



# Texas Lesson Study

Professional Development Program:  
Report on Program Effectiveness 2018–2019

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## EVALUATOR INFORMATION

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## EXECUTIVE SUMMARY

### Brief Background

The Texas Education Agency (TEA) began piloting the Lesson Study Professional Development Program in the fall of 2016 as part of the TEA Strategic Plan, which was set forth by Texas Commissioner of Education Mike Morath. This report describes the results of the second yearlong study conducted during the 2018–2019 school year. Lesson Study is inquiry-based, job-embedded professional development where teachers work collaboratively to develop, teach, and assess research-based lessons. The purpose of Lesson Study is to help teachers improve their effectiveness, share best practices with other teachers, improve student outcomes, and provide a platform to demonstrate mastery within the teaching profession. Research suggests that Lesson Study can positively impact teachers’ knowledge and beliefs (Lewis, Perry, & Hurd, 2009).

Through Lesson Study, teachers identify a research theme and student expectation(s) from the Texas Essential Knowledge and Skills (TEKS) that students have difficulty understanding. Teachers work together to build knowledge of subject matter and student thinking, develop collaborative lesson plans, teach the lesson, observe each other in the classroom, and reflect on their observations to improve learning outcomes for students (Lewis & Hurd, 2011; Stepanek, Appel, Leong, Turner Mangan, & Mitchel, 2007).

The Texas Education Agency (TEA) collaborated with 17 education service centers (ESCs) during the 2018–2019 school year to examine potential benefits of Lesson Study. Data were collected in the form of surveys, in-person interviews, and locally-designed assessments. This report focuses on changes to teacher self-efficacy, student performance on assessments, and the perceptions of Lesson Study facilitators, teachers, administrators and students about the effectiveness of the program.

### Summary of the 2018–2019 Results

The yearlong study examined data from 202 Lesson Study groups, 74 administrators, 761 teachers, and approximately 12,708 students in Texas across grades K–12. Although, there were several academic subjects taught, most the Lesson Study groups focused on English language arts and reading (ELAR), mathematics, or science.

Teachers who participated in the Lesson Study reported statistically higher levels of (a) confidence in teaching abilities, (b) time to collaborate with colleagues, (c) expertise in the content areas taught (d) discussions regarding classrooms, (e) respect as a professional, (f) colleagues being viewed as experts in the field of teaching, and (g) student learning. The greatest gains were found in teachers’ confidence in their teaching ability, and the effect was moderate ( $p < .05$ ).<sup>1</sup> All of the gains were considered to be small

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<sup>1</sup>Probability value ( $p$ ) less than .05 suggests that observed differences in the sample are less likely to be due to chance (i.e., random fluctuations in the data).

to moderate.<sup>2</sup> In another efficacy survey, teachers reported gains in all four areas, a) crafting good questions for students, b) using a variety of assessment strategies, c) providing alternate examples to alleviate confusion, and d) implementing alternative strategies in the classroom. The effect sizes ranged from small to large. The largest effects were on crafting questions and implementing alternative strategies.

Further, 84 percent of teachers and 86 percent of administrators reported that the Lesson Study impacted the teachers' professional growth, a direct aim of the program. In addition to professional growth, 83 percent of administrators and 84 percent of teachers noted that the process also impacted student growth. Teachers indicated that being able to reflect and revise lessons with their groups led to a deeper understanding of the standards and how to teach them.

Overall, the results of the students who were pretested and posttested suggest that the process had a moderate to large effect on their academic performance ( $d = .76$ ). Large effects were found on students' growth on assessments in ESCs 1, 3, 4, 7, 9, 10, and 20. When considering grade level, the largest increases appeared to be in high school. When considering academic subject, Lesson Study students who participated in social studies or ELAR lessons made the greatest gains. When considering student outcomes, the most student growth occurred as a result of an observed lesson that had been refined by the group. Finally, most students indicated that they enjoyed (74 percent) and understood most or all of the lessons (90 percent) their teachers delivered during the Lesson Study process.

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<sup>2</sup> Cohen's  $d$  is the difference between two means expressed in terms of standard deviation (i.e., average variability within the data). The use of a standardized metric can be beneficial, particularly when measures used to quantify a construct (e.g., self-efficacy) and the scores associated with these measures are subject to change. Cohen (1992) provides some general guidelines for interpretation of these standardized mean differences although comparisons are most meaningful in the context of findings from related literature.

## INTRODUCTION

The Texas Education Agency (TEA) examined the benefits of the Lesson Study Professional Development program during the 2018–2019 school year. Lesson Study is a part of the TEA Strategic Plans (Fiscal Years 2017–2021 and Fiscal Years 2019–2023) set forth by Texas Commissioner of Education Mike Morath “to improve teacher in-service training and support by introducing teacher-driven, reflective, job-embedded professional development and structures” (TEA, 2018, p. 4). Teachers develop and submit research lessons to TEA for review. The best lesson studies are shared with teachers across the state on the Texas Gateway website. This report details findings from the 2018–2019 Lesson Study Professional Development program.

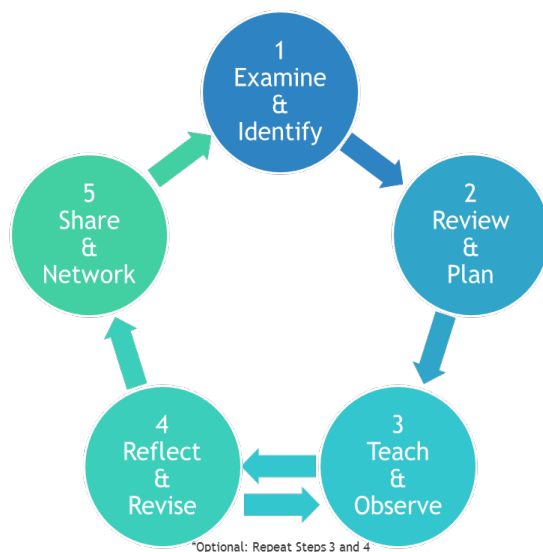
### Overview of Lesson Study

Lesson Study is a form of job-embedded, professional development for teachers that uses a systematic process to foster a collaborative, professional environment (Stepanek, Appel, Leong, Turner Mangan, & Mitchel, 2007). Lesson Study is distinct in that teachers develop, teach, and assess research-based lessons. The utilization of Lesson Study in the United States is new but has expanded in recent years given evidence it can positively impact teachers’ knowledge and beliefs (Lewis, Perry, & Hurd, 2009).

The Lesson Study process is illustrated in Figure 1. Teachers collaborate in teams of two to five to

- identify a research theme and student expectation(s) (SEs) from the TEKS that students have difficulty understanding;
- research best instructional practices for the chosen SEs and plan a strategic, research-based lesson;
- teach the lesson to students and collect data on students’ responses, levels of engagement, and learning processes;
- reflect on the lesson and options for refinement; and
- share the teacher-designed, research-based lesson and report on the lesson effectiveness with other teaching professionals via the Texas Gateway site.

*Figure 1. Illustration of the Lesson Study Process.*





## Summary of the Spring 2017 Pilot Study

The Spring 2017 pilot included 109 teachers from 25 schools and 15 school districts who made up 33 Lesson Study groups. Teachers who participated in Lesson Study reported statistically higher levels of (a) confidence about their teaching ability and (b) feelings about being an expert in the content area they taught ( $p < .05$ ). These gains were considered to be moderate to large and consistent with findings from the Fall 2016 pilot. In contrast to findings from Fall 2016, teachers in the Spring 2017 pilot also reported gains in (a) the time they received to collaborate with colleagues and (b) seeing their colleagues as experts. Overall, eighty-four percent (84.3 percent) of participating teachers reported that Lesson Study impacted their professional growth. This finding was supported by the comments of school administrators.

Student performance was also compared through locally developed assessments designed by the Lesson Study groups. Students demonstrated statistically significant gains ( $p < .05$ ) from pretest to posttest. Students reported that they enjoyed (63.4 percent) and understood most or all of the lesson (88.9 percent) their teachers delivered during the Lesson Study process. Students further reported that the utilization of group work incorporated by the lessons was the activity they enjoyed most and that helped them to learn best.

## Summary of the Yearlong 2017–2018 Study

The yearlong study included 702 teachers from 60 school districts. Teachers were combined into 1 of 198 Lesson Study groups. The lessons created by the groups were then delivered to over 13,000 students in Texas across grades K–12. Although most the Lesson Study groups focused on ELAR or mathematics, there were several groups that designed lessons in science and social studies.

Teachers who participated in the Lesson Study reported statistically higher levels of (a) confidence in teacher abilities, (b) the time they received to collaborate with colleagues, (c) feelings of expertise in the content area taught, and (d) being comfortable discussing their classroom with others ( $p < .05$ ).<sup>3</sup> These gains were considered to be small to moderate.<sup>4</sup> In another efficacy survey, teachers reported gains in a) crafting good questions for students, b) using a variety of assessment strategies, c) providing alternate examples to alleviate confusion, and d) implementing alternative strategies in the classroom. These gains were also considered small to moderate. The facilitators reported that nearly all the teachers were open-minded, patient and flexible, optimistic and enthusiastic, responsible, and diligent and effective in groups. Seventy-seven percent of teachers and 90 percent of administrators reported that the Lesson Study impacted the teachers' professional growth. Though teachers found the lesson planning process challenging, they found the ability to reflect on the lesson and debrief with colleagues to be beneficial.

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<sup>3</sup>Probability value ( $p$ ) less than .05 suggests that observed differences in the sample are less likely to be due to chance (i.e., random fluctuations in the data).

<sup>4</sup> Cohen's  $d$  is the difference between two means expressed in terms of standard deviation (i.e., average variability within the data). The use of a standardized metric can be beneficial, particularly when measures used to quantify a construct (e.g., self-efficacy) and the scores associated with these measures are subject to change. Cohen (1992) provides some general guidelines for interpretation of these standardized mean differences although comparisons are most meaningful in the context of findings from related literature.

Most of the teachers and administrators reported that the process also impacted student growth. Overall, the results of the students who were pretested and posttested suggest that the process had a large effect on their academic performance ( $d = .91$ ). The greatest gains were observed in ESCs 3 and 4 and the mean difference effect sizes were considered large. Lesson Study had moderate effects in ESCs 5, 8, and 10, and small effects were observed in ESC 6. When comparing grade levels across regions, primary grade (Pre-K–2) students' post-test mean scores were the highest. Finally, most students indicated that they enjoyed (67 percent) and understood most or all of the lessons (90 percent) their teachers delivered during the Lesson Study process.

## Purpose and Goal of the 2018–2019 Lesson Study

The Texas Education Agency collaborated with 17 Education Service Center Regions to facilitate the Lesson Study Professional Development program in select districts and campuses throughout the regions. This report examines to what extent the Lesson Study Professional Development Program met the expected outcomes as outlined in program documents. The following questions guided this evaluation report:

1. How did the Lesson Study Professional Development program affect teachers' sense of self-efficacy?
2. What were the facilitators' and participants' perceptions of the Lesson Study process?
3. How did the students' performance change after participating in the lessons?
4. What were the differences in post-test scores among ESCs, grade levels, and academic subjects?
5. What were the students' perceptions of the lessons developed through the Lesson Study process?

## METHOD

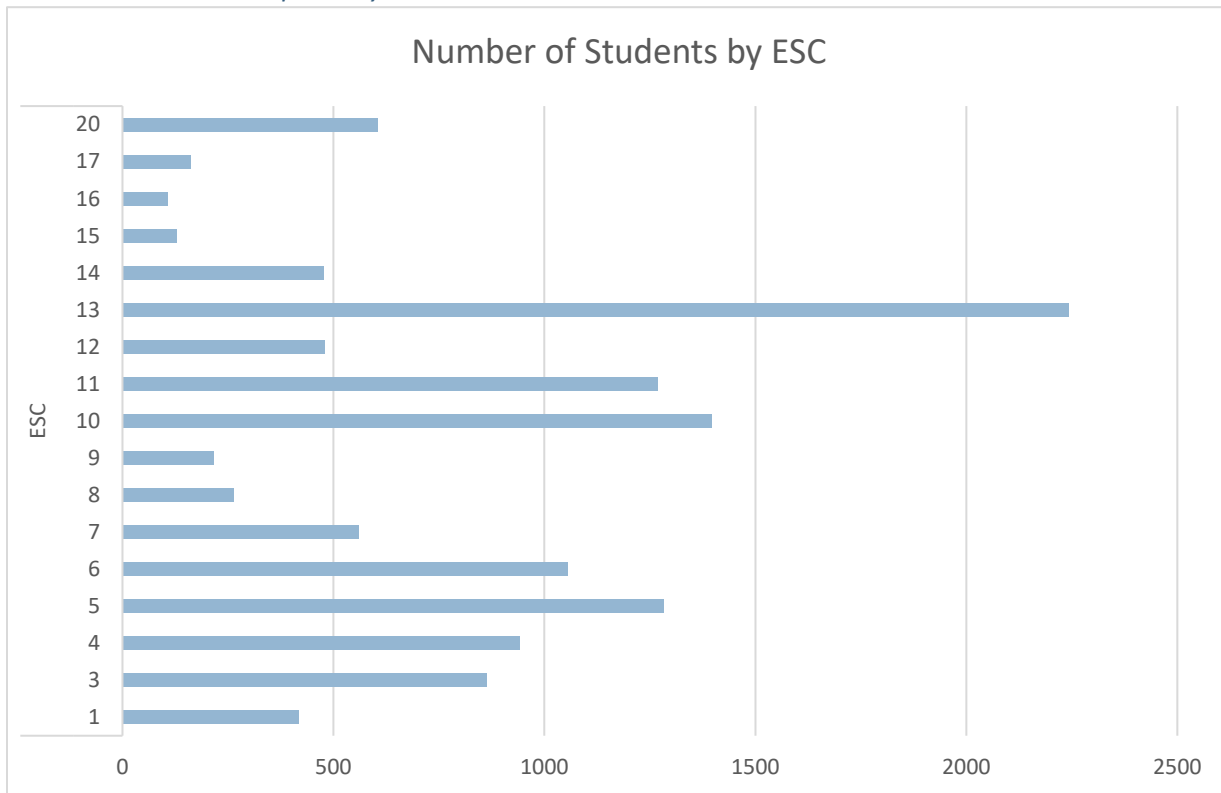
### Data Collection

Data were collected from ESC facilitators, teachers, administrators, and students throughout the Lesson Study cycles. Lesson Study facilitators responded to a survey on the attitudes of their participants and provided observations about the Lesson Study. Teachers completed a pretest and posttest survey about their level of self-efficacy and reflections on Lesson Study after each phase of the process. In addition, an administrator at each of the participating schools was asked to complete a survey about their observations of the Lesson Study Professional Development program. Lastly, students were given assessments developed by teachers from the respective Lesson Study group to evaluate what they learned from the research-based lesson. Students were also invited to respond to a brief survey and an in-person interview about their experience with the lesson. A copy of all surveys can be found in Appendix A.

### Participants

Collectively, schools and districts from 17 of the 20 ESCs participated in the 2018–2019 Texas Lesson Study (TXLS). There were 202 Lesson Study groups and a total of 761 teachers that participated in the Texas Lesson Study. Approximately 12,708 students (Table 1) were assessed on their learning, and 8,977 students completed surveys intended to determine how students viewed the research-based lessons. In addition, 779 students were interviewed to further investigate their perceptions of the lessons developed through the Lesson Study process.

Table 1. Student Participants by Education Service Center



## Lesson Study Implementation

Lesson Study participants were combined into groups. Groups consisted of two to five individuals who were guided through the Lesson Study process (Figure 1) by a facilitator from one of the regional ESCs. Facilitators met regularly with participants in each group during the 2018–2019 school year.

Groups identified a target grade level, subject area, and TEKS for the Lesson Study, although the composition of the Lesson Study groups varied based on the campus’s size and needs. For example, groups comprised of teachers that taught the same subject, grade level, or sometimes a combination of the two (e.g., a group of third grade math teachers, a group of sixth, seventh, and eighth grade science teachers, etc.).

The percentage of student participants by grade level are reported as such in Figure 2. Lesson Study groups created lessons for grade levels ranging from prekindergarten (Pre-K) to grade 12. In addition, there were classrooms specified by content, including band and art. Most groups created lessons for elementary students; however, grade 6 had the highest number of participating students. Some groups reported collaboratively working across grade levels, most often in grades 3–5 or 6–8. The percentage of participating students is reported by subject area in Figure 3. Most groups focused the Lesson Study on either English language arts, mathematics, or science.

Figure 2. Percent of Lesson Study Students by Grade Level

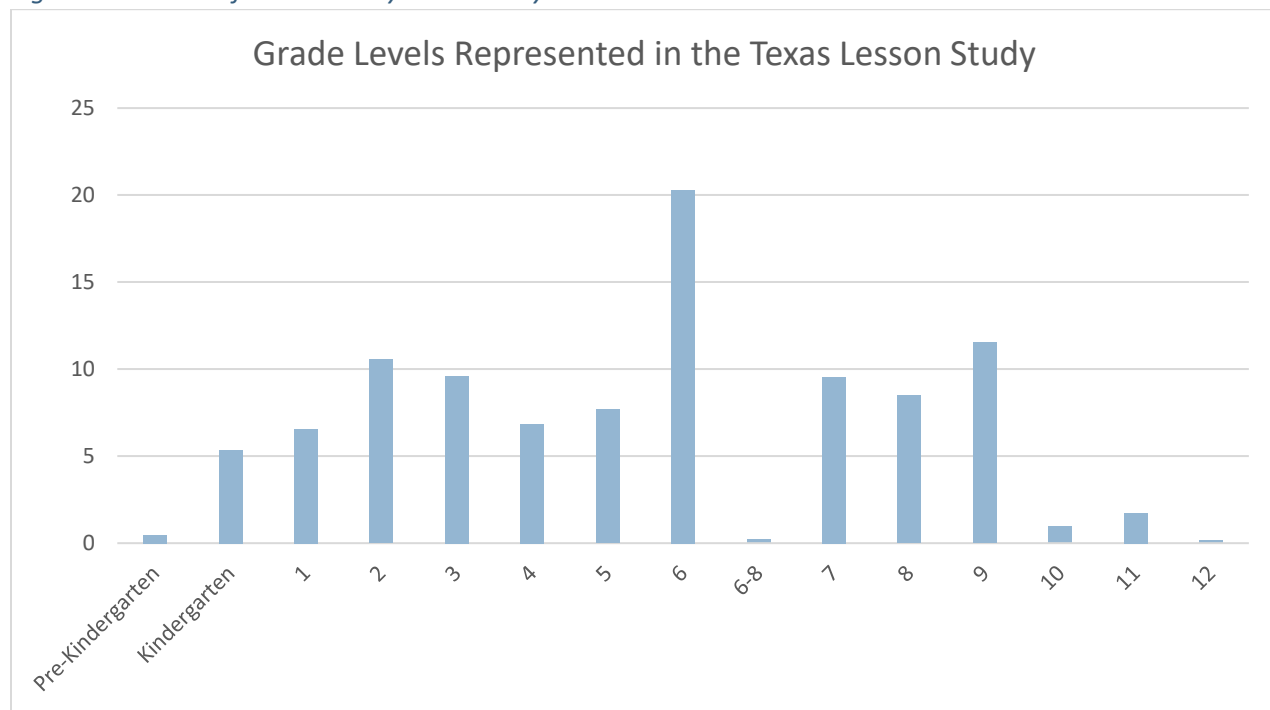
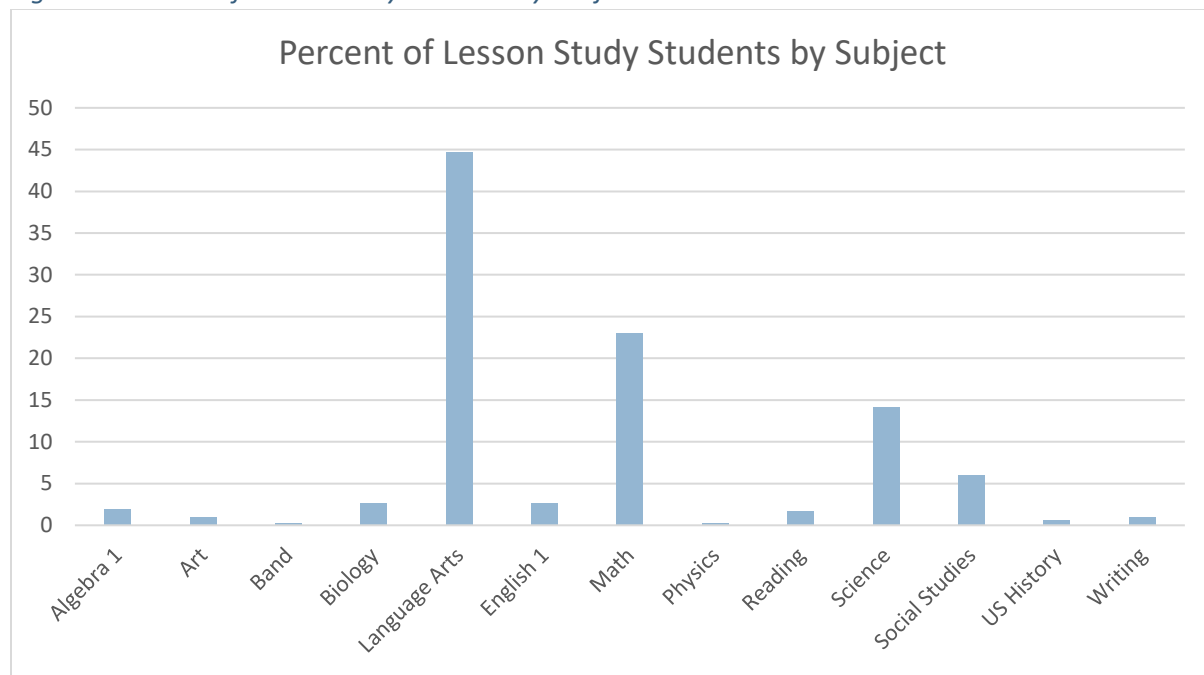


Figure 3. Percent of Lesson Study Students by Subject



## RESULTS

### Q1. How did the Lesson Study Professional Development pilot program affect teacher's sense of self-efficacy?

A pretest and posttest survey of teacher self-efficacy (Appendix A) was completed online before and after the Lesson Study cycle. This survey was developed by the program managers from each of the coordinating ESCs (i.e., ESC 6, ESC 13, ESC 14) and TEA staff. The analysis included 774 pretest (fall) responses and 496 post-test (spring) responses. The internal consistency of scores from the pre-test survey was  $\alpha = .72$ ,<sup>5</sup> and the internal consistency of scores from the post-test survey was  $\alpha = .69$ . The results of the pretest and posttest surveys are reported in Table 2.

Teacher participant responses varied from pretest and posttest. To better evaluate those differences, the scores from the pretest survey and posttest survey items were compared using an independent samples *t*-test ( $\alpha = .05$ ). The results of the *t*-tests indicated that the scores of four survey items were statistically different from pretest to posttest. Teachers reported gains in (a) "I am confident in my teaching abilities," (b) "I receive adequate time to collaborate with my colleagues," (c) "I am an expert in the content that I teach," (d) "I am comfortable discussing my classroom with others," (e) "I feel like a respected professional," (f) "I view my colleagues as experts in the field of teaching," and (g) "Collaborative professional development positively impacts student learning." Only one measure did not increase significantly: "I would recommend the teaching profession to others." The greatest gains were found on teachers' confidence in their teaching ability, and the effect was moderate ( $d = .57$ )<sup>6</sup>.

Teachers were asked to answer four additional questions that were procured from the Teachers Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001). The results of the independent samples *t*-test indicated that the scores of the items were statistically different from pretest to posttest. Teachers reported gains in all four areas: a) crafting good questions for students, b) using a variety of assessment strategies, c) providing alternate examples to alleviate confusion, and d) implementing alternative strategies in the classroom. The effect sizes ranged from small to large. The largest effects were on crafting questions and implementing alternative strategies. The means, standard deviations, and effects sizes are reported in Table 3.

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<sup>5</sup> Alpha ( $\alpha$ ) is a measure of internal consistency which refers to how consistent the items on a test measure a single construct or concepts.

<sup>6</sup> Cohen (1992) was used as a general guide for the interpretation of standardized mean differences.

Table 2. Means, Standard Deviations, and Standardized Mean Differences of Teacher Self-Efficacy Scores (N = 1,270)

Teacher Self-Efficacy	Pretest (N=774)		Posttest (N=496)		ES
	M	SD	M	SD	
1. I am confident in my teaching abilities.	4.06	0.75	4.45	0.63	0.57*
2. I would recommend the teaching profession to others.	3.64	1.07	3.75	1.05	0.10
3. I receive adequate time to collaborate with my colleagues.	3.29	1.14	3.65	1.10	0.32*
4. I am an expert in the content that I teach.	3.66	0.83	4.01	0.73	0.45*
5. I am comfortable discussing my classroom with others	4.57	0.67	4.72	0.50	0.25*
6. I feel like a respected professional	3.89	0.97	4.12	0.90	0.24*
7. I view my colleagues as experts in the field of teaching.	4.21	0.70	4.40	0.63	0.28*
8. Collaborative professional development positively impacts student learning.	4.61	0.63	4.68	0.56	0.13*
<b>Internal Consistency Reliability (<math>\alpha</math>)</b>	0.72		0.69		

Note: ES, effect size as measured by Cohen's *d*, .2 = small effect, .5 = moderate effect, .8 = large effect.

\* Statistically significant ( $p < .05$ ).

Table 3. Means, Standard Deviations, and Standardized Mean Differences of Teacher Self-Efficacy Scores (N = 580)

Teacher's Sense of Efficacy Scale	Pretest (N=236)		Posttest (N=344)		ES
	M	SD	M	SD	
1. To what extent can you craft good questions for your students? (How much can you do?)	3.80	0.69	4.28	0.49	0.80*
2. How much can you use a variety of assessment strategies? (How much can you do?)	3.80	0.70	4.20	0.46	0.68*
3. To what extent can you provide an alternative explanation or example when students are confused? (How much can you do?)	4.09	0.66	4.32	0.47	0.40*
4. How well can you implement alternative strategies in your classroom? (How much can you do?)	3.83	.68	4.30	0.48	0.80*
<b>Internal Consistency Reliability (<math>\alpha</math>)</b>	.79		.76		

Note: ES, effect size as measured by Cohen's *d*, .2 = small effect, .5 = moderate effect, .8 = large effect.

\* Statistically significant ( $p < .05$ ).

Table 4. Means, Standard Deviations, and Standardized Mean Differences of Teacher Teacher’s Perceptions After “Research” in Phase 2 (Pretest) and After Phase 4 (Posttest) (N = 1,222)

Teachers’ Perceptions of the Research Phase	Pretest (N=619)		Posttest (N=603)		ES
	M	SD	M	SD	
1. Research informed our decisions and discussions during this phase.	4.334	.8793	4.420	.8673	-0.10
2. Our Lesson Study work during this phase will lead to improved student outcomes for our selected TEKS.	4.541	.7392	4.595	.7418	+0.07
3. The outside facilitator was prepared, open to our ideas, and encouraged discussion.	4.756	.6636	4.595	.7418	-0.23*
4. I understood the objective(s)/purpose of our Lesson Study meetings.	4.528	.8421	4.552	.8846	+0.03
5. I was given the opportunity to share my ideas and felt listened to.	4.717	.7031	4.672	.7592	-0.06
6. We achieved our meeting objectives by the end of each meeting.	4.446	.8618	4.471	.8913	+0.03
<b>Internal Consistency Reliability (<math>\alpha</math>)</b>	.91		.92		

Note: ES, effect size as measured by Cohen’s *d*, .2 = small effect, .5 = moderate effect, .8 = large effect.

\* Statistically significant ( $p < .05$ ). +/- indicates positive or negative effect.

Table 4 summarizes teachers’ perceptions after completing the bulk of the Research component in phase 2 (pretest) and completing phase 4 (posttest). The results of the independent samples *t*-test indicated that there was a statistically significant difference from pretest to posttest on one item, “The outside facilitator was prepared, open to our ideas, and encouraged discussion,” and there was small negative effect. This suggests that teachers believed that the outside facilitators were less prepared, open to new ideas, and less likely to encourage discussion by the end of the Lesson Study cycle. No other significant differences were found on the remaining items and the effects were negligible.

## Q2. What were the facilitators’ and participants’ perceptions of the Lesson Study process?

### Facilitators’ Perceptions

Facilitators were asked to respond to a brief at the midpoint of phase 2 and at the end of phase 4 of the Lesson Study (Appendix A). The percent of facilitators that indicated group members met or exceeded expectation is reported in Table 5. Facilitators generally reported that group members met or exceeded their expectations throughout the Lesson Study.

Table 5. Percent of Facilitators Indicating Group Members Met or Exceeded Expectations

Facilitator Reflections about Group Members	% (N = 358)
Open and non-judgmental to other’s opinions and ideas	98

<b>Facilitator Reflections about Group Members</b>	<b>% (N = 358)</b>
Patient and flexible	95
Optimistic and enthusiastic	93
Prepared with materials, resources, and ideas	93
Share responsibility and follow through with their meeting 'roles'	92
Understand the phase of the Lesson Study cycle in which they are working	95
Listen to each other and ask questions	98
Contribute to the discussion	96
Stay on task	93

Facilitators were also invited to identify practices that assisted in the success of the Lesson Study process through an open-ended survey question. The most salient commonalities in those responses were comments about the effective data and research tools that were available and how those tools promoted collaboration among teachers.

#### *COLLABORATING AROUND DATA AND RESEARCH*

The data and research tools available to participants of the Lesson Study were generally well-received and helped to facilitate discussions and served as a foundation for collaboration. Facilitators reported that teachers aptly identified relevant research to improve instruction while having deep and meaningful discussions within their groups.

*“The collaborative development of specific research interests/questions, along with a shared list of vetted research databases resulted in a focused and efficient use of time. This then provided ample opportunity to discuss and share ideas for practical classroom implication.”*

*“Teachers printed out their research materials and physically highlighted quotes they thought were important or insightful. They then made a list of quotes and main ideas from each article they read. When they began writing, they used the lists as an outline for their writing.”*

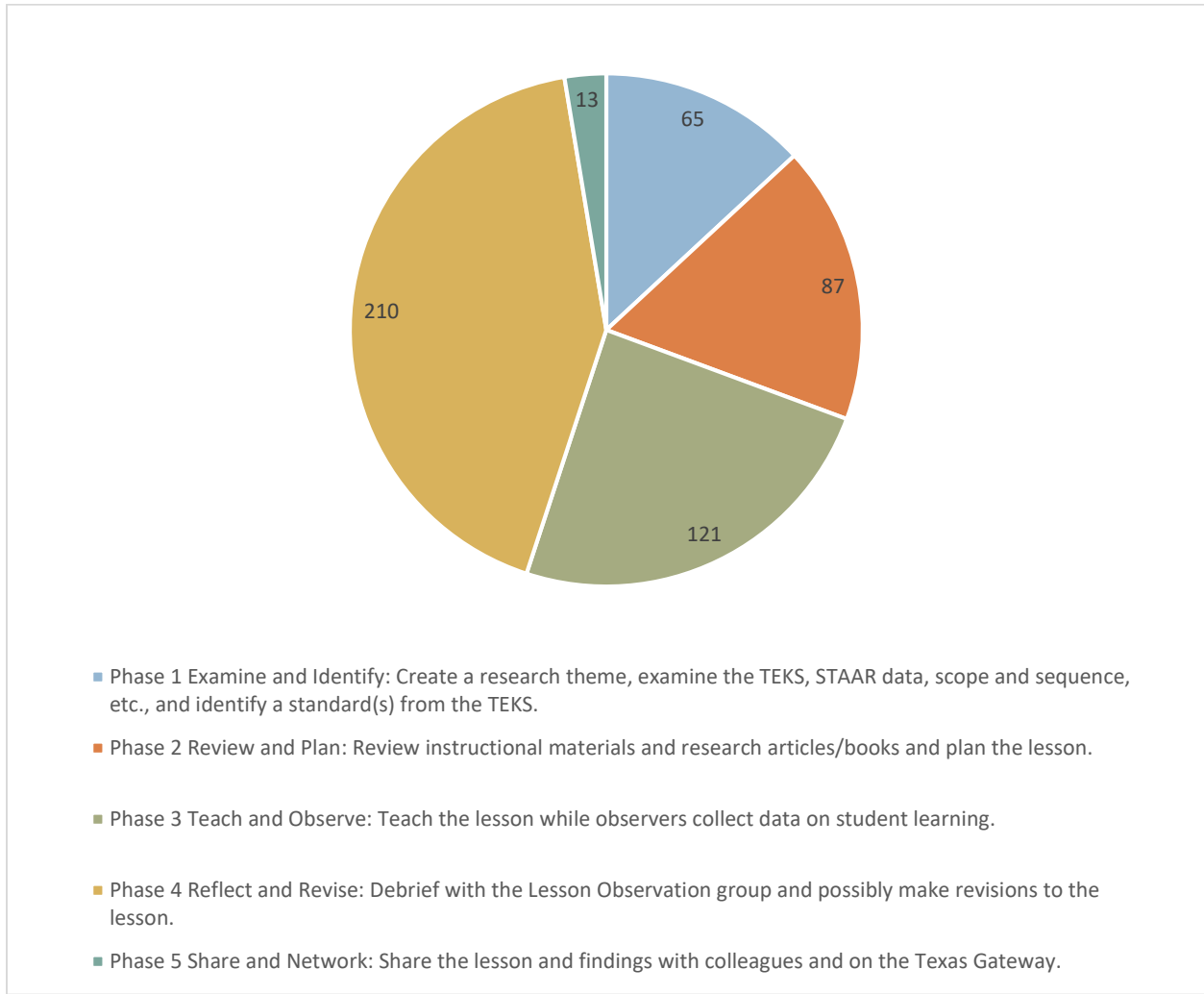
*“Using the research protocol was most helpful.”*

#### **Teachers’ Perceptions**

Teacher participants were invited to respond to a Teacher Reflection Survey (Appendix A) given at the end of the Lesson Study cycle. As part of these surveys, teacher participants were asked to identify the phase of Lesson Study that they believed was most beneficial. Forty-two percent of the teachers believed reflecting and revising to be the most beneficial phase. Only three percent believed the share and network phase was the most beneficial. A summary of the teacher responses can be found in Figure 4.

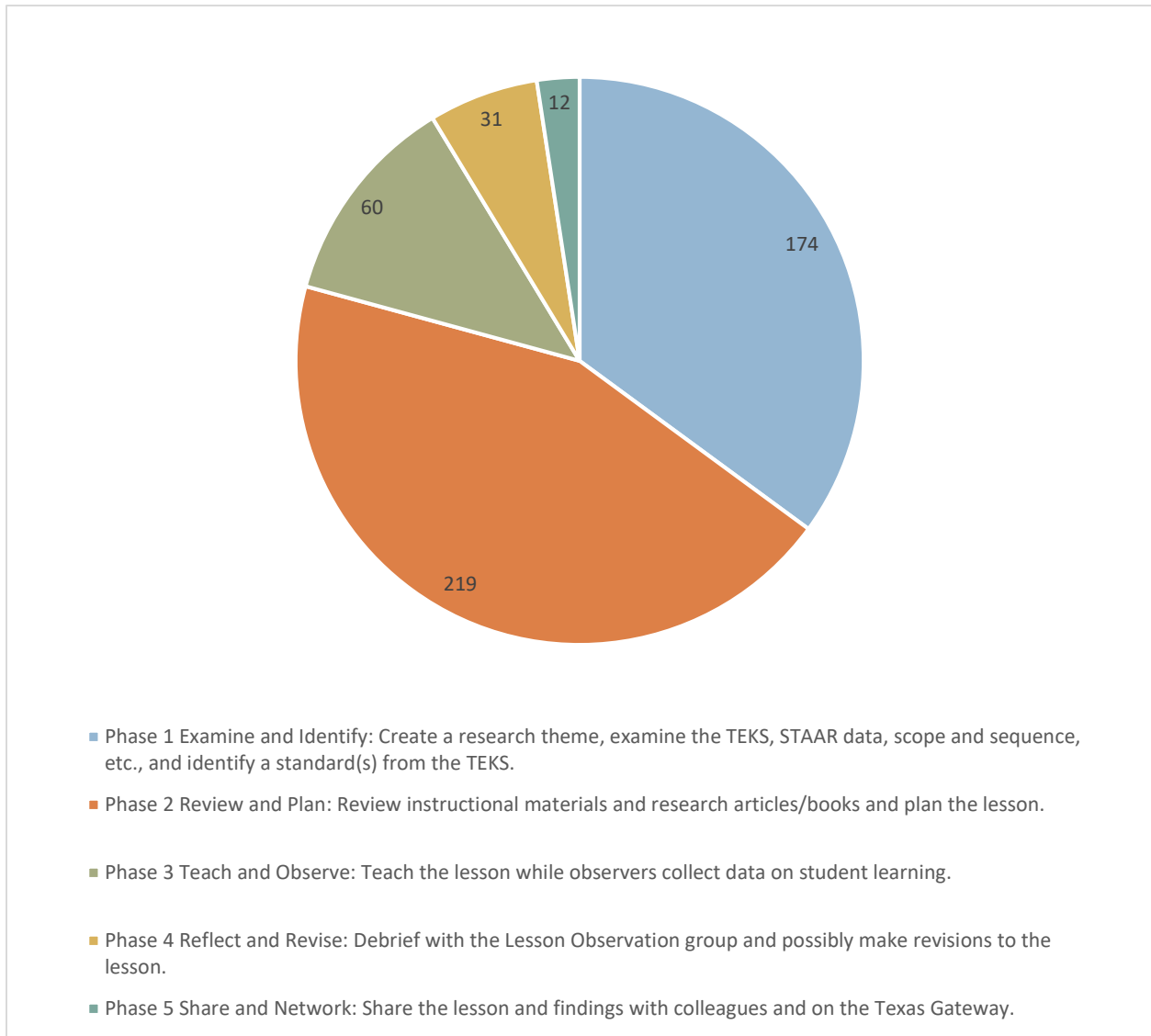


Figure 4. The Most Beneficial Phase of the Lesson Study (N = 496)



Teachers were also asked to report the most challenging phase of the Lesson Study process. Results indicated that the planning process was most difficult. Thirty-five percent of teachers indicated that Phase 1 was the most challenging, and 44 percent of teachers perceived Phase 2 as the most challenging. These two phases focused mainly on the planning process. Conversely, teachers appeared to be relatively comfortable with teaching, observing, reflecting, and sharing their lessons (Phases 3–5). The results are summarized in Figure 5.

Figure 5. The Most Challenging Phase of the Lesson Study (N = 496)



**MOST BENEFICIAL FOR TEACHING PRACTICE**

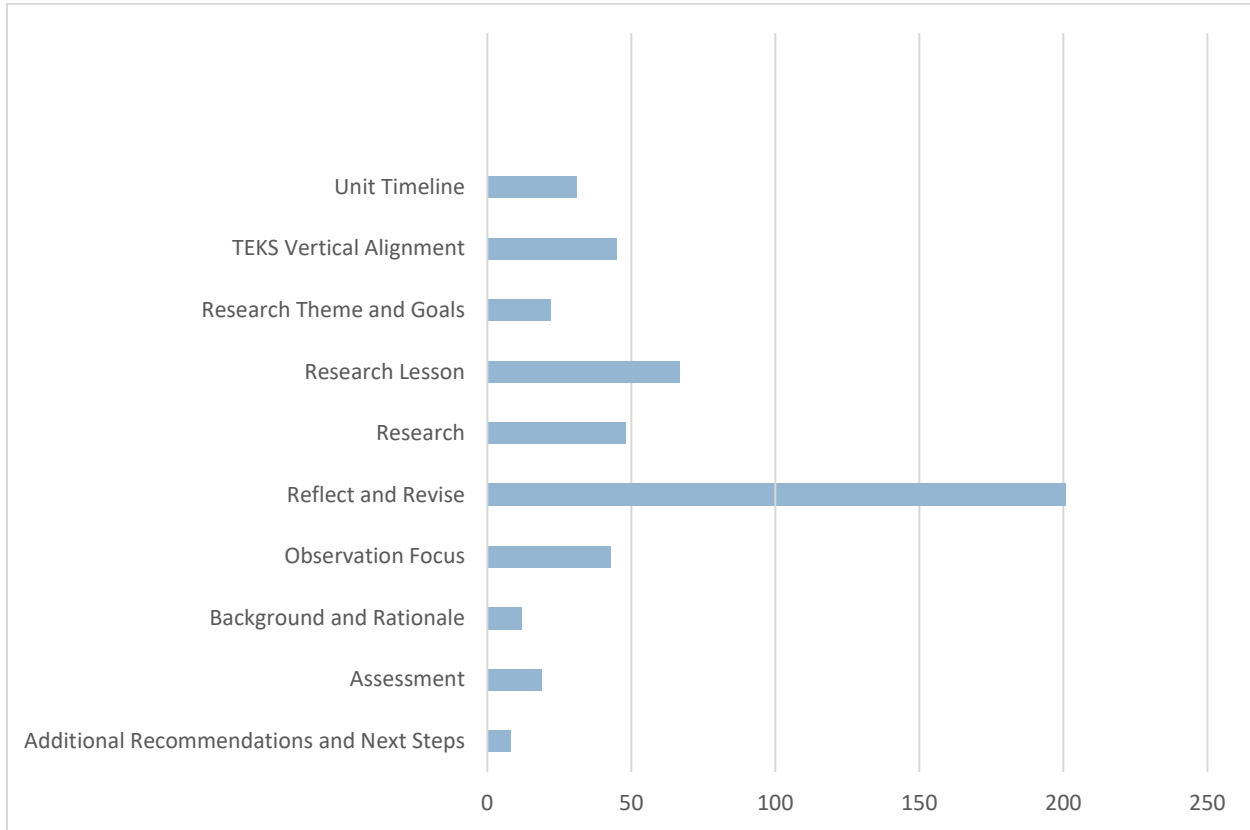
Lastly, teachers were asked about which section of the Lesson Study proposal (i.e., the document teachers complete throughout the Lesson Study process) they viewed as most beneficial for their teaching practice. The most common response was the Reflecting and Revising section (Figure 6). When reviewing the qualitative data, teachers who valued Phase 4 clearly benefitted from working together and believed it had a positive impact on students’ learning.

*“I liked the Reflect and Revise portion because I truly like others’ feedback on my teaching, what they saw the kids doing well, and what needs to be improved. I find it interesting how we all process a lesson differently.”*

*“Reflecting and Revising helped me make a better lesson for my kids.”*

*“The opportunity to review the lesson implementation and discuss specific changes together as a team.”*

Figure 6. The Most Beneficial Lesson Proposal Section for Teaching Practice (N = 496)



#### ***STUDENT AND PROFESSIONAL GROWTH***

The percent of teacher participants that responded favorably to questions about student and professional growth is reported in Table 6. Most teachers reported that Lesson Study positively impacted student growth (84 percent) and their own professional growth (84 percent). Further, most teachers reported that the process of collecting data during the lesson observation provided insight into the learning process (88 percent). In addition, 86 percent of the teachers believed there was enough time to get through the Lesson Study process. Finally, 68 percent of the teachers placed the Lesson Study process in the top 10 percent of professional development they had received.

Table 6. Percent of Teachers Who Responded Favorably to Questions about Student and Professional Growth (N = 496)

<b>Question</b>	<b>%</b>
Did you have sufficient time to go through the Lesson Study process?	86
Participating in Lesson Study has impacted student growth	84
Participation in Lesson Study has impacted my professional growth	84

Question	%
By having teachers and outside educators collect data during the Lesson Observation, I had greater insight on the learning process and students' understanding of the objective(s)	88
Of the professional development sessions/programs I've participated in, Lesson Study is in the top 10 percent for impacting my effectiveness in the classroom.	68

#### CONTINUED LESSON STUDY AND STIPENDS

The percent of teachers who responded favorably to repeating the Lesson Study process and without a stipend is reported in Table 7. A little over half of the teachers participating in the Lesson Study reported that they would be willing to participate in Lesson Study again (54 percent), which was a higher percentage than the previous year's results. However, only 20 percent of teachers would participate in the Lesson Study without receiving a stipend, which was still higher than the previous year as well. Qualitative data indicate that the extensive time commitment is likely the most common factor in teachers' willingness to participate.

*Table 7. Percent of Teachers Who Responded Favorably to Repeating Lesson Study and Without Receiving a Stipend*

Question	%
I would like to go through the Lesson Study process again	54
Would you participate in Lesson Study again without receiving a stipend	20

### School Administrators' Perceptions

Administrators from each school that participated in the Lesson Study during the 2018–2019 school year were asked to complete a survey about the professional development program (Appendix A). A total of 74 principals in 13 of the 17 regions completed the survey. Of the 77 percent of administrators that indicated they were able to sit in on the Lesson Study sessions, about 83 percent agreed that the sessions were more in-depth than typical team discussions.

Teacher conversations were often described using words such as “meaningful,” “focused,” “deep,” and “professional.”

*“Very meaningful, deep discussions around depth and complexity of the TEKS.”*

*“Rich, meaningful, professional dialogue.”*

*“Conversations were deep and meaningful. They focused on student and teacher behaviors.”*

*“The discussions taking place during the Lesson Study sessions were professional, TEKS-based, and student-focused.”*

The percent of administrators that responded favorably to survey items are reported in Table 8. Most administrators indicated that Lesson Study impacted both students’ (83 percent) and teachers’ professional (86 percent) growth. Many administrators (92 percent) also believed that the lessons designed though Lesson Study were aligned to the Texas Teacher Evaluation and Support System (T-TESS) framework.

*Table 8. Percent of Administrators Who Responded Favorably to Post-Survey Items (N = 74)*

<b>Question</b>	<b>%</b>
Lesson Study impacted student growth	83
Lesson Study impacted teacher professional growth	86
The designed lesson is aligned to the T-TESS framework	92

When asked how the Lesson Study impacted teachers, many administrators commented that Lesson Study developed a deeper understanding of instruction and the standards for teachers. The administrators claimed:

*“The process improved their skill set as a teacher and understanding how to focus on TEKS...”*

*“I believe the Lesson Study helped teachers get a deeper understanding of what students really need to know and what each content standard really means. It was great training on how to break standards down, understand where students are coming to us from, and how we need to plan our instruction to meet the expected outcomes.*

*“I believe they gained a better understanding of the TEKS.”*

School administrators were also asked about what changes they would recommend for the Lesson Study Professional Development program, and many of the administrators spoke positively about the current process, stating often they would recommend no changes. However, many school administrators mentioned time as a concern, but some admitted they were unsure of how to resolve the issue, “The process is long. I don’t know if it can be streamlined to require less time for the teachers participating.” One administrator did recommend, “If at all possible, ... a model that can be done start to finish in one week. I would recommend one day of planning, one day to observe, and one day to reflect spread out over one week.” Several of the administrators also suggested being more up front with teachers about the time commitments. Finally, similarly to the previous year’s findings, the administrators were concerned about completing the cycle in the spring because of standardized testing. The following quote sums up many of the administrators’ concerns:

*“The process was great, but it was very time consuming for the teachers. Some of them felt overwhelmed with all the parts that were required.”*

#### **SCHOOL ADMINISTRATOR INTEREST IN FUTURE LESSON STUDY PARTICIPATION**

School administrators were asked about their interest in implementing Lesson Study campus-wide and their willingness to incorporate Lesson Study meetings into their campus-wide professional development plan, and 81 percent indicated they could likely integrate it (Table 9). Fifty-one percent of school

administrators reported that they were willing to implement Lesson Study campus-wide. Both of these percentages were much higher than the previous year.

*Table 9. Percent of School Administrators Who Responded “Yes” to Questions about Lesson Study in the Future (N = 74)*

Question	Yes	No
	%	%
Are you interested in implementing Lesson Study campus wide?	51	49
Could you see Lesson Study as part of your campus-wide professional development program?	81	19

### Q3. How did the performance of students change after participating in the lessons?

#### Student Participants

During the year-long study, 12,708 students directly participated in at least one of the lessons as part of Lesson Study. The students were given a pretest and posttest to demonstrate their learning and measure students’ growth as a result of the lesson. Students were also surveyed to gather the students’ perceptions of the lessons (n = 8,976). Finally, 779 students involved in the Lesson Study participated in one-on-one interviews.

#### Summary of Student Participant Pretest and Posttest Scores

The means and standard deviations of the pretests and posttests included in the analysis are reported in Table 10. These means were tested using a paired samples *t*-test. The result of those tests indicated students made statistically significant gains from their pretests to posttests ( $p < .05$ ) in all the participating ESCs. On average, the magnitude of those gains was 0.76 standard deviations, which is approaching a large effect. The largest gains were reported among students in the ESC 7 groups ( $d = 1.63$ ). The smallest gains were reported among students in the ESC 16 groups ( $d = .33$ ). On average for the state, there was an increase of approximately 21 percent between pretest and posttest results.

*Table 10. Means and Standard Deviations of Student Pretest and Posttest Lesson Study Assessments (N = 12,471)*

ESC	n	Pretest Data		Posttest Data		ES
		M	SD	M	SD	
1	417	40.69	26.16	67.58	26.68	0.96*
3	865	46.46	27.84	80.63	20.41	1.16*
4	941	37.07	24.94	77.11	22.52	1.39*
5	1283	55.11	23.94	70.66	19.32	0.65*
6	1055	53.42	24.48	65.83	22.81	0.51*
7	560	40.27	25.85	81.37	20.26	1.63*
8	264	60.67	30.93	73.90	23.44	0.41*

<b>9</b>	216	53.63	21.48	73.99	19.77	0.88*
<b>10</b>	1396	32.06	32.07	65.44	33.50	0.92*
<b>11</b>	1268	58.74	26.07	75.33	22.19	0.64*
<b>12</b>	480	41.43	34.33	60.48	33.96	0.49*
<b>13</b>	2244	60.50	27.26	76.06	25.23	0.54*
<b>14</b>	478	60.33	26.81	75.31	20.54	0.56*
<b>15</b>	128	55.21	28.02	66.23	27.16	0.37*
<b>16</b>	108	57.70	25.95	67.16	26.01	0.33*
<b>17</b>	163	26.35	27.62	41.45	30.59	0.58*
<b>20</b>	605	60.84	28.30	83.46	20.02	0.90*
	<b>Average</b>	<b>49.44</b>	<b>27.18</b>	<b>70.71</b>	<b>24.38</b>	<b>0.76</b>

Note: Means reflect the percent of correct responses to the assessment developed by the Lesson Study group. ES, effect size as measured by Cohen's *d*, 0.2 = small effect, 0.5 = moderate effect, 0.8 = large effect.  
 \* Statistically significant ( $p < .05$ )

### Summary of Student Growth by Grade Level

A repeated measures analysis of variance revealed statistically significant differences from pretest to posttest among grade levels. There were statistically significant main effects,  $F(1, 12455) = 155.58, p < .001$ , which was qualified by an interaction effect,  $F(15, 12455) = 31.11, p < .001$ . These differences are illustrated in Table 11 with students' mean growth scores by grade.

Table 11. Student Growth by Grade Level ( $N = 8,683$ )

Grade	N	Pretest Data		Posttest Data		Growth
		M	SD	M	SD	
<b>Pre-K</b>	58	73.34	16.3	80.86	13.34	7.52
<b>K</b>	669	57.72	29.89	82.57	22.27	24.85
<b>1</b>	820	51.34	31.7	77.67	27.3	26.33
<b>2</b>	1326	51.93	27.39	74.19	24.14	22.26
<b>Primary</b>	2873				<b>Avg</b>	<b>20.24</b>
<b>3</b>	1175	54.95	27.15	74.52	23.36	19.57
<b>4</b>	861	47.35	29.75	64.25	28.76	16.9
<b>5</b>	965	51.48	27.29	77.6	21.89	26.12
<b>Intermediate</b>	3001				<b>Avg</b>	<b>20.86</b>
<b>6</b>	2496	51.95	25.5	73.98	21.42	22.03
<b>7</b>	1209	44.54	33.21	58.57	31.51	14.03
<b>8</b>	1065	57.78	28.43	74.6	24.75	16.82
<b>Middle</b>	4770				<b>Avg</b>	<b>17.63</b>
<b>9</b>	1462	39.81	29.99	73.63	25.87	33.82
<b>10</b>	120	42.65	19.51	60.37	20	17.72
<b>11</b>	195	43.47	37.38	74.12	23.62	30.65
<b>12</b>	20	50.1	27.56	66.37	14.99	16.27

<b>High</b>	1797				<b>Avg</b>	<b>24.62</b>
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### Summary of Student Growth by Lesson Type

In order to determine the differential growth of students by lesson type, a repeated measures analysis of variance was used to determine whether differences existed between the types of lesson, namely, 1) The first time the Lesson Study lesson was taught for the Lesson Observation, 2) The Lesson Study lesson being taught for the Lesson Observation after teachers reflected on refined the original lesson, and 3) The lesson was taught to students but not observed by other teachers. The analysis revealed statistically significant main effects,  $F(1, 12414) = 5,958.53, p < .001$ , which was qualified by an interaction effect,  $F(2, 12445) = 5.16, p < .05$ . Tukey post hoc procedure showed that the observed, refined research lesson type outperformed the unobserved lesson and the observed first lesson, and the differences were statistically significant ( $p < .001$ ). Other pairwise comparisons were not statistically significant. This indicated that students' scores increased more when the lesson was observed, and the lesson had been refined.

### Summary of Student Growth by Academic Subject

In order to determine the differential growth of students by academic subject, related subjects first were collapsed into five main subjects, including ELAR ( $n = 6,211$ ), math ( $n = 3,142$ ), science ( $n = 2,167$ ), social studies ( $n = 793$ ), and fine arts ( $n = 158$ ). A repeated measures analysis of variance is revealed statistically significant main effects,  $F(1, 12466) = 2,040.88, p < .001$ , and the main effects were qualified by an interaction effect,  $F(2, 12466) = 104.41, p < .001$ . Tukey post hoc procedure showed several statistically significant comparisons. Students' growth in social studies was significantly greater than students in the other three academic subjects. Growth in ELAR was significantly greater than in math, science, and fine arts. Students in fine arts showed the least significant growth. No statistically significant differences were found between math and science.

## Q4. What were the perceptions of students about the lessons?

### Student Responses to the Post-Lesson Survey

Students were also invited to respond to a survey about their opinions of the lesson (Appendix A). Student responses on how well they understood the lesson are reported by category in Table 12. Overall, 90 percent of students from the study indicated that they understood most or all the lesson.<sup>7</sup> Thus, there was only a small percentage that reported having difficulty with lessons. These results were nearly identical to the previous year's study.

*Table 12. Student Perceptions about How Well They Understood the Lesson*

	<b>N</b>	<b>Understood the lesson</b>	<b>Understood most of the lesson</b>	<b>Somewhat confused</b>	<b>Did not understand</b>
All Surveyed Students	8,976	56%	34%	8%	2%

<sup>7</sup> This number was computed by adding the percent of students who "understood the lesson" and "understood most of the lesson" reported in Table 12.



Student participants were also asked about the difficulty of the work associated with the lesson. Student responses are reported in Table 13. Seventy-six percent of students responded that the level of work was just right for the lesson. Only a small percentage of students reported that the lesson was too difficult. These responses were nearly identical to the previous year’s study as well.

*Table 13. Student Perceptions About the Level of the Work Associated with the Lesson*

	<b>N</b>	<b>Too Hard</b>	<b>Just Right</b>	<b>Too Easy</b>
All Surveyed Students	8,976	7%	76%	17%

The percent of students that thought the lesson was similar to their typical lessons is reported in Table 14. Overall, a little less than half of the students (48 percent) believed the lessons delivered during Lesson Study were typical of other lessons while 52 percent believed the lessons were different.

*Table 14. Percent of Students Who Indicated the Lesson Was Similar to or Different from Other Lessons (N = 8,976)*

<b>All Surveyed Students</b>	<b>%</b>
Similar to other lessons	48
Different than other lessons	52

The percent of students that responded favorably to how well they enjoyed the lesson is reported in Table 15. Overall, most students reported they enjoyed the lessons developed by the Lesson Study groups (74 percent).

*Table 15. Percent of Students Who Responded Favorably to the Lesson*

	<b>N</b>	<b>%</b>
Students	8,976	74

Note: % reflects the percent of students who responded, “strongly agree” or “agree.”

## Student In-Person Interviews

Lastly, of the students who participated in the lessons, some were invited to a separate in-person interview (Appendix A). This resulted in 779 interviews conducted by the Lesson Study facilitators. Many of the comments from those interviews were specific to the individual lessons delivered by the Lesson Study groups. However, there were some general themes identified from data. Mainly, students commented that the lessons were “fun.” They also reported that they enjoyed learning in groups. These findings were quite similar to the previous year’s findings.

*“I liked how we shared our ideas in a group and compared our thoughts to other people’s. We argued but in a respectful way. That was fun.”*

*“I liked the group work and to talk to people. I liked the first article about snakes. It was fun. I liked seeing my teacher labeling the text features, so I could do it by myself or with my group later.”*

*"I enjoyed being able to debate with classmates and I also really enjoyed going around and doing a gallery walk. It was fun working with my group to understand what text structure it was."*

## SUMMARY AND RECOMMENDATIONS

### Summary

This report detailed findings from the Lesson Study Professional Development program implemented during the 2018–2019 school year. The study examined data from 202 Lesson Study groups, 74 administrators, 761 teachers, and approximately 12,708 students from 17 different regions (ESCs) across Texas. The major goals of the study were to determine how participation in the study affected teachers' self-efficacy; evaluate the facilitators', teachers', and administrators' perceptions of the process; analyze student performance; and consider the students' perspective on the lessons developed in the process of the Texas Lesson Study. The results were similar to the previous year's study on effectiveness.

#### HOW DID THE LESSON STUDY PROFESSIONAL DEVELOPMENT PROGRAM AFFECT TEACHER'S SENSE OF SELF-EFFICACY?

One of the goals of the Lesson Study Professional Development program is to improve teacher's sense of self-efficacy. Teachers reported gains in (a) "I am confident in my teaching abilities," (b) "I receive adequate time to collaborate with my colleagues," (c) "I am an expert in the content that I teach," (d) "I am comfortable discussing my classroom with others," (e) "I feel like a respected professional," (f) "I view my colleagues as experts in the field of teaching," and (g) "Collaborative professional development positively impacts student learning." The greatest gains were found in teachers' confidence in their teaching ability, and the effect was moderate.

#### WHAT WERE THE FACILITATORS' AND PARTICIPANTS' PERCEPTIONS OF THE LESSON STUDY PROCESS?

Lesson Study facilitators, teachers, and administrators were also asked about their perceptions of the Lesson Study process. First, facilitators indicated that nearly all of the teachers participating were open-minded, patient and flexible, optimistic and enthusiastic, responsible, and diligent and effective in groups. Teachers also viewed the facilitation process positively; however, teachers did indicate that by the end of the process, the outside facilitator was less likely to be prepared, open to ideas, or encourage discussion.

Participating in the Lesson Study promoted growth among teachers and students. Eighty-four (84) percent of teachers and 86 percent of administrators reported that the Lesson Study impacted the teachers' professional growth, a direct aim of the program. In addition to teachers' professional growth, 83 percent of administrators and 84 percent of teachers noted that the process also impacted student growth. Teachers indicated that being able to reflect and revise lessons with their groups led to their deeper understanding of the standards and how to teach them. Although teachers generally viewed Lesson Study positively, they also noted the process was time consuming.

#### HOW DID THE STUDENTS' PERFORMANCE CHANGE AFTER PARTICIPATING IN THE LESSONS?

Collectively, there was an overall increase of approximately 21 percent. The largest gains were reported among students in the ESC 7 groups ( $d = 1.63$ ). The smallest gains were reported among students in the ESC 16 groups ( $d = .33$ ). When considering grade level, the high school students had the largest gains. When considering academic subject, Lesson Study students who participated in social studies or ELAR

made the greatest gains. In addition, the most student growth occurred after an observed, refined lesson was used. Finally, it should be noted that the variation in the number of students from different ESCs, grade-levels, and academic subjects should be taken into consideration when interpreting the results.

#### WHAT WERE THE PERCEPTIONS OF STUDENTS ABOUT THE LESSONS DEVELOPED THROUGH THE LESSON STUDY PROCESS?

Most students indicated that they enjoyed (74 percent) and understood most or all of the lessons (90 percent) their teachers delivered through Lesson Study. 76 percent of the students believed the lesson's level of difficulty was "just right." A little over half (52 percent) of the students surveyed believed the lesson developed during the process were different than their regular instruction. From the interviews, many of the students reported the lessons to be fun, and they enjoyed working in groups.

## Recommendations

The evidence collected from the Lesson Study process suggested value for both teachers and students. The following recommendations are offered to help guide program managers of the Lesson Study Professional Development Program:

- **Check in with facilitators throughout the process.** Teachers reported that outside facilitators were less effective in promoting discussions, being open to ideas, and were slightly less prepared near the end of the Lesson Study cycle.
- **Reiterate that the process is not simply about creating one lesson.** Although teachers produce a tangible lesson that is delivered, the process itself serves as means for developing the teachers' abilities that can be transferred to other contexts. For example, the process helped teachers diversify their assessments, use of examples, and classroom strategies, which are important for any learning situation.
- **Remind teachers of the purpose.** Teachers should be aware that the process is not punitive or meant to be condescending. Rather, it is an opportunity to work collaboratively, teach, reflect, and understand one's strengths and areas for improvement. Moreover, the survey results indicated that teachers made the greatest gains in confidence and, therefore, should be reminded that the results of the process are often positive.
- **Continue to provide opportunities to reflect and debrief with colleagues.** Teachers found that reflecting and debriefing with their colleagues to be the most beneficial part of the Lesson Study.
- **Encourage and provide time for peer observations.** Students who participated in a lesson that teachers had previously reflect on and refined made the most gains. Encouraging teachers to observe each other, reflect on their lessons, and make revisions to the lesson could have a positive impact on student learning.
- **Identify similar classrooms to serve as a control group.** While many of the results were positive, it would be informative to know whether the Lesson Study process is more effective than some current practices already in place.
- **Incorporate group work in the lessons.** According to the student perceptions, students liked working in groups. Encourage teachers to incorporate collaborative learning opportunities in some aspect of the lesson. This may have a positive impact on students learning.
- **Time continues to be a concern.** The process should be evaluated at every step to find ways to increase effectiveness while considering efficiency.

- **Continue to provide external and financial support.** Although the percentages of administrators willing to implement the Lesson Study campus-wide and teachers willing to participate without a stipend was greater than the previous year's study, about half of the administrators surveyed were not inclined to expand the program campus-wide. Continuing to provide external support may help facilitate this process. Teachers were still less inclined to participate in the process without receiving a stipend.

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## APPENDIX A: Lesson Study Surveys

### 1. Teacher Self-Efficacy Survey (administered before Lesson Study process begins) via Google Form

1. Which ESC Region do you teach in?
2. What is your email address? (The email address will be used to send a post-survey and in the data analysis, but individual results will not be shared with the district.)
3. To date, how many cycles of Texas Lesson Study have you completed? (If you are completing this survey at the end of a cycle, include the current cycle.)

#### Section 1

For Part 1, please share your thoughts on the teaching profession. (Answer choices are on a five-point Likert scale from Strongly Disagree to Strongly Agree.)

4. I am confident in my teaching abilities.
5. I would recommend the teaching profession to a student, friend, or relative.
6. I receive adequate time to collaborate with my colleagues.
7. I am an expert in the content that I teach.
8. I am comfortable discussing what goes on in my classroom with my colleagues.
9. I feel like a respected professional.
10. I view my colleagues as experts in the field of teaching.
11. I believe that taking part in collaborative professional development opportunities positively impacts student learning.

#### Section 2

Part 2 is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below.<sup>8</sup>

12. To what extent can you craft good questions for your students? (How much can you do? Nothing, Very Little, Some Influence, Quite a Bit, A Great Deal)
13. How much can you use a variety of assessment strategies? (How much can you do? Nothing, Very Little, Some Influence, Quite a Bit, A Great Deal)
14. To what extent can you provide an alternative explanation or example when students are confused? (How much can you do? Nothing, Very Little, Some Influence, Quite a Bit, A Great Deal)
15. How well can you implement alternative strategies in your classroom? (How much can you do? Nothing, Very Little, Some Influence, Quite a Bit, A Great Deal)
16. Other comments or questions (Long answer text)

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<sup>8</sup> Questions 11–14 are from the [Teachers' Sense of Efficacy Scale \(TSES\)](#).

## 2. First Teacher Reflection via Google Form (after Research section has been drafted)

Congratulations on what you've accomplished so far in the Lesson Study cycle! The feedback you provide will be used to make programmatic improvements. Please take your time and respond honestly and thoroughly. Thank you for your feedback!

1. What is your TXLS group number? (short response)
2. In which ESC region do you teach?
3. Which Lesson Study phase are you currently working in?
  - a. Phase 1: Examine & Identify
  - b. Phase 2: Review & Plan
  - c. Phase 3: Teach & Observe
  - d. Phase 4: Reflect & Revise
  - e. Phase 5: Share & Network

### Section 1

So far, your team has created a Research Theme, identified a student expectation(s) from the TEKS, set goals, drafted the Background and Rationale, and reflected on and summarized research findings.

4. Which of the listed components was the most beneficial to your practice? Why?
  - a. Creating a Research Theme
  - b. Identifying a student expectation from the TEKS
  - c. Setting Unit and Research Lesson goals
  - d. Drafting the Background and Rationale
5. Which of the listed components was the most challenging? Why?
  - a. Creating a Research Theme
  - b. Identifying a student expectation from the TEKS
  - c. Setting Unit and Research Lesson goals
  - d. Drafting the Background and Rationale

(Answer choices are on a five-point Likert scale from Strongly Disagree to Strongly Agree.)

6. Research informed our decisions and discussions during this phase.
7. Our Lesson Study work during this phase will lead to improved student outcomes for our selected TEKS.

### Section 2 (Meetings)

(Note: The responses are on a five-point Likert scale from Strongly Disagree to Strongly Agree.)

8. The outside facilitator was prepared, open to our ideas, and encouraged discussion.
9. I understood the objective(s)/purpose of our Lesson Study meetings.
10. I was given the opportunity to share my ideas and felt listened to.
11. We achieved our meeting objectives by the end of each meeting.
12. Other Comments or Questions

### 3. Facilitator Reflection via Google Form (after Research section has been drafted, then again after Phase 4)

Congratulations! You are half way through the Lesson Study cycle. Please provide your thoughts below.

1. Email address (short response)
2. Which ESC Region are you in?
3. Facilitator Name (first name and last name)
4. Campus Name
5. Group #

#### Section 1

6. Which phase are you currently working in?

#### Section 2 (Characteristics of a Collaborative Group)

3 = Exceeds Expectations; 2 = Meets Expectations; 1 = Needs Improvement

7. Group members are open and non-judgmental to other's opinions and ideas.
8. Group members are patient and flexible.
9. Group members are optimistic and enthusiastic.

#### Section 3 (Group Skills—Planning and Preparation)

3 = Exceeds Expectations; 2 = Meets Expectations; 1 = Needs Improvement

10. Group members come prepared with materials, resources, and ideas.
11. Group members share responsibility and follow through with their meeting 'roles'.

#### Section 4 (Group Skills—Meeting Participation)

3 = Exceeds Expectations; 2 = Meets Expectations; 1 = Needs Improvement

12. Group members know and understand the phase of the Lesson Study cycle in which they are working.
13. Group members listen to each other and ask questions.
14. Group members contribute to the discussion.
15. Group members stay on task.

#### Section 5 (Group Skills—Meeting Participation)

(Note: The responses are on a five-point Likert scale with descriptors below.)

1 = 100% (All) of the discussion is on GLOBAL (broad) characteristics of student learning (e.g., "My students always struggle with fractions.").

2 = 75% (Most) of the discussion is on GLOBAL (broad) characteristics of student learning, however teachers are beginning to have SPECIFIC insights into how students are thinking.

3 = 50% (Half) of the discussion is on GLOBAL (broad) characteristics of student learning, and 50% (half) of the discussion is on SPECIFIC insights into how students are thinking.

4 = 75% (Most) of the discussion is on SPECIFIC insights into how students are thinking, however teachers are still make GLOBAL, generalized comments on student thinking.



5 = 100% (All) of the discussion is on SPECIFIC insights into how students are thinking (e.g., "When comparing fractions, my students often have the misconception that the fraction with the larger denominator is the greater fraction.).

16. What was the common discussion trend up to this point?

### Section 6 (Self-Reflection)

17. Identify a best practice that assisted in the success of this phase. This can be a strategy used by you or your teachers. Why was this strategy effective? (short response)

18. What is a goal that you have for the next phase? (This can be for you as the facilitator or for your team of teachers.)

### Section 7 (Self-Reflection)

Questions, Group Issues, Other Thoughts

19. Additional Comments, Questions, and/or Suggestions

## 4. Second Teacher Reflection via Google Form

Congratulations on finishing the Lesson Study cycle! The feedback you provide will be used to make programmatic improvements. Please take your time and respond honestly and thoroughly. Thank you for your feedback!

1. Which ESC Region do you teach in?
2. What is your email address? (The email address will be used to send a post-survey and in the data analysis, but individual results will not be shared with the district.)
3. To date, how many cycles of Texas Lesson Study have you completed? (If you are completing this survey at the end of a cycle, include the current cycle.)

### Section 1

1. What is your TXLS group number? (short response)
2. In which ESC region do you teach?
3. Which Lesson Study phase did you JUST complete?
  - f. Phase 1: Examine & Identify
  - g. Phase 2: Review & Plan
  - h. Phase 3: Teach & Observe
  - i. Phase 4: Reflect & Revise
  - j. Phase 5: Share & Network

In these phases, your team designed formative assessments, mapped out the Unit Timeline, designed the Research Lesson, and taught and observed the Research Lesson while collecting data on student learning. The team then reflected on the Research Lesson, made revisions to the lesson, and retaught the lesson. You may have also heard from a final commentator (outside observer).

### Section 2 (Phase 2)

4. Which of the listed components was the most beneficial to your practice within Phase 2?
  - a. Designing formative assessments
  - b. Mapping out the Unit Timeline
  - c. Designing the Research Lesson
5. Why?
6. Which of the listed components was the most challenging within Phase 2?
  - a. Designing formative assessments
  - b. Mapping out the Unit Timeline
  - c. Designing the Research Lesson
7. Why?

### Section 3 (Phases 3 and 4)

8. Which of the listed components was the most beneficial to your practice within Phases 3 and 4?
  - a. Teaching the Research Lesson
  - b. Observing and collecting data on student engagement
  - c. Reflecting on and discussing the Research Lesson and collected data
  - d. Revising the Research Lesson
  - e. Reteaching the Research Lesson
  - f. Hearing from a final commentator (outside observer)

9. Why?
10. Which of the listed components was the most beneficial to your practice within Phases 3 and 4?
  - a. Teaching the Research Lesson
  - b. Observing and collecting data on student engagement
  - c. Reflecting on and discussing the Research Lesson and collected data
  - d. Revising the Research Lesson
  - e. Reteaching the Research Lesson
  - f. Hearing from a final commentator (outside observer)
11. Why?

## Section 4 (Teacher Reflection)

(Note: The responses are on a five-point Likert scale from Strongly Disagree to Strongly Agree.)

12. Research informed our decisions and discussions during this phase.
13. Our Lesson Study work during this phase will lead to improved student outcomes for our selected TEKS.

## Section 5 (Meetings)

The following questions will be focused on your TXLS team meetings. (Note: The responses are on a five-point Likert scale from Strongly Disagree to Strongly Agree.)

14. The outside facilitator was prepared, open to our ideas, and encouraged discussion.
15. I understood the objective(s)/purpose of our Lesson Study meetings.
16. I was given the opportunity to share my ideas and felt listened to.
17. We achieved our meeting objectives by the end of each meeting.
18. Other comments or questions

## 5. Teacher End-of-Cycle Reflection via Google Form

Congratulations on completing the Texas Lesson Study cycle! The Texas Education Agency and regional service center ask that you complete this survey to give feedback on your experience with Texas Lesson Study.

1. What is your TXLS group number?
2. In which ESC Region do you teach?
3. What is your email address? (The email address will be used to send a post-survey and in the data analysis, but individual results will not be shared with the district.)
4. To date, how many cycles of Texas Lesson Study have you completed? (If you are completing this survey at the end of a cycle, include the current cycle.)

### Section 1

For Part 1, please share your thoughts on the teaching profession. (Note: The responses are on a five-point Likert scale from Strongly Disagree to Strongly Agree.)

5. I am confident in my teaching abilities.
6. I would recommend the teaching profession to a student, friend, or relative.
7. I receive adequate time to collaborate with my colleagues.
8. I am an expert in the content that I teach.
9. I am comfortable discussing what goes on in my classroom with my colleagues.
10. I feel like a respected professional.
11. I view my colleagues as experts in the field of teaching.
12. I believe that taking part in collaborative professional development opportunities positively impacts student learning.

### Section 2

Part 2 is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below.<sup>9</sup>

13. To what extent can you craft good questions for your students? (How much can you do? Nothing, Very Little, Some Influence, Quite a Bit, A Great Deal)
14. How much can you use a variety of assessment strategies? (How much can you do? Nothing, Very Little, Some Influence, Quite a Bit, A Great Deal)
15. To what extent can you provide an alternative explanation or example when students are confused? (How much can you do? Nothing, Very Little, Some Influence, Quite a Bit, A Great Deal)
16. How well can you implement alternative strategies in your classroom? (How much can you do? Nothing, Very Little, Some Influence, Quite a Bit, A Great Deal)
17. Other comments or questions (Long answer text)

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<sup>9</sup> Questions 11–14 are from the [Teachers' Sense of Efficacy Scale \(TSES\)](#).

## Section 3

18. Which of the following best describes your role in Texas Lesson Study for this semester?
  - a. Participating Teacher (participated in Lesson Study with an ESC Facilitator)
  - b. Teacher Lead (served as the main facilitator for the Lesson Study group)
  - c. Instructional Coach Participant (participated in a Lesson Study group)
  - d. Instructional Coach Lead (served as the main facilitator for the Lesson Study group)
  - e. Teacher TXLS Trainee (shadowed a Lesson Study facilitator as they met with other groups)
19. Have you participated in Texas Lesson Study previously?
  - a. Yes
  - b. No
20. If yes, how many TXLS cycles have you completed?
21. If yes, describe in detail how your experience this semester compares to previous semesters.
22. Which part of the Lesson Study process did you find the most beneficial?
  - a. Phase 1 Examine and Identify: Create a research theme, examine the TEKS, STAAR data, scope and sequence, etc., and identify a standard(s) from the TEKS.
  - b. Phase 2 Review and Plan: Review instructional materials and research articles/books and plan the lesson.
  - c. Phase 3 Teach and Observe: Teach the lesson while observers collect data on student learning.
  - d. Phase 4 Reflect and Revise: Debrief with the Lesson Observation group and possibly make revisions to the lesson.
  - e. Phase 5 Share and Network: Share the lesson and findings with colleagues and on the Texas Gateway.
23. Why?
24. Which part of the Lesson Study process did you find the most challenging?
  - a. Phase 1 Examine and Identify: Create a research theme, examine the TEKS, STAAR data, scope and sequence, etc., and identify a standard(s) from the TEKS.
  - b. Phase 2 Review and Plan: Review instructional materials and research articles/books and plan the lesson.
  - c. Phase 3 Teach and Observe: Teach the lesson while observers collect data on student learning.
  - d. Phase 4 Reflect and Revise: Debrief with the Lesson Observation group and possibly make revisions to the lesson.
  - e. Phase 5 Share and Network: Share the lesson and findings with colleagues and on the Texas Gateway.
25. Why?
26. Did you have sufficient time to go through the Lesson Study process?
  - a. Yes
  - b. No
27. Participating in Lesson Study has impacted student growth. (Note: The responses are on a five-point Likert scale from Strongly Disagree to Strongly Agree.)

28. Participating in Lesson Study has impacted my professional growth. (Note: The responses are on a five-point Likert scale from Strongly Disagree to Strongly Agree.)
29. By having teachers and outside educators collect data during the Lesson Observation, I had greater insight on the learning process and students' understanding of the objective(s). (Note: The responses are on a five-point Likert scale from Strongly Disagree to Strongly Agree.)
30. I would like to go through the Lesson Study process again. (Note: The responses are on a five-point Likert scale from Strongly Disagree to Strongly Agree.)
31. What changes to the Lesson Study program would you recommend?
32. Which section of the Lesson Proposal was the most beneficial in your teaching practice?
  - a. TEKS Vertical Alignment
  - b. Research Theme and Goals
  - c. Background and Rationale
  - d. Research
  - e. Assessment
  - f. Unit Timeline
  - g. Research Lesson
  - h. Observation Focus
  - i. Reflect and Revise
  - j. Additional Recommendations and Next Steps
33. Why?
34. Of the professional development sessions/programs I've participated in, Lesson Study is in the top 10% for impacting my effectiveness in the classroom. (Note: The responses are on a five-point Likert scale from Strongly Disagree to Strongly Agree.)
35. Why?
36. Would you participate in Texas Lesson Study without a stipend?
  - a. Yes
  - b. No
  - c. Maybe
37. Other comments, questions, or concerns

## 6. Principal End-of-Cycle Survey via Google Form

Thank you for participating in Texas Lesson Study. The Texas Education Agency and regional service center ask that you complete this survey to give feedback on your experience with Texas Lesson Study.

### Section 1 (Survey completer contact information)

1. Name
2. Email Address
3. School Campus Name
4. District Name
5. ESC Region

### Section 2

6. How did participation in the Lesson Study process impact your teachers? (open ended)
7. What changes to the Lesson Study Program would you recommend? (open ended)
8. Were you able to sit in on any of the Lesson Study sessions? (Yes, No)
  - a. If yes, how would you describe the discussions taking place? (open ended)
  - b. The discussions in those meetings were more in depth than typical team discussions.  
(Likert scale: Strongly Disagree to Strongly Agree)
9. The discussions in those meetings were more in depth than typical discussions.
10. Lesson Study impacted teachers' professional growth. (Note: The responses are on a five-point Likert scale from Strongly Disagree to Strongly Agree.)
11. Lesson Study impacted student growth. (Note: The responses are on a five-point Likert scale from Strongly Disagree to Strongly Agree.)
12. The designed lesson is aligned to the T-TESS framework. (Note: The responses are on a five-point Likert scale from Strongly Disagree to Strongly Agree.)
13. Are you interested in implementing Lesson Study campus wide?
14. Why or why not? (open ended)
15. Could you see Lesson Study as part of your campus-wide professional development program?
16. Why or why not? (open ended)
17. Other questions, comments, or concerns

## 7. Student Post-Lesson Survey (Paper Survey)

1. Group #
2. How well did you understand today's lesson?
  - a. I understood the lesson and can successfully do the work on my own.
  - b. I understood most of the lesson but might need more time on this.
  - c. I am a little confused and would like to spend more time on this.
  - d. I did not understand the lesson and need more help.
3. The work I did today was
  - a. too hard.
  - b. just right.
  - c. too easy.
4. I enjoyed today's lesson.
  - a. Strongly agree (I really enjoyed the lesson).
  - b. Agree (I enjoyed the lesson.)
  - c. Neutral (The lesson was okay.)
  - d. Disagree (I did not like the lesson.)
  - e. Strongly Disagree (I really did not like the lesson.)
5. Today's lesson seemed the \_\_\_\_\_ what we normally do in class.
  - a. same as
  - b. different than

## 8. Student Interview (Conducted in-person)

1. What is the student's current achievement level? (Note: The responses are on a three-point Likert scale; 1 = below grade level, 2 = at grade level, 3 = above grade level)
2. What did you learn? (What can you do now or better than before today's lesson?)
3. What did you enjoy most about the lesson?
4. Which activities, ideas, or parts of the lesson helped you learn best?
5. If the same lesson is being taught to another class, what would you change?
6. Why would you change that aspect?