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The Effect Of Student Learning Objectives On Teachers And Teaching As Part Of The Teacher Evaluation Process: A Grounded Theory Study

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THE EFFECT OF STUDENT LEARNING OBJECTIVES ON TEACHERS AND TEACHING AS PART OF THE TEACHER EVALUATION PROCESS: A GROUNDED THEORY STUDY

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Abstract

Teacher evaluation is changing in the United States, primarily due to federal policies requiring that measures of student growth be embedded within teacher evaluation systems. Student Learning Objectives (SLOs) emerged as one way to measure teacher effectiveness. SLOs are teacher-developed goals for student achievement that reflect student learning and growth over a specified time period. Each state or district utilizing SLOs in teacher evaluation implements SLOs in a different way, and the details of SLO implementation affect the extent to which teaching is improved. This grounded theory research study investigated the influence of SLOs on teachers and teaching. The researcher interviewed 20 teachers from six regions of the United States. This research identified three dimensions of SLO implementation that influence SLOs' effect: School Leadership, School Climate and Teacher Agency. These dimensions are explored in this research, resulting in recommendations that would serve to enhance the benefits of SLOs on teachers and teaching. Additionally, future research suggestions are noted to add to the growing body of research on SLOs.

Dedication

> *It is my hope that public schools will be places where children learn who they are as learners, to celebrate difference and uniqueness, to develop skills in challenging settings and in accordance with the best research on how the human brain learns, and where interpersonal problem solving and understanding is as central to the learning process as is personalized intellectual development.* Al Myers, Swift House Facilitator, 2005.

I wish to dedicate this work to my colleagues and mentors on the Swift House Team in Williston, Vermont. Swift House began in 1990 when then-principal Marion Stroud paired me with three remarkable educators to develop a multi-age middle school team- Gary Howard, Bernie Caron, and the late Al Myers. The team was to both meet the needs of middle school learners, and prepare these learners for a rapidly changing, technological world. Together with the support of Charlie Wilson and Carter Smith, Swift House was created. During the first year of operation, the 1991-1992 school year, and subsequently, Swift House emphasized technology integration, personalized learning, proficiency-based learning, student-led portfolio conferences, project-based learning, and strong student voice. These educators were forward-thinking and had the autonomy within the structure of the public school to create these systems, many of which are considered innovative event today. Swift House carries on under the dedication of my former colleagues, Kevin Hunt, Debbie Donnelly, Amy Skapof, Amanda Laberge, and Lisa Bisbee. Thank you for keeping the vision strong and always emerging. Strong public schools are vital to the health and well-being of our nation.

Acknowledgement

First, I wish to acknowledge the support and guidance from educator colleagues from around the country. Martha Allen, President of Vermont-NEA, and Sherry Gile, former Director of Professional Programs at Vermont-NEA, introduced student learning objectives (SLOs) to me as a growing response to nationwide policies requiring evidence of teacher effectiveness in teacher evaluation systems. The National Education Association awarded nine states a grant to support the development of teacher leaders to build SLO understanding in states where SLOs were being considered or already required. Dr. Irv Richardson (NH), Dr. Adriane Dorrington (DC), Mary McCorkle (SD), Betty Weller (MD), Penny Cyr (ID), Kathy Vetter (WY), James Lynch-Urbaniak (HI), Raymond Rodriguez (HI), Sharon Gallagher-Fishbaugh (UT), Dr. Sarah Jones (UT), Lisa Nentl-Bloom (UT), Dr. Barbara Hopkins (DC), Bernadette Hampton (SC), and Kathy Richardson (SC) graciously shared their experiences, reached out to their members to participate in the research and focus group, and allowed me to learn from their work.

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Chapter 1

Introduction to the Study

Teachers are the single most important school-based factor influencing student achievement (Rivkin, Hanushek, & Kain, 2005), therefore having effective teachers in every classroom is necessary for improved student learning. The evaluation of teachers is the collection and use of information to judge effectiveness (Darling-Hammond, Wise, & Pease, 1983a, p. 290). Teacher competence refers to the repertoire of skills teachers have mastered, and teacher practice refers to teachers' abilities to apply their competencies (Darling-Hammond, Wise, & Pease, 1983b). Evidence collection has changed over the years. Most schools use a teacher evaluation framework, complete with rubrics, such as Danielson's (2014) Framework for Evaluation, which defines competencies and performance levels of professional practice. The evaluator rates a teacher on competencies identified by the evaluation framework, leading to two products: formative discussions on teaching practice and a summative rating. The frequency, method, and consequences of teacher evaluation are usually specified in a school district's collective bargaining agreement.

Until recently, student learning outcomes were not part of teacher evaluation. It was assumed that if a teacher's practice rated well on the framework rubrics, then student learning had occurred. Student achievement itself was not a factor in teacher evaluation. However, federal and state policies and legislation incorporated measures of student learning into teacher evaluation increased during the years when the U.S. Congress failed

to reauthorize the Elementary and Secondary Education Act (ESEA) as defined by the No Child Left Behind Act (NCLBA) of 2001. As a result, the U.S. Department of Education developed a waiver program through which states could apply for relief from some of the requirements of the No Child Left Behind Act (U.S. Department of Education, 2012a). To receive this flexibility, state education agencies (SEAs) and local education agencies (LEAs) agreed to "develop, adopt, pilot, and implement, with the involvement of teachers and principals, teacher and principal evaluation and support systems" (U.S. Department of Education, 2012a, p. 3). The United States Congress reauthorized ESEA as the *Every Student Succeeds Act of 2015* (U.S. Department of Education, 2017). States are creating their state accountability plans, which will be submitted to the U.S. Department of Education in the spring or fall of 2017.

Teacher effectiveness is currently measured in two ways. The first is through value-added measures, statistical methods designed to assess teachers' contributions in raising the scores of their students on standardized tests (Goe, Bell, & Little, 2008). This entails attempting to statistically control for conditions beyond a teacher's influence such as student absence, socioeconomic status, and English language proficiency, thus isolating teacher impacts. However, the use of value-added measures is rife with issues of validity and reliability and is thus experiencing ongoing scrutiny, especially when used for high stakes decisions (American Statistical Association, 2014; McCaffrey & Rand Education (Institute), 2003). The second approach is through the use of student learning objectives (SLOs). SLOs are teacher-developed goals for student achievement. (see

Figure 2.2, p.33 for a sample SLO template.) These objectives measure student learning and growth over a specified time period and have the goal of improving and documenting the effectiveness of an individual teacher's instructional practice (Lacireno-Paquet, Morgan, & Mello, 2014; Prince et al., 2009). SLOs were originally developed for the 70% of teachers who teach in grades and subjects not tested by yearly standardized tests (Weisberg, Sexton, Mulhern, & Keeling, 2009). However, both as a result of the issues related to value-added evaluation and to address those teachers whose work is not covered by standardized tests, many states are now using SLOs for all teachers' evaluations.

In states where both teacher practice (using teacher observation frameworks) and teacher effectiveness (using value-added or SLOs) are used as part of teacher evaluation, teachers receive two ratings that are combined into one score (see Figure 2.1, p. 23). The weighting of each of the two scores varies from state to state, with some states using the effectiveness scores as 50% of the overall teacher ratings and other states not using the effectiveness rating at all.

Significance of the Study

In December 2015, then-President Obama signed the Every Student Succeeds Act (ESSA) of 2015, representing the newest reauthorization of the ESEA of 1964 (Senate Committee on Health, Education, Labor and Pensions, 2015). Under ESSA, states and local districts will have more flexibility in determining how teachers will be evaluated. Despite the growing use of SLOs, research on SLOs thus far is limited. Not all SLOs are

the same: Teachers in different states and districts have different processes, expectations, and stakes attached to the SLOs. With new flexibility under ESSA, understanding the consequences of these differences is important as teacher evaluation systems are revised.

This research is designed to add to the scant empirical research on SLOs. The questions this researcher seeks to answer include:

1. What effect do student learning objectives have on teachers and teaching when used in teacher evaluation systems?
2. What conditions surrounding student learning objectives in teacher evaluation lead to improved teaching practices?

Measuring and improving the quality of teachers in the classroom is the role of robust teacher evaluation systems. Teacher evaluation systems adopted by states and/or states should accurately measure the complexities of teaching and lead to useful feedback, relevant professional learning opportunities, and most importantly, improved outcomes for all learners. In order for this to happen, ineffective teachers need to be identified and given opportunities for professional learning in order to achieve improved outcomes for students. Research on student learning objectives is thus essential in order to understand the effect of the differing conditions surrounding its implementation have on teaching and teachers.

Organization of the Dissertation

This dissertation begins with an overview of the study in Chapter 1 with a description of the importance of teacher evaluation, the ways in which teacher

effectiveness is measured in states and districts, and the policies that led to the use of SLOs in teacher evaluation. Next, the significance of the study, research questions, overview of the literature base, and methods and limitations of the study are introduced. Chapter 2 presents the conceptual framework and literature reviewed. Chapter 3 justifies the research design and research methods including participant selection, data collection and analysis, and researcher identity. Chapter 4 documents the context of each participant in this study, including the different systems under which SLOs are implemented. Chapter 5 describes the analysis of the findings and integrates new literature needed to ground findings not noted in the literature reviewed prior to the research. Chapter 6 reports the conclusions and recommendations for future studies. The appendices include the participant survey and research questions utilized throughout this research.

Literature Base and Conceptual Framework

The literature base of this dissertation begins with Goe, Bell, and Little's (2008) definition of an effective teacher. This definition acknowledges the myriad qualities possessed by an effective teacher, and more specifically, addresses the contributions teachers make to student academic progress. Next, the historical context of teacher evaluation and key reports and legislation that changed the landscape of teacher evaluation are explored. These include the *No Child Left Behind Act of 2001*, the flexibility waivers for which states could apply, and the most recent reauthorization of the Elementary and Secondary School Act (ESEA), *Every Student Succeeds Act of 2015*

(ESSA). The literature examines the traditional approach to teacher evaluation and the problems surrounding the process which led to more comprehensive evaluation systems through federal government initiatives. In many states, teacher effectiveness is measured by applying value-added formulas to student achievement or by student achievement on student learning objectives. Value-added approaches are described and critiqued within the review of literature, and a case is made for the use of student learning objectives, a method that can be utilized in measuring effectiveness for teachers of *all* grades and subjects.

Two districts and early adopters of SLOs, Denver Public Schools and Charlotte-Mecklenburg Schools, are described in the literature base. The work of these districts, who were supported and studied by the *Community Training and Assistance Center* (CTAC), represents the first studies of SLOs as a way to measure teacher effectiveness. In two implementations, SLOs positively impacted planning, instruction, data analysis, assessment, and future professional learning. These topics are reviewed in the literature in order to justify the research, provide theoretical sensitivity, and build background knowledge for the researcher (McCann & Clark, 2003a).

Research Methods

Qualitative research methods were utilized for this study and are explained in depth in Chapter 3. Qualitative methods are needed to capture the teacher experience, develop themes to describe the experience, and offer suggestions for improvement and further research to the process. Grounded theory was the research method utilized in this

study. In this approach, a theory is systematically developed that explains the phenomenon, action, or interaction on a topic, through interviews and other collected artifacts (Corbin & Strauss, 1990, 2015). Grounded theory is an inductive model in that the "process is one of generating or discovering a theory grounded in views from participants in the field" (Creswell, 2007, p. 239). Grounded theory is a useful approach in qualitative research when a prior theory does not exist (Glaser & Strauss, 1967; Martin & Turner, 1986).

The setting for this study is the United States. The researcher utilized both purposeful and theoretical sampling, collecting data from 20 participants across nine states in order to gain a wide perspective of experiences to analyze. Teachers represented in this study taught grades prek-12 and nine different subject areas (see Table 4.1). The teachers received a wide range of training prior to SLO implementation, ranging from no training at all to more than 16 hours (see Table 4.2). The stakes attached to the SLOs also varied among participants with some reporting low (or no) stakes and some reporting high stakes (see Table 4.2). The researcher details the specifics of the participants utilized in this study in Chapter 4.

The data sources for this study included interviews conducted using Adobe Connect, artifacts (most notably the teachers' SLOs), and a focus group. Interviews were conducted over a three-month period. During the interviews, the SLOs were uploaded into Adobe Connect and participants referred to their SLOs as they discussed the experience with the researcher. The semi-structured interviews included broad questions

that were generated from the review of literature as well as questions that were guided by the content of the participant's conversation with the researcher. (see Appendix B). Following initial interviews, the researcher conducted follow-up interviews with five participants to gather feedback on draft models. This information was used to verify the accuracy of the models in describing each participant's experiences with SLOs and then to revise models based on the new information. Finally, the researcher conducted a focus group convened at a conference focused on SLOs, at which the revised models were examined and discussed. These data were utilized by the researcher for yet further analysis and revisions.

Central to the grounded theory method is the constant use of comparative analysis where data collection and analysis occur simultaneously (Glaser & Strauss, 1967). Each piece of data was compared with others for similarities and differences, and data deemed conceptually similar were grouped together under a common conceptual heading (Corbin & Strauss, 1990, 2015). The researcher grouped concepts into categories or themes, and each category was developed in terms of its properties and dimensions and integrated around a core category (J. Corbin & Strauss, 1990a). All concepts had to earn their way into the theory by being repeatedly present in the data collected by the researcher. A three-phase coding process advanced by Corbin and Strauss (1990) was employed. Each phase of coding (open, axial, and selective) played an important role in developing a model or theory from which to learn (Creswell, 2007) and are described in detail in Chapter 3. The researcher made constant comparisons throughout the analysis, so when

an event was noted, it was compared to other events for similarities and differences. These comparisons led to interviewing five participants a second time in order to explore in greater detail concepts that emerged from the initial interview (Corbin & Strauss, 1990).

Chapter 2

Literature Review and Conceptual Framework

This literature review begins by examining Goe, Bell, and Little's (2008) definition of an effective teacher and the traditional approach to teacher evaluation along with other research suggesting that this approach is not sufficient in today's schools. Next, the historical context of teacher evaluation, including key reports and legislative events that changed the landscape of teacher evaluation, is explored. This includes the U.S. government's push toward increased teacher accountability and ways in which various entities have attempted to measure (and in some instances reward) teacher effectiveness. Next, a conceptual framework for exploring the use of student learning objectives (SLOs) as the means of measuring teacher contribution to student learning is described. This chapter concludes with the need for research on student learning objectives used to measure a teacher's effectiveness as part of teacher evaluation.

Definition of Teacher Effectiveness

It is well known that teaching is an extraordinarily complex process (Danielson, 2007), so identifying effective teaching demands a broad view of teacher effectiveness. Goe, Bell, and Little (2008) developed a five-point definition of effective teachers through a review of research literature, policy documents, standards, reports, and feedback from educational experts. The definition included the following:

1. Effective teachers have high expectations for all their students and help students learn as measured by value-added measures, other test-based growth measures, or by alternative measures.
2. Effective teachers contribute to positive academic, attitudinal, and social outcomes for students such as regular attendance, on-time promotion to the next grade, on-time graduation, self-efficacy, and cooperative behavior.
3. Effective teachers use diverse resources to plan and structure engaging learning opportunities, monitor student progress formatively, adapt instruction as needed, and evaluate learning using multiple sources of evidence.
4. Effective teachers contribute to the development of classrooms and schools that value diversity and civic-mindedness.
5. Effective teachers collaborate with other teachers, administrators, parents, and education professionals to ensure student success, particularly the success of students with special needs and those at high risk for failure (p. 8).

This definition acknowledges the myriad qualities possessed by an effective teacher. Measuring a teacher's effectiveness at promoting student achievement is acknowledged in the first element of Goe's and colleagues' definition and is the focus of this dissertation research, but a comprehensive evaluation system needs to capture all of the definition's parts.

Teacher evaluation has both formative and summative purposes (Darling-Hammond et al., 1983b). The formative purpose is improvement of teaching, including

providing descriptive information and identifying areas for professional learning. The summative purpose is accountability: The evaluation must be objective, standardized and externally defensible, especially when it is used to determine teacher retention (Darling-Hammond et al., 1983b).

Traditional Approach to Teacher Evaluation – The Process-Product Model

How a teacher instructs and engages students impacts how much a student learns (Brophy, 1973, 1986). Teacher evaluation models that examine teaching behaviors thought to lead to successful student achievement are referred to as process-product models. The observable teaching behaviors (the process) are assumed to correlate with positive student achievement (the product) based on prior research on the impact of those behaviors. Standards-based evaluation models such as the Framework for Evaluation (Danielson, 2014), the 5D+ Teacher Evaluation Rubric from The Center for Educational Leadership at the University of Washington (Center for Educational Leadership, University of Washington, 2016), and the Teacher Evaluation Model (Marzano, 2013) provide clear expectations of what teachers should know and be able to do in the classroom to support student learning. Teacher evaluators, usually school administrators, observe and use objective data to offer feedback to advance a teacher's skill. The process-product model is used in most states as one part of a teacher's evaluation. What these models do not do is directly measure a teacher's effectiveness in advancing student learning. The models imply that if a teacher's practice is proficient, then learning must be occurring in the classroom (or if not, lack of learning is due to external influences such

as poverty). However, in the context of accountability, the process-product model is not rigorous enough for policy makers (Weisberg et al., 2009).

Problems with the traditional model of teacher evaluation. A report by The New Teacher Project (Weisberg et al., 2009), *The Widget Effect: Our National Failure to Acknowledge and Act on Differences in Teacher Effectiveness*, exposed problems in traditional teacher evaluation. The authors found that teacher evaluation failed to distinguish differing levels of teaching, hence concluding that all teachers are good teachers. In districts that used a binary system (satisfactory or unsatisfactory), more than 99 percent of the teachers were satisfactory (p. 6). In districts that used a scale (e.g., unsatisfactory, basic, proficient, distinguished), 94% of the teachers rated proficient and distinguished, while only 1% of the teachers rated unsatisfactory (p. 6). The "flawed assumption," therefore, is that "teachers are interchangeable parts." The authors termed this the Widget Effect: If there is an accredited teacher in the classroom, nearly all students are receiving an adequate education.

According to Darling-Hammond (2013), the purpose of teacher evaluation should be to identify and measure each teacher's strengths and weaknesses in order to improve learning by offering each teacher quality feedback and appropriate professional learning opportunities. If a teacher is evaluated, but quality feedback is not received to inform professional learning, the teacher may not set appropriate goals for professional growth. Weisberg and colleagues (2009) identified that professional learning was not included in 73% of the teacher evaluations surveyed, and of those where professional learning areas

were identified, only 45% of teachers said they received professional learning that was useful. Only 42% of the teachers in the New Teacher Project study agreed that evaluation helped them improve (Weisberg et al., 2009).

Teacher evaluation for novice teachers plays a dual role. Novice teachers generally go through from one to two years of "probationary status." The National Education Association, the largest teachers' union in the United States, agreed that it is appropriate and fitting that ineffective teachers in their initial years be non-renewed upon notice at the end of the year. The NEA also stressed the importance of a strong induction program for all probationary teachers and the need for these teachers to receive ongoing support and feedback from administrators through the teacher evaluation process (National Education Association, 2011). Research indicated that novice teachers grow much during their first years of teaching (Harris & Sass, 2011; Kane, Rockoff, & Staiger, 2008). Weisberg et al. (2009) reported that 41% of administrators surveyed said they had never non-renewed a teacher in their probationary years. This calls into question whether the development of novice teachers was limited due to lack of rigor in the teacher evaluation process. If novice teachers begin with the highest ratings, then they are getting the message that either they are already excellent teachers or that their rating has little to do with their performance (Weisberg et al., 2009).

Teacher tenure in many states makes it difficult to dismiss veteran teachers, yet teachers and administrators agreed that in order to maintain high quality instructional teams, dismissing poor performers was important (Weisberg et al., 2009). Many

administrators did not identify, support, or dismiss teachers. Identifying teachers in need of improvement is a goal of teacher summative evaluation. The National Education Association Policy Statement on Teacher Evaluation and Accountability states:

> If, through a high quality evaluation system, a teacher's practice fails to meet performance standards, a teacher should be provided with clear notice of the deficiencies and an improvement plan should be developed by the teacher, local association, and employer. The improvement plan should provide the teacher with a reasonable opportunity — including time, high quality professional development and support — to meet expectations. In addition, the teacher should receive regular and frequent feedback from the district and the local association regarding his or her progress during the support program period (National Education Association, 2011).

Therefore, identifying teachers in need of improvement is one outcome of the recent reforms in teacher evaluation.

Administrators often devoted little time and attention to teacher evaluation. In one study, 64% of experienced teachers were observed two or fewer times in their most recent evaluation, and novice teachers received only slightly more time. School districts invested minimally in administrator training in teacher evaluation (Brandt, Mathers, Oliva, Brown-Sims, & Hess, 2007; Weisberg et al., 2009). Ongoing training in observing practice, giving productive feedback, and accessing professional learning experiences

needs to be a priority in school districts (Darling-Hammond, 2013; Goe & Holdheide, 2011; Kimball & Milanowski, 2009; Weisberg et al., 2009).

Weisberg et al. (2009) created four recommendations to more accurately differentiate teacher quality and enhance the use of teacher evaluation to improve schools:

1. Adopt comprehensive performance evaluation and development systems that fairly, accurately, and credibly differentiate teachers based on their effectiveness in promoting student achievement and provide targeted professional development to help them improve (p. 27).
2. Train administrators and other evaluators in the teacher performance evaluation system and hold them accountable for using it effectively (p. 28).
3. Use performance evaluations to inform key decisions such as teacher assignment, professional development, compensation, retention, and dismissal (p. 29).
4. Adopt dismissal policies that provide lower-stakes options for ineffective teachers to exit the district and implement a system of due process that is fair but streamlined and efficient (p. 30).

Policy makers recognize the weaknesses in teacher evaluation, and as a result, recent federal policies have emerged requiring stronger accountability systems for teachers and schools. These accountability systems must factor in growth in student learning as a

significant component in teacher evaluation systems (U.S. Department of Education, 2012a).

Historical Perspective - Pivotal Reports and Education Legislation

Many reports and studies have influenced educational policy decisions in the United States. The Elementary and Secondary Education Act of 1965 (ESEA) had the goal of reducing the socioeconomic achievement gap and providing a fair and equal education to all school-aged children in the United States. This act and its reauthorizations over the past 50 years have provided funds to school districts for professional development and educational resources. The report, *Equality of Educational Opportunity*, (Coleman et al., 1966) stated that the single most important factor in student achievement was the aggregate social make-up of the students in the school. This report led to the desegregation of American schools in hopes that all students would have equal opportunity through the public education system.

The National Commission on Excellence in Education (1983) report titled *A Nation at Risk* concluded that "declines in educational performance are in large part the result of disturbing inadequacies in the way the educational process itself is often conducted" (p. 17). The report outlined shortcomings in educational content, expectations, time, and teaching (The National Commission on Excellence in Education, 1983). The report emphasized that too many teachers come from the bottom quartile of their graduating high school classes, and teacher preparation courses included too many "methods" courses and not enough "content" courses. It also concluded that teachers

were not paid enough and had to supplement their incomes, and that there were teacher shortages in math, science, foreign languages, gifted and talented education, and special education (The National Commission on Excellence in Education, 1983). Subsequent to *A Nation at Risk,* reauthorizations of Elementary and Secondary Education Act (ESEA) in 1994 and 2002 focused on improving the quality of the classroom teacher in Title II of the Acts.

No Child Left Behind Act of 2001. The most significant change to ESEA occurred in the 2001 reauthorization, most commonly known as the *No Child Left Behind Act of 2001* (NCLBA). This act, which is now replaced by the *Every Student Succeeds Act*, required states to develop and administer tests of basic skills in order to receive federal school funding. At the beginning of each school year, schools that received federal funds needed to notify parents if their child was being taught by a teacher who was not highly qualified (107th Congress, 2002). This act also imposed increased accountability. Student results on state tests were disaggregated into subgroups, focusing attention on those students traditionally underserved by America's public schools (107th Congress, 2002). Those subgroups included students on Individual Education Plans, students who qualified for free or reduced-price lunch, members of minority populations, and English Language Learners. States needed to show "adequate yearly progress" (AYP) for all students and subgroups, with increasing consequences to schools who fail to meet AYP over time (107th Congress, 2002). The identification of schools as failing further fueled politics in the United States about the quality of our teachers and teaching

(Rose, 2015). The goal of NCLBA was for *all* students to be proficient by 2014, but this goal was not met (Klein, 2015).

The reauthorization of the Elementary and Secondary Education Act, named *The Blueprint for Reform*, of March 2010, was not passed (U.S. Department of Education, 2010) by the United States Congress. However, in December of 2015, a bipartisan bill entitled *The Every Student Succeeds Act of 2015 (ESSA)* was passed by Congress. This version of the Elementary and Secondary Education Act allows *states* to develop their own teacher evaluation systems and eliminates the definition of a highly qualified teacher (Senate Committee on Health, Education, Labor and Pensions, 2015).

Teacher Incentive Fund. In 2006, the U.S. Department of Education launched the Teacher Incentive Fund (U.S. Department of Education, 2006). This was the first policy that required use of student growth data in teacher evaluation. The Teacher Incentive Fund (TIF) was part of an initiative to design and implement performance-based teacher and principal compensation systems in high need schools. The four goals of the TIF grants included (a) improving student achievement by increasing teacher and principal effectiveness; (b) reforming teacher and principal compensation systems so that teachers and principals were rewarded for increases in student achievement; (c) increasing the number of effective teachers teaching poor, minority, and disadvantaged students in hard-to-staff subjects; and (d) creating sustainable performance-based compensation systems (U.S. Department of Education, 2006). This policy required the

use of student achievement data to evaluate a teacher's effectiveness in order to reward effective teachers with bonus pay.

Race-to-the-Top Initiative. The Race-to-the-Top initiative began in 2010 with the purpose of advancing reforms in four specific areas: (a) adopting standards and assessments that prepare students to succeed in college and the workplace and to compete in the global economy; (b) building data systems that measure student growth and success, then informing teachers and principals about how they can improve instruction; (c) recruiting, developing, rewarding, and retaining effective teachers and principals, especially where they are needed most; and (d) turning around the lowest-achieving schools (U.S. Department of Education, 2013b). The intent was that the award winners would develop systems that other districts and states could emulate to transform their schools. It should be noted that while NCLBA had a focus on highly *qualified* teachers (HQT), Race-to-the-Top focused on highly *effective* teachers. Highly-qualified-teacher designations told the public that teachers possessed certain credentials to teach in the area of assignment but said nothing about demonstrating an impact on student learning. By contrast, the students of "highly effective teachers" demonstrated adequate growth (one grade level per year) as a result of the teaching they experienced. This was evident in states receiving Race-to-the-Top grants. States receiving grant awards were required to

include measures of student growth in both teacher and leader evaluations (U.S. Department of Education, 2010).

ESEA Flexibility Waivers. When the Elementary and Secondary Education Act was not reauthorized in 2010, the U.S. Department of Education created a waiver program through which states could apply for relief from some of the requirements of the No Child Left Behind Act. To receive this flexibility, state education agencies (SEAs) and local education agencies (LEAs) agreed to "develop, adopt, pilot, and implement, with the involvement of teachers and principals, teacher and principal evaluation and support systems" (U.S. Department of Education, 2012a, p. 3). Every evaluation system implemented under flexibility waivers had to "incorporate student growth into its performance-level definitions with *sufficient* [emphasis theirs] weighting to ensure that performance levels will differentiate among teachers and principals who have made significantly different contributions to student growth or closing the achievement gap" (U.S. Department of Education, 2012b, p. 19). Forty-two states, the District of Columbia, and Puerto Rico applied for and received ESEA flexibility waivers.

As a result of ESSA, the waivers became null and void on or after August 1, 2016, and new accountability systems developed by the states will take effect beginning with the 2017-2018 school year.

The Every Student Succeeds Act of 2015. In December 2015, then-President Obama signed a reauthorization of ESEA called the Every Student Succeeds Act (ESSA) of 2015 (Senate Committee on Health, Education, Labor and Pensions, 2015). With the

signing of ESSA, the flexibility waivers received by all but a few states, and which required a measure of teacher effectiveness as a *significant* part of teacher evaluation systems, were gone. States now have more freedom to create teacher evaluation systems with less federal input. Some states have started to reconsider their teacher evaluation policies, while other question the benefit of going back to the days when nearly all teachers were rated proficient without any measure of student growth (Sawchuk, 2016).

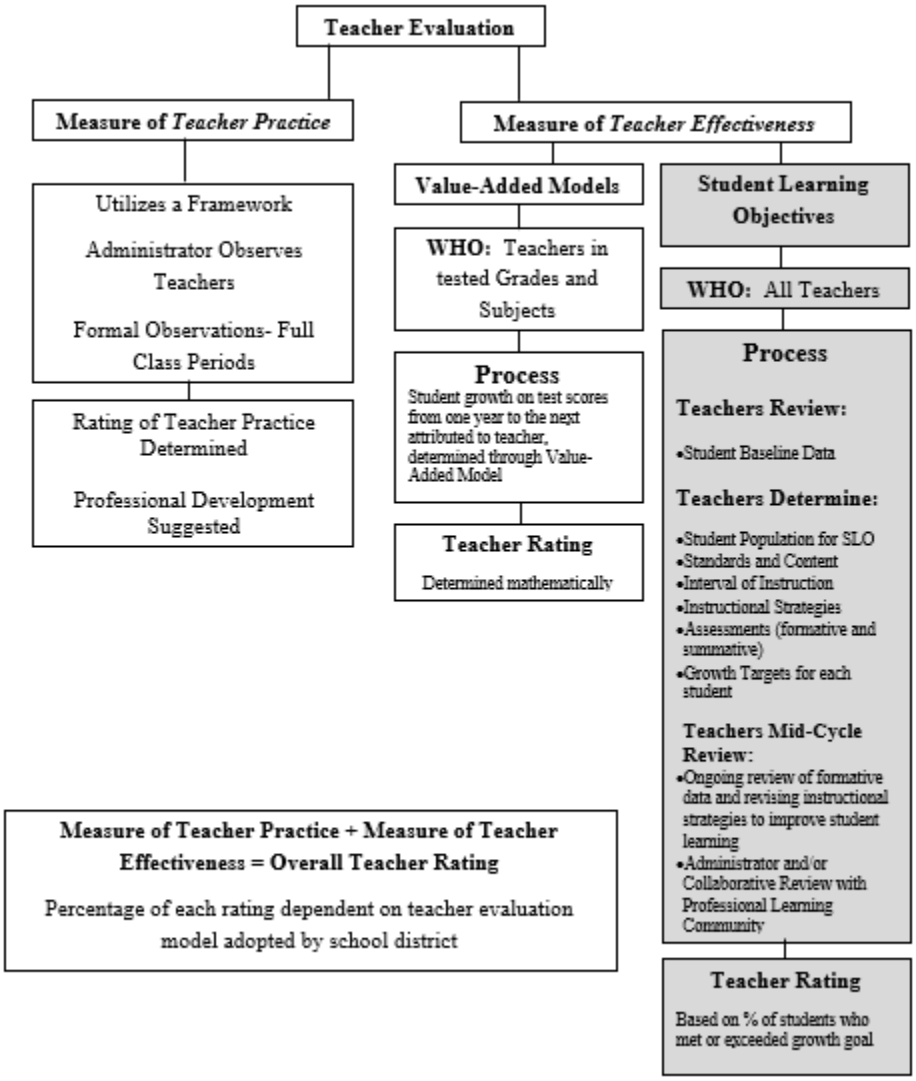
There are differences in teacher quality in schools (Hanushek, Kain, O'Brien, & Rivkin, 2005; Holland, 2001; Sanders & Horn, 1998; Weisberg et al., 2009). Hanushek and colleagues (2005) noted that within-school teacher heterogeneity existed in teacher quality and that the quality of the classroom teacher positively impacted student achievement. Sanders and Rivers (1996) found that teacher effects on student achievement are both additive and cumulative. Using the Tennessee Value-Added Assessment System (TVAAS), they found that students assigned to ineffective teachers continued to show adverse effects years later, even if they were subsequently assigned to very effective teachers. With the quality of classroom teachers being the most important school-based factor impacting student achievement, teacher assessment systems are limited if they do not provide measures of student growth (Sanders & Horn, 1998).

New Approaches to Teacher Evaluation

As a result of policies outlined above, teacher evaluation systems in most states have changed as a result of policies that require evidence of teacher effectiveness. Many states created evaluation systems that included a measure of teacher practice (usually

from a supervisor observing the teacher) and a measure of teacher effectiveness. Teacher effectiveness is defined as a measure of student growth through the use of value-added models (using standardized test scores and complicated value-added formulas), Student Learning Objectives (SLOs), or perhaps a combination of the two. The two measures, *teacher practice* (observations by administrators) and *teacher effectiveness* (a rating measuring teachers' contribution to student growth), are combined to create a summative evaluation score (see Figure 2.1). Subsequent sections explore these measures.

Figure 2.1 Teacher Evaluation Model



Measuring teacher practice. The traditional approach to measuring one's teaching practice continues to be a component of teacher evaluation. Evaluating teacher practice is measured through a combination of (a) administrator observations of teachers in full class periods; (b) walkthroughs (short, unannounced observations); and (c)

artifacts such as lesson plans (Milanowski, 2011). Walk-throughs, with face-to-face feedback and discussion with documentation, allow an administrator to see a teacher in numerous classes and at different times of day (Downey, Steffy, English, & Poston, 2004; Milanowski, 2011). This evidence is then compared against the evaluation instrument used by the district that defines what teachers should know and be able to do (e.g. Danielson's (2014) Framework for Evaluation). Danielson's model divided teaching into four domains: Planning and preparation, classroom environment, instruction, and professional responsibilities. Under each domain were five to six components that defined a specific aspect of the domain. Danielson also included four levels of competency for each component (Unsatisfactory, Basic, Proficient, and Distinguished). Each level provided critical attributes and examples that supported administrators and teachers in determining the specific level of competence exhibited by the collected evidence. Jacob and Lefgren (2008) found that principals generally could identify extremes of teacher performance based on achievement gains in math and reading, but they had a more difficult time differentiating teachers in the middle of the distribution. With the addition of student growth data to measure teacher effectiveness as part of a comprehensive evaluation system, greater differentiation could occur (Sanders & Horn, 1998; Sanders, & Rivers, 1996).

Measuring teacher effectiveness. Goe and Holdheide (2011) found that measuring growth was a fairer way to measure teacher effectiveness, especially for teachers who have students who come into the classroom well below grade level. A

system of evaluation should not penalize teachers who choose to teach in schools where a disproportionate number of students are below grade level. Even if these students do not reach grade-level proficiency, the growth they make towards mastery is a measure of effectiveness.

As noted earlier, in order to qualify for federal Race-to-the-Top grants, legislatures were required to include student growth as part of teacher evaluation systems (Goe & Holdheide, 2011). Federal guidelines for measuring student growth stated that learning must be rigorous, between two points in time, and comparable across classrooms (U.S. Government, 2010). "Rigorous" meant that high expectations were set for learners and aligned with grade level standards. "Between two points" meant that student growth was measured during a school year to determine the growth a student made from one point in time to another on the standards being measured. "Comparable across classrooms" meant that the measures used to determine growth were analogous. Effective teachers were also defined as those teachers demonstrating student growth of at least one academic year, and highly effective teachers were defined as demonstrating student growth beyond one academic year. A teacher's evaluation had to include multiple measures, and the student growth variable should be a significant part of a teacher's evaluation (U.S. Department of Education, n.d.-a). The word "significant," being vague, has been defined differently by different states (Doherty & Jacobs, 2013).

Value-added models. Some states are measuring teacher effectiveness using value-added models to determine scores for high stakes decisions such as tenure, pay

raises, teacher ranking, and decisions around retention and dismissal. Value-added scores are determined through algorithms that look at student achievement scores from one year to the next. However, there have been recent calls for caution about using these scores for high stakes decisions. The American Statistical Association (2014) published recommendations in a *Statement on Using Value-Added Models for Education Assessment.* It stated that value-added models "should be viewed within the context of quality improvement" (p. 2). Teachers account for about 1% to 14% of the variability in test scores (American Statistical Association, 2014). Standardized tests measure student achievement on specific standards that are adopted by the state and not on future learning outcomes. The many regression models used to determine value-added scores are calculated from classroom-level heterogeneity that is not explained by the background variables in the regression model. However, classroom-level differences may be due to a number of factors that are not part of the value-added models. Such exogenous factors include class size, non-school student factors (tutoring, homework help, enrichment etc.), individual student needs and abilities, peer culture and achievement, and the myriad (or lack) of enriching summer activities (American Statistical Association, 2014; Berliner, 2014; Darling-Hammond, Amrein-Beardsley, Haertel, & Rothstein, 2012). Additionally, the effect of teachers' peers is not embedded in value-added models yet have significance (Jackson & Bruegmann, 2009). Teachers who work collaboratively influence the achievement of students in each other's classrooms (Leana, 2011). The validity of the regression model depends on how well it is adjusted for these myriad, difficult-to-capture

factors. The American Statistical Association (2014) acknowledged that the quality of education is not one "event" but "a system of many interacting components" (p. 6).

Moreover, value-added models were found to be inherently biased (American Statistical Association, 2014). One major bias was a result of the nonrandomized assignments of students to classrooms (Darling-Hammond et al., 2012; Koedel & Betts, 2011; Rothstein, 2009; Sass, Semykina, & Harris, 2014). Administrators may overload an especially effective teacher with demanding students. Small schools, common in some parts of the U.S., may only have one class for each grade or combinations of grades. The validity of value-added scores in these classrooms is impacted by these factors (Kalogrides & Loeb, 2013; Lareau, 1987).

Some of these factors can be ameliorated. Koedel and Betts (2011) found that using multiple years of data help reduce this bias. The administrators who make the decisions in student placement influence value-added scores as a result of those decisions. Therefore, a system for placing students in classrooms to affect equitable opportunities for student growth in each classroom is essential yet very difficult to achieve. Value-added models could not establish causal relationship between a teacher's quality and student achievement (American Statistical Association, 2014; Rothstein, 2009). At best, these scores could correlate to student achievement on a select set of standards.

Using value-added scores for high stakes decisions had unintended consequences. There were issues with reliability, bias, teacher attribution, and validity, leading to

possible lawsuits when teachers are dismissed as a result (Amrein-Beardsley & Collins, 2012). Additionally, using value-added scores could present a disincentive to teachers to teach students who are English Language Learners, special education students, or gifted students. These populations tend to have lowest growth on the standardized tests used to measure a teacher's contribution to student learning (Darling-Hammond & Haertel, 2012).

However, there was some evidence that value-added scores do differentiate teacher effectiveness. Students assigned to teachers with higher value-added scores were more likely to attend college, earn higher salaries, save more for retirement, and live in more affluent neighborhoods as adults (Chetty, Friedman, & Rockoff, 2011). Chetty and colleagues (2011) concluded that good teachers created economic value, and value-added scores helped to identify those teachers. However, when they are used, value-added models should be used as only one of many sources of data, especially when attaching high stakes decisions to the outcomes (Glazerman et al., 2010; Ritter & Shuls, 2012).

When pay-for-performance teacher evaluation systems were implemented in various school districts as required by the Teacher Incentive Fund and Race-to-the-Top Grants, the issue of assessing teachers in non-tested grades and subjects (NTGS) so they too might earn financial rewards for effective instruction surfaced. This varied across the nation. In some schools, teachers in NTGS decided whether they wanted to focus on mathematics or reading, and their award was based on either the schoolwide math or reading performance. For example, in Eagle County (Colorado) Public Schools, 50% of

a teacher's performance award was based on schoolwide gains in either math or reading (Prince et al., 2009). Other schools used reading and math scores to estimate teacher "spillover" contribution to those scores. Koedel (2009) examined "spillover" of reading scores in other core high school teachers. He concluded there was no evidence that science or social studies teacher quality impacted reading scores, giving caution to group-based value-added scores at this level.

Another approach used was for teachers in NTGS to design performance goals in their areas of specialization, and their rewards would then be based on the attainment of those goals (Prince et al., 2009). The advantages of this option are that teachers were clear about how they would be assessed and were empowered to develop the goals and assessment tools to be applied with students. This approach recognized the important contributions of all teachers in a school, avoided the "free rider" problem when teachers are rated by the schoolwide math or reading scores, and did not require new assessments to be created in all of the different NTGS (Prince et al., 2009). This approach also required a lot of planning, training, and clear direction if rigorous goals were to be set and assessment tools developed at the classroom, school, or district levels (Community Training and Assistance Center, 2004, 2013a).

Student learning objectives. Student learning objectives (also called student growth targets, student growth goals, and student learning goals) can be either an alternative or addition to value-added models. Student learning objectives (SLOs) are "a set of goals that measure educators' progress in achieving student growth targets"

(Lachlan-Hache, Cushing, & Bivona, 2012, p. 3). Twenty-five states include SLOs as part of their teacher evaluation systems (Lacireno-Paquet, Morgan, & Mello, 2014), and there are districts in other states that also use student learning objectives. In total, SLOs are a part of teacher evaluation in over 30 states and thousands of school districts nationwide (Lacireno-Paquet et al., 2014).

Teachers in non-tested grades and subjects (NTGS) represent the majority of classroom teachers. In the United States, under NCLBA, NTGS include teachers in kindergarten through grade 12 in which standardized tests are not required. Under NCLBA, math and English/language art teachers in grades 3-8, and one year in high school were required to test students. Additionally, science was tested in many states, once each in elementary, middle and high school. Teachers of students for which standardized tests are not available, such as students with cognitive disabilities or other disabilities that preclude reliable results (Community Training and Assistance Center, 2004, 2013b; Goe & Holdheide, 2011), had alternate measures to determine whether adequate growth was achieved during the years when testing is required.

Measuring the effectiveness of all teachers requires a system that accurately measures a student's growth on grade-level and subject standards (Goe & Holdheide, 2011). Every subject in every grade has standards that are utilized when developing curriculum. Determining the standards for which all teachers are accountable in the subjects they teach is an important first step in measuring teachers' contributions towards growth (Goe & Holdheide, 2011).

The SLO process varies from state to state, but there is a general approach that is common to most states using SLOs in teacher evaluation. The six general stages of SLO development and timeframes are (Reform Support Network, 2014):

1. *Review Student Data (August-September)* - Individual teachers or teams of teachers review student data before the school year begins (or they review pre-test data after the school year begins).
2. *Developing SLOs (September-October)* - Individual teachers or teams of teachers draft SLOs.
3. *Approving SLOs (October-November)* – Evaluators review and approve proposed SLOs (or request revisions).
4. *Reviewing SLO Process (Mid-year)* – Teachers or evaluators review teacher progress on SLO targets mid-year. Changes in assignment or class composition may warrant target adjustment.
5. *Scoring SLOs (May-June)* – Evaluators review and score the progress on SLOs by individual teachers or teams of teachers.
6. *Summative Scoring (June)* - SLO results are included as a (or the) measure of student growth.

In creating SLOs, states and districts have developed different templates (see Figure 2.2 for one example). However, all the templates contain three common elements. The first is the learning goal, which describes which standards will be measured by means of the SLO process. Next are the assessments used to measure student learning at

the beginning, during, and at the end of the instructional period. Finally, all SLOs have targets for student achievement that identify the goals for student learning (Center for Assessment, 2013). The scoring of each teacher's SLO is based on the teacher's success in moving students to the individual targets set in the beginning of the SLO period (Lachlan-Hache et al., 2012; Lacireno-Paquet et al., 2014).

History of SLOs in Practice

Two early adopters of SLOs in teacher evaluation were Denver Public Schools and Charlotte-Mecklenburg Public Schools. Each early district provided valuable lessons that led to the more current versions of SLOs.

Denver public schools. Student Learning Objectives (called Student Growth Objectives, or SGOs) were first used in Denver Public Schools as part of Denver's Professional Compensation System for Teachers (ProComp). As part of the ProComp system, all teachers in the pilot schools could earn a one percent bonus for each Student Growth Objective they met, with the maximum bonus for SGOs set at 2 percent. SGOs were defined as "goals set individually by each teacher and approved by the principal" (Goldhaber & Walch, 2012, p. 1069). Analysis of teachers' SGOs in tested grades and subjects (math and reading) correlated well with their students' performance on the Colorado Student Assessment Program (CSAP), suggesting the SGOs might be a tool to evaluate teachers' effectiveness in non-tested grades and subjects (Goldhaber & Walch, 2012).

Figure 2.2 Student Learning Objective Template

Student Learning Objectives (SLO) Template

This template is designed to help teachers create SLOs. A complete SLO must include the planning information found in the SLO instructional guide.

Course/Grade Level Information	
Course Name	
Brief Course Description	
Grade Level(s)	
Course Length	

Directions for Establishing a Learning Goal: Use the planning information and the SMART Review to refine and tailor the description of the learning goal you described.

Learning Goal: a description of the enduring understandings or big ideas that students will possess at the end of the course or grade based on course- or grade-level content standards and curriculum.	
Learning Goal for this SLO:	
Describe the **learning goal** for this SLO.	

Directions for Documenting Assessments and Scoring: Use the planning information to refine and tailor the description and use of assessments you described.

Assessments and Scoring: Assessments should be of high quality, and designed to best measure the knowledge and skills found in the learning goal of this SLO. The assessment should be accompanied by clear criteria or rubrics to describe what students have learned.	
Assessments for this SLO	
Describe the **assessments** (such as performance tasks and their corresponding rubrics) that measure students' understanding of the learning goal[1].	
Explain how student performance is defined and scored using the assessments. Include the specific rubric and/or scoring criteria to be used.	

[1] Assessments and rubrics need to be established as high quality, such as through the Assessment Review Tool.

Figure 2.2 (Con't) Student Learning Objective Model

Directions for Establishing Targets: Use the planning information to guide how you will use previous performance to set baseline data as well as to establish expected targets.

Targets: identify the expected outcomes by the end of the instructional period for the whole class as well as for different subgroups, as appropriate.	
Actual Performance from Baseline Data	
Identify the actual performance (e.g., grades, test scores, etc.) from the collected baseline data used to establish starting points for students and place students into "starting" groups such as high, typical, and low.	
Expected Targets for this SLO	
Using students' starting points, identify the **number or percentage of students** expected at each achievement level based on their end-of-course assessment performance(s).	

Directions: Complete this section at the end of the instructional period.

Actual Outcomes: identify the actual outcomes at the end of the instructional period for the whole class as well as for different subgroups, as appropriate.	
Record the **actual** number or percentage of students who achieved the targets.	
Please provide any comments you wish to include about actual outcomes:	

Figure 2.2 Adapted from SLO Template (Center for Assessment, 2017)

The Community Training and Assistance Center (2004) was hired by Denver Public schools to provide technical assistance and conduct a comprehensive study of SLOs. Since student growth objectives were a unique way to measure a teacher's contribution to student growth, CTAC studied this aspect of the assessment system. They concluded that teachers who met two SGOs were positively associated with higher mean

student achievement as measured by the mean normal curve equivalent (NCE) scores on both the *Iowa Test of Basic Skills* (ITBS) Reading, Language and Mathematics Tests and the *Colorado Student Assessment Program* (CSAP) Reading, Writing and Mathematics Tests. CTAC found that in elementary schools, teachers who met both objectives outlined in their SGO had significantly higher scores than students of teachers who met one objective on the ITBS Reading, Language and Math exams, adjusted for school and student factors, and on the CSAP Reading, Writing, and Math exams. The CSAP Writing exam difference was not statistically significant. At the middle schools, teachers meeting two objectives had a mean NCE difference of 1.8 higher than teachers who met one objective on the ITBS Reading. At the high school level, students of teachers who met two SGOs had significantly higher mean NCE scores than students of teacher's who only met one objective on the ITBS Reading tests at both Manual High School and Thomas Jefferson High School (see Table 2.1).

Table 2.1 Estimated Difference in Mean NCE by Number of Objectives Met, Adjusting for School and Student Characteristics (at the High Schools Student Characteristics only)

	Objectives Met	ITBS Reading	ITBS Language	ITBS Math	CSAP Reading	CSAP Writing	CSAP Math
Elementary Schools	2	49.5^{*1}	45.5^{*0,1}	47.0^{*1}	54.8$^{*.01}$	52.1	54.0^{*0,1}
	1	47.4^{*2}	43.6^{*2}	43.7^{*0,2}	52.7^{*2}	51.5	50.1^{*2}
	0	48.1	43.3^{*2}	47.0^{*2}	52.6^{*2}	52.0	45.5^{*2}
Middle Schools	2	33.9^{*1}	40.7^{*0}	35.0	43.4	45.1	46.8
	1	32.1^{*0,2}	41.4^{*0}	34.0	43.3	45.6	46.5
	0	35.0^{*1}	37.6^{*1,2}	33.7	43.2	45.1	44.1
Manual High School	2	37.0^{*0,1}	32.2	38.0	42.5	36.8	37.4
	1	33.3^{*2}	37.0		42.9	34.7	
	0	33.1^{*2}		35.9	42.7		35.6
Thomas Jefferson High School	2	57.1^{*1}		55.7	57.0		60.2
	1	51.7^{*2}		54.1	55.6		58.3
	0						

*2 = different from Met 2 Objectives at p<0.05
*1 = different from Met 1 Objectives at p<0.05
*0 = different from Met 0 Objectives at p<0.05
NOTE: Adapted from "Catalyst for Change: Pay for Performance in Denver Final Report" by Community Training and Assistance Center, 2004

Charlotte-Mecklenburg schools. North Carolina's Charlotte-Mecklenburg School District was a Teacher Incentive Fund-Leadership for Educators' Advanced Performance (TIF-LEAP) school district to develop performance-based compensation systems in order to improve teaching and learning in high needs schools. They used SLOs as part of their performance-based compensation system from the second year of the initiative (2008-2009 school year) through 2012. SLOs were used to determine the relationship between teacher performance and student achievement. CTAC developed a four-level rubric to rate the content, expectations, completeness, and coherence of the SLO system. Additionally, CTAC examined whether student growth targets were met and the relationship between the quality of the SLO and student achievement (Community Training and Assistance Center, 2013a, p. 6).

Three cross-sectional HLM analyses were conducted, with the first coming after the first year of SLO implementation. During year one, there was a positive association between the attainment of the SLOs and student achievement in mathematics and reading. There was, however, no year one statistically significant association between the quality of the SLO and student achievement. However, in year two there were positive, statistically significant associations between the attainment of SLOs and student achievement at the elementary level in math and reading, and the quality of the SLO and student achievement in elementary school mathematics, elementary school reading and middle school math. In the third year there was a positive, statistically significant

association between the SLO quality and student achievement in mathematics in grade 5 and between the attainment of the SLO and student achievement in reading in grade 6 (Community Training and Assistance Center, 2013a, p. 5).

In general, two lessons were learned about SLOs in the Charlotte-Mecklenburg schools. First, there was a positive relationship between the inherent quality of the SLO and the student attainment of the individual growth target set by the teacher. Second, those teachers who wrote SLOs for three years created stronger SLOs, and their students had greater success attaining the growth targets (Community Training and Assistance Center, 2013a, p. 6). This success, however, is not replicated in all states and districts where SLOs have been implemented (Lachlan-Haché, 2015).

Teachers utilizing SLOs in teacher evaluation have noted the process as having a positive influence in several key areas. Charlotte-Mecklenburg teachers indicated that the data analysis, curriculum planning, and instructional elements were valued and significant factors in improving teaching effectiveness and advancing their professional growth (Community Training and Assistance Center, 2013a). Increased collaboration among teachers through the SLO process was also regarded by some as a positive outcome of SLOs (Donaldson, 2012; Lachlan-Hache, 2015). SLOs also informed professional development as teachers and administrators use SLO goals and data to target needed areas of training (Community Training and Assistance Center, 2015). These areas of potential benefit are examined in more detail below. Additionally, this

dissertation research identified the critical role of school leadership in creating a culture of using SLOs as a tool for improving teaching.

SLO Process and Curriculum Design

The SLO process modeled quality curriculum design by the connections between the SLO process and Understanding by Design (Wiggins & McTighe, 2011). Understanding by Design (UbD) was created to facilitate the development of high quality units. UbD-based unit development comprises three stages. *Stage 1* identifies the unit's long-term academic objectives. Wiggins and McTighe broke this down into the two areas of meaning and transfer. In the UbD context, *meaning* includes *understandings* and *essential questions*, while *transfer* is the student's ability to independently use the skill in contexts other than the one in which it was taught. *Stage 2* of UbD involves identifying evidence of learning (Wiggins & McTighe, 2011). It includes the criteria on which the students will be assessed. This includes identifying performance tasks, selected response and essay tests, and other forms of evidence on which teachers and students analyze for evidence of achievement of the standards noted in stage 1. Finally, *Stage 3* of UbD is the Learning Plan. The learning plan includes the pre-assessments and the learning events or instruction as well as progress monitoring. In UbD, the learning events reflect principles of learning and best practices, include a clear alignment between learning goals and assessments, and include engaging and effective lessons for all learners. Progress monitoring includes how teachers and students will monitor learning, identify areas that might be difficult for learners to understand so teachers can address misconceptions, and

develop systems of feedback for learners (Wiggins & McTighe, 2011). This stage is considered the "meat" of what happens in the classroom.

The SLO process mirrors UbD in important ways. In the SLO process, teachers identify the *learning content,* the most important standards to include in their SLO. Those standards "should represent the essential learning in the course, such as key skills or overarching content, and the specific national or state standard(s) that align with content" (Lachlan-Hache et al., 2012, p. 3). Next, teachers decide on the interval of instruction. An SLO can cover an entire year, a semester or trimester, or a quarter. Stage 1 of UbD is closely aligned to this phase of the SLO Process. UbD stage 2, though not as specific as what is required in the SLO process, mirrors the SLO element *Assessments*. That portion of the SLO process called *Instructional Strategies, Interval of Instruction,* and *Assessments* are analogous to Stage 3 of UbD (see Table 2.2). Both UbD and SLOs represent an intentional development of instruction and assessment by teachers.

Understanding by Design (UbD)	Student Learning Objectives
Stage 1- *Long-term Academic Objectives*	*Learning Content and Internal of Instruction*
Meaning- Understandings and Essential Questions	
Transfer – Applying Skills in Context	
Stage 2 – *Evidence of Learning*	*Assessments* (Summative)
Summative Assessment	
Stage 3 – *Learning Plan*	*Baseline Data*
Pre-Assessments	*Instructional Strategies*
Instructional Activities	*Interval of Instruction*
Formative Assessments	*Assessment (Formative)*

Table 2.2 Intersection Between Understanding by Design and Student Learning Objectives

SLO Process and Assessment

The SLO process requires the use of summative and formative assessments. Teachers have long used summative assessments to measure student achievement, but they have been less skilled at using formative assessments to guide teaching and learning. Formative assessment, also known as assessment for learning, has been shown to significantly improve student learning when used to provide timely and quality feedback (Black & Wiliam, 1998, 2009; Kennedy, Chan, Yu, & Fok, 2005; Marsh, 2007; Stiggins, 2005). Both forms of assessments are valuable and play a key role in the SLO process.

Summative assessments. Summative assessments are used at the end of a learning cycle to establish what has been learned by students. Although it is passive, with little direct effect on student learning, it has a great policy impact when used in high stakes decisions (Sadler, 1989). The high stakes nature of summative assessments has created a negative view of it due to its influence on curriculum, pedagogy, and student learning strategies (Kennedy, Chan, Yu, & Fok, 2005). Undue focus on summative assessments has led students and their teachers to put an emphasis on scoring well on

high stakes examinations, leading to more rote learning because of teacher comfort with this traditional form of teaching (Marsh, 2007).

However, there are two forms of summative assessments: internal and external. Internal assessments are used to report to students and parents on progress being made on important standards, while external summative assessments are used by bodies such as state and national education agencies. Internal summative assessments are better suited to improving teaching than for ranking purposes. It is mostly external summative assessments that have been associated with the negative perception (Kennedy et al., 2005).

In the SLO process, summative assessments are used in a number of ways. First, summative assessments (both internal and external) are used as historical data when teachers are developing their SLOs. These trends become important when determining the focus of the SLO and growth targets for students (Lachlan-Hache et al., 2012). Summative assessments, usually internal, are also used at the end of the SLO cycle to determine student growth on the standards outlined in the SLO. Sometimes, internal summative assessments are used formatively (Kennedy et al., 2005). If a student has not demonstrated enough progress on an important standard, reteaching and retesting might occur.

Formative assessments. Black and Wiliam (1998) brought the interaction between formative assessment and student learning into sharp focus. Formative assessments are concerned about how judgments about quality can be used to shape and

improve student learning. The key to effective formative assessment is providing timely feedback that is used by both the teacher and the students. Teachers use feedback to determine student readiness, diagnose and remediate learning issues, and adapt instruction. Students use such feedback to monitor strengths and weaknesses in order to recognize success and modify their learning of challenging concepts. Teacher feedback informs the students of what they need to do to move closer to achieving the desired learning. (Black & Wiliam, 1998, 2009; Marsh, 2007; Sadler, 1989; Stiggins, 2005). Feedback is the key to creating learners who self-monitor. Marsh (2007) highlighted five benefits of formative assessment:

- Formative assessment helps with planning because it gives clear learning intentions to students.
- Formative assessment ensures that pupils are focused on the purpose of the task and that they become involved in their learning and can comment on it – that is, there is a sharing of learning intentions.
- Formative assessment empowers students to realize their own learning needs and have control over future targets. Students are trained to evaluate their own achievement against learning intentions in oral or written form.
- Formative assessment tracks progress diagnostically and informs students of their successes and weaknesses.
- Formative assessment improves student motivation, achievement and involvement in progress.

- Formative assessment keeps teachers informed of individual needs (p. 26).

Unfortunately, formative assessment is not used as frequently as it might be in classrooms today (Marsh, 2007). There are many reasons for this. For one, teachers' experiences have been focused on summative assessments. In the era of high stakes accountability, the results of summative assessment are the focus of the media, parents, and administrators. Another reason is due to the culture of summative examinations. Awards and honors are given to high achieving students, generally as measured by summative assessments. Little praise is given to students (or the teachers of students) who underperform on summative assessments yet still may show substantial growth in their learning or demonstrate perseverance, critical thinking, problem-based learning, and self-learning. However, the formative assessment process highlights these qualities (Marsh, 2007).

Kennedy and his colleagues (2005) concluded that a more inclusive model of assessment needs to have the following components:

- All assessments need to be conceptualized as "assessment for learning."
- Feedback is a key component of all forms of assessment.
- Teachers must play an important role not only in relation to formative assessment but in both internal and external summative assessment as well.
- Decisions about assessment need to be viewed in a social context since in the end they need to be acceptable to the community (p. 9).

In the SLO process, teachers create a plan for assessment that places a strong emphasis on formative assessment. Throughout the period of the SLO, data are used formatively by both teachers and students to inform what needs to be done to fill the gap between what learners know and what they need to learn. These data are used throughout, so when the SLO interval comes to an end, the summative assessments more accurately reflect the learning process and current achievement (Lachlan-Hache et al., 2012).

Collaboration and Improved Outcomes for Students

Teachers bring to their work both human and social capital. In one large-scale study in the New York Public Schools spanning the period 2005 to 2007, Leana (2011) examined the influence of social capital through the lens of one-year changes in student achievement in mathematics. Measures of human capital included years of experience, educational attainment, and math pedagogy as established by asking teachers to respond to a series of classroom scenarios developed and validated at the University of Michigan. The researcher also surveyed 1,200 kindergarten through fifth grade teachers about their understanding of mathematics and from whom they sought advice. The findings showed that student math achievement was stronger when teachers reported collegial, math-centered conversations with peers. “Teacher social capital was a significant predictor of student achievement gains above and beyond teacher experience or ability in the classroom (p. 33).” Teachers with high human capital outperformed teachers with low human capital, but when social capital was figured in, the equation became more

complex. Students of teachers having high human and social capital exhibited the highest achievement in math. Conversely, students of teachers having low levels of human and social capital demonstrated the least student achievement. Interestingly, teachers with low human capital performed as well as teachers with average ability if they had strong social capital. Social capital, therefore, had a positive impact on math learning (Leana, 2011; Leana & Pil, 2006).

In another study, elementary teachers' performance was affected by the quality of their peers (Jackson & Bruegmann, 2009). Less experienced teachers were more responsive to peer quality than more experienced teachers; however, there was a positive and statistically significant effect on both math and reading achievement when the quality of teachers' grade-level peers was high. Jackson and Bruegmann (2009) attributed this to peer-related learning "to learning directly from peers or peer-induced learning (p. 106)."

The balance between teacher autonomy and heteronomy is important to consider when working in schools. Teacher autonomy was negatively associated with student achievement (Gates & Watkins, 2010; Smylie, Lazarus, & Brownlee-Conyers, 1996). Both collective and individual teacher capacity was necessary for schoolwide reform in promoting student learning (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). This learning is critical for the professional community within that school, as one teacher's solutions may support another teacher who is trying to solve the same problem. Teachers expressing their autonomy within the contexts of the school collaborative community was the balance needed to enrich the learning community (Gates & Watkins, 2010).

Structures for collaboration within schools are common. For instance, professional learning communities (PLCs) in some form or another, are in place in many schools. A professional learning community is an "ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for students they serve" (DuFour, 2010, p. 11). Whole school communities need to work together in order to find the most effective ways to improve student learning and teaching (Goddard, Goddard, & Tschannen-Moran, Megan, 2007; Levine & Marcus, 2007; Stoll et al., 2006). PLCs are more than a meeting where teachers collaborate around teaching practice and learning outcomes. Seashore, Anderson, and Riedel (2003) state that by "using the term professional learning community we signify our interest not only in the discrete acts of teacher sharing, but in the establishment of a school-wide culture that makes collaboration expected, inclusive, genuine, ongoing, and focused on critically examining practice to improve student outcomes" (p. 3). The characteristics of PLCs included shared values and vision, collective responsibility, reflective professional inquiry, collaboration, and group as well as individual learning was promoted (Levine & Marcus, 2007; Stoll et al., 2006). Strong professional learning communities led to increased teacher instruction and student learning (Borko, 2004; Bryk, Camburn, & Louis, 1999; DuFour, 2010; Goddard et al., 2007; Rosenholtz, 1989).

SLOs have been created and monitored within PLCs in many districts. In a study of the Austin Independent School District Pilot Teacher Appraisal System, some teachers

expressed that teams that created SLOs "promoted teamwork and collaboration in ways that might not otherwise exist" (Lamb, Schmitt, Gross, & Cornetto, 2013, p. 7). Teachers in Charlotte-Mecklenburg attributed increased collaboration to use of the SLO process (Community Training and Assistance Center, 2013a). Some teachers felt the SLO process helped to clarify PLC meeting goals by providing thoughtful content for teachers to discuss, and a principal believed that grade level planning was improved as a result of SLOs (p.87).

The SLO process and informing professional learning. Teachers who write SLOs identify an area they want to critically examine in order to improve instruction and measure the effectiveness of the instruction in promoting student learning. For many teachers, professional learning on their SLO focus is necessary to improve instruction. Schools, districts, states, and the federal government spend billions of dollars each year to provide professional development to improve teaching and learning. Professional development has been at the center of improving education in nearly all educational policies and proposals (Guskey, 2002). The No Child Left Behind Act (107th Congress, 2002) required states to ensure the availability of "high-quality" professional development for all teachers. However, NCLBA did not define *high quality*. These decisions were left up to the individual states and school districts and this approach continues in the ESSA era.

Professional development opportunities at the school level allowed for shared learning and directly related to student outcomes (Hausman & Goldring, 2001).

Professional development needed to include opportunities for teachers to "share what they know, discuss what they want to learn and connect new concepts and strategies to their own unique contexts (Darling-Hammond & McLaughlin, 1995, p. 1)." Professional development involved the interaction of the teacher, the school and the learning activity, all of which interact in complex ways to promote improved teaching and student learning (Opfer & Pedder, 2011).

As Darling-Hammond & McLaughlin (1995) argued, effective professional development must:

1. Engage teachers in practical tasks and provide opportunities to observe, assess and reflect on the new practices
2. Be participant-driven and grounded in inquiry, reflection and experimentation
3. Be collaborative and involve the sharing of knowledge
4. Directly connect to the work of teachers and their students
5. Be sustained, on-going and intensive
6. Provide support through modelling, coaching and the collective solving or problems
7. Be connected to other aspects of school change (p.2).

These seven qualities are embedded in research on professional development that has been conducted by other researchers (Avalos, 2011; Borko, 2004; Garet, Porter, Desimone, Birman, & Yoon, 2001; Guskey, 2002; Heller, Daehler, Wong, Shinohara, & Miratrix, 2012; Little, 1993). Failure of professional development to take into account

the qualities above will lead to failure of the learning to change practice and improve learning (Guskey, 2002).

Embedded in the SLO process is a determination of professional development that is needed to better instruct students on the focused standards. In the ideal implementation of SLOs, the professional learning was flexible and based on the needs of the teacher or group of teachers. As teachers looked at formative work of students, teachers determined whether the professional development was leading to improved student outcomes (Community Training and Assistance Center, 2013a).

School leadership and teacher evaluation. Through the initial interviews conducted in this study, the researcher noted the importance of school leadership, in most cases the school principal, in SLO implementation. The role of the principal is indeed critical in school initiatives. Leithwood and his colleagues (2008) highlighted seven claims regarding school leadership:

1. School leadership was second only to classroom teaching as an influence on pupil learning.
2. Almost all successful leaders drew on the same repertoire of basic leadership practices.
3. The ways in which leaders applied these basic leadership practices – not the practices themselves – demonstrated responsiveness to, rather than dictation by, the contexts in which they worked.

4. School leaders improved teaching and learning indirectly and most powerfully through their influence on staff motivation, commitment and working conditions.
5. School leadership had a greater influence on schools and students when it was widely distributed.
6. Some patterns of leadership distribution were more effective than others.
7. A small handful of personal traits explained a high proportion of the variation in leadership effectiveness (pp. 27-28).

The school principal's role in instruction and student outcomes is primarily through the school learning climate (Sebastian & Allensworth, 2012). Furthermore, the leadership style matters. The effect of instructional leadership on student outcomes was three to four times greater than that of transformative leadership (Robinson, Lloyd, & Rowe, 2008). High school teachers in high performing schools noted that strong leaders had a greater focus on teaching and learning, were an instructional resource for teachers, and were active participants in, and leaders of, teacher professional development (Robinson et al., 2008). Robinson and his colleagues (2008) stressed the importance of developing staff relationships and utilizing these relationships when engaged in educational tasks. They developed a list of five leadership dimensions of effective leaders. These included 1) establishing goals and expectations, 2) resourcing strategically, 3) planning, coordinating and evaluating teaching and the curriculum, 4) promoting and participating in teacher learning and development, and 5) ensuring an orderly and supportive

environment (pp. 25-30). Note that only one of these dimensions focuses specifically on evaluating teachers. Only about 3% of an administrator's worktime is spent on teacher evaluation, so they need to enhance instructional quality through nonevaluative channels (Hallinger, Heck, & Murphy, 2014), such as those channels represented in the leadership dimensions and claims described above.

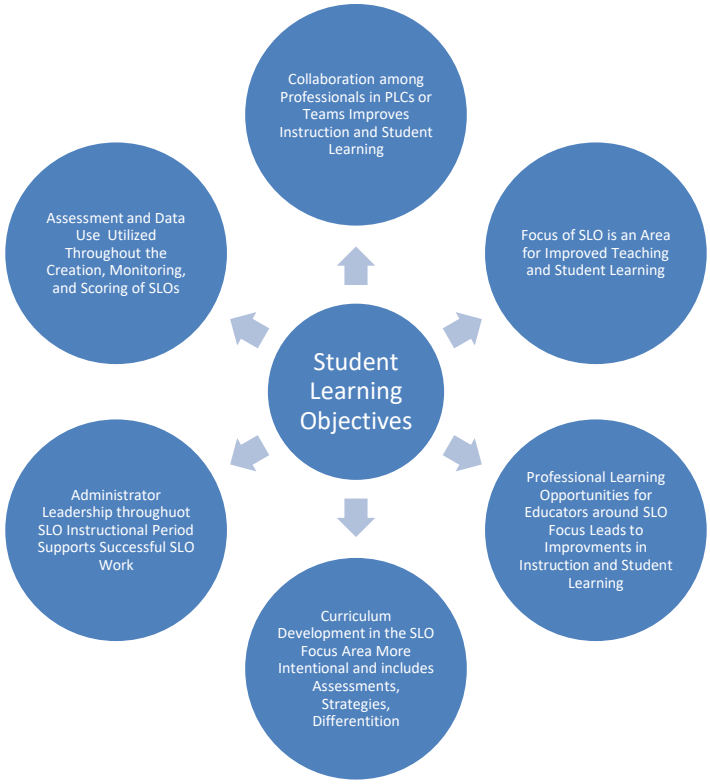
Conceptual Frameworks

This researcher has included two conceptual frameworks in which teacher evaluation and SLOs are grounded. The first is represented in Figure 2.1 and depicts how SLOs fit into teacher evaluation. Teacher evaluation may contain two scores, one each for teacher practice and effectiveness. The teacher practice score is created using a rubric that consumes evidence from administrators' observations along with other evidence. The teacher effectiveness score involves evidence that the teacher was successful at promoting student growth. Various schools and districts have employed both value-added techniques and SLOs to generate the latter score. The teacher practice rating and teacher effectiveness ratings are combined pursuant to the school or district's teacher evaluation process. This varies from state to state and district to district.

The second conceptual framework focuses on student learning objectives and the factors that influence the culture surrounding SLOs in each school or district. Figure 2.2 shows these factors and includes collaboration, the focus area of the SLO, opportunities to orient professional learning to the SLO focus, clear attention to curriculum design around the SLO focus, administrator leadership within the school in relation to SLOs, and

the use of assessment and data throughout the SLO process. These qualities, when found in schools, support the use of SLOs as a teaching and learning tool, not just for purposes of teacher evaluation.

Figure 2.3 Positive Qualities of the Culture Surrounding SLOs



The SLO process with teachers is bound to evolve being (1) relatively new to teachers and (2) backed with little empirical research to inform the process. The goal is for teachers to make valid inferences about student learning based on evidence from classroom work that is authentic and tied to important standards. Qualities of school environments that support SLOs in practice include strong collaboration, formative use of data, relevant professional learning, and observations and feedback by school leaders that support the SLO goals (Lachlan-Hache, 2015).

Utilizing a measure of teacher effectiveness as part of teacher evaluation is in its infancy. It is important to get teacher evaluation right. If teachers perceive evaluation measures as biased and unreliable, they will not be attracted to that district, leaving the district without the best and the brightest teachers (Herlihy et al., 2014).

Promoting good instruction and thus improving student learning should be the central purpose of a teacher evaluation system (Marion, DePascale, Gong, & Diaz-Bilello, 2012). According to Darling-Hammond (2013), "…what we really need in the United States is a conception of teacher evaluation as part of a *teaching and learning system* that supports continuous improvement, both for individual teachers and for the profession as a whole" (p. 3). As SLOs become part of many teacher evaluation systems throughout the country, ongoing research is essential to understanding the effect of SLOs on teachers and teaching.

Chapter 3

Research Method

The primary purpose of this study is to explore student learning objectives (SLOs) in teacher evaluation systems an indicator of teacher effectiveness in schools. Two open-ended questions serve to organize this study: (a) What effect do student learning objectives have on teachers and teaching when used in teacher evaluation systems? (b) What conditions surrounding student learning objectives in teacher evaluation lead to improved teaching practices?

Researchers use qualitative methods when phenomena require description of complex, multi-person interactive behaviors or social contexts in order to capture macro-level historical, institutional, and social processes (Nastasi & Schensul, 2005). Qualitative research methods illuminate social phenomena from the perspective of those experiencing the phenomena (Glesne, 2006). Qualitative researchers develop a deep understanding of how participants perceive their world and how they interpret their experiences (Rubin & Rubin, 2012).

Use of SLOs as evidence of teacher effectiveness in promoting student growth is growing in the United States, yet there has been limited research exploring the use of SLOs and its effect on teachers and teaching from the teacher's perspective. Qualitative methods are necessary to capture the teacher experience, develop themes to describe the experience, and offer suggestions for improvement, and further research into the process.

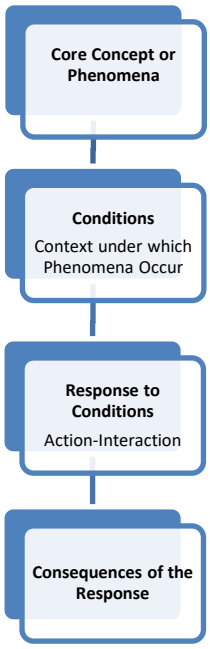
Grounded Theory

Grounded theory, developed by Glaser and Strauss (1967), was selected as the systematic and analytical qualitative approach for this research. In this approach, according to Corbin and Strauss (1990, 2015), a theory is systematically developed that explains the process of the phenomenon, action, or interaction on a topic through interviews and other collected artifacts. Grounded theory is an inductive model in that the "process is one of generating or discovering a theory grounded in views from participants in the field" (Creswell, 2007, p. 239). Grounded theory is a useful approach in qualitative research when a prior theory does not exist (Glaser & Strauss, 1967; Martin & Turner, 1986). One unique aspect of grounded theory is that the concepts used to develop the theory are derived from data collected during the research process and not articulated before the research begins (Corbin & Strauss, 1990). This approach allows the researcher to be less theoretically biased and more objective because concepts emerge from the data collected (Glaser & Strauss, 1967).

Data collection and analysis. In grounded theory, a variety of data are collected (Corbin & Strauss, 1990). Data collection and analysis are ongoing, interrelated processes (J. Corbin & Strauss, 2015; Corbin & Strauss, 1990b). Interviews play a primary role in grounded theory research; however, observations and other written or recorded materials can be used (Corbin & Strauss, 1990; Creswell, 2007). Interview questions in grounded theory research need to be somewhat general in order to cover a wide range of experiences yet narrow enough to elicit and explore the experiences of the

participants (Charmaz & Belgrave, 2012). Central to the grounded theory method is the constant use of comparative analysis where data collection and analysis occur simultaneously (Glaser & Strauss, 1967). Each piece of data is compared for similarities and differences to data collected previously, and data deemed conceptually similar are grouped together under the same conceptual heading (Corbin & Strauss, 1990). The researcher groups concepts into categories or themes, and "each category is developed in terms of its properties and dimensions, and eventually the different categories are integrated around a core category" (Corbin & Strauss, 1990, pp. 7–8). In grounded theory, a core concept, or phenomenon, is identified and regarded as continually evolving in response to conditions as the researcher captures the different conditions, responses (actions/interactions) and consequences of the responses (Corbin & Strauss, 1990). These provide the structure to the theory. Figure 3.1 shows the different levels of concepts unveiled throughout this research and the hierarchy within which data are collected and organized. The concepts are the unit of study and every concept earns its way into the theory through repeatedly being present in the data collected (Corbin & Strauss, 2015). This helps reduce bias in the results because the relevance of the concepts need to either be proven through ongoing scrutiny or discarded (Corbin & Strauss, 1990).

Figure 3.1 Grounded Theory Levels of Concepts within the Research[1]



[1]Note that under any one core concept, the researcher may discover many conditions, responses to the conditions, and consequences to the responses.

Key characteristics of grounded theory. Different variations of grounded theory have emerged since its development (explained in a later section), but regardless of the variation employed, there are seven key characteristics: theoretical sensitivity, theoretical sampling, constant comparative analysis, coding and categorizing the data, theoretical memos and diagrams, literature as a source of data, and integration of theory (McCann & Clark, 2003a). Each plays a key part in the process of developing a theory grounded in the data collected.

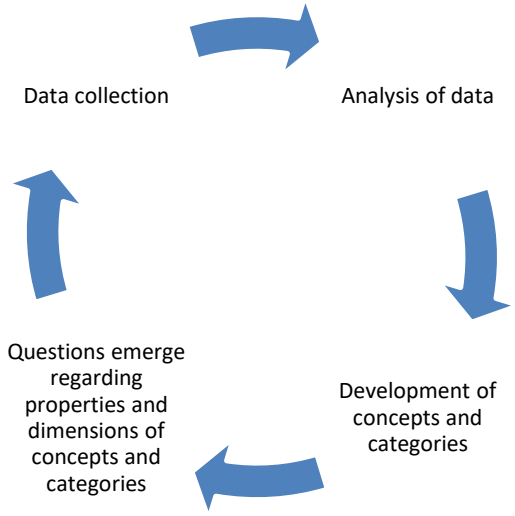
Theoretical sensitivity. Theoretical sensitivity begins with the researcher building knowledge and awareness of data that might be found in the data (Corbin & Strauss, 2015; McCann & Clark, 2003a) and continues throughout the research as the researcher

conceptualizes and formulates theory (Glaser & Strauss, 1967). Theoretical sensitivity can be developed through a preliminary review of the literature as well as from relevant professional experience (McCann & Clark, 2003a). However, theoretical sensitivity can be lost when the researcher focuses data analysis on a preconceived theory (Glaser & Strauss, 1967).

Theoretical sampling. Grounded theory usually begins with purposeful sampling in order to select participants who understand the research topic or central phenomenon under study (Creswell, 2007). However, once the analysis begins, sampling then follows the cycle of theoretical sampling. Theoretical sampling allows the researcher to explore a concept in depth and from many different angles (Corbin & Strauss, 2015; Glaser & Strauss, 1967; McCann & Clark, 2003a). In grounded theory, "it is concepts and not people, per se, that are sampled" (Corbin & Strauss, 2015, p. 135). Theoretical sampling begins with the first data collection. As the data collected are analyzed, concepts emerge. The questions the researcher asks regarding these concepts lead to more data collection in order to answer these new questions (Corbin & Strauss, 1990; Glaser & Strauss, 1967). Figure 3.2 shows this continuous cycle of theoretical sampling. Theoretical sampling continues until all categories are saturated, no new data emerge, and "when the major categories demonstrate specificity, are dense in terms of properties, show dimensional variation, and are well integrated" (Corbin & Strauss, 2015, p. 141). Glaser and Strauss

(1967) describe the researcher as "empirically confident" when similar instances occur over and over again, and a category has reached saturation.

Figure 3.2 Cycle of Theoretical Sampling



Constant comparative analysis. In grounded theory, data collection and analysis occur throughout the analysis. Constant comparative analysis refers to a systematic process of comparing different pieces of data against each other for similarities and differences (Corbin & Strauss, 2015). Glaser and Strauss (1967) describe four stages in the constant comparative method: (a) comparing incidents applicable to each category; (b) integrating categories and their properties; (c) delimiting the theory; and (d) writing the theory (p. 105). Constant comparative analysis and theoretical sampling continue throughout the research until a detailed and abstract theory is created (McCann & Clark, 2003a).

Coding and categorizing the data. Grounded theory uses a three phase coding process that was advanced by Corbin and Strauss (1990). Each phase of coding-open,

axial, and selective-plays an important role in developing a model or theory, from which to learn (Creswell, 2007).

Open coding.

Open coding is usually the first type of coding in grounded theory research. Open coding allows the data to be described. In this phase, the researcher examines the text for "salient categories of information supported by text" (Creswell, 2007, p. 160). Open codes are generated "bottom up" by segmenting each interview into discernable, indivisible units of meaning called concepts. Using this "constant comparative approach" (Creswell, 2007, p. 160), coding continues until the data are saturated and no more meaningful codes emerged. Categories and subcategories are developed when concepts that pertain to the same phenomenon are grouped together (Corbin & Strauss, 1990). Not all concepts become categories, however. In order to rise to the level of a more abstract category, there must be conditions, actions/interactions and consequences of the response identified (Corbin & Strauss, 1990).

Axial coding.

Following open coding, the researcher selects one open coding category as the "central phenomenon of interest" (Creswell, 2007, p. 160). From here, the researcher reviews the transcripts and creates axial codes that provide insight into the central phenomenon. Insights include connections among categories and subcategories by exploring the conditions, context, strategies, and consequences which influenced the central phenomenon (Mills, Durepos, & Wiebe, 2010). The researcher makes use of

constant comparisons throughout the analysis, so when an event is noted, it is compared against other events for similarities and differences. These comparisons may require a second interview with participants in order to explore in greater detail events that emerged after the initial interview in greater detail (Corbin & Strauss, 1990). Creswell (2007) describes the rationale for conducting theoretical sampling at this stage of the research to "confirm or disconfirm the conditions, both contextual and intervening, under which the model holds" (p. 28).

Selective coding.

The final stage of coding is selective coding, which occurs towards the end of the research. The purpose of this stage is to develop the analytical story from the data extracted through the previous two stages (Creswell, 2007; Mills, Durepos, & Wiebe, 2010). All categories are unified around a core category and the descriptive detail needed to complete the story is researched (Corbin & Strauss, 1990). The researcher generates statements that interrelate the categories in the coding paradigm. The researcher then creates a conditional matrix, a diagram that helps visualize the range of conditions and consequences related to the central phenomena (Creswell, 2007).

Theoretical memos and diagrams. Writing memos and creating diagrams are part of data analysis, created as data are explored. The internal dialogue between the researcher and the data is important to capture in words and diagrams. Corbin and Strauss (1990) described four types of memos: (a) opening data exploration, identifying or developing the properties, dimensions, concepts, or categories; (b) making

comparisons and asking questions; (c) exploring relationships among conditions, actions-interactions, and consequences; and (d) developing a storyline (p. 117). Memos help track cumulative thinking throughout the research. Diagrams allow the researcher to "organize data, keep a record of their concepts and the relationships between them, and integrate their ideas" (p. 123).

Literature as a source of data. The review of literature in grounded theory is somewhat different than in other research methods. Initially, a review of literature is used to justify the research, provide theoretical sensitivity, and build background knowledge for the researcher (McCann & Clark, 2003a). Since a researcher will not know all the concepts that will be created through research, it is impossible to review all of the literature prior to the study. Corbin and Strauss (2015) describe six ways in which literature may be used: (a) making comparisons, (b) enhancing sensitivity, (c) providing descriptive materials, (d) supplying questions for initial observations and interviews, (e) stimulating analytic questions, and (f) confirming findings.

Integration of theory.

Building a theory involves linking, or integrating, categories around a central or core category. Corbin and Strauss (2015) describe the importance of integration using an umbrella analogy. The spokes of an umbrella give it shape, but it is not until the spokes are covered with material that the object can be used as an umbrella. Concepts, like the spokes, cannot stand alone to make a theory; they must be linked and filled in with detail in order to construct a dense and explanatory theory (p. 188). The core category of

grounded theory research is the umbrella fabric. It is a broad and abstract concept that summarizes in a few words the main theme of the study (Corbin & Strauss, 2015). Corbin and Strauss (2015) described several techniques to support the integration of concepts including (a) writing the descriptive summary memo, (b) writing the conceptual summary memo, (c) making use of integrative diagrams, (d) reviewing and sorting through memos, (e) thinking in terms of metaphors or similes, and (f) talking with a professor or colleague (p. 191). Though it may seem like integration happens at the end of the research, it really grows throughout the research. The last step in finalizing the theory involves looking for internal consistency and logic, filling in poorly developed categories, and trimming and validating the theory (Corbin & Strauss, 2015).

Variation of Grounded Theory Research

Variations to grounded theory have evolved since its inception. Glaser's approach has been described as *traditional or classical*, where Corbin and Strauss's approach has been described as *evolved* (Mills, Bonner, & Francis, 2008). Both methods "share the common elements of theoretical sensitivity, theoretical sampling, constant comparative analysis, coding and categorizing of data, literature as a source of data, integration of theory and theoretical memos" (McCann & Clark, 2003b, p. 22).

The researcher's role in Corbin and Strauss' approach is active and dialectic compared to the neutral role in Glaser's approach (McCann & Clark, 2003b). Corbin and Strauss' (1990) theory development is based on the researcher's interpretation that is verified through the process, where Glaser's theory development is not verified. The use

of literature in Corbin and Strauss' approach allows for a preliminary review prior to data collection in order to aid theoretical sensitivity, where Glaser believes reviewing literature prior to going into the field influences the researcher's generation of categories (McCann & Clark, 2003b). Finally, Glaser believes the research should be conducted in a more flexible manner, whereas Corbin and Strauss provide a more structured approach (McCann & Clark, 2003b).

For this doctoral research, the Corbin and Strauss' approach enables this researcher to utilize her extensive knowledge of teaching and teacher evaluation as well as aiding in participant selection through her role as Professional Programs Director in a state affiliate of a major teacher's union.

Site Selection Description and Rationale

Multiple sites were utilized in this research. The researcher contacted the communication directors and local union leaders of the state affiliates of the National Education Association (NEA), where SLOs are used in teacher evaluation. State Affiliates of the NEA had ongoing communication with their members through weekly or biweekly emails. The communication directors and local leaders were asked to include the link to a teacher participation letter in their communication with members. Within the United States, there are a variety of approaches to SLOs and the "stakes" attached to the results of the SLOs in teacher evaluation, creating diversity in the phenomena needed to develop a theory that is both wide and deep.

Participant Selection Description and Rationale

The 20 participants for this research were selected through first purposeful, and then theoretical, sampling, until a theory reached saturation. It is critical that grounded theory research include participants who can contribute to the development of the theory (Creswell, 2007, p. 128). Theoretical sampling allows the researcher to explore the concepts in depth that are relevant to the population studied (Corbin & Strauss, 1990). When studying a new or unexplored topic, theoretical sampling allows for discovery and requires the researcher to have an open mind. Additionally, theoretical sampling is cumulative. Concepts are explored and derived from previous data collection and analysis (Corbin & Strauss, 1990). Creswell (2007) suggests 20-30 participants in grounded theory in order to develop a well-saturated theory.

Teachers received the notice of the research through their state affiliate of the National Education Association. In addition, some state association leaders reached out to specific teachers due to their leadership in SLOs. Interested teachers followed a link from the introductory letter to an SLO Research Participation Survey (see Appendix A). The information obtained through this survey helped determine the initial participants for the study. Participants were purposefully stratified to illustrate subgroups and facilitate comparisons between these subgroups (Creswell, 2007, p. 127). Since participants self-selected to be considered for this study, the researcher selected participants that allowed for the widest range available. Chapter four describes the 20 participants in this study and the common and unique factors surrounding SLOs in their schools.

As a result of participant self-selection for this study, gender and racial diversity was not obtained. Over 80% of public school teachers are female and white (Feistritzer, 2011). This study achieved a 75% female to 15% male ratio. Issues of gender and race in SLO development should be an area for future research with more purposeful participant selection.

Collection and Analysis of Data

For this study, the researcher conducted semi-structured interviews with each participant (see Appendix B). Although unstructured interviews provide the richest source of data for building a theory, semi-structured interviews enable the researcher to maintain some consistency over the concepts and provide a list of topics for the researcher to fall back on if the participant does not offer a lot of explanation (Corbin & Strauss, 1990). Each interview took place online using Adobe Connect software, was recorded, and later transcribed verbatim. Interviews ranged from 35 minutes to one hour in length. Five follow-up interviews were conducted after initial coding in order to gather additional data to ensure the saturation of concepts and categories and their properties, as well as to relate themes to the varying conditions and to each other (Corbin & Strauss, 1990). During the follow-up interviews, participants viewed diagrams of the themes to offer new insights and verify that their experiences were depicted in the diagrams. Pseudonyms were assigned for state, school, district, and participant names during data transcription. Transcripts of interview and memoing (researcher reflections) were downloaded into NVIVO software for coding.

Grounded theory relies on secondary data to support the development of themes. Secondary data in this research included the researcher's journals, researcher reflection memos written immediately after each interview, and the teachers' finished SLOs or their districts' SLO templates. Participants removed all student and teacher identifying information prior to submitting the SLO to the researcher. The SLOs were collected in order to compare the components required by each of the districts. Additionally, participants referred to the SLO as they explained the process required by their district. During the interviews they were given the Adobe Connect role of "presenter," which allowed participants to scroll through the SLO as necessary as they explained their process. The collected SLOs enabled the researcher to later refer back to the components during analysis. The SLOs, as well as the researcher's memos and diagrams, were stored within NVIVO software program on a password-protected computer.

Following each interview, the researcher wrote memos exploring themes, processes, and ideas presented by the participants. After interviews were transcribed, they were downloaded into NVIVO for initial, or open coding. The initial interviews took place over a three-month time period between December, 2015 and March, 2016. This allowed the researcher to explore ideas and concepts within each interview, construct diagrams to explore relationships between ideas, and develop questions for the subsequent interviews to explore specific themes that emerged. Data collection and analysis were performed in parallel. Thirty-five initial themes were identified through this open coding (see Table 3.1).

Next, through axial coding, categories and subcategories and the actions and interactions within each were identified. The core concept that emerged was "The Context of Student Learning Objectives: Three Dimensions," and eleven models under this core concept were created.

The final step of coding was selective coding. At this point, the researcher refined the emerging theory and interviewed five candidates a second time via Adobe Connect. During these interviews, the eleven subcategories were described by the researcher, one at a time. The participants addressed each model to determine if their experiences were accurately depicted, and the models were then refined by the researcher. The final feedback on the models occurred during an SLO Consortium Meeting that brought together educators from nine states to discuss SLOs. The researcher offered a session during this two-day meeting and had nine participants. The participants included six current teachers from four states implementing SLOs in their schools, two current state teacher union presidents, and a senior policy analyst from the National Education Association. Each focus group participant viewed eleven models that depicted the SLO narrative constructed as part of this research. As in the second interviews with the participants, the focus group educators examined the models in light of their experience with SLOs. Each participant offered written and verbal feedback to the researcher, and this was used in creating the final renditions of the models.

Table 3.1 Initial Codes

Application of SLO Skills to Non-SLO Classes	*Non-Core Content Teacher*
Building Administrator Collaboration	*Professional Learning*

Changes Teachers Would Make to SLO Process
Collaboration
Common Language
Confusion in the SLO Process
Create and Use Assessments
Curriculum Design
Developing the SLO Model
Differentiation
Embedding Other Responsibilities into SLOs
Growth Targets
Importance in Teacher Collaboration in Developing the SLO Process
Improvements in Teaching
Improving the Quality of SLOs
Intentional Planning for Learning
Involving Students in the SLO
Professionalism
Relevance of the SLO Process
School Culture Around SLOs
Selecting SLO Focus
SLO as Documentation for Teacher Evaluation
SLO End-of-Year Scoring
SLO State and District Support
Stakes Attached to SLOs
Teacher Leadership in SLOs
Time
Training
Understanding Learning Goals
Using Data
Validation of Teaching Skill
Why SLOs if not for Teacher Evaluation

Efforts to Minimize Bias

The trustworthiness of qualitative research requires validation through multiple means including credibility, transferability, dependability, and confirmability (Miles & Huberman, 1994; Shenton, 2004). This researcher addresses these considerations below.

Credibility. Insuring credibility is one of the most important factors in establishing trustworthiness (Lincoln & Guba, 1985). In this research, credibility was established in several ways. First, grounded theory was used as the research method. This research method establishes procedures for the researcher to utilize throughout the project (Corbin & Strauss, 2015). Participants in this study all had experiences with student learning objectives. The experiences differed as a result of different expectations in the states and districts in which the participants worked. Shenton (2004) discussed the importance of the researcher becoming familiar with the culture of the participants

around the phenomenon under study. Triangulation also occurred in this study. Interviews with participants across multiple sites, artifacts from the participants, follow-up interviews, and a focus group were utilized in this study.

Tactics to ensure honesty also strengthen credibility (Shenton, 2004). Participants volunteered for this study, could withdraw at any time, and were encouraged to be frank in their dialogue with the researcher. Frequent debriefing sessions with colleagues or a steering group also contributes to credibility (Shenton, 2004). This researcher discussed and received feedback from both the American Institute for Research (AIR) and Community Training and Assistance Corporation (CTAC). These two organizations have worked extensively with states and districts throughout the United States in developing SLO models, conducting site-based research, and training teachers in developing SLOs. Finally, the background qualifications and the experience of the researcher, with thirty-three years in education, brings a depth of understanding of the topic of SLOs and teacher evaluation to the research.

Transferability. Lincoln and Guba (1985) suggests that transferability is developed when the researcher provides the context in which the participants reside in order to determine whether the findings might be relevant in a similar context. Chapter four of this dissertation contains the context of the participants in the study. The boundaries of this study, however, reside with the participants of this study. Further

research will need to be conducted to determine how wide the findings in this research might be transferred.

Dependability. Shenton (2004) wrote that dependability is related to both credibility and transferability. Additionally, dependability requires the method procedure in the study to be reported in detail so that a future researcher could conduct a similar study. This includes the research design and implementation, data gathered and the reflective appraisal of the project. This researcher has included an in-depth description of the research method employed in this study.

Confirmability. Confirmability is the researcher's concern with objectivity (Shenton, 2004). Researchers should understand their own predispositions and how these predispositions might result in bias (Miles & Huberman, 1994). The detailed method section provides an "audit trail" of the research decisions. Grounded theory is a method resulting in describing a phenomenon from the perspectives of the participants so that others might understand the phenomenon. This lens is less about finding the different truths represented by the participants, not one truth. However, diagrams constructed as part of this research do lead to recommendations based on the experiences of the participants. Understanding and articulating shortcomings in the research add to the confirmability of a study, which this researcher has embedded.

Limitations

The limitations of this study are grounded in the small sample represented in this research. This study included in-depth interviews of 20 teachers and a small focus group

composed of teachers and association leaders. It provides a window into the teachers' experiences with SLOs in their specific schools. However, this is a qualitative study with a small sample and cannot be generalized to a larger population. Teachers volunteered to be a part of this study, limiting the study to their specific school cultures surrounding SLO implementation. Each school culture is unique, and this study only represents the culture of the schools of this study's participants.

Another limitation is that there were no administrators or other district leaders in the sample, so the perspective is purely that of a teacher. Qualitative research collects data in a "natural setting sensitive to the people and places under study, and data analysis that is inductive and establishes patterns or themes" (Creswell, 2007, p. 37). This study's intent was to capture the teacher's experience with SLOs and not generalize their experience to the entire population. However, the results provide some insight of the SLO process to schools and districts utilizing SLOs in teacher evaluation.

SLOs are still an emerging process for teacher evaluation with little empirical research to inform its use in schools. Therefore, this research, while contributing to the small base of research on SLOs, is not informed by rich empirical studies from other researchers.

Researcher Identity

The researcher is the Director of Professional Programs for a state affiliate of a major teacher's union and taught 30 years in public schools. The state in which the researcher works does not require SLOs as part of teacher evaluation at the time of this

writing, but SLOs are included in a state model for teacher evaluation as one approach to documenting teacher effectiveness with students in all grades and subjects. Teacher evaluation is locally controlled in the researcher's home state, but the nature of her job allows her to interact with professionals in other states where SLOs are required in teacher evaluation. Having been a teacher might allow for more honest and open dialogue between researcher and participant. The researcher understands the complexities of the job of the classroom teacher and can empathize with the participant. This relationship will be an advantage in grounded theory research, which depends on an open and honest dialogue throughout the interviews.

In qualitative research, bracketing a researcher's experiences to avoid bias is important (Creswell, 2007). In grounded theory, the goal is to explain, not interpret, the experiences of the participants. With the use of constant comparative analysis and the need for concepts to earn their way into the theory bias is limited.

This research is important in order to add to the understanding and use of SLOs in teacher evaluation. Including a measure of teacher effectiveness through the use of SLOs has the potential to improve teacher practice, leading to positive outcomes for students. Understanding the varying conditions under which SLOs are implemented and the subsequent responses (actions/interactions) and consequences are needed in order to reflect on how best to utilize SLOs in teacher evaluation.

Chapter 4

Context

The 20 participants in this study represented a diverse group of teachers in many ways including geographically, years of experience, years of utilizing SLOs in teacher evaluation, SLO characteristics as part of teacher evaluation, and the school climate and expectations around SLOs.

Participants were geographically located in one of seven regions of the United States (see Table 4.1) and from nine different states. The grade levels ranged from PK-grade 12, and the content areas included teachers in both tested and nontested grades and subjects.

Table 4.1 Participant Characteristics

Participant	Geographic Location	Grade Level Range Taught	Subject Area taught
Abby	Southwest	6-8	General Elementary
Anna	Southwest	5-8	Art
Braden	Southwest	7-9	English
Candace	Mid-Atlantic	6-8	Music
Garrett	Mid-Atlantic	6-8	English
Ida	Northeast	5-8	Art
Izzy	Northeast	6-8	English
Jennifer	Northwest	PK-8	Elementary and Special Education
Jill	Midwest	6-8	English
Jo	Northeast	6-8	PE/Health
Kathy	Midwest	7-8	English
Kelly	Midwest	6-8	English/Science
Leah	Midwest	9-12	Special Education
Lucy	Southeast	3-5	General Elementary
Macy	Midwest	3-5	General Elementary
Mike	Mid-Atlantic	PK-5	General Elementary
Nicole	Northeast	6-8	Social Studies
Robyn	Southwest	3-8	Special Education and Math
Sadie	Southwest	PK-2	General Elementary
Ty	Northwest	3-5	General Elementary and Technology

The participants also varied in their years of experience with Student Learning Objectives, their training prior to implementation, and the stakes attached to SLOs for teacher evaluation purposes (see Table 4.2). Approximately one-third of the participants had one year of experience in writing SLOs and the most experienced was Mike, who had completed four years of writing SLOs. Training also varied from no training through over 16 hours of training. Many of the participants with more training received it through their local teachers' association and were teacher leaders in their buildings. The stakes attached to SLOs also differed. The lowest stakes participant was not required to write SLOs but was trained through her association and used SLOs as evidence of the professional goal that she was required to set each year as part of teacher evaluation. Mike experienced the highest stakes attached to the SLOs, where the SLO was 50% of his overall teacher evaluation score. This researcher noted no patterns in the amount of training, years of implementation, or stakes attached. SLOs are in the early stages of implementation and in flux as a result of the new requirements under ESSA, which allows states more flexibility in designing teacher evaluation systems.

There were also variations in other SLO characteristics (see Table 4.3). These included by whom the SLO was written, how the pre/post assessments and formative assessments were created, and whether teachers collaborated with others around the SLO focus. Figure 4.3 provides detail on the variety of participants' experiences. SLOs were created individually, collaboratively with their PLC/Team, or by a district committee

little individual teacher autonomy. Some districts provided the pre/post assessments for use to determine the growth of student learning, while others allowed teachers or teams to create the pre/post assessments. Finally, participants varied in their collaboration around their SLOs.

Table 4.2 SLO Years of Implementation, Training and Stakes

Participant	Years of Teaching	Years of SLO Implementation	Hours of Training Prior to Implementation	Stakes Attached to SLOs for Teacher Evaluation
Abby	23	1	1-4 hours	20% of Evaluation Rating
Anna	22	1	1-4 hours	SLOs used as evidence to inform district evaluation rubric
Braden	21	1	1-4 hours	20% of Evaluation Rating
Candace	1	1	No Training	SLOs used as evidence to inform district evaluation rubric
Garrett	12	3	13-16 hours	20% of Evaluation Rating
Ida	32	3	>16 hours	SLOs used as evidence for Individual Professional Goal
Izzy	30	2	>16 hours	20% of Evaluation Rating
Jennifer	9	1	>16 hours	SLOs used as evidence to inform district evaluation rubric
Jill	25	2	13-16 hours	SLOs used as evidence to inform district evaluation rubric
Jo	34	2	>16 hours	SLOs used as evidence to inform district evaluation rubric
Kathy	1	1	No Training	SLOs used as evidence to inform district evaluation rubric
Kelly	8	3	13-16 hours	SLOs used as evidence to inform district evaluation rubric
Leah	19	1	No Training	35% of Evaluation Rating
Lucy	8	2	1-4 hours	SLOs used as evidence to inform district evaluation rubric
Macy	17	2	1-4 hours	SLOs used as evidence to inform district evaluation rubric
Mike	25	4	>16 hours	50% of Evaluation Rating
Nicole	4	2	>16 hours	SLOs used as evidence to inform district evaluation rubric
Robyn	14	3	9-12 hours	20% of evaluation rating

Sadie	23	1	1-4 hours	20% of evaluation rating
Ty	18	2	No Training	SLOs used as evidence to inform district evaluation rubric

Table 4.3 SLO Characteristics

Participant	How the SLO is Created and Focus Selected	Pre/Post Assessment Decisions	Formative Assessments	Frequency of Collaboration in PLC/Team around SLOs
Abby	District-created with no choice	Committee at district level	District and teacher	Occasionally
Anna	District-created with no choice	Teacher	Teacher	Never
Braden	District-created with no choice	Committee at district level	District and teacher	Occasionally
Candace	Individually	Teacher	Teacher	Never
Garrett	In collaboration with PLC/Team	PLC/Team	District and teacher	Frequently
Ida	Individually	Teacher	Teacher	Occasionally
Izzy	In collaboration with PLC/Team	PLC/Team	PLC/Team and teacher	Frequently
Jennifer	Individually	PLC/Team	Teacher	Never
Jill	In collaboration with PLC/Team	PLC/Team	Teacher	Frequently
Jo	Individually, and in collaboration with PLC/Team	Teacher	Teacher	Occasionally
Kathy	In collaboration with PLC/Team	PLC/Team	PLC/Team and teacher	Frequently
Kelly	Individually	Committee at district level	District and teacher	Occasionally
Leah	In collaboration with PLC/Team	Created by PLC/Team	Teacher	Occasionally
Lucy	In collaboration with PLC/Team	Created by PLC/Team	District and teacher	Occasionally
Macy	In collaboration with PLC/Team	Created by PLC/Team	Teacher	Frequently

Mike	Individually	Committee at district level	District and teacher	Occasionally
Nicole	Individually	Teacher	District and teacher	Never
Robyn	District created – teachers select from district created SLOs	Committee at district level	District and Teacher	Frequently
Sadie	In collaboration with PLC/Team	Created by PLC/Team	PLC/Team and teacher	Frequently
Ty	Individually	Teacher	Teacher	Never

The last set of data regarding the participants in this study involves administrative participation in the SLOs. Table 4.4 shows how often the participants met with the administration regarding their SLOs.

Table 4.4 Meetings with Administrator

Participant	Administrator SLO Approval Meeting	Administrator Midyear Meeting	Administrator End-of-Year Meeting
Abby	No	No	No
Anna	No	No	Yes
Braden	Yes	Yes, but "barely"	Yes
Candace	Yes	If modifications to SLO needed	Yes
Garrett	Yes	Yes	Yes
Ida	Yes	Yes	Yes
Izzy	Yes	Yes	Yes
Jennifer	No	No	Yes
Jill	Yes	Yes	Yes
Jo	No	No	No
Kathy	No	No	No
Kelly	Yes	No	Yes
Leah	No	No	No
Lucy	Yes	Yes	Yes
Macy	Yes	No	Yes
Mike	Yes	Yes	Yes
Nicole	No	No	No

Robyn	No	Yes	Yes
Sadie	Yes	No	Yes
Ty	Yes	No	No

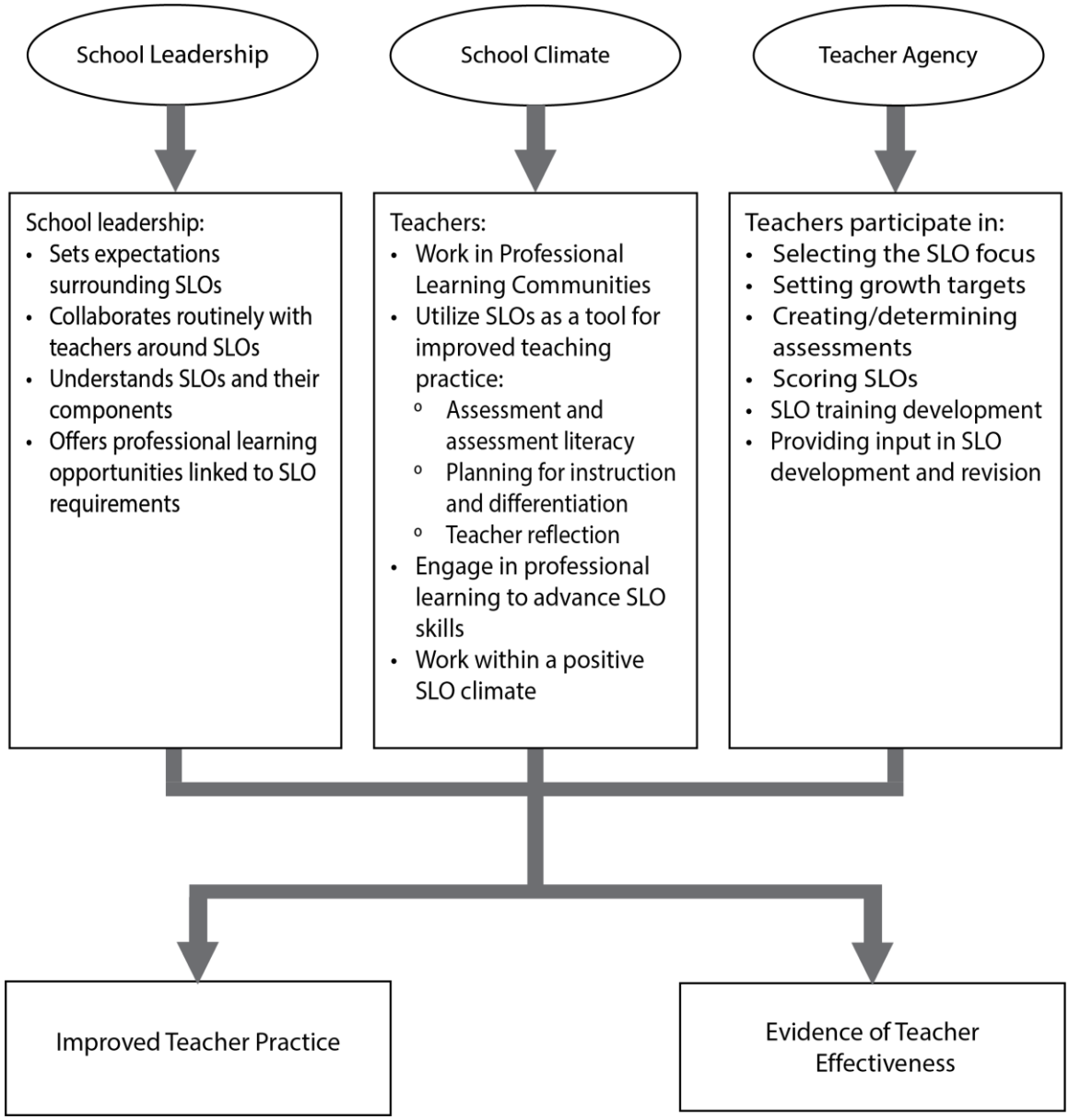
The participants interviewed for this study had unique experiences in the use of SLOs. Highlighting the variety of conditions around which SLOs are implemented and the ways in which these conditions influenced the experience for the participants will be explored in the next section.

Chapter 5

Findings and Discussions

The core concept that emerged from this research is that the effect of an SLO depends on three distinct dimensions of the context within which the SLO is implemented (see Figure 5.1). The dimensions are school leadership, school climate, and teacher agency. These dimensions provide the structure to examine the research questions under study. The first question, *What effect do SLOs have on teachers and teaching when used in teacher evaluation systems?* is dependent on the answer to the second question, *What conditions surrounding SLOs in teacher evaluation lead to improvements to teacher practice?*

Figure 5.1 Context of Student Learning Objectives: Three Dimensions



For the participants in this research, school leadership was the first dimension that emerged from the data. School leadership developed the expectations surrounding SLOs, including whether SLOs would be implemented as a collaborative activity within PLCs,

and what professional learning would be offered in the areas of SLO development, SLO focus area, assessment, or teaching strategies. The stronger the school leadership was in setting expectations, collaborating with teachers, and offering professional learning, the more likely it was that SLOs would be seen to improve teaching.

The second dimension that emerged from this research is school climate. The climate surrounding SLOs in the participants' schools was diverse. First, participants experienced different levels of collaboration during the SLO process within professional learning communities. Next, participants described different experiences regarding how SLOs directly improved their teaching practice. Teachers having a positive experience noted that implementing SLOs improved their understanding of assessment literacy and use of assessments to support learning and helped them plan their curriculum more intentionally around the SLO focus areas. Teachers use of SLOs also helped teachers engage in deeper reflection. Finally, participation in the SLO development and revisions varied. Some participants worked in schools where teachers were an integral part of the development of the SLO process in the context of teacher evaluation while other participants lacked such involvement. The research revealed that these climate factors strongly influenced participants' experiences with SLOs.

The final dimension that this researcher uncovered was teacher agency, the involvement and engagement of teachers in the SLO process. The SLOs of all participants contained one or more learning goals on which teachers measured student growth, with historical data and assessment being used to determine student proficiency

at the beginning and end of the SLO period. What differed among participants was teacher agency in many of the SLO components, including the learning goals. In some settings, the teachers were given the SLO by their district, while in other settings, teachers worked collaboratively to write their SLO based on their own perceived needs. These differences, along with their impacts, are outlined in greater detail in this chapter.

The following sections examine various systems and themes contributing to diversity of SLO implementation and the actions and interactions that influenced the outcomes for the participants in this study.

School Leadership

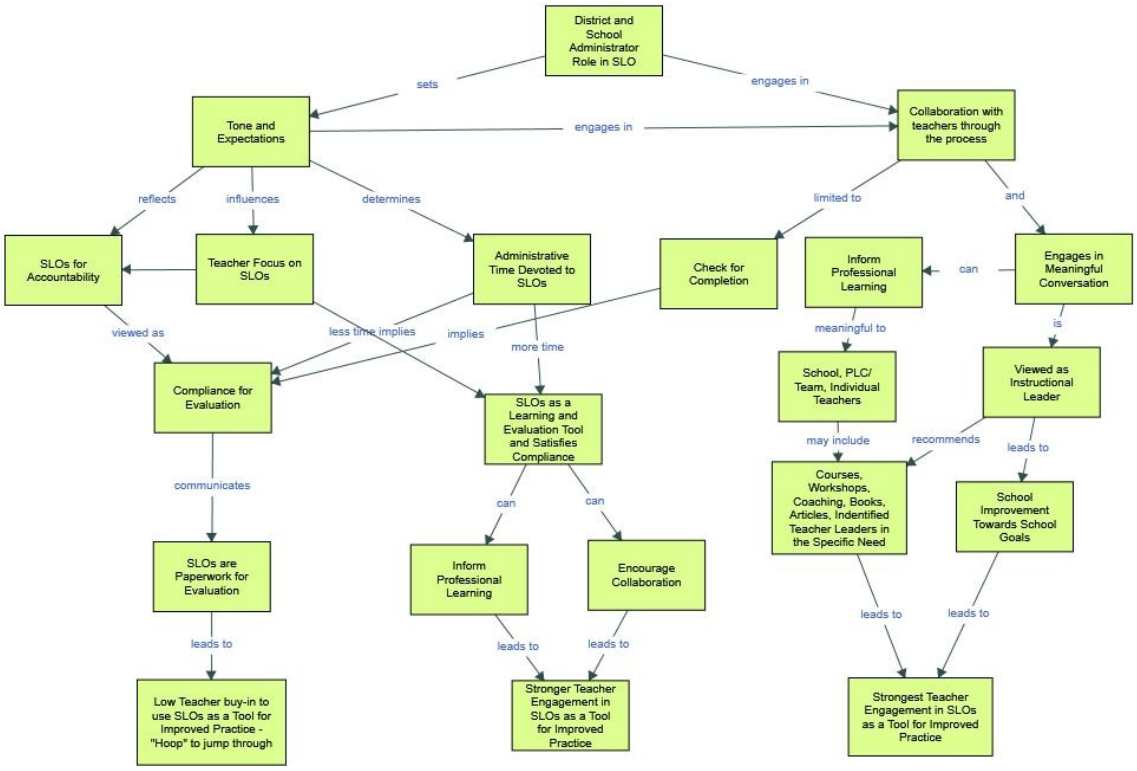
School leadership, in most cases the school principals/administrators, set the tone of SLOs in their schools and is the first of three dimensions in the context of SLOs. Figure 5.2 depicts the effect of leadership. Where SLOs were regarded positively by teachers, administrators, viewed as instructional leaders by the participants, set the tone that SLOs were a tool for improved teaching, and administrators collaborated with teachers through meaningful conversations. These administrators also used these conversations as a way to identify professional learning and promote school goals. Teachers in these situations felt like respected professionals.

Conversely, administrators not viewed as instructional leaders set a tone that SLOs were for compliance. They spent little time with teachers discussing the SLO goals and offering professional learning to strengthen teacher skill in the SLO goal area. Participants felt their time was valuable, and they perceived that using their time to “jump

through hoops" to fulfill a district obligation was not respecting their roles as professionals.

Figures 5.1 and 5.2 summarize the conditions that led to the use of SLOs as a way to improve teaching while providing teacher accountability.

Figure 5.2 District and School Administrator Role in SLOs



School leadership sets expectations surrounding SLOs. As noted earlier, school administrators were key in establishing the expectations and culture surrounding SLOs, and the tenor of those expectations strongly influenced the effectiveness of SLOs in improving practice. Half of the participants in this study had administrators who set a

neutral or positive tone in regards to SLOs. The other half, however, had administration who set the tone that the SLOs were for compliance.

When administrators set the tone and expectations that SLOs were a tool for improved practice, SLOs were regarded as valuable for improved teaching. Kelly, with eight years of teaching experience and three years of experience with SLOs, had significant training prior to completing her SLO. Her administrator set a positive tone and clear expectations around SLOs.

> *For the most part, everybody is pretty embedded in it…For the most part, it is embedded in our culture because we've spent a lot of time invested in doing this process and doing it right. (Kelly)*

Receiving training and having a set schedule throughout the year were important expectations for Kelly.

Teachers in districts where administrators set the "compliance only" tone, including Leah, Abby, and Garrett, SLOs were regarded as just paperwork that had little value. Leah and Abby did not get the message from their leaders that SLOs could help their practice as teachers. Both of these teachers were in their first year of writing SLOs, received no or minimal training (1-4 hours), and did not have formal meetings with their administrators. Leah was a 19-year veteran teacher and the SLO accounted for 35% of her total teacher evaluation score. Abby was a 23-year veteran teacher and the SLO accounted for 20% of her total teacher evaluation score. Both felt that SLOs were purely for compliance.

> *[The SLO is] just something that's turned in, you know, completed by the teacher and turned in at the end of the year. No conversation about it, really. (Leah)*

> *At the district level, their impression is that it [the SLO] is a compliance thing. I don't think that the district has conveyed to principals nor to teachers the value that can come from SLO. (Abby)*

In Garrett's case, a teacher of 12 years, SLOs were not being "counted" for evaluation purposes during the pilot year. His administrator did not regard the process as one to which teachers should give their full attention. Garrett was wary of his administrator's tone.

> *Our administrator said that it [the SLO] wouldn't count, that you wouldn't be observed doing this, that you didn't need to collect data… this will all blow over soon, was the message that we were getting. The resounding facts are no, absolutely not, this [SLOs] is here to stay at least until the next statewide or national cycle comes through. (Garrett)*

As a union leader in his district, he felt his administrator was brushing off the SLO because it was not going to "count" and probably would not be required in the future. Garrett received extensive training from his association and did meet with the administrator through the process. However, he was concerned that the administrator was not taking SLOs seriously enough considering that in the future, the SLOs would likely be 20% of a teacher's evaluation rating, despite the administrator's skepticism.

The tone and expectations administrators set were pivotal in creating the SLOs around a culture for learning. The next section presents positive and negative examples of administrator tone and expectations through the SLO process focusing on collaboration with teachers and engaging in and offering professional learning to enhance SLO development.

School leadership collaborates with teachers. One key action that set a positive and productive tone surrounding SLOs was whether principals took time to meet with

teachers through the process. Table 4.4 identifies how often the participants met with their administrator to discuss their SLOs. Of the 20 participants, 25% had no meetings, 15% had one meeting, 20% had two meetings, and 40% had three meetings to review and discuss the SLO during the school year. Collaborating with teachers around SLOs was an opportunity for administrators to assume the role of educational leader. Often, these collaborative discussions led to identifying professional learning that would lead to improved teaching. The educational quality of these meetings varied, however, meeting three times a year with the administrator did not automatically ensure a positive experience. There were administrators for whom SLOs were a compliance activity and the meetings with teachers were either short or led to "checking the box."

Kelly, Mike, Macy, and Ida all had positive experiences with their administrators. Kelly's district used SLOs as one piece of evidence that informed the teacher evaluation rating but not a specific percentage. Kelly noted a change in the administrator's role through the SLO process. The process allowed the administrator to meet with her twice a year to talk about her goal and student learning. To her, this represented a shift in his role from disciplinarian to instructional coach as a result of SLO implementation.

> *I really feel like it's [the SLO] changed the focus [of the principal] from just being there to discipline to now being the instructional coach. To me, that's really kind of the sweet spot. You become an administrator to be the instructional coach rather than just being the disciplinarian. It's actually kind of highlighting, making the profession better… It's been really enriching. For me, and I thank him too, taking the role of instructional coach has been great for him because he enjoys it but he's never had the opportunity to do it. (Kelly)*

Kelly's principal engaged in conversations around teaching and student learning that were not occurring prior to the implementation of SLOs.

Mike's administrator was also positive and supportive. Mike had implemented SLOs for four years, making him the most experienced SLO participant in this study. He received over 16 hours of training before implementing SLOs, and the SLOs represent 50% of his overall teacher evaluation rating. Meetings with his administrator occurred at the beginning, midpoint, and end of the school year. During these meetings, Mike's administrator asked questions about the focus of the SLO and the supports Mike needed to achieve the SLO. The administrator prioritized meetings in order to engage Mike in conversations around teaching, thus supporting a culture of learning around SLOs.

> *[…] we sit down with our principal and they either say, yes this is the target, or let's tweak it here, or what made you think of that, or what supports might we need, things like that [sic]. So that's September and you start working through the year. You meet mid-year, in January, where we look at our midyear data and what changes need to be made, what professional development is needed, and we just have a conversation. (Mike)*

Macy also found support in her administrator through the SLO process. Macy had 17 years of teaching experience and was implementing SLOs for the second year. Her SLOs were developed in collaboration with colleagues in her PLC meetings and the administrator met with her at the beginning and end of the year. SLOs were a new requirement for teacher evaluation, and many teachers were nervous about the process.

> *In our school we have one administrator and she really tried to make us comfortable… she's very encouraging…We meet with her. She doesn't help us plan, but we talk about it [the SLO] and then she's very open to any questions that we have ... Willing to send us to training ... If she comes across any new data information resources she shares them with us. It's been a really positive thing. (Macy)*

Ida's district was not requiring SLOs as a formal part of teacher evaluation, but Ida used her SLO as an artifact for teacher evaluation to demonstrate her teaching

effectiveness. As an experienced art educator of 32 years, and the only art educator in her building, she used SLOs as a way to assess her effectiveness in promoting student growth on her SLO goal. Ida received training from her teachers' association in order to improve her teaching practice. Ida's collaborative meetings with her administrator was an opportunity for Ida to share the SLO process, discuss student progress, and allowed her administrator to see how she grew as an educator as a result of the SLO.

> *She would spend time with me to understand [the SLO goals]. She saw me as a teacher growing and wanting to explore more ways to improve my teaching. We sat down once and we just talked about assessment. How could I do better assessments? (Ida)*

Conversely, Jill and Anna did not have a positive view of their administrative meetings. Anna, an art teacher of 22 years, received little training around SLOs. The SLO was used as evidence to inform teacher evaluation, and her administrator only met at the end of the year with her. Even then, Anna's administrator did not discuss the SLO at all.

> *We met to discuss those [professional] goals, but as far as an SLO, all I had to do was write up whatever one assignment I was going to pick in the one class, just write it up and submit it, and I haven't heard anything since then. (Anna)*

Jill, a 25 year veteran, who received two days of training round SLOs and met with her administrator at the beginning, middle and end of the year. However, these meetings were only to review the form; there was no substantive discussion that could lead to improvements to her teaching.

> *We just walk through the form with her. […] Our meeting was like 15 minutes, if even that. (Jill)*

Meaningful discussion of the components of an SLO takes time. However, administrators have many responsibilities, often pulling them in different directions. When pressing matters occur, meetings are cancelled or shortened. Many teachers noted that principals and teachers do not always have time to meet, but teachers understood that the reality of administrators' jobs made it difficult. Specifically, Abby and Braden (a 21-year veteran teacher), viewed teaching and administrative loads as barriers for collaborating with administrators.

> *In a perfect world I would have loved to sit down and talk about what's going on, but I don't have a planning period. […] In the administrator's defense, there's not enough time for them to do everything they're supposed to be doing. (Abby)*

> *This is a lot of extra meetings with teachers. Sometimes in those meetings, they get phone calls or whatever, and it pulls them away from it. It's a hard job. (Braden)*

Finding time to meet with teachers to review SLO goals and student progress is difficult for administrators. However, some administrators have integrated SLOs into the expectation of team/PLC meetings that the administrators cycle through regularly. These administrators had knowledge of the SLO learning goals of each PLC. In Mike's school, the principal has an active role in the SLO process: Throughout the year she attended PLC meetings that examined SLO focus and student progress. At these meetings, the principal approved each teacher's SLO face-to-face, not via a submit button. The interactions also included what professional learning the teacher needed in order to reach the SLO goals. This personalized attention recognized that teachers have different skill sets and need different things in order to accomplish goals.

> *Throughout the year, and at every PLC meeting, she [the principal] meets with everybody. She has an open door policy, so people can go in whenever, but we definitely meet once every two weeks, then she has the mid-year review where it's all conversation about how the students are doing [on the SLO focus]. (Mike)*

Sadie, as a 23-year teacher, was in her second year of implementing SLOs, for which she received no training prior to either year of implementation. The SLOs were created within PLCs and contributed 20% to her overall teacher evaluation rating. Sadie's experience was more positive in year two due to a new principal who required regular PLC meetings. This changed the culture surrounding SLOs. The SLO, under her new principal, was used as a tool to collaborate around the SLO focus. In Sadie's school, SLO goals were created within a PLC, so teachers within the PLC had the same goals. SLOs were discussed at PLC meetings, and the administrator attended them regularly.

> *[…] the expectation is that we will be meeting with our administrator in the next week as a grade level team in our PLCs and we'll be discussing our data and what has occurred and kind of looking at trends. I will tell you, I've been in my building for seven years and this is the first year that an administrator has required PLCs. (Sadie)*

The time and quality of the discussions the teachers had with the administrator mattered. Administrators who participated in teacher discussions about the SLO within the regular PLCs influenced the teaching of the SLO focus. Abby did not experience meetings with her administrator and viewed them as potentially valuable. Administrators developed a stronger sense of the teacher's practice around the SLO focus and the progress students were making in achieving the goal when they were collaborative.

> *I think meeting with the administrators would help with accountability...not accountability in a bad way, but accountability even as a celebration of 'look what they're [students] doing, look what they're learning'…I think it would be*

good for our school and for our kids if there was that kind of accountability. (Abby)

Overall, when the administrator devoted little time to discussing SLOs and their components (including the SLO focus, student baseline data, teaching strategies and differentiation, and assessments), the teacher didn't receive feedback that supported improvements to teaching. Participants who experienced collaboration with administrators valued their administrators and their contributions. Sometimes administrators did not have the time to walk through classrooms and might not have a strong understanding of the classroom happenings of all teachers in the building. SLOs enabled administrators to recognize strong instruction happening in the school.

School leadership understands SLOs and their components. School administrators' understanding of SLOs, as perceived by the teachers in this study, was not strong. Twenty percent of the teachers acknowledged that their administrators had adequate or strong training, while fifty percent noted inadequate training. The remaining participants were unclear about the training their administrators received on SLOs. Participants in schools in which administrators were trained in the SLO components were best prepared to implement SLOs. Kelly would compare her training notes with that of her administrator. This collaboration led to stronger conversations with teachers and the impression that the students in the school are the responsibility of all the faculty of the school.

My principal and I went through a separate training. He and I would compare notes on how our trainings were. It was just interesting to see how his trainings were versus mine… We have an assistant principal and a high school principal. They are really doing well with having conversations with staff. It's really

> *encouraging. It's really changed the way conversations have been happening. (Kelly)*

Inadequate administrator professional learning in SLOs was a barrier for setting school expectations around SLOs. Administrators needed training in their districts' SLO components in order for the administrator to support teachers and interact with them on the SLO components. Izzy, a 30-year veteran teacher in a collaborative system, received ongoing professional learning from her state teachers' association, but her administrator received little training from the district. Knowing this, Izzy's training group decided to support the administrators by creating a list of questions the administrators could ask teachers during an SLO conference.

> *Our principals want to meet with us in January and they don't have any clue what to ask. We [her SLO training group] spent a working session coming up with a list of questions for administrators to ask and so I forwarded that and hand-delivered it to my principal, but I also forwarded it to the superintendent so they could forward it to the other principals. (Izzy)*

Similarly, although Garrett received SLO professional learning from his state teachers' association, his principal did not have adequate training. His local association stepped in and advocated for more SLO professional learning for the administrator.

> *She didn't really know what she was doing so we had to have the association step in and kind of redirect [the] course of where our school was headed. So the association came in and requested extra training for the principal which I was like, oh my gosh, this is awesome. (Garrett)*

Both Garrett's and Izzy's state teachers' associations utilized grant money to train teacher leaders in SLOs. The training allowed them to lead in their respective schools, and they advocated for their administrators in order to strengthen the SLO process as a tool for improved teaching.

School leadership offers professional learning linked to SLOs. If the SLO focus area is regarded as an important skill to develop in learners, one would think that professional learning would be linked to either the goal area or strengthening different instructional skills needed to implement SLOs well, such as assessment practices, differentiation, or instructional resources. However, only 25% of the participants noted that administration offered professional learning specifically to improve teaching related to the SLOs. Izzy felt that SLOs allowed teachers to advocate for more training in specific areas, and their administration encouraged this link.

> *And it's [SLOs] allowed professional development from administration because now we can say, 'listen this is our SLO and we don't have the professional skills to do it really well and to make sure that we are consistent vertically. Can we go together to this training' and they [administrators] are like, 'oh yeah, absolutely.' Argumentative writing was the piece that the 8th grade team was looking at last year for SLOs and kids were terrible at it because we really don't even teach it that much in our school. This year we are going to workshops on teaching argument writing. (Izzy)*

Macy's administrator, as noted earlier, not only allowed teachers to go to specific SLO-related trainings but also shared resources that would support teachers in their SLO focus area. Linking professional learning with the SLO focus elevated the importance of the SLO in the work of the teachers and led to teachers respecting the SLO process more fully. When the administrators did not make that link, the SLO was not regarded as important. Abby reported that her SLO had not impacted any professional development opportunities, which created a lot of frustration. Lucy, a teacher in her 8th year, reported no professional learning related to her SLO focus area but some on the SLO components.

The link between the SLO focus area, the goal on which the teacher is going to measure their effectiveness in promoting student growth, could be the center of a teacher's professional learning for the year, but at this point in the evolution of SLOs,the link does not seem to be intentional for most of the participants in this study.

The administrator in a school sets the school learning environment (Sebastian & Allensworth, 2012). The participants in this study noted the importance of the administrator's instructional leadership in setting the climate surrounding SLOs. Robinson et al. (2008) discussed the importance of instructional leadership in improving teaching and learning. Their five leadership dimensions of effective leaders were

- establishing goals and expectations;
- resourcing strategically;
- planning, coordinating and evaluating teaching and the curriculum;
- promoting and participating in teacher learning and development, and
- ensuring an orderly and supportive environment (pp. 25-30).

These can be viewed with an SLO lens: Leaders who developed positive expectations around SLOs created a climate where these expectations were followed. Leaders who resourced professional learning to align with SLO goals also supported teachers in their professional goals and promoted teacher learning and development. Leaders who took an active role in SLOs, including routinely meeting with teachers and teacher groups within the school, were regarded as instructional leaders in the school. Finally, leaders who organized and supported SLO work, created an environment that led to strong teacher

support and learning due to SLOs. SLOs created an opportunity for administrators to be collaborative instructional leaders, spending more time in the evaluation process, since only a small amount of an administrator's time is spent on teacher evaluation (Hallinger et al., 2014). Administrators who created a climate that supported the SLO work, and who were actively involved, had teachers who believed that SLOs led to improvements in teaching.

School Climate and SLOs

The second dimension of the SLO context was school climate. The school climate around SLOs included a number of key factors. The first was whether teachers collaborated within professional learning communities as part of the SLO experience. The second factor looked at whether teachers felt SLOs led to improved teaching practice. The third factor was whether specific professional learning experiences were a direct result of SLO implementation. The final factor was whether the teachers worked within a positive school climate for SLOs. This section documents that the participants of this study were in schools with diverse climates supporting SLO development and implementation, and as a result, their perceptions of the influence of SLOs on their teaching were similarly diverse.

Teachers collaborating in professional learning communities. Many participants were in schools where professional learning communities (PLCs) or team meetings took place regularly. Some of these participants were expected to utilize this time to work on their SLOs while others were not (see Figure 5.3). Of the twenty

participants in this study, seven collaborated frequently, eight collaborated occasionally, and five did not collaborate on their SLO (see Figure 4.3).

Using PLC time to work on the SLO focus had many benefits. PLC members shared resources, collected and examined data, analyzed student work, discussed common standards, and sometimes even opened up their classrooms to model successful teaching strategies. In these ways, SLOs informed the PLCs' work and vice versa.

For some participants, collaboration on SLOs was not required, but the teachers chose to collaborate nonetheless. Members of Garrett's PLC were not required to have the same SLO focus, but they decided to do so because their students were being held to the same accountability measures.

> *My 7th grade colleagues for language arts, there were three of us, we all picked the same goal, and we all picked the same writing assignments. Because we all eventually would have to take the same test from the county[…] This is something we do, we swap papers, keep each other honest. (Garrett)*

Garrett's district expected the results of certain formative assessments to be recorded, so his PLC members would score each other's papers. Since they were not evaluating their own student's work, he felt that the scores would be more reliable by reducing the opportunity for bias.

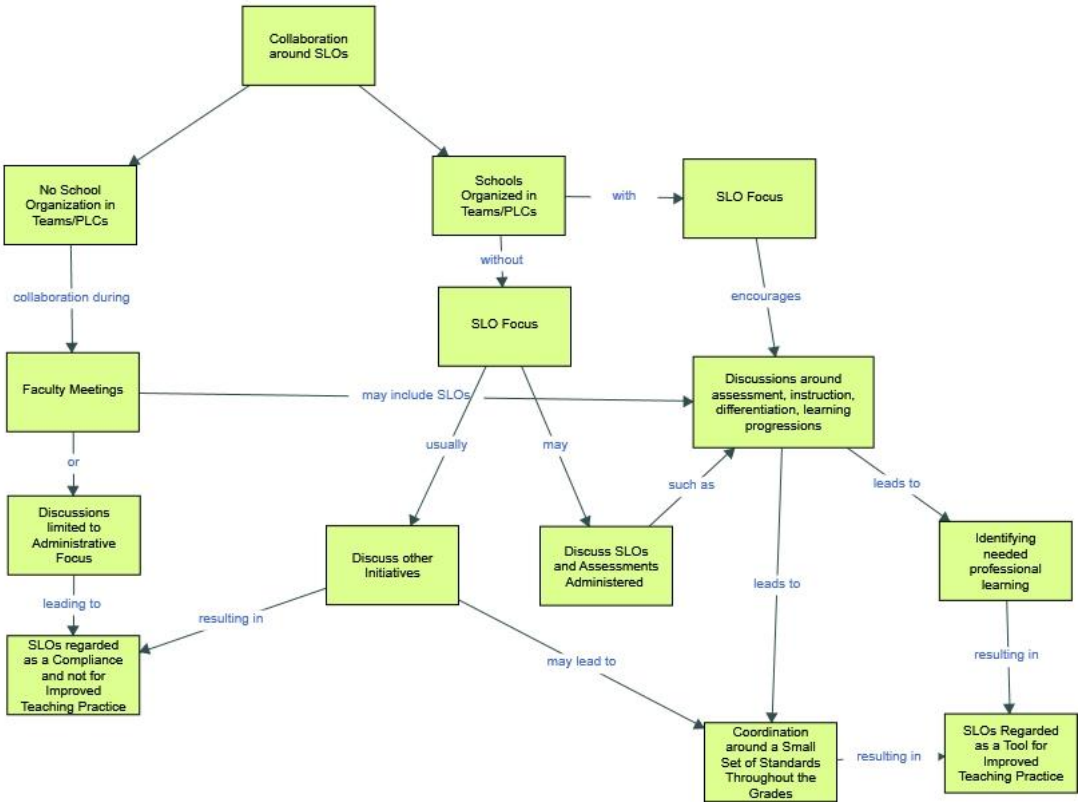
Izzy, Sadie, Kathy, Kelly, and Leah also felt that SLOs became a tool for enhancing collaboration within their PLCs.

> *We didn't really spend a lot of time looking at that [last year] and now in our curriculum meetings once a month we talk about SLOs so we look at the data and we say "you know, we can't move onto this next piece because 75% of the kids didn't get the skill that they needed in order to be successful in the next piece" (Izzy)*

> *It's really awesome to see what is happening in this school. I get discouraged sometimes, but the good news is there are things that would never be occurring and that are now. No one teamed, no one talked, no one worked together. Everybody had their doors closed. Now, we're going back and forth and I have people coming in my room saying, "Hey, did you just teach that math lesson and how'd your kids do? My kids are at library. Can I watch you teach the rest of your lesson so I can see what I'm missing?" (Sadie)*

For Izzy, implementing SLOs and focusing monthly on the SLO focus area led to collaboration around student outcomes and problem solving around next steps in the teaching process. Sadie and her teammates, as a result of a new administrator who placed high value and expectations on collaboration, created a culture of learning that extended beyond the time they spent in their PLCs. They used each other as resources outside of the meeting time to support their professional learning and improved practice around the SLO focus area.

Figure 5.3 Collaboration Around SLOs



Kelly and Leah both felt that SLOs focused their collaboration with colleagues. To both, this collaboration improved their teaching. They looked for more effective teaching strategies, ways to differentiate, and how to plan more purposeful instruction towards a focused goal.

> *Really, there's a lot of communication between teachers now with the SLOs. They're talking about how can we make it [instruction] better? How can we change it? What should I write here? That kind of thing. (Kelly)*

> *I think at first we [her PLC group] were skeptical, oh here's just another form [the SLO] to fill out. I don't have to be accountable for it. I think it has improved*

> *how we service kids and how we group kids. We are more purposeful in setting that goal and the growth target for our kids. (Leah)*

Kathy is a first year teacher who worked in a PLC that regularly discussed not only the SLO focus but daily progress students were making. She noted that her colleagues also analyzed student work together, which has been helpful to her practice as a new teacher. Scoring work together has helped her understand the criteria expected and the next steps in her teaching.

> *Well, for one thing, it's [SLO discussions in PLCs] created the professional community for me to discuss daily progress with my peers, my colleagues. So that has an effect on my practice, especially as a new teacher. (Kathy)*

Kelly's, Leah's and Kathy's collaboration with colleagues around the SLO focus led to more purposeful conversations around the learning progression of the SLO focus, assessment, instructional strategies, and differentiation.

SLOs supported collaboration across grade levels as a way to gain a better understanding of where students should be at each grade level (learning progressions) and what teachers could do to improve their teaching practice in order to strengthen student learning. Both Lucy and Macy discussed the benefits in understanding the requirements of students both above and below the grade level on which their students are working.

> *I've never taught 2nd grade and I've never taught 4th grade, so I have an idea of where my kids are going and I have a good idea of where they've come from, but I don't really* ***know*** *what they've done, I don't really* ***know*** *what they've focused on. Now, we compare notes and support each other. (Macy)*

Macy's collaboration with colleagues led to a stronger understanding of the learning progressions of the SLO focus from the grade level below and above the grade level she taught.

> *Math was a particular concern, specifically fluency and problem solving. Our team looked at those standards and skills that would affect the grades above us and have the most impact, and so that's how we went about choosing our SLO focus. (Lucy)*

Lucy's PLC selected the SLO focus area by looking at weak areas of student achievement and sought a better understanding of the learning progression of the SLO focus. However Lucy's PLC did not engage in discussions throughout the year on the SLO focus.

> *On Friday, we're supposed to have PLC which is basically a data reporting, report what assessments we've given in the classroom, and what our results are, and that's about it. (Lucy)*

Candace had PLC meetings, but SLOs were not, by design, a part of the discussion within these meetings. These meetings sometimes focused on students and student data, and sometimes the focus was unclear or not productive.

> *I do talk to them [her colleagues] about it [the SLO], but we never sit down and try to develop, "Okay, we want all our students to be able to count this kind of rhythm." I would like to do that but I don't feel like it's up to me yet. We talk every day, and we'll discuss, "Oh, they're having a lot of trouble doing this," but we never discuss how to help that or fix it. (Candace)*

As a new teacher, Candace does not have the supportive PLC that Kathy does as another new teacher. Yet, Candace yearned for this type of colleagueship and felt like it would support her growth as a music teacher. As a new teacher, she did not feel that she had the experience to suggest this, but if the school leadership had an expectation, it would have happened by design.

Braden had PLC meetings "on paper," but in reality they did not happen as often as they were supposed to, and SLOs were not expected to be completed in the PLC.

Braden said that collaboration was "*hit and miss, usually in passing."* As a department head, he was responsible for supporting some of his new teachers, and he felt like he had not done that well. He hoped that new teachers were getting support from their grade-level partners. The math department had a "math department goal" which was a different goal from their SLO. Therefore, the SLO goal was not often a topic of conversation at meetings. Braden wished that administration had stated that the focus of the PLC is to discuss SLO progress. Doing so would have encouraged the group to speak about their goals. This connects back to the importance of the administration in setting the tone and expectations, as discussed earlier.

When the decision to use PLC planning time for collaboration around the SLOs was a teacher decision, not an institutional expectation, collaboration differed depending on the PLCs' focus and use of time. Jill had a set collaboration time in her school. In the first year of SLO implementation, she and her teammate combined their data and looked at all the students as one group. From there, they determined what students needed and how their instruction could support that need. In the second year, she worked more independently because her PLC collaboration had not been as strong. As a result, she did not feel as positive about her SLO. Collaboration made her more accountable to the SLO focus.

> *Last year we worked on our SLOs together. Actually, last year we combined our data even…then we compared our data, I mean we looked at it together. This year we really haven't done that; we have done just ours separately. I feel like last year, when we compared them together and worked together, it just made me more accountable in looking at the data. (Jill)*

When SLOs are not embedded into an existing structure, like a PLC, it was regarded as another responsibility above an already overflowing plate. Jennifer, who was piloting SLOs for her school, felt SLOs have increased her workload. She saw the benefits of SLOs, most notably linking data with instruction, but she believed that it needed to be a part of the work of the PLCs, and she felt that it would then be better received by teachers upon full implementation. Otherwise, SLOs would be regarded as something for compliance and not for improved teaching practice.

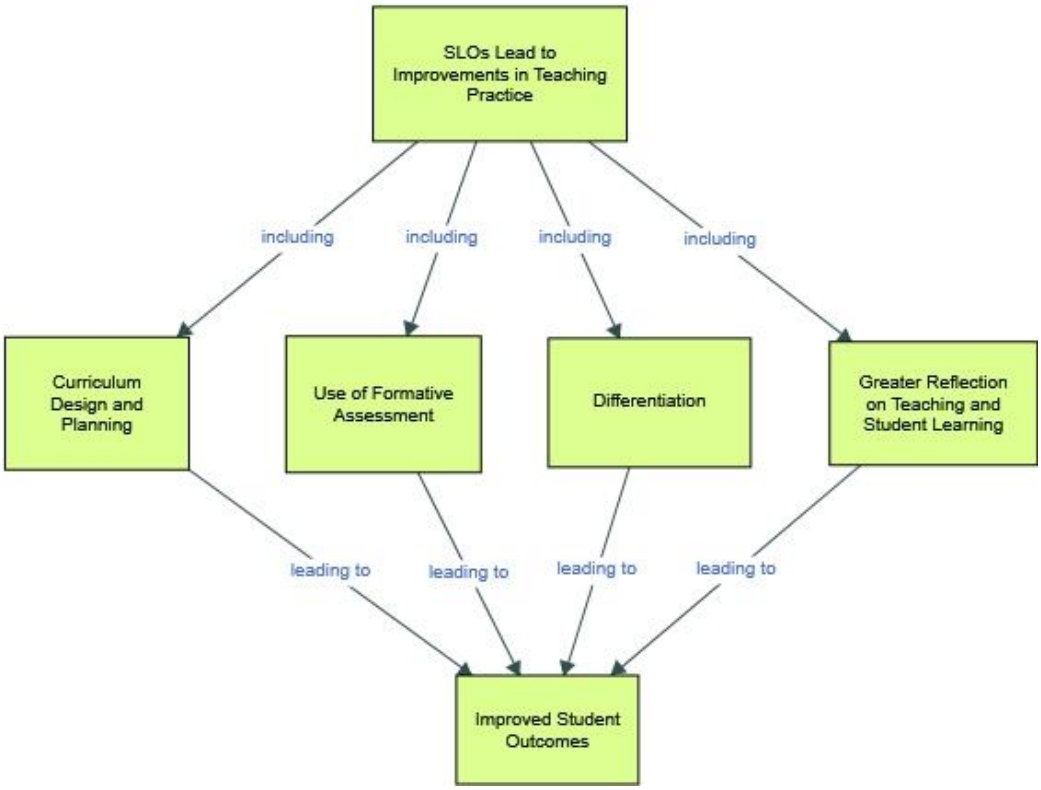
> *If it [SLOs] was part of the PLC it would be seen less like something that's in addition to what you are always doing, which is a lot, and more integrated into what you're doing. (Jennifer)*

SLOs are still new in many states and/or school districts, and with newly relaxed federal requirements, states and districts can reassess the ways in which SLOs have been implemented. The participants in this study believed that SLO development and implementation within the context of PLCs supported (or would support) the SLO focus and provide a structure to PLCs where there might not have been one. Figure 5.3 provides a model depicting the differing collaboration experiences of the participants. The end result is that collaboration around SLOs enhances teaching in the SLO focus; without collaboration, SLOs tend to become an individual, compliance-oriented activity.

These observations are supported by the literature. Several studies document that students benefit from teachers collaborating with each other (Jackson & Bruegmann, 2009; Leana, 2011; Leana & Pil, 2006; Stoll et al., 2006). Conversely, when teachers work independently, without strong collaboration, there are smaller gains in student learning (Gates & Watkins, 2010; Smylie et al., 1996).

SLOs as a tool for improved teaching practice. Participants reflected on the many ways in which SLOs contributed to stronger teaching practice. Teacher practices that led to improved student learning were stronger use of assessments, more intentional curriculum design and planning, differentiation, and greater reflection on teaching and student learning (see Figure 5.4).

Figure 5.4 SLOs Lead to Improvements in Teaching Practice

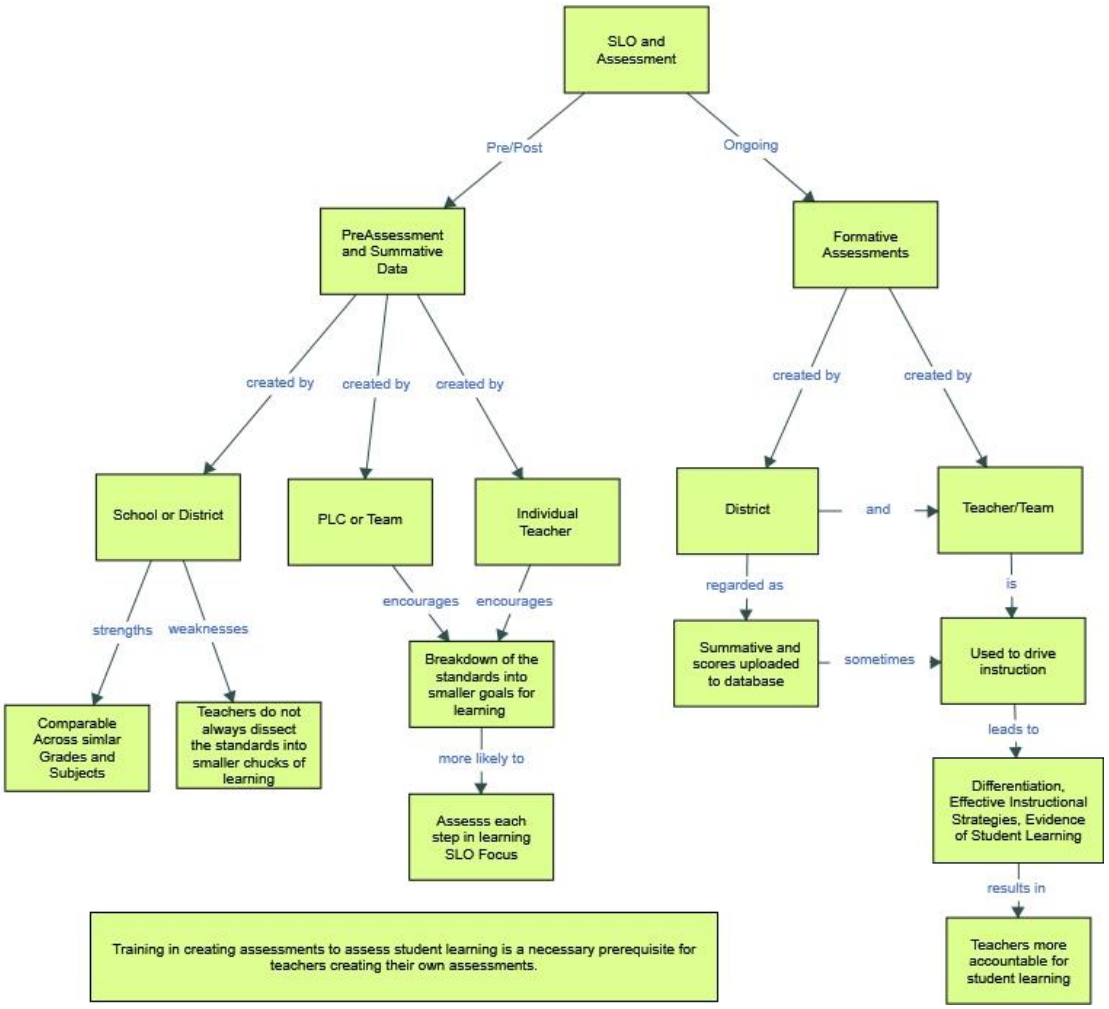


These four areas were repeated by participants as positive benefits of SLOs. However, participants varied in the number of benefits they experienced.

Assessment and assessment literacy. SLOs supported stronger use of assessment, both summative and formative (see Figure 5.5). Many participants, especially those with strong SLO training that included assessment, noted stronger assessment literacy and use of assessments for accountability as a result of SLOs. There were differences in who created the pre and summative assessments. Five teachers utilized assessments created or determined by the district, while nine teachers created assessments within their PLCs and six teachers created their own summative assessments. When assessments were created by teachers, they gained a stronger knowledge of the standards addressed on their SLO. Most all teachers noted stronger uses of formative assessment throughout the

instructional period. This area of improvement empowered teachers as they gathered evidence of student learning, and analyzed the effectiveness of their instruction.

Figure 5.5 Assessment in SLOs



Pre-assessments and summative assessments.

Understanding how to create assessments (assessment literacy) seemed to be a weakness with many of the participants in this study. Participants who received training on assessments highlighted this learning and how it supported their work on SLOs.

Nicole, Kelly, and Ty learned a lot about assessment as part of the SLO training they received. Some of the training in assessment included how to write scoring rubrics, construct an assessment matrix to plan assessments, and create different types and levels of questions/assessments including performance assessments. This training was regarded as valuable by many of the participants.

> *Another part of our training was doing a lot with assessment. I think that is the part that I felt the most lost and behind with the training. I realized assessment wasn't something that I had really learned in my teacher training. So I learned about holistic and analytical rubrics, and broke student achievement down into three levels; below proficient, nearing proficient and proficient. The rubric had descriptions on it of what I expected at each level, and it worked with an array of different kinds of assignments I gave. (Nicole)*

> *I think it's [the training] made me really think about assessments. Are they valid? Are they reliable? It's increased my knowledge on assessment. It really has expanded my view on, "I shouldn't use that because of this reason," or "I really need to make sure that I'm using assessments that contain all the depth of knowledge levels." That's something that I didn't focus on as much before I moved into doing SLOs. (Kelly)*

Nicole was in a district where she created her own summative assessments, while Kelly was in a district that developed assessments within a district committee. Nicole used her new learning to create assessments, while Kelly used her knowledge to analyze assessments for validity and reliability. Both teachers used the knowledge to create formative assessments that were aligned to the SLO focus goal in order to inform their instruction.

Ty learned the difference between formative and summative assessments. This may seem like an elementary concept for teachers, but depending on the training one

receives both in their pre-service education and in-service training, teachers will have differing levels of expertise.

> *The assessment part of it (SLOs) was a little more difficult when you start talking about formative assessments and summative assessments and those types of things. So it was just going through those and really thinking about and determining that this is more of a summative assessment. The formative assessments help drive what I review with the students. So if there is an idea or a strategy that the student continues to have trouble with or the standard, then I use a formative assessment to add more repetition to what is being taught to help them understand. Those assessments drive my next step with what is being taught. (Ty)*

Fifteen teachers were in districts where teachers or groups of teachers created the assessments for the SLO. Some participants submitted their assessments for approval to their district or building administrators as part of the SLO requirement. In districts where teachers created the assessments collaboratively, the process led a better understanding of the standards, how to measure student understanding through assessment, and establish common expectations for learning.

> *We went through the standards of fourth grade for math. This is part of the proficiency scale rubrics course that we've been working on within our district as well. We included some level two [depth of knowledge] questions, some level three questions, and then some application, a real world, level four question. (Jennifer)*

Jennifer's PLC created an assessment that ensured students could solve increasingly complex problems through utilizing varied questions requiring different depths of knowledge with the final question requiring students to apply their skills to a real world problem.

Izzy, who developed assessments at the district level, found that collaboration led to improved communication in respect to developing district-wide expectations for learning.

> *We have four towns that feed into our high school. At district meetings we do on a monthly basis, because of our SLOs, we have now gotten into the practice of looking at writing because writing has been a weakness for state testing in our whole district. We have really come together as a group of professionals representing each building in each town to create rubrics for writing and common assessments for writing. (Izzy)*

Common assessments allowed for cross-building collaboration and alignment of expectations for learning.

Macy collaborated with colleagues in creating assessments, but the assessments were not vetted for reliability and validity outside of their PLC. Assessments were created by grade level teams on a school level, not on the district level.

> *It's [the pretest] basically one that we created using materials that we have. We have developed all of our math assessments by the standards, by what we've gathered, so we just kind of use some of that stuff to develop one [pretest] and then that will be the posttest as well. (Macy)*

Macy and her colleagues were careful to align assessments to the standards being assessed. In creating their own assessments, they dissected the standards and assessed different parts of the standards so they could see where students were in their understanding.

When creating assessments without training, teachers crafted their own set of assessments in order to comply with the expectations of their district. Candace designed assessments without having a strong foundation of how to write assessments.

> *I didn't even know how to create a test, but I talked to all the other music teachers in my school about it, and I actually found the exams that were given by the teacher before me that I replaced. (Candace)*

As a first year teacher, Candace found some tests from the teacher she replaced and was able to use some of these for her SLO. However, assessment literacy is an area she knows is weak in her practice.

Formative assessments.

Eight participants had to administer district benchmark assessments as part of their SLO, while the rest used formative assessments they created within their PLC or on their own. The participants who utilized district assessments acknowledged that these assessments allowed them to look closely at their students' needs, but the assessments that drove their daily work were the formative assessments that they created. The required benchmark assessments were checkpoints but not as important as the teacher-developed formative assessments for informing their teaching.

> *I think some teachers see them [benchmark assessments] as summative because they didn't create them. They are just being told to give them, where maybe a weekly quiz or even a daily check for understanding provides more data for the teacher than a benchmark assessment. (Abby)*

Though the standardized district assessments were used for the SLOs, participants' formative assessments focused on the smaller steps throughout the year.

Using formative assessments throughout the SLO instructional period supported teachers in looking at student understanding more objectively.

> *So throughout the course through the school year, I had eight different stop and checks to see where each kid was. Whether or not they got, like one check could be "do you know how to put together a claim for an argument, yes or no?" It could just be, "I'm going to check your papers or check your notebooks, let's see*

> *what you've got." Another check could be "do you have all the parts in for counterclaim in your rebuttal, yes or no?" It was very black and white: they either had it or they didn't have it. (Garrett)*
>
> *It [the SLO] definitely has reminded me how important it is to let your data be your guide. You know not make emotional decisions based on the student in front of you, but what does the data tell you? (Mike)*
>
> *Getting a chance to select a learning goal and looking at data to prove I am meeting my students' needs has helped me focus a lot more on my teaching at a time when I am close to the end of my teaching career. (Jo)*

Garrett, Mike and Jo's use of formative assessment allowed them to look more objectively at their students' needs. They became better at using data as evidence of where students were and how much they had learned.

Additionally, since most SLO goals were full year goals, teachers measured student learning throughout the year, and not just on the specific unit where the concepts were taught directly.

> *That's what the SLOs have done for my students. I'm able to keep assessing them all year long, instead of just that one time of the year, where I only see them during that line unit. But, I'm able to carry it through to the other units. (Ida)*

Ida selected an SLO focus that could be measured all year long. She introduced the SLO focus in the first unit of the year but expected application of the concepts throughout the year.

Understanding and using data also strengthened some teachers feelings of professionalism, both in regards to their colleagues and parents.

> *I know for us, special area teachers, like music, art, PE, are now giving evaluations that are standardized across the county, and are meeting and talking and developing things. That has improved the professionalism of the specialist, not that they weren't professional before… they are like hey, we are having a*

> *meeting too, because they are in that rotation of once every other week meeting and talking about data. (Mike)*

Teachers teaching in nontested grades and subjects found that using data from formative assessments and discussing data at their PLCs led to a greater feeling of professionalism. The standards assigned to their content area were regarded as important.

Braden and Ty included students in data analysis, encouraging students to be metacognitive about what they need to do to strengthen their understanding.

> *I think the difference is I'm showing them [students] their scores more. They see their folders. I'm like, "Here's where you were last time." Last time he got a 3. He got proficient. He's like, "I guess I can do it. I'm getting pretty good. I'm getting pretty good at this." To tell you the truth, before, I think I would have been a little more dismissive. I'm so aware of every student's individual scores... You could probably say one of my students' names and I could say where they started and where they are. (Braden)*

> *They [the students] are even more aware of it [their progress]… they are to that point where they are interested in making sure that what they are doing is good, and if they don't there are things in place that they know of that are non-threatening and we test again, we practice and reassess through formative assessments. They [students]are becoming more comfortable with talking about how they are doing and talking about their data and what they are learning and those types of things. (Ty)*

Using assessment as part of routine practice was a positive effect of the SLO process, leading to stronger teaching practice. Every participant in this study commented on the increased use of assessment data arising from SLOs. Assessment data were utilized in determining the SLO focus, student growth targets, and success or failure in meeting those targets. Ongoing assessment data, or formative assessment, were utilized throughout the instructional period to inform teaching practice. However, since different states/districts have different expectations for SLOs, assessment requirements also

differed. Some states or districts had pre-determined pre- and post-tests, and pre-determined benchmark tests, while other states allowed teachers to create their own assessments throughout the SLO instructional period. Some teachers utilized common rubrics and used proficiency levels on rubrics to score student work, while others used single pre- and post-tests to determine growth. Some participants received assessment training prior to SLO implementation, and gained skill and confidence in creating assessments. Others, who lacked training on assessment pieced together assessments for use on the SLO and didn't feel as confident. Assessment literacy was regarded as a skill that was strengthened or needed to be strengthened by teachers as a result of SLO implementation.

Assessment has been a significant growth area for the participants in this study. Their experiences highlighted the need for professional learning on the creation and use of assessment as part of routine practice across grades and subjects. One cannot just assume that teachers have the knowledge of assessment to implement SLOs well. Strong training on assessment led to routine practice in utilizing assessment to drive instruction, increased teacher accountability for student learning, and created a greater sense of teacher professionalism.

Both formative and summative assessment play an important role in SLOs. Formative assessment guided teaching and learning, and as the research suggests, has the most profound impact on student learning (Black & Wiliam, 2009, 2009; Kennedy et al., 2005; Marsh, 2007; Stiggins, 2005). On the other hand, summative assessments, used at

the end of the instructional period, impacts higher stakes decisions like determining teacher effectiveness in promoting growth (Sadler, 1989; Kennedy et al., 2005). Both forms of assessment were important in the SLO process, but the participants most notably improved their practice as a result of the formative assessment strategies utilized in the classroom, which led to a perceived feeling of professionalism by the teachers.

More intentional planning and curriculum design. Thirteen participants commented that as a result of better data and a clearer sense of what they are measuring and what students know, they are planning stronger units and lessons. Some of the teachers had taught "off the cuff" and now are spending more time in planning more intentionally to address the focus of their SLOs.

> *The SLOs are forcing teachers to do more backward design in their planning. Educators have not been trained in doing that. The only reason that we are doing it is because, number one, it's like a new expectation for the district and number two, we have a new administrator. He expects us to do that. (Sadie)*

Sadie moved to more intentional planning through the use of Understanding by Design (UbD) process of unit development (Wiggins & McTighe, 2011b). By articulating the standards, they are focusing on stage one of UbD. When teachers discuss the evidence of learning and planning how they will collect evidence of learning (before, during, and after instruction), they are focusing on Stage 2. Finally, as they look at the learning events or instruction and how they will monitor student progress and adapt instruction, they are focusing on Stage 3. The SLO format mirrors UbD, with the caveat that for some teachers, the results will be used for accountability in teacher evaluation.

For Jo, Ida, and Macy, the SLO supported a more organized and mindful approach to planning.

> *My instruction wasn't organized. It was just like I had these little pieces, like a web. You had these pieces all over the place, and now, the SLO is helping my style of teaching, it's helping me make sense of all those little pieces, and organize them in a fashion that totally promotes learning. (Jo)*

> *I believe the improvements in my planning occur because I know what the kids are lacking, where before I didn't. I focused on engaging the students in my art class, but assumed much of what they knew. Now, I have a better understanding of where they are and how I need to plan for their next steps. (Ida)*

> *I guess it (SLO) makes me more mindful. Mindful of including instruction on the standards on my SLO. Mindful of making sure we're working at it as we go throughout the year, across the board, rather than saying okay we're going to work on this, and then we move onto the next thing. I think this the mindfulness has been positive. (Macy)*

The SLO focus was embedded in the curriculum planning. This intentional focus led to stronger alignment of the learning plan to the SLO focus. Data collected along the way provided evidence of student learning because of better planning and instruction.

Differentiating instruction. Use of differentiation strategies improved for fifteen of the participants as a result of SLO implementation. Intentional scaffolding, utilizing different strategies for different groups of learners, and making sure that all students had an entry into the content was important. Participants discussed how the SLO was a catalyst for improvements in their ability to understand what students and groups of students needed to achieve the next step in their learning, leading to differentiation. More specifically, Ty and Kelly spoke directly about their use of differentiation. Ty, an 18-year

teacher, focused on the idea of scaffolding for students in order to be successful and Kelly focused on ensuring that the focus of instruction met the needs of all learners.

> *I guess with my kids, because of their needs, the SLO focus is pushing me to provide increased scaffolding for my students to be successful when it comes down to when they are required to read that information. When we do the state testing, all that stuff is at grade level, and so as I look at the SLO focus, I have increased activities that support them in making the text accessible. This scaffolding is helping them become more independent in this reading. (Ty)*

> *To me, that's the whole SLO process. It kind of gives teachers the key to say, "All right. I need to make sure that I'm not just working with my lowest students. I'm not just working with my highest students." The SLO process makes teachers more cognizant of working with all their kids. It's not that we mean to leave out those kids, but sometimes we focus so much on getting one group of students that we forget that there's everyone else to keep moving. (Kelly)*

For many participants, implementing SLOs led to more differentiation for student learning and improved grouping of students in order to better serve their instructional needs. Participants such as Leah changed to their schedules to more effectively service students.

> *It's (SLOs) forced us, on a high school level, to evaluate how we service kids and when we service kids. We would have kids reading at a second grade level with kids that are reading at an eighth grade level and kids that needed help with comprehension with kids that needed help with decoding. We have been more purposeful in our scheduling of kids. So we group our kids together so that we can be more effective with the kids that we have, during the time that we have them. (Leah)*

Teachers today have diverse classrooms and acknowledge that even with beautifully created units, students will learn at different rates and in different ways. Adapting to these differences is the purpose of differentiation in the classroom. Differentiation is certainly embedded in curriculum planning and UbD (Wiggins & McTighe, 2011) but many of the participants improved their skills in integrating UbD

with differentiation strategies resulting in greater student learning (Tomlinson, 1999; Tomlinson & McTighe, 2006).

Greater reflection. Greater reflection on teaching and student learning as a result of SLOs was also experienced by half the participants in this study. Reflection as an everyday practice has led to more differentiation of and more intentional planning.

> *For me, I would say I'm far more reflective. I'm really thinking more about how I can change my instruction so that I can meet students' needs. It really makes me refocus and really constantly be on my toes about where are my kids headed. Where are they at right now? How do I get them to the next step? How do I differentiate my teaching styles in order to be reflective of what the kids need to be able to learn and how their learning styles are? (Kelly)*

> *SLOs has made me reevaluate, not just what I'm teaching, but how I'm going to present it. This has been the most beneficial thing. This is my fourth year teaching regular education. What I have found has helped me most in these four years, and then even more so now with this SLO project, is presenting the information to the kids in a method and a manner that they can see the life use of this skill. (Jennifer)*

Kelly and Jennifer's thoughts mirror the other participants who became increasingly reflective as they analyzed student learning through assessments. This led to modifications in their instruction to support increased gains in student learning.

Danielson (2007, 2014) labeled Domain 4a "Reflection" in the *Framework for Evaluation*. Reflection needs to be both accurate and specific in order for it to be used in future planning. SLOs became a tool for teachers to gather more accurate and specific data on which they could reflect to improve their teaching.

Little impact on instructional practice. Some participants did not feel that SLOs impacted their instructional practice. Lucy felt that if there was more collaboration around the SLO it would have made a difference.

> *That's [differentiation] just a part of my instructional approach. It [SLOs] hasn't impacted that at all. I think that if the collaboration would have been in there, I may have been able to benefit from the knowledge and experience from my colleagues that do differentiation a little differently, but the way the process is being administered, no. (Lucy)*

Anna felt that the teachers in her school were strong and effective teachers. She described SLOs as "another name" for things she already did in her classroom. She did not feel that implementing SLOs made a difference in her practice because the elements embedded in an SLO were already established in her practice.

> *A beautiful thing is we're all highly effective teachers and we've been practicing these ideas all along. They've just changed names, you know? When I was first out of college, the big thing was make your objectives. Do you remember those? (Anna)*

Anna's SLO was created individually with no collaboration with her colleagues, while Lucy created her SLO with her colleagues, but there was only occasional collaboration on the work of both.

Professional learning to advance skills in SLO focus area. Whether the SLOs have influenced a teacher's professional learning is mixed with the participants in this study. For a third of the participants, there was a clear connection between professional learning and the SLO focus, where for other participants there were none. Macy and

Mike, for example, felt the SLO focus justified pursuing professional learning for which their administrator granted approval.

> *You look for those opportunities and we are given a lot of opportunities for professional development through our district as well as our school, and we are allowed to go to conferences and things that are reasonable. For example, our 2nd grade teachers went to a two-day training in a nearby city focusing on math. (Macy)*

> *I think it [SLOs] does [inform professional learning]. Maybe not to the degree that one would hope, but my second grade team definitely is searching out more [professional learning] about math conceptual development as opposed to putting the chart up that shows the algorithm. (Mike)*

For Macy and Mike, having the SLO cleared the path for professional learning in the SLO focus area in order to improve instruction.

Robyn was a literacy teacher in her school and visited many classrooms. Her unique role allowed her to advocate for teachers to receive valuable professional learning.

> *I have had teachers who have struggled, and I have gone to a principal in the building and have said this teacher is struggling on this standard and their SLO and they are newer, can you check them out for half a day and let them go watch because I saw a fantastic teacher who is having great results, can they go up and watch that teacher. And the principals have been very good with all types of things. (Robyn)*

Two-thirds of the participants noted that SLOs have not been influential in impacting professional learning. For some, this is because the process is so new, and there has been little time to focus on the learning needs. Most of the participants received at least some professional learning in their schools on understanding the SLO process, but not specific learning on their SLO focus area. Additionally, the placement of professional development days was not always conducive to implementing the skills learned in the trainings.

> *There have been a couple times when I've walked away from in-service training thinking, oh, I could really use that, maybe I should try to implement that. That will usually wait for another year where I can actually have some time to sit down and try to wrap my head around that. The trouble is, that they [administrators] try to do all of this once the school year begins. It's just so chaotic, and we're so busy that we don't have time to revamp everything. (Anna)*

Anna's in-service training was not directed at her SLO focus, so the professional learning did not align with her immediate needs of supporting her students in strengthening her SLO focus.

Leah's professional development was similar to Anna's in that it is more general in nature and did not pertain to her focus area.

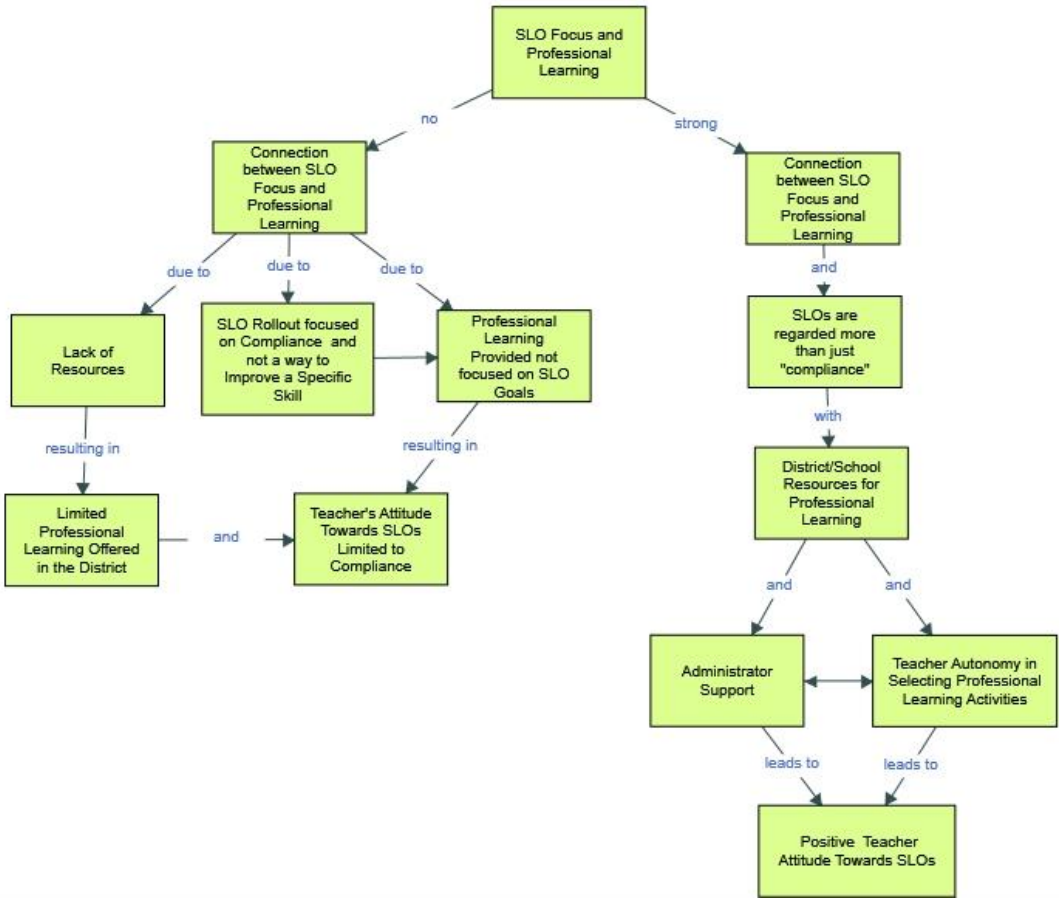
> *We have identified professional development that we would like. Our problem in our district is professional development seems to follow regular and mainstream initiatives more so than what's related to special education. (Leah)*

Funding for professional learning was also an issue brought up by some participants. Sadie was frustrated by her state's lack of funding for professional development.

> *When my state started slashing the budget in 2009, the first thing that went was training and staff development. My state allowed us three days for staff development, and now they do not allow those days. The funding for staff development is not there. (Sadie)*

This bleak picture was improved by her national and state associations, which provided professional development on SLOs to members.

Figure 5.6 SLOs and Professional Learning



The link between SLOs and professional learning is important. When the link exists, the SLO is perceived as important enough for the school to allocate resources in the form of professional learning. Professional learning is relevant and directly connected to the work of teachers and their students, is participant-driven, grounded in reflection and inquiry, and connected to school initiatives - all key components of effective professional learning (Darling-Hammond & McLaughlin, 1995; Guskey, 2002; Hausman & Goldring, 2001).

School culture surrounding SLOs. The final element under the school climate dimension, is the culture surrounding SLOs. Key elements in culture influenced how participants felt about the process. These key elements included training for administrators and teachers, the understanding that the main purpose of teacher evaluation is to improve teaching practice, integrating SLOs into the work of the PLCs, administrator engagement, and time for collaboration. The more elements present in schools, the more favorably SLO cultures were (see Figure 5.7). Braden, Kelly, Macy, and Mike felt more positive about SLOs due to their schools' culutres. Kelly had a lot of training and invested time in learning about and implementing SLOs.

> *For the most part, everybody is pretty embedded in it [SLOs]. Do we have a few [teachers]that do not entirely have their whole heart and soul into it? I think you have that anywhere…For the most part, it is embedded in our culture because we've spent a lot of time invested in doing this process and doing it right. (Kelly)*

Mike was an SLO leader and trainer in his school and tried to explain SLOs as a way to document what teachers were already doing. This helped to build support in the school to create a more positive SLO culture. The SLO score represented 50% of the total evaluation rating for teachers in his school.

> *I think once teachers saw it, it wasn't as big of a deal as they thought, it was just a little bit of a mind shift, it's stuff we are already doing. I keep telling teachers they are already doing it; you are just documenting it in a different place. You are already doing these types of interventions; you are just being more focused. We are already doing PLC's. That is where we bring our data back and talk about and see what other people are doing to help. We are already doing these things, so it wasn't like a huge jump for us. (Mike)*

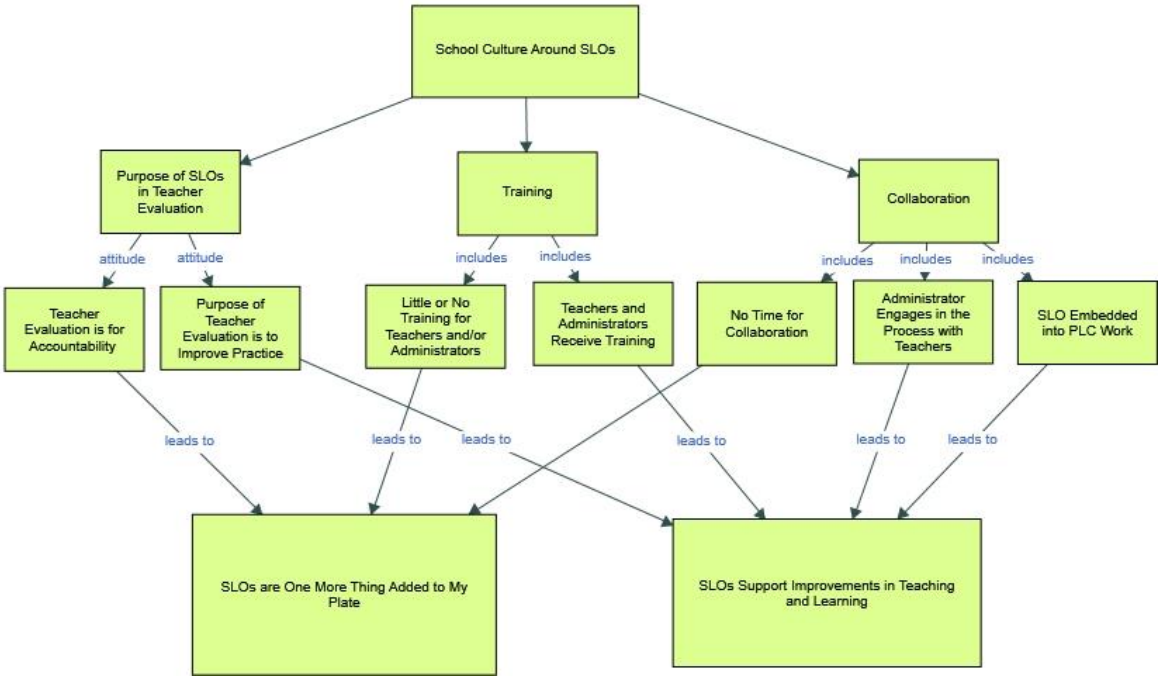
Conversely, in schools where teachers and administrators had limited or no training, where the purpose of evaluation was one of compliance and accountability,

where teachers and administrators lacked the time or desire to work collaboratively, or where SLOs were regarded as “another thing on my plate,” the culture was either neutral or negative.

> *The teachers have not been told to use this [SLOs]as a tool to help them improve their instruction. The teachers just fill this [SLO template] out so we can have a way to show growth for evaluation according to the state law. (Abby)*
>
> *It's become a hoop to jump through. That's basically it. (Anna)*
>
> *I never hear anyone talking about it [SLOs] unless they're complaining about something. I think if they schedule something else and the kids have to miss class, the teachers usually get mad, and they'll like mention their SLOs and how they're going to be affected. It's only a negative thing. I never hear teachers talking about how they're useful or how they are using them to help kids. (Candace)*
>
> *Yeah, it's more of a compliance thing than it is a tool for student growth and professional growth. (Lucy)*

Abby, Anna, Candace, and Lucy received some training around SLOs, but the link between the SLO focus and professional learning was not connected within their school culture.

Figure 5.7 School Culture and SLOs



School SLO culture made a difference for the participants with the important qualities being training for administrators and teachers, administrators who engaged in the process, time and expectation for collaboration around the SLO, and the underlying belief that the primary purpose of teacher evaluation is to improve teaching. When these qualities were present to some degree, participants regarded SLOs more positively.

Teacher Agency and SLO Components

The final dimension of the context of SLOs is teacher agency in the process of developing their SLOs. Teacher agency refers to teacher involvement and ownership over the process. This researcher would like to note that the focus group preferred "involvement and ownership" over the term "agency," but this researcher decided to keep

the word agency for it encompasses both terms succinctly. Three components of the SLO process were viewed as key components for the participants in this study; writing and determining the focus of the SLO, setting growth targets, and SLO scoring. These three key areas differed across participants. Determining assessments was an additional key component that was examined in the previous section.

Writing the SLO and determining the SLO focus. Participants in this study had three different types of experience in writing the SLO, including how standards were selected. Participants (1) wrote their own SLO either individually or in groups; (2) participants were given the SLO from their district; or (3) participants could select one of several district-created SLOs for their content and grade level (see Figure 5.8).

Those 16 participants who were allowed to write their own SLO, either within their PLC or individually, determined their SLO focus by reflecting on what the data said about student need, the perceived area on which the teacher would like to improve instructional practice, and school improvement plan goals. Some selected goals within their PLC, and some wrote an individual SLO, especially those teachers who are in teaching roles where they did not have many colleagues teaching the same subject (e.g. music, art, health).

> *What I had noticed the previous year is, […] these kids could not support their analysis worth a lick. Like when they read for literary experience, when they read for information, whenever it came time for writing, which has been overlooked nationally for such a long time, they could not sift through the hoops of making inferences, connecting the quote with an idea, connecting an inference from a correct quote, and citing it in their papers. […] we (PLC team) all picked the same goal, and we all picked the same writing assignments. (Garrett)*

> *Our teachers between August and September, are working on their pre-assessments. First, they get their students and get to know them. We do the pre-assessment in August. Start writing the SLO after the pre-assessment. […] They [the administration] just said, "Whatever you need to do in your classroom. Because you know your kids best, you know what your kids need," which is really good. (Kelly)*

> *My PLC used the team approach, so as a grade level we got together and we decided to use the math standard. Our district encouraged us to set our goals that were aligned with district and school goals. Math was a particular concern, specifically fluency and problem solving. Our team looked at those standards and skills that would affect the grades above us and have the most impact, and that's how we went about choosing ours. (Lucy)*

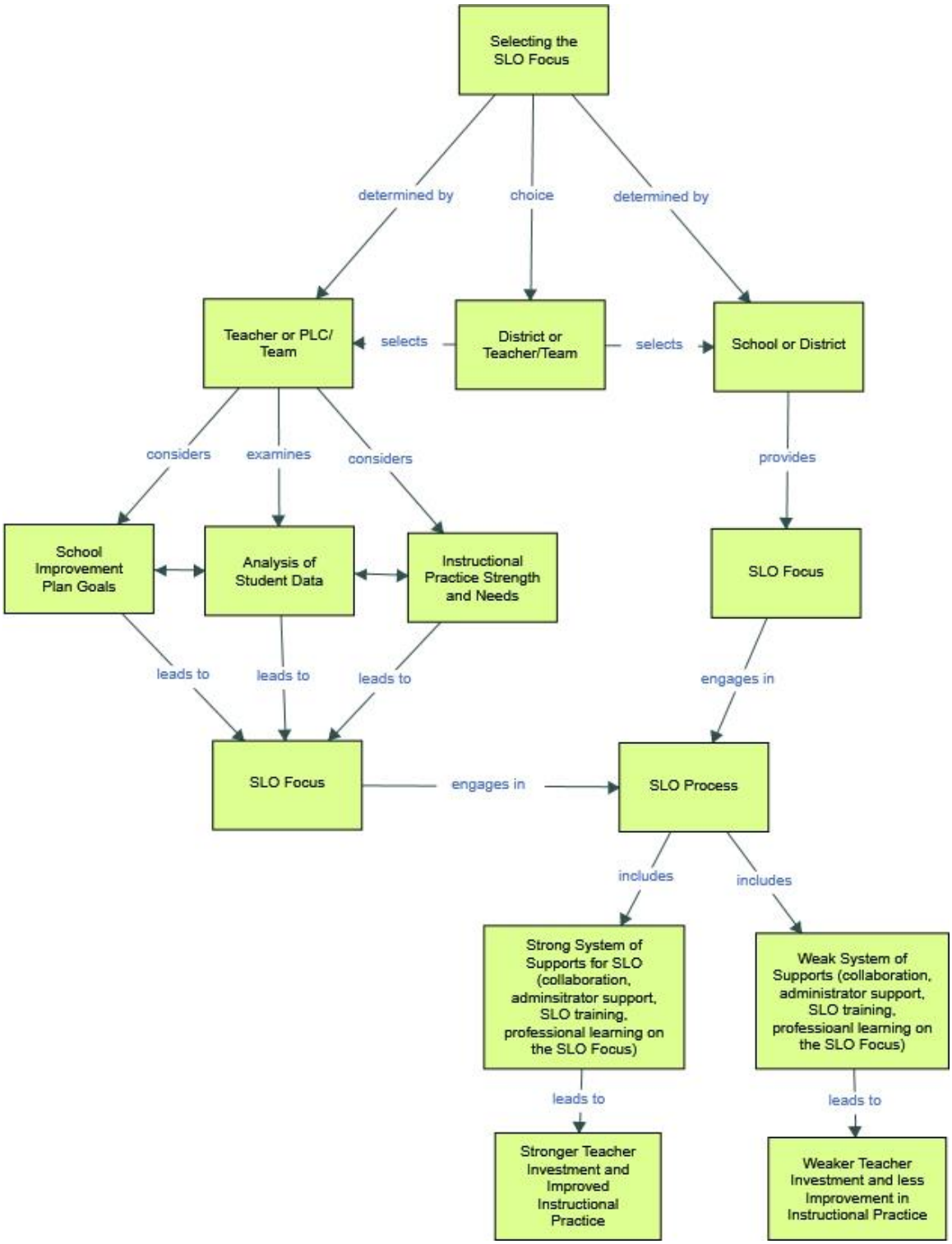
These three participants represent teachers who developed their SLOs collaboratively (Garrett and Lucy) and individually (Kelly). They were empowered to focus their SLOs on areas that represented an identified student need in their classroom.

The four participants who had to utilize a district-created SLO would have liked more autonomy in developing the SLO, but for some, the SLO represented a goal on which they would have selected. Abby and Braden's SLOs were provided to them.

> *We got an email that said here is a SLO website, here is the password to get into the SLO website, then you went and found your grade level and subject and specific SLO, you downloaded the form. The only boxes I completed were part four, classroom assessment data, everything else was precompleted. The assessments were uploaded in Mastery Connect, that is the assessment platform that they are using for data gathering. We are in a fairly large district - 55,000 kids. But I think they want to be able to compare from school to school, from teacher to teacher and so I think that they require the same assessment and the same standards so they can make those comparisons. (Abby)*

> *I just had to fill out that box. This was uploaded in Google docs. I have put baseline data in mine, and then expected targets. (Braden)*

Figure 5.8 Selecting the SLO Focus


Selecting the SLO Focus
determined by
choice
determined by
Teacher or PLC/ Team
selects
District or Teacher/Team
selects
School or District
considers
examines
considers
provides
School Improvement Plan Goals
Analysis of Student Data
Instructional Practice Strength and Needs
SLO Focus
leads to
leads to
leads to
engages in
SLO Focus
engages in
SLO Process
includes
includes
Strong System of Supports for SLO (collaboration, adminsitrator support, SLO training, professional learning on the SLO Focus)
Weak System of Supports (collaboration, administrator support, SLO training, professioanl learning on the SLO Focus)
leads to
leads to
Stronger Teacher Investment and Improved Instructional Practice
Weaker Teacher Investment and less Improvement in Instructional Practice

Missing from the process, when one was provided the SLO, was the examination of their students' data to determine the focus and the area in teaching practice on which they would like to improve. Abby yearned for a different process. She worked in a PLC and wished for the opportunity to build her SLOs within the structure of her PLC, allowing a stronger link between her SLO and her students' needs.

> *If our PLC looked at all of this and said okay, we need to pick an area that we want to focus on and that area would be the content of our SLOs we could all do this beautiful work together. We could look at our data from the previous year and identify areas where students struggled to be the focus of the SLO. I should seek out a class or some other way to get some professional development on teaching kids to understand theme. (Abby)*

For those teachers who were given the SLO, districts created the SLOs in two ways. Some districts brought teachers together who were representative of the different grades and subject areas to create the SLOs and assessments. Other districts took the SLOs submitted during the pilot year and selected SLOs that would be utilized by all the teachers in the specific grade or subject. Anna noted that her SLO from the previous year became a district SLO for teachers in her content and grade level.

> *This particular SLO that I sent [the researcher] is actually just for the district in general, but the interesting thing is that when we had to write SLOs last year and we had to submit them, and then when we got to school this year, this popped up. I'm looking at it, and I'm thinking that's pretty much what I wrote. (Anna)*

Braden's district-created SLO included standards that he wanted to work on, but this was not the case for other teachers in his school.

> *I'm probably the only one I know of in my school that would say that [the SLO learning goals were relevant to his needs as a teacher] because they feel like a learning goal has been forced on them with whatever. It's frustrating for them. (Braden)*

In general, regardless of which experience a participant had, if the supports were in place for implementation (administrator support, collaboration, and professional learning), the teacher experienced improved instructional practice on the SLO focus. However, there was a limiting factor. Two participants who had SLOs written by the district had so many standards, that it was less a *focus*, than an entire year's curriculum. This made it difficult to focus on one or two areas for improving instructional practice.

Setting growth targets. Growth targets, or the amount of learning that is documented per student during the SLO period of implementation, were determined in many different ways in the participants' schools and districts. Some participants selected individual growth targets for each student on the SLO, determined through the examination of historical and baseline data. Some participants needed to show a pre-determined amount of growth for all students. Other participants put students into leveled groups and determined the growth targets for each group. Finally, others needed to show growth but not any particular amount (see Figure 5.9).

> *The growth target is 35% growth for all students in all subjects. (Abby)*
>
> *We have to set targets. On mine I did say students should at least advance. If they're a 1 they go to a 2, a 2 goes to a 3. (Braden)*
>
> *We are required to get to 80% proficiency. (Jill)*
>
> *We did professional development on all the different models of setting growth targets that are available and teachers in the school were able to pick and choose between models. For example, I want all the kids who are in red to get 10 points but the kids who are in green I'm going to do an individual goal for them, or something like that. (Mike)*

Abby, Braden, Jill and Mike represent four different ways of setting growth targets. Setting growth targets was a difficult skill for some participants, but one on which they improved over time.

> *The targets are really hard to make. It took me a long time to figure out what kind of information I could use to inform my baseline because I love being a Social Studies teacher because I have freedom in how I teach, and really that is probably mostly because it's not formally assessed […] I think that I did a better job with that this year. I thought about where they should be for the next grade level and what I thought was reasonable for me to do within the year. I think that I should have looked more at the individual students than who were near the threshold of moving up a level to create my targets. I don't think last year I had a very good idea of* ***why*** *I thought that students would be able to achieve those targets, just that I thought that they would. (Nicole)*

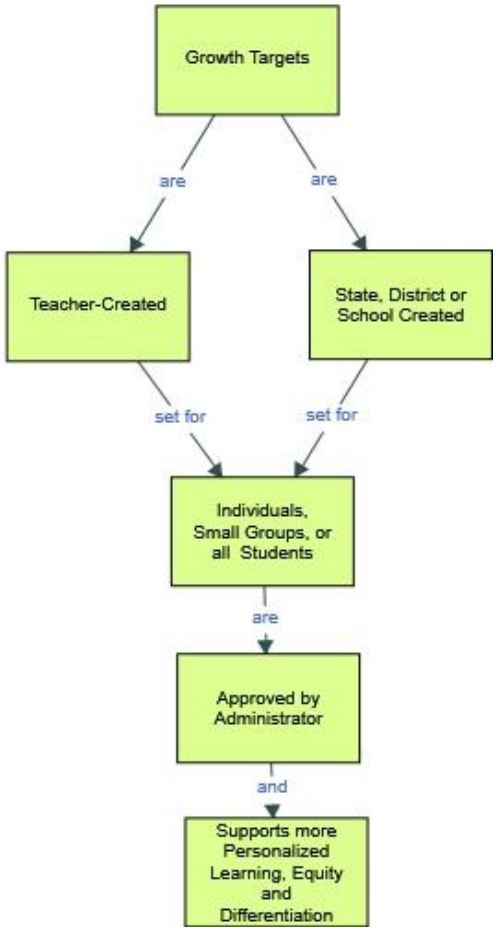
Three participants discussed issues of equity surrounding growth targets. Each student is represented in the growth targets. Some participants commented on how growth targets made them feel more accountable for all learners, influencing the teacher to be more equitable in their examination of student learning.

> *I think this was helpful in organizing kids, like understanding who is a faster learner than the others. I do sometimes feel like I leave out the kids that are in the high group. I feel like they're not advancing as much as the low kids, but it's something I definitely have to work on. (Candace)*

> *I've got my honors English class. Many of them came in at a 4. I still want them to improve. There's levels of 4's. We talked about how you get a score up, and so now they're able to insert an apositive in complex sentences. I have also anecdotal notes. […] I'm so aware of every student's individual growth... You could probably say one of my student's names and I could say where they started and where they are. (Braden)*

Growth targets were viewed as goals for them as teachers. Most participants had some agency in how they set their growth targets. They felt that the targets were important for equity in their practice.

Figure 5.9 Growth Targets



SLO scoring. Scoring SLOs differed greatly among participants. Some participants experienced "black and white" scoring. It was all in the numbers. For example, if 80% of students met the growth target, the teacher was rated as proficient for teacher effectiveness. Some districts needed to define the percentage of the SLO score in the Race-to-the-Top application with the federal government so teachers had little agency in how SLOs were scored. In general, the higher "stakes" attached to the SLO in teacher

evaluation were perceived as more stressful to the participants. (See Figure 5.10) Leah and Mike had the highest "stakes" attached to their SLOs (35% and 50% of their total teacher evaluation rating, respectively). For six participants, the SLO was 20% of their overall teacher evaluation rating. The majority of the participants in this research did not have a specific percentage attached to their SLO; The SLO was evidence that was used to inform part of the district evaluation rubric.

> *We default to the state model which meant that the SLO would be 50% of our evaluation. (Mike)*
>
> *Because [the county] did not opt into Race-the-Top, we were only one of two counties in [the state], two out of 24 counties where SLO's only count for 20% of our evaluation. In the rest of the state, SLOs counted as 50% of your evaluation. I haven't had any problems with doing really well on my evaluations, but I will say that it's a little less tense knowing that it's 20% and not 50%. (Garrett)*

The higher the stakes attached to the SLO, the more stressful SLOs were for the participants and their colleagues.

Some districts ranked teachers on their teacher effectiveness rating in order to differentiate between teachers. This was the case in Abby's district, where the ratings are ranked in order to prevent too many teachers receiving the highly effective and effective ratings.

> *They [the district] are going to put [teacher effectiveness scores] along a continuum and they are going to use the same percentages as they currently use on the observation portion of our evaluation. So roughly, the top 35% of our districts' teachers will get the highly effective score for growth. An the next 55% of the teachers will be rated effective. That's how the scoring all gets determined. (Abby)*

When evaluations are completed in Abby's district, the top 35% earn the *highly effective* rating, the next 55% receive the *effective* rating, the next 6% receive the *basic* rating and

the bottom 4% receive the *ineffective* rating. There are consequences attached the bottom two levels of achievement including being on a probationary contract and being removed from their position.

Other participants had a combination of the percentage of students who met the growth target combined with the teacher reflection. Mike was involved in the evaluation committee in his school, and there was the realization that "*Teacher A"* may have learners with challenges and need to utilize many strategies to promote student learning, while "*Teacher B,"* with less challenging learners, may have students who reach the targets with less effort on the teacher's part. The SLO had a reflection section that asked teachers to describe what they did to promote growth.

> *Then if you look at our particular SLO, there are two parts to each [evaluation] section. The first one is, did you hit the target, and the second one is what did you do to try to hit the target? And what I've told every teacher that I've ever worked with is that when we [the evaluation committee] made [the SLO evaluation section], we knew we had to have the "did you hit the target" box because the state said so. But the administrators are really looking at what you did to try to hit the target. That is how you prove you are a highly effective teacher. Even if every child in your class hits the target, if you did nothing, it really doesn't mean anything about you. It's great that you had great students, but what did you do? (Mike)*

Reflection was an important component of Robyn's evaluation process as well.

> *When [the teacher] talks to the administrator the evaluation is about reflecting on what have you done. Have you done everything in your power to help the students grow and learn? That really is what it's about, more than like the actual score. (Robyn)*

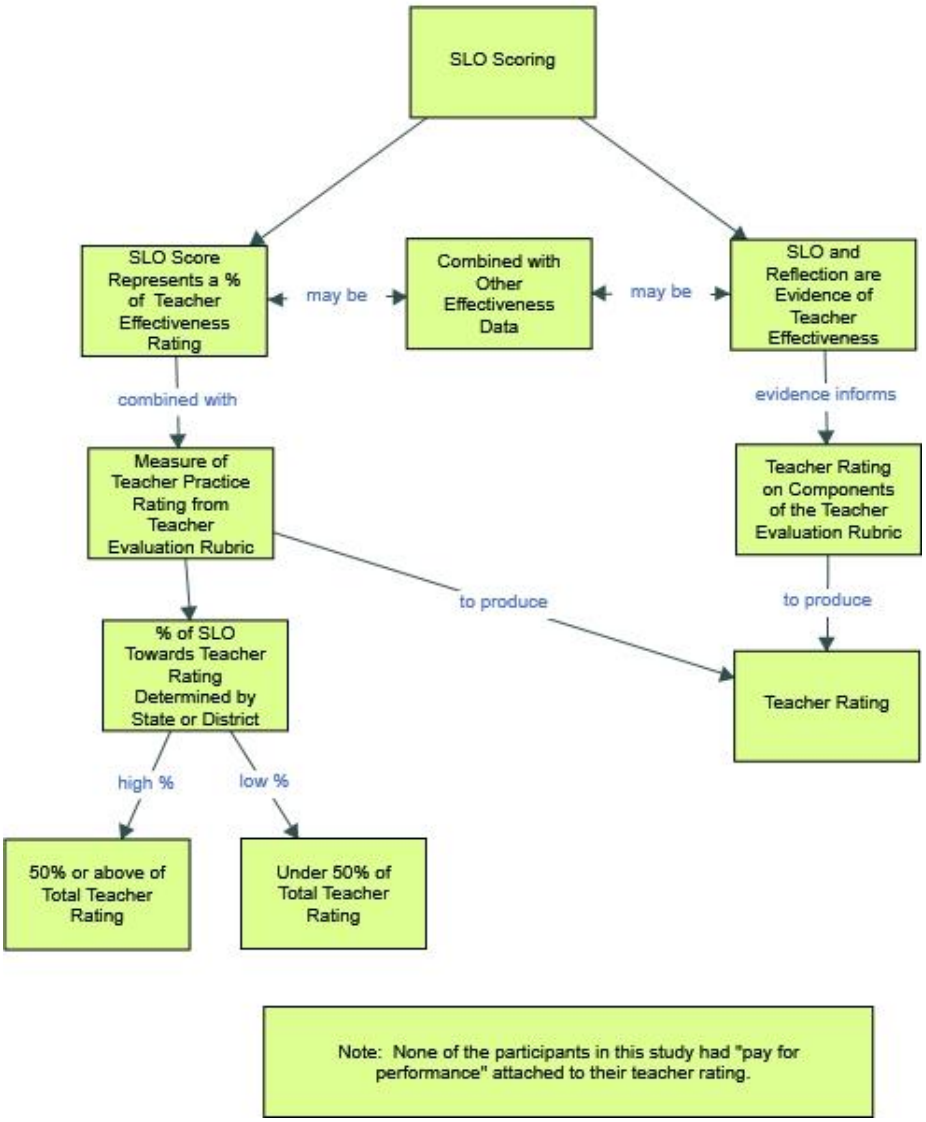
Some participants did not have an evaluation system where their SLO was counted as a percentage of the teacher evaluation rating. Instead, these participants used the SLO data as a piece of evidence corresponding to an element of the district's teacher

evaluation framework, thus contributing to their total professional practice rating. This represented a lower-stakes use of SLOs.

> *The teacher evaluation contains four parts, and the SLO is only one part of the entire evaluation process. So one of four sections is based on the number of kids that grew on the SLO. (Izzy)*

Decisions surrounding the scoring of SLOs were determined by different stakeholders. Some participants were in states where these decisions were made by the state, while other participants had a committee of stakeholders that created the SLO model collaboratively.

Figure 5.10 SLO Scoring

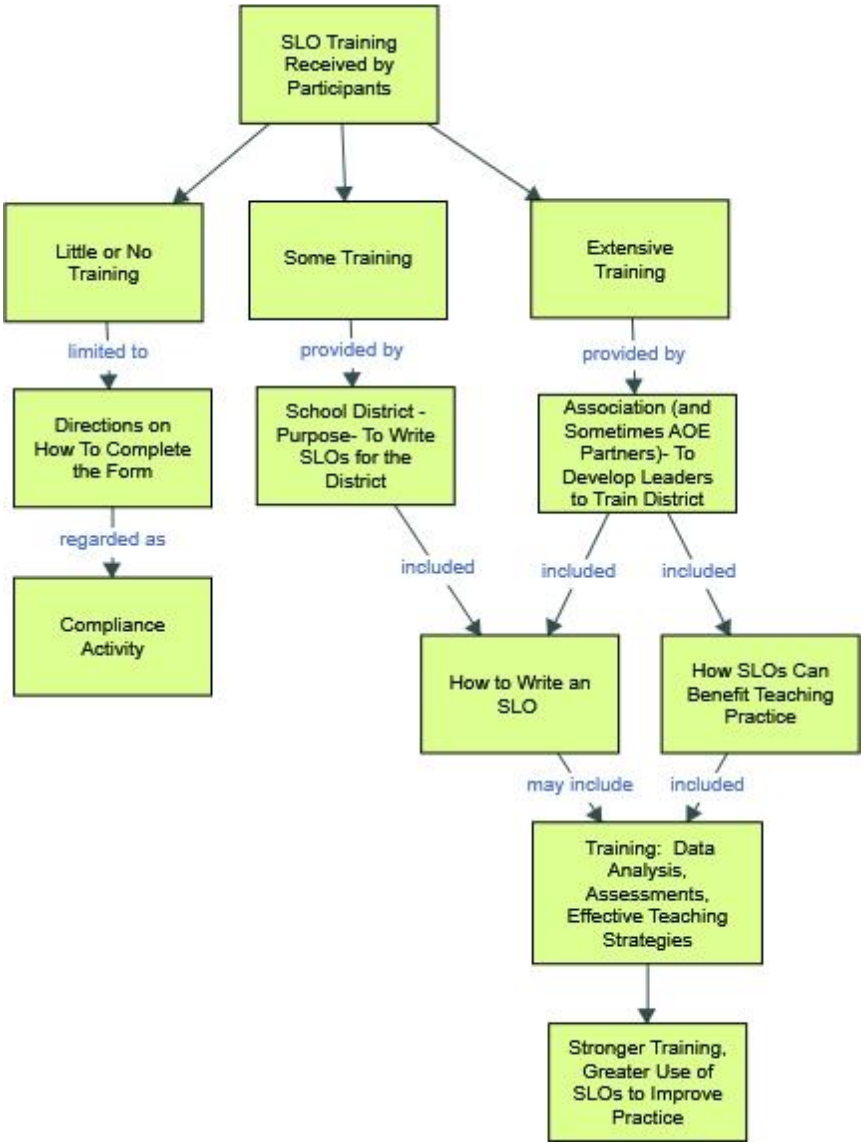


SLO training.

Training varied considerably for the participants in this study. Half the participants received 0-4 hours of training, while half received 5 or more hours of training. Some of the participants in this study were trained by their state teachers' association. The training from the association were intended to develop leaders to

support teachers in their districts as SLOs were rolled out. Other participants had little or no training (see Figure 5.11).

Figure 5.11 SLO Training



For participants who received no or little training, SLOs were communicated as a compliance task for teacher evaluation.

I didn't receive that much training. We just talked about it in a large group setting a couple of days before school started. Then there would be after school faculty meetings when SLOs were discussed, but I was never taught to write one, or what tests I should use. The training was more informational, "Here's the form." "These are the expectations when you're going to get things down." (Candace)

The first year of SLO I didn't have any training and we just went through the template and filled in the boxes. (Jill)

Candace and Jill were examples of participants whose training had the goal of understanding how to fill in the form for compliance. The training did not address areas that would lead to improved teaching practice.

Participants with little training expressed a desire for more.

I want a little bit more training and a little bit more background knowledge, like this is what we're finding about SLOs and this is what we're looking at. That would really assist me and assist everyone I believe in my district, not just saying these are the goals but here are the student learning objectives, this is what we're going to focus on or you pick what you're going to focus on, whatever. Just a little bit of training on SLOs. (Sadie)

I think that having training on how to use the SLOs in our teaching would help all the teachers in our district. Instead of seeing it as a top down, here is another thing you have to do, teachers could use it to inform their instruction. Right now that is not happening. (Abby)

Sadie and Abby, both 23-year teaching veterans, stressed the importance of training in order to make sense of the process as a tool to improve classroom instruction. Sadie spoke about her district communicating the research on SLOs as a way to increase teacher understanding. Abby spoke of the need to have more teacher agency in the process as a way of mitigating the top-down directive to use SLOs.

To identify important teaching goals, the SLO process needed to be rolled out in a way that looked at the benefits of SLOs. Teachers who received training saw the benefits

of SLOs to teaching practice. Extensive training included data analysis, assessment literacy, effective teaching strategies, differentiation, and reflection. All participants who received extensive training, received it from their state teachers' association, or in collaboration with the state teachers' association and the state's education agency. This training influenced the participants' perceptions of the process as one that can improve practice.

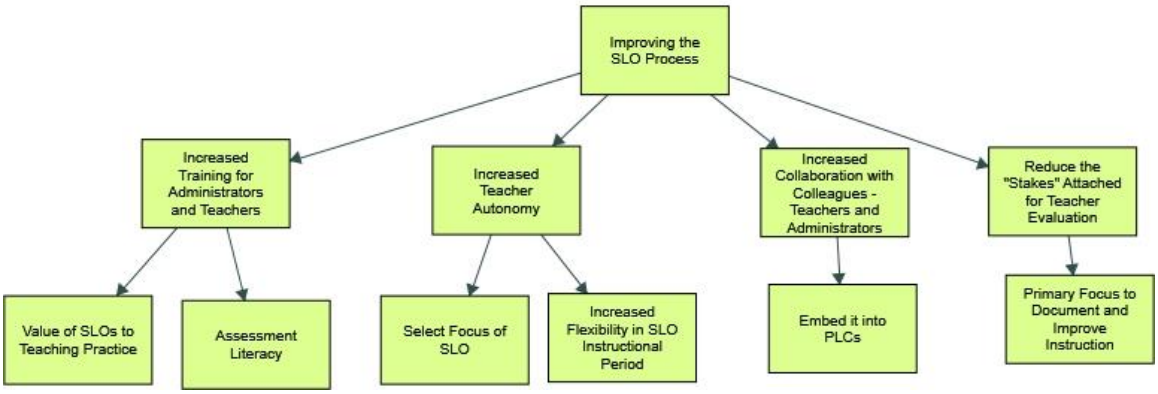
> *I attended our Department of Ed and our state teachers' association joint partnership train the trainers on SLOs [sic]. It was a three-day training. Then I went out and trained individuals in five different school districts. I've also continued to attend the trainings and wrote a grant for my school district to have individuals come in and train teachers. (Kelly)*

Training was a key component for teachers in order for them to feel involved in the SLO process. Kelly's extensive training led to her being a leader and trainer in SLO development. Teachers who received training could better see how SLOs could support improved practice.

Improving the SLO process. The participants in this study believed teachers should provide ongoing input in their SLO development and revisions. They noted four main areas for improvement in the SLO process: (1) increased training for administrators and teachers; (2) increased teacher autonomy in selecting the SLO focus and the SLO

instructional period; (3) increased collaboration by design; and (4) reducing the "stakes" attached to SLOs (see Figure 5.12).

Figure 5.12 Improving the SLO Process



Professional development has been a theme across this research, in particular in assessment literacy, but Abby and Lucy articulated the need for teachers to understand the process in order to see how the process can support their work.

> *The first thing there needs to be is professional development. Teachers need to understand how SLOs could be helpful to them in their teaching and in their professional learning communities, and that connection has not been made. The district has been more focused on "this is how you write it" rather than "this is why we are doing this, this is how it can benefit you, this is how this can benefit your students." (Abby)*

> *I would definitely give teachers more training upfront in the understanding of what the process means for professional growth and student achievement. That would be my number one thing. Then equipping teachers with the knowledge and understanding of how to select and/or develop assessments, so that they could track a student's progress from start to finish. I would allow for collaborative time around, solely around, the SLO rather than that being an aside. That collaboration would be the biggest thing that I would change. Additionally, training administrators so they understand the true goals of an SLO would improve the process. (Lucy)*

Anna added that SLOs should be completed and discussed in collaboration with others in order to benefit from each other's knowledge and expertise. Other participants have also noted the importance of working within their PLCs on the SLOs and its impact on instruction.

> *I think training is probably the biggest need as well as collaboration with other visual art teachers [...] I'm sure I could gain some ideas and some insights from my colleagues based on what they did in their classes. That would be very helpful. (Anna)*

Garret commented on allowing SLOs to be more flexible. Having shorter SLOs would allow him to hone in on more specific areas he would like to improve, areas that might not be full year goals.

> *I wouldn't have the SLO be a yearlong process. I would like to measure student growth by semesters. If I have a shorter-term SLO, like the kids will understand the Diary of Anne Frank, or they will write stronger essays when they read the Hobbit, it would make the process more meaningful. (Garrett)*

Abby wanted the SLO process to be more flexible as well, with the ability for teachers to personalize their SLOs to support their instructional needs.

> *I would like to personalize it a bit more. I mean I like the idea that it was created for me and that I didn't have to go through and figure it out myself, including writing my own assessments. However, I would like to be able to personalize it a bit more. (Abby)*

Kathy wanted more administrative interest in the SLO process. This theme is repeated in different areas of this research. Administrators set the tone and expectations surrounding SLOs. In those schools where administrators were trained and involved, teachers felt more positive about the SLO process and its value to their teaching practice. Kathy would have liked administrative observations to align with the SLO focus.

> *I would like it if our administrators had a greater interest or took more time looking at SLO goals because I think it would make things like actual teacher observation more tangible. (Kathy)*

Teacher evaluation has the dual purpose of improving teaching and providing accountability. Mike's district SLOs are a percentage of the teacher evaluation rating. This is always in the back of his mind and impacts the use of SLOs as a tool to improve practice. He would like to take the higher stakes out of the SLO equation.

> *One thing I would do is get the evaluation part out of it. You know at the end of the year it's part of the evaluation. I find myself fixating on the fact that it's part of my evaluation as opposed to truly allowing it be a professional development tool. (Mike)*

Most participants in this study valued the *potential* that SLOs could have on teaching practice and recognized areas where the process might be improved in their schools to better realize this potential. Participants in districts where the roll-out happened quickly, due to the flexibility waivers from the federal government, felt there was not adequate time for training and building the culture surrounding SLOs to promote SLOs as a tool for improving professional practice. The teacher evaluation has changed in states with the passage of the ESSA (Sawchuk, 2016). States utilizing SLOs as a way to measure teacher effectiveness have the opportunity to examine and revise their rollout of SLOs in order to make the investment of time and resources by teachers and administrators lead to improved educator practice and greater student learning.

Chapter 6

Conclusions and Implications

The purposes of this study were to (1) understand the effect student learning objectives have on teachers and teaching when used in teacher evaluation systems, and (2) explore how the conditions surrounding SLOs lead to improved teaching practices. These two questions are intertwined because the conditions in which teachers experienced SLOs were found to determine the effect SLOs on their teaching roles. Some key findings not only answer the research questions, but also provide ideas on how to improve the process in order to positively affect teaching.

School and District Leadership is Essential

This study identified four properties of school and district leadership that led to stronger SLO implementation for these participants: (1) training and collaboration; (2) setting expectations for SLOs; (3) employing a system of collaboration; and (4) linking professional learning to the SLO focus.

If SLOs are to be embedded into teacher evaluation, leadership at the school and district levels not only needs training on the SLO process; administrators also must devote time to collaborating with teachers on the SLO focus. When school leadership was informed and engaged in the SLO process, teachers viewed administrators as educational leaders, and the SLO process as important to teaching and learning. Conversely, when the administrator devoted little time to discussing the SLOs and did not collaborate with the teacher regarding the SLO, the teacher didn't receive feedback that

supported improvements to teaching, and as a result, regarded the SLO process as merely one of compliance. This resulted in a missed opportunity for administrators to be regarded as instructional leaders in their schools. When administrators are trained in the SLO process and collaborate with teachers, they have an opportunity to reinforce and improve SLOs.

It is important for administrators to lead the conversation around SLOs by setting the tone and expectations of the SLO development, which proved to be critical to a positive SLO process. When administrators set the expectation that SLOs would be a collaborative process within PLCs or within teaching teams, teachers worked together and benefited from the collaboration. When this expectation was not present, teachers did not always work collaboratively and sometimes regarded the process as one of compliance for evaluation, not for improving teaching. Similarly, when administrators regarded the SLOs as a way to improve teachers' practice in the SLO goal area, most teachers regarded the process as a way to improve teaching practice.

Administration should also define the expected roles for teachers, teacher collaborative groups, and the administrators. The more the process of teaching and collaborating is embedded in the expectations of the professional work of teachers, the more teaching will improve.

Structured collaboration within the SLO process resulted in enhanced respect for SLOs. Without a collaborative culture of inquiry, SLOs were regarded as "just another thing on a teacher's already full plate." Administrators must create the structure where

collaboration happens. Where collaboration takes place is not important. It could be during regular PLC or team meetings, in-service days, faculty meetings, or other planning time. If teachers do not have time to engage in these high level discussions, the SLO process will not realize its full potential in improving teaching and learning. Therefore, administrators must support the process by building time for frequent collaboration and, as noted above, participating in the collaboration themselves.

Administrators play a key role by offering professional learning experiences to teachers in both SLO development and the SLO focus area. Teachers have individual strengths and needs, so differentiating professional learning is essential to meeting the unique needs of each teacher. One-size-fits-all professional learning opportunities are unlikely to meet those needs. Teachers noted specific areas needed in order to implement SLOs – most notably assessment literacy, as well as specific learning related to the area identified in their SLO focus. Linking SLOs to professional learning may strengthen relevance of the specific learning to teaching.

When school leadership had a strong understanding of the SLO process, collaborated with teachers, set clear expectations for the process and offered professional opportunities linked to the SLOs, the teachers respected the process as an important one to improve teaching as well as document student learning.

The School Climate Around SLOs

The school climate surrounding SLOs was important to its success and value by teachers. When administrators provided the leadership described in the previous section,

teachers used these expectations to develop a positive culture around SLOs. The key areas of school climate from this study were collaboration, using SLOs as a tool for improved teaching practice, and regarding SLOs as a positive aspect of the culture.

For the participants in this study, collaboration led to stronger support for SLOs as a tool for improved practice, though the level of collaboration mattered, as did leadership's expectation for collaboration. The most positive teacher experiences reported were when SLOs were regarded as a tool for enhanced teacher collaboration, especially when an entire PLC selected the same focus for their SLO. The SLOs gave conversations a focus, and the SLO process became a protocol key work done in PLCs. Through these professional conversations, knowledge of teaching and learning was elevated.

SLOs strengthen assessment and data use. SLOs became a tool for improved teaching practice for many participants. The major areas of improved teaching practice were assessment and assessment literacy, curriculum design, differentiation, and teacher reflection. The conversations this researcher had with teachers illuminated how ill-prepared many teachers to create classroom assessments. Those teachers who were received assessment literacy as part of the SLO training commented on how much they learned. This learning was essential for all teachers working on an SLO. First, they need to make sure student learning on SLO goals is being assessed in a way that is as valid and reliable as it can be. Building assessments, both formative and summative, collaboratively strengthened teachers' understanding of the goal and what successful

student learning would look like. Scoring assessments collaboratively led to conversations about what students knew, what they still needed to learn, strategies that supported and would support increased student learning, and ways to differentiate to improve instructional effectiveness. Collaboration also supported analysis of assessment tools. Does the assessment illuminate students' current proficiency? Does the assessment need to be modified in order to strengthen the information gained about student learning? Analyzing student work in order to understand next steps and the level of proficiency requires strong knowledge of assessment literacy, but many teachers have not gained that knowledge through pre-service and in-service training.

If instruction is to improve on the SLO focus area, professional learning is required. Identifying areas and offering professional learning should be ongoing and within a collaborative culture. When teachers were granted professional learning on the SLO focus, they got the message that the focus was indeed important enough to spend money on; the administrator was acknowledging that SLO work is supported and valued. Finally, professional learning on the SLO focus embraces timely learning that will be applied and discussed during the current year and regarded as relevant by teachers.

As noted, establishing a positive SLO climate requires professional learning. The participants in this study had widely varied experiences with pre-implementation professional learning. This learning was found to be critical if the SLO process is to reap the potential benefits. Many teachers in this study received no training. Each school and district has a unique culture that is influenced by many factors, so a one-size-fits all

template for SLOs across the nation is not going to be best practice. Teachers are instructional experts in the school and need to be involved in ongoing revision to the SLO process in order for it to work within the school's and district's cultures. Creating a committee of SLO leaders in the school to gather teacher input and suggest changes based on that feedback creates a transformative culture where teachers are regarded as professionals and their recommendations are valued.

Teacher Agency

The participants in this study came from districts and schools that afforded different levels of teacher agency. Not all of the differences were regarded as either good or bad by the participants, but there were some common understandings that teachers found important. As the SLO process is developed in schools and districts, this researcher recommends development includes a strong voice from teachers who have piloted the process and can effectively inform the committee on those practices that best improve teaching. Areas of teacher agency identified by teachers in this study included selecting the SLO focus, setting growth targets, creating and determining assessments, and scoring SLOs.

The most important aspect of SLO focus is relevance to teachers and representing an area of practice in which they want to improve. Some participants were handed their SLO focus by the district that everyone in their teaching context or content was expected to improve. Other participants were given the freedom to select any goal area on which

they wanted to improve and document their effectiveness with students. Both these approaches had value to the participants in this study.

When the SLO goal area did not represent a priority for the teacher, or when there were so many goals on an SLO that it became overwhelming, the SLO was not valued. One participant was given the SLO focus for both of her SLOs, and the focus consisted of *all* the key standards for the grade in math and reading. There was not one focus at all, making it difficult to effect change. This approach should be avoided. The more relevant the goal area is to the teacher or group of teachers, the more likely that SLO process will be regarded positively and used that improves teaching.

The teacher agency in the decision on how to determine student growth varied across participants. Some teachers were involved in this decision making while others were not. There was great variety in how teachers growth scores were determined. Some participants needed to show growth, and that growth was not defined by scores. Others needed to have each student move up at least one proficiency level (typically on a four-point proficiency scale). These growth targets, regardless of how they were set, reinforced that every student's learning is important. Teachers were more cognizant of individual learners and what they needed, since each student needed to demonstrate documented learning. Whereas this researcher originally thought that growth targets were not a necessary part of the SLO process, (because all teachers want to see their students learn), the study participants felt otherwise. They felt that having growth targets made them more accountable for student learning and supported more intentional

instruction and differentiation. This researcher notes that the decision on how to set growth targets might be differentiated depending on the content area and student population.

Some participants in this study had a great deal of autonomy when creating assessments, while other teachers had no autonomy at all. Building assessments requires assessment literacy, so any new assessments will ideally be developed by teachers who have learned how to develop strong assessments. Summative assessments, especially, need vetting for increased reliability and validity. However, if every teacher has a different focus for their SLO, it would be difficult to create assessments to evaluate student learning in a group setting, such as the PLC. This reason alone makes a group SLO, where teachers can develop assessments together, preferred by this researcher. The process of creating the assessments will strengthen teachers' understanding of the learning goals.

Goals need to be dissected into measurable learning targets. This understanding is essential in creating learning opportunities for students through strong curriculum design. However, when teachers are handed an assessment to use, the process of breaking down the goals into measurable learning targets may not occur. Students will benefit from teachers with strong assessment literacy, and providing an opportunity for teachers to gain these skills as a part of the SLO process would indeed make teachers more effective. Working collaboratively to create and score assessments was thus regarded as a valuable process by participants in this study who engaged in these activities.

Teaching is a complex profession. It is impossible for an evaluator to observe a lesson and witness all that a teacher thinks and does. Every time a student responds, teachers make a decision on what to do next. Therefore, scoring an SLO should be more than the end score, documenting the number of students who met their individual SLO goal. What a teacher does to promote learning is an important ingredient. A teacher may provide little "extra" to promote growth for one student, but another student may require much intervention and differentiation. How is this captured in an SLO score? Some participants in this study were evaluated based solely on the number of students who met the SLO goal, while others were evaluated through not only this information, but also through written and oral reflection with their administrator. Teachers felt reflection was an essential part of the evaluation of the SLO. Reflection leads to future learning, strengthens the teacher's skills, and informs future professional learning. Developing a scoring process that includes both reflection and student scores builds a stronger picture of a teacher's ability. It also supports the vision of SLOs and the outcome of teacher evaluation that it must both hold teachers accountable for student learning and lead to improvements in teacher instruction. Building the process with strong teacher voice with the two goals of accountability and improved teaching in mind sets a strong base for a comprehensive evaluation system that includes teacher effectiveness through SLOs.

Implications and Recommendations for Practice and Further Research

SLOs, which first entered teacher evaluation as a part of the No Child Left Behind Act era, are now in a new phase. The *Every Student Succeeds Act* puts teacher evaluation

decisions at the state level. States are developing their own accountability systems and this research may support changes in states' and districts' SLO processes and implementation that will better support teachers and their teaching practice.

The most important implication of this research is that SLOs serve as a nexus of several high-quality practices. For example, successful SLOs are shown to work well within collaborative environments, as teachers in this study who developed and monitored their SLOs in collaborative groups benefited from the collective experience of the teachers within the group. The SLO became a tool for collaboration and inquiry into teaching and learning. Teachers engaged in discussions around practice. What worked well? What differentiation practices were most successful? What did the formative assessment data tell one about the effectiveness of instruction and next steps? All these questions, addressed within the context of professional learning communities, engaged teachers in rich and productive discussions on teaching and learning. The value of these discussions, from the first-year teacher to the veteran, has great potential for improving learner outcomes.

Another implication of this research is that training in the SLO process is critical for both teachers and administrators. For teachers, the SLO process mirrors that of strong curriculum design as outlined in Understanding by Design (Wiggins & McTighe, 2011b). For the teachers in this study, training on assessment practices were highly beneficial. Teachers commented on how limited their assessment knowledge was prior to the SLO training, and how, because of the training, they developed summative assessments that

were more valid and reliable, and they improved in their ability to use formative assessment in connection with SLO goals. In addition, administrators need training as well. For some administrators, SLOs were a tool for reflective conversations around teaching and learning, allowing administrators to be viewed as instructional leaders.

SLOs viewed purely as a compliance activity are an opportunity lost. If schools expend resources to develop SLOs as part of the evaluation process, and the process is not viewed as a way to benefit teachers and students, those resources are expended in vain. SLOs can only result in improved teaching and learning if the school leadership, climate, and teacher agency allows for this to occur.

The final implication this researcher would like to note is in preservice education. This research included two first-year teachers. Both felt inadequate in assessment practices. A modified SLO that allows preservice educators to grow in the use formative and summative assessment would allow them to practice both assessment to inform instruction and as documentation of effectiveness in promoting student growth.

This research captured a broad teacher focus on SLOs. More research is needed on the following areas to fully understand how SLOs can lead to positive outcomes for educators and, ultimately, their students.

1. Limited data were collected on such aspects of the participants' schools as socioeconomic details, educational funding, and cultural make-up of both student body and educators. It would be beneficial to expand the current findings to include schools diverse in terms of these characteristics.

2. Training both teachers and administrators on the elements of SLOs varied widely for the participants in this study. What are the characteristics of SLO training that support strong use of SLOs for teacher evaluation?
3. The stakes attached to SLOs varied considerably for the participants in this study. What affect do the stakes have on teacher acceptance of to the process?
4. The school leader sets the tone and expectations for SLO implementation. Research focusing on the role of school leaders would help clarify important characteristics of school leadership in SLO implementation.
5. When used in collaborative settings such as professional learning communities, the SLO process was viewed more positively in this study. Researching SLOs as a tool for collaboration, and not necessarily as a formal part of teacher evaluation, would be important in understanding how the collaborative process improves teaching in the absence of the added stress of accountability.

SLOs used in teacher evaluation systems are still new in education. Ongoing research is necessary to refine SLO implementation so that it can both inform teacher evaluation and lead to improvements in teaching.

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Appendixes

Appendix A UVM Survey – SLO Research – Participation Form (LimeSurvey)

You are being invited to participate in this study because of your experience in developing Student Learning Objectives as part of teacher evaluation.

Title of Research Project: The Effect of Student Learning Objectives on Teaching and Student Learning as Part of the Teacher Evaluation Process

Principal Investigator: Juliette Longchamp

Faculty Advisor: Dr. Maureen Neumann

Study Information

Why is This Research Study Being Conducted?

The purpose of this study is to understand how SLOs affect teaching and student learning when thy are used as part of teacher evaluation.

How Many People Will Take Part in This Study?

About 15-25 teachers will participate in this study.

What is Involved in The Study?

Participation will involve one 1-hour interview with the principal researcher. At that interview, participants will share their 2014-2015 SLO(s) with identifying information removed, and answer questions related to their experience in developing SLO(s) in their schools. Later in the fall, some participants will be asked to participate in follow-up interviews to clarify ideas that are arising in the data analysis. Participants have the option of a face-to-face interview or a virtual interview utilizing Adobe Connect.

What are the Benefits of Participating in The Study?

SLOs are a new teacher evaluation requirement for many teachers. Understanding the benefits and challenges will help strengthen the process to improve instruction and student learning, as well as document an educator's effectiveness.

What is the Compensation?

Participants will receive a $25 gift card for participating in the initial interview and any follow-up interviews (if applicable).

Can You Withdraw from the Study?

Participants may discontinue their participation in this study at any time.

What About Confidentiality?

The study data will be handled as confidentially as possible. If the results of this study are published or presented, individual names and other personally identifiable information will not be used. Additionally, each participant will be given a pseudonym. To minimize the risks to confidentiality, all data will be kept in password protected files electronically. Any paper copies will be scanned and stored electronically, and original paper copies will be shredded
securely. Research data will be kept until December 2020.

Please note that email communication is neither private nor secure. Though we are taking precautions to protect one's privacy, one should be aware that information sent through email could be read by a third party.

Contact Information

Participants may contact Juliette Longchamp, the Investigator in charge of this study, at juliette.longchamp@uvm.edu or 802-224-2421, for more information about this study. Any questions about the rights of a participant in a research project one should contact the Director of the Research Protections Office at the University of Vermont at 802-656-5040.

Consent to Participate

Participation is voluntary and one may withdraw at any time without penalty or prejudice. To participate, please continue with this form.

Participant Information

Name (last, first)
Email:

Gender: Please choose only one of the following:

___Female
___Male

Contact Phone Number:

School District:

School:

Grade Level(s) Taught:

Please choose all that apply:

_____Pre-K to 2
_____3-5
_____6-8
_____9-12
_____Other:

Subjects Taught:

Please choose all that apply:

_____Elementary Education (PK-6) - General
_____English/Language Arts
_____Mathematics
_____Science
_____Social Studies/History/Economics
_____Special Education (including SLPs)
_____Art
_____Music
_____Physical Education/Health
_____Family, Health and Consumer Science
_____World Language
_____Technology Education
_____Business Education
_____Drama/Public Speaking

_____English Language Learners
_____Other:_____

How much Training did you receive prior to writing your first SLO?

_____No Training
_____1-4 hours
_____5-8 hours
_____9-12 hours
_____12-16 hours
_____>16 hours

How many years have you developed SLOs?

_____I have not completed my first SLO
_____1 year
_____2 years
_____Other:

Please do not include the 2015-1016 school year.

Thank you!

I appreciate your willingness to participate in this research. I will contact you to set up an initial interview in November.

Submit your survey.
Thank you for completing this survey.

Appendix B Interview Protocol

Time of Interview:

Date:

Place:

Interviewer:

Interviewee:

Position of Interviewee:

Pseudonym:

Questions:

1. Describe the training you received for developing SLOs.
2. What are the expectations for SLO process in your school?
3. How does the SLO process impact teachers and teaching?
4. How does the educational culture surrounding SLOs impact the potential benefits of the process?
5. How did your SLO rating this year compare to your perception on how effective you were in achieving student growth?
6. How accurately did your teacher evaluation rating, including the rating of teacher practice and effectiveness, compare to your self-assessment?
7. Is there anything else you would like to add in regards to the impact of SLOs in your classroom, school, and district?

If more data is needed to complete this research, may I contact you for a second interview?