited feedback mechanisms and procedures for overseeing the SLO process at the district level.	• The district monitors the SLO process through audits and gathers occasional feedback.	• The district monitors and revises the SLO process on an ongoing basis through regular communication channel in which schools provide feedback and suggested revisions.
• The district has limited plans to improve implementation over time.	• The district has the capacity to evaluate implementation on a yearly basis and adjusts the process as necessary.	• The district evaluates implementation on an ongoing basis and adjusts implementation on an as-needed basis.
• The district has no formal plans to conduct or participate in research around the implementation of SLOs.	• The district has considered conducting or participating in research around SLOs.	• The district recognizes the importance of, and is conducting or participating in, research around the implementation of SLOs.
Teacher Knowledge and Skill		
• Teachers struggle to analyze student data; using data to inform instruction is not common practice.	• Teachers analyze student data with support and use data to inform long-term planning but not in everyday instruction.	• Using student data to inform instruction is common practice; teachers consistently use student data to adjust planning, improve instructional practice, and seek professional development.
• Teachers implement mandatory district and state assessments but rarely use other forms of assessment.	• Teachers use a variety of formative and summative assessments of varying quality.	• Teachers apply assessment literacy skills to select or collectively develop high-quality formative and summative assessments that align with standards and provide useful information about student mastery and growth.
• Teachers rely upon student files and prior-year report cards as sources of information about their students.	• Teachers rely upon student files and prior-year report cards as sources of information about their students and attempt to seek out additional information but do not always know where to look.	• Teachers gather and use a variety of information about the needs and strengths of their students from student files, prior-year teachers, report cards, surveys, assessments, and discussions with family members.
Support Systems		
• Teachers often work in isolation and have limited opportunities to engage with peers.	• Teachers participate in professional learning communities (PLCs), share planning time, or work in teams to analyze student data.	• Teachers productively use time allocated for collaborative activities to plan instruction, engage in reflection, analyze data, and share best practices.
• The school lacks an organizational structure that can facilitate reviews of SLOs and provide feedback and support.	• The school has a building-level team responsible for overseeing the SLO process, but team members lack sufficient training, time, or commitment to provide feedback and support.	• The school has a building-level team that possesses sufficient expertise, time, and commitment to approve SLOs and provide valuable feedback and support to teachers.

Appendix B. Creating a Sustainable Vision

The TIF grantees listed below use SLOs as part of their measures of teacher effectiveness. Although these systems are leading the discussion on how to effectively integrate SLOs, each system has its strengths and limitations. All grantees continue to train, evaluate, and adjust their systems to maximize the validity and rigor of their SLOs. Below are some examples of their practices in several components of SLO implementation.

Creating a Sustainable Vision

	Austin Independent School District (AISD)	Denver Public Schools (DPS)	Maine Schools for Excellence (MSFE)	Ohio TIF
Engaging Stakeholders and Providing a Vision of Sustainability				
Communicating	In an effort to be proactive and provide continued support to teachers after trainings, AISD has created a website that houses guides and videos for educator use. The district also sends e-mail blasts to staff periodically to ensure that everyone is aware of program requirements and upcoming deadlines.	DPS provides guidebooks, videos, and SLO samples for teachers and evaluators to further enhance their understanding of SLOs.	MSFE's webpage of resources provides multiple videos, checklists, and example SLOs. Here, MSFE provides their SLO framework that was developed by an SLO workgroup of representatives from each district. The document outlines MSFE requirements and district-specific decisions related to SLOs. MSFE also developed an SLO Handbook that districts can edit and tailor to their contexts, as well as a communication guide for districts that, while not specific to SLOs, emphasizes the importance of clear communication in implementing high quality educator evaluation and human capital management systems.	The resources on the Ohio Department of Education website have assisted Ohio TIF districts by providing a guidebook, sample SLOs, and frequently asked questions related to student growth measures in the state.

Implementing Feedback Loops	AISD analyzes participant feedback through annual program updates regarding the SLO process, including the adequacy of support and program elements and their impact.	Regular monitoring of SLO implementation was conducted by the Community Training and Assistance Center (CTAC) and resulted in an important study.	MSFE meets regularly with cooperating districts to collect feedback and make refinements to the system. They work closely with the American Institutes for Research to audit selected SLOs and provide feedback to districts in early implementation.	Frequently asked questions are regularly updated based on training and email feedback from teachers and principals. Ohio TIF has also developed their own online community that is available for fellow TIF grantees.
Staggering Implementation	AISD began its work at nine schools as part of a strategic compensation initiative and has since expanded to 36 schools. Over time, the district has refined its SLO process to include individual and team goal setting. In 2011–12, AISD piloted SLOs as part of a teacher evaluation in three schools and has expanded this practice to 12 schools.	DPS has been using SLOs for many years and has worked to strategically embed SLOs in district culture. SLOs are created by all school personnel to foster a sense of accountability within all staff.	In an effort to avoid overwhelming educators during the first year of implementation, MSFE required that educators develop only one SLO during the first year of implementation. The second year, their districts followed the state requirement of two SLOs for each educator.	As a state committed to local control, Ohio leaves the decision making related to implementation timeline to the districts. While this makes tracking implementation across the Ohio TIF districts a challenge, it allows district leadership the flexibility to phase in implementation in ways that best suit their district.
Allocating Teacher and Principal Time	AISD offers teachers and principals an SLO spreadsheet that streamlines the analysis of student data by allowing for the input of student information, pre- and post- test data, and a formula for calculating whether or not the growth target was achieved.	To streamline the SLO process, DPS has developed an online student growth objective application that allows teachers and evaluators to input SLO data directly into an online tool and interact with one another through the approval, monitoring, and scoring process. Access to the tool is restricted to DPS staff, but information is available through application user guides.	Some of MSFE's districts have offered professional development time specific to SLOs. One district's school board approved dedicating a full day to training on and writing SLOs, while others have early release times or time during their professional learning communities set aside for SLO work. In addition, there is a growing effort to connect SLOs to other initiatives, such as the Common Core or and Maine's proficiency-based diplomas at the high school level.	To reduce tensions around implementing SLOs, there is a growing effort to connect current educator practices to SLOs (e.g. building assessment literacy, ensuring rigor of curriculum standards, analyzing student data).

Appendix C. Policies, Examples, and Resources: Sample Supporting Documents From States and Districts

SLO Communications		
Denver Public Schools (DPS)	SLO Teacher FAQs	http://testing.dpsk12.org/resources/slo/slo_faq_2.pdf
	SLO One Pager	http://testing.dpsk12.org/resources/slo/SLOOne-pager.pdf
Rochester City School District	Frequently Asked Questions: Student Learning Objectives	http://www.rcsdk12.org/cms/lib04/NY01001156/Centricity/Domain/8504/APPR%20FAQ%20UPDATED.pdf
Reform Support Network	Communications Workbook for Student Learning Objectives	https://rtt.grads360.org/services/PDCService.svc/GetPDCDocumentFile?fileId=4227
SLO Guidebooks and Materials		
Austin Independent School District (AISD)	SLO Manual	http://www.austinisd.org/sites/default/files/dept/reach/SLO_Manual_2014_2015interactiveFinal.pdf
	SLO Guide	http://www.austinisd.org/sites/default/files/dept/reach/docs/SCI_SLO_Guide_2009-2010.pdf
Charleston County School District	CCSD Student Learning Objectives (SLOs) Guidebook	https://static.battelleforkids.org/documents/ccsd/Guidebook-OVERALL-DRAFTrevised-8-4-14.pdf
DPS	SLO Handbook	http://testing.dpsk12.org/resources/slo/slo_handbook.pdf
Maine Schools for Excellence (MSFE)	SLO Handbook	http://maine.gov/doe/excellence/documents/MSFE-district-SLO-handbook-template.pdf
Washoe County School District	WCSD Student Learning Objectives Guide	http://www.washoeschools.net/cms/lib08/NV01912265/Centricity/Domain/228/2014%20WCSD%20SLO%20Guide.pdf
	Setting Growth Targets: Increasing Student Achievement Advancing Teacher Practice	http://www.washoeschools.net/cms/lib08/NV01912265/Centricity/Domain/228/Setting%20Growth%20Targets%20Fall%202014.pdf
	Overview of the WCSD SLO Model	http://www.washoeschools.net/cms/lib08/NV01912265/Centricity/Domain/228/Overview%20of%20the%20SLO%20Model%20fall%202014.pdf
SLO Assessment Guidance and Forms		
AISD	SLO Spreadsheet with Formula	http://www.austinisd.org/sites/default/files/dept/reach/docs/SLO_Spreadsheet_with_Formula.xls
New York	Assessment Options for SLOs: Reference Guide	https://www.engageny.org/file/1876/download/assessment_options_for_slos.pdf
MSFE	SLO Assessment Checklist	http://maine.gov/doe/excellence/documents/sloassessmentcklist.pdf
Washoe County School District	Developing Quality Assessments: Increasing Student Achievement Advancing Teacher Practice	http://www.washoeschools.net/cms/lib08/NV01912265/Centricity/Domain/228/Developing%20Quality%20Assessments%20Fall%202014.pdf
SLO Scoring Guidance and Rubrics		
AISD	SLO Rubric	http://www.austinisd.org/sites/default/files/dept/reach/docs/SCI_SLO_Rubric_2010-11.pdf
Center on Great Teachers and Leaders	Scoring SLOs	http://www.gtlcenter.org/technical-assistance/professional-learning-modules/scoring-student-learning-objectives
Center on Great Teachers and Leaders	Balancing Autonomy and Comparability: State Approaches to Assessment Selection for Student Learning Objectives	http://www.gtlcenter.org/sites/default/files/AskTeam_Selecting_Assessments_SLO.pdf
MSFE	SLO Approval Checklist	http://maine.gov/doe/excellence/documents/MSFE-TEPG-SLO-approval-checklist.pdf

Washoe County School District	Student Learning Objectives Quality Rubric	http://www.washoeschools.net/cms/lib08/NV01912265/Centricity/Domain/228/Quality%20Rubric%20Fall%202014.pdf
	Student Learning Objectives Quality Rubric Supplemental	http://www.washoeschools.net/cms/lib08/NV01912265/Centricity/Domain/228/SLO%20Quality%20Rubric%20-%20Supplemental%20Spring%202014.pdf
	Student Learning Objectives Guiding Questions	http://www.washoeschools.net/cms/lib08/NV01912265/Centricity/Domain/228/Guiding%20Questions%20Fall%202014.pdf
SLO Videos and Training Materials		
AISD	SLO Overview	http://player.vimeo.com/video/75771384?autoplay=1
Charleston County School District	CCSD Student Learning Objectives (SLOs) Overview Video	http://portal.battelleforkids.org/Bridge/evaluation/resources
DPS	SLO 101 Turnkey	http://testing.dpsk12.org/resources/slo/slo_101.ppt
	SLO Turnkey (Objective Statement and Performance Criteria)	http://testing.dpsk12.org/resources/slo/turnkey_os_ps_bd_2.ppt
	SLO Turnkey (Learning Progression Rubric)	http://testing.dpsk12.org/resources/slo/turnkey_rubric.ppt
	SLO Turnkey (Baseline Data, Preparedness Levels, and Body of Evidence)	http://testing.dpsk12.org/resources/slo/turnkey_bd_boe.ppt
MSFE	SLO Introduction and Overview Video	https://www.dropbox.com/s/boijrefzanncsx1/MSFE SLO Video I - Overview - Final.wmv
	SLO Development Video	https://www.dropbox.com/s/lp3c554enxmlfdv/MSFE SLO Video II - Process - Final.wmv
	SLO Assessments Video	https://www.dropbox.com/s/679bmxg98qeisen/MSFE SLO Video III - Assessments - Final.wmv
	SLO Approval Video	https://www.dropbox.com/s/r5g2ifs3crfe0kj/SLO approval process webinar 11.18.wmv
	SLO Rating Video	https://www.dropbox.com/s/koww6gvpu2tp730/14_1707_RatingSLOwebinar_ed_3-28-14.wmv
New York	Student Learning Objectives: Webinar I	http://engageny.org/resource/student-learning-objectives-webinar-i/
Rochester City School District	K-2 Webinar – setting targets	http://www.rcsdk12.org/cms/lib04/NY01001156/Centricity/Domain/8504/K-2%20ELA%20and%20Math%20SLO%20Webinar.wmv
Washoe County School District	Introductory Video March 2014	http://youtu.be/jlQB_oLMXGk
	SLO Cohort 2 School Training	http://www.washoeschools.net/cms/lib08/NV01912265/Centricity/Domain/228/Cohort%202%20August%205%202014%20SLO%20Training%20All%20Levels.pdf
	SLO Cohort 2 School Training Session 2: Learning Content and Assessments	http://www.washoeschools.net/cms/lib08/NV01912265/Centricity/Domain/228/SLO%20Cohort%202%20Training%20Session%202%20Learning%20Content%20and%20Assessments.pdf
	SLO Cohort 2 School Training Session 4: Student Population and Instructional Strategies	http://www.washoeschools.net/cms/lib08/NV01912265/Centricity/Domain/228/Cohort%202%20Training%20Student%20Population%20and%20Instructional%20Strategies.pdf
	SLO Cohort 2 School Training Session 5: Interval of Instruction and Setting Growth Targets	http://www.washoeschools.net/cms/lib08/NV01912265/Centricity/Domain/228/Cohort%202%20Training%20Interval%20of%20Instruction%20and%20Growth%20Targets.pdf

Appendix D. Training, Evaluator Calibration, and Specific Guidance Around SLO Assessments

In addition to offering effective teacher evaluation and compensation systems, AISD, DPS, MSFE, and Ohio TIF provide training and resources to build consistency among evaluators and educators. These initiatives often include role-specific guidance documents and trainings, as well as videos and guidance to support evaluators and educators in their selection or development of quality SLO assessments.

District Efforts in Training, Evaluator Calibration and Specific Guidance around SLO Assessments

	AISD	DPS	MSFE	Ohio TIF
Training	Teachers and evaluators need consistent training and recalibration on how to develop high-quality SLOs. Austin regularly trains teachers, evaluators, and other school staff, and provides examples of SLOs for teachers.	DPS provides guidebooks, videos, and SLO samples for teachers and evaluators to training educators on the SLO process. They have turnkey presentations that support teachers in the basics of SLOs, writing objective statements, using a learning progression rubric, and analyzing data for use in SLOs DPS also has sets of guiding questions, guidance for teachers of student with disabilities, and conversation protocols.	MSFE uses a train-the-trainer model and offered additional SLO "refresher" trainings during the second year of implementation. District facilitators hold office hours for educators to attend while they are writing their SLOs, and TIF leadership conducts additional training if districts request more guidance in specific areas of the SLO process. In addition to formal trainings, their website houses example SLOs and videos on developing SLOs, assessment guidance, and SLO approval and rating processes.	During the first year of implementation, TIF leadership traveled to districts using SLOs to provide direct training and support.

	AISD	DPS	MSFE	Ohio TIF
SLO Assessment Guidance	Austin provides guidelines around the use of assessments for specific subjects and grades (p. 17) and created a quality assurance rubric for principals and campuses to use for rating SLOs. Austin also provides a checklist for principals.	DPS teachers build learning progression rubrics that addresses specific performance criterion as well as proficiency levels. These rubrics are used to describe the typical growth process through which students move as they develop mastery. Denver provides teachers with guidance on how to determine students' end-of-course command levels with multiple sources of evidence as well as rubrics to determine students' end-of-course command levels when few evidence sources are available.	Some districts within MSFE have mandated certain assessments while others allow more flexibility in assessment selection. To get an accurate pulse on where support is most needed, MSFE developed a survey asking educators about their assessment literacy. Districts will use the results of the survey to determine next steps in assessment guidance. For further guidance, MSFE has developed an assessment checklist and an SLO handbook (p. 14) for additional support around assessment.	During the summer of 2013, each Ohio TIF district sent up to six representatives to two trainings. The first training focused on common formative assessments and authentic performance tasks. These training facilitated conversations within district teams on standards alignment, depth of knowledge, and constructing rigorous and standards-aligned assessment items. The second training certified two members of each team to act as assessment literacy lead trainers, but all members had sufficient training to provide support and capacity building within their respective districts. During the first year, each district was provided a full day site visit by a professional development consultant to assist in the district's assessment literacy training process, and consultants made explicit ties to SLOs during each of these visits. This academic year (2014–15) marks Ohio TIF's second year working on assessment literacy. They have continued to conduct site visits and connect much of this work to SLOs.

Appendix E. Monitor and Evaluate SLO Implementation: Research Questions, Resources, and Examples

Ongoing monitoring and evaluation of SLO implementation provide districts and states with essential information that can be used to inform revisions to SLO implementation as needed. This appendix describes five domains—or categories—of research questions that will help to support an examination of the validity and reliability of SLO implementation. Following the description of these domains is a table of examples that highlights how AISD, DPS, MSFE, and Ohio TIF have monitored and evaluated SLO implementation in their contexts (or, in some cases, how they plan to monitor and evaluate their respective SLO implementations).

1. **Level, Quality, and Relevance of Program Implementation.** Research questions in this domain can serve a formative function, addressing whether the program is being implemented with fidelity and whether key stakeholders (e.g., teachers, evaluators) perceive implementation as being effective. Research in this domain may also examine the quality of SLOs relative to variations in the depth of training and calibration for evaluators and teachers. As we know from experience, SLO training comes in a variety of forms. Research that examines such varieties of dosage in both training and collaboration may help states and districts better assess what level of training is necessary for quality implementation while considering time and budget constraints.

2. **Intermediary Outcomes.** This domain consists of research questions that determine whether the implementation of SLOs is associated with outcomes that facilitate student achievement gains, such as improved school climate or working conditions; educator engagement in professional development; or increased collaboration to develop assessments, review data, or create lessons.

3. **Student Outcomes.** This domain examines the overall impact of implementation on student achievement. For example, research teams can examine how rigorous and realistic SLO growth targets relate to student achievement gains. Researchers can also examine the effect of implementing the SLO process on closing achievement gaps, as the process often targets instruction to improve the scores of low-performing students.

4. **Mechanisms.** This domain may be one of the most critical in terms of understanding the particular dimensions of SLO implementation. Research questions in this domain seek to understand which components of implementation are more strongly related to specific outcomes. For example, research questions can examine:

   - The number of SLOs required of teachers relative to the quality of growth targets
   - The quality of baseline data relative to the quality of growth targets
   - The use of standardized versus teacher-made assessments as they relate to student growth targets and achievement scores
   - Different scoring methods as they relate to teacher scores on SLO targets
   - The quality of assessments and their relationship to the rigor and achievement of SLOs
   - The quality of SLO assessments as they align to standards and enacted curriculum

   Generally these questions examine relationships among program implementation, building-based programmatic decisions, and critical outcomes such as educator engagement and student achievement.

5. **Correlation to Other Metrics.** Ideally, SLO scores will correlate with other metrics used in the evaluation system. High correlation is not necessarily a requirement because metrics often examine different variables. For example, SLOs measure student growth on specific student standards, while teacher observations measure specific teaching standards as evidenced by teacher practice. Regardless, some correlation is desirable and, therefore, research questions that compare teacher observation scores and SLO scores are useful. In addition, some scholars suggest

that teachers will more easily achieve growth targets than they will high value-added model (VAM) scores (Milanowski, 2012). Teachers and principals new to both measures share this concern (Gandha & Baxter, 2014), and at least one study has found this disparity to ring true (Lamb & Schmitt, 2013). Given the limited research base, further examination of SLOs and VAM scores, where both are available in common subjects and grades, is warranted. Early implementation studies suggest that some degree of correlation is possible (Community Training and Assistance Center, 2013). Reviewing scores for correlations will also contribute to greater understanding of student growth and will provide particular insight into the rigor of teacher-developed SLOs.

District Efforts in Training, Evaluator Calibration and Specific Guidance around SLO Assessments

	AISD	DPS	MSFE	Ohio TIF
Monitoring and Evaluation	In an effort to monitor the quality and rigor of SLOs, Austin established a central office monitoring committee. This committee was particularly important when the district first began using SLOs. The district reviews every submitted SLO for quality purposes at the beginning of the year and then conducts random audits at the end of the year. It also offers annual reports of its monitoring and research efforts.	The Community Training and Assistance Center of Boston, Massachusetts, conducted a study on Denver ProComp's implementation of SLOs and found that the highest quality objectives (as measured on a four-point rubric) were linked to their attainment by the teachers' own measures, as well as by student achievement measured by independent, standardized state and national assessments.	District review teams conduct quality assurance and calibration sessions to ensure consistency across their SLOs. At the conclusion of the first year of implementation, American Institutes for Research (AIR) conducted an audit of 20 SLOs from all MSFE districts. One district that particularly struggled with implementation requested a more thorough audit specific to their district. The results of the audits were used to inform changes to their SLO process. This year, MSFE will conduct a review of 30 percent of approved SLOs by district teams and facilitated by experts at AIR. This process aims to ensure rigor, clarity, and comparability across MSFE's districts. The results of the audit are used to inform leadership practice and training needs around SLO quality and comparability.	Since each district is implementing SLOs differently, TIF leadership is continually in conversation with districts about how to best monitor and evaluate their work. These conversations typically guide next steps and reforms for future decision making. For example, one district recognized its struggles and inefficiencies with implementation at the end of its first implementation year. TIF leadership reviewed a large sample of the district's SLOs and conducted follow-up trainings to ensure that its areas of growth were addressed for the next year.