Final Report on the Evaluation of the Texas Principal Excellence Program (TxPEP)

Prepared for the Texas Education Agency

December 2008

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Executive Summary

This report on the evaluation of the Texas Principal Excellence Program (TxPEP) conducted by Learning Point Associates provides an overview of program content and organization during its first year of implementation (2007-08) and describes the overall evaluation design. The report then describes the methods used for collecting data during the 2007-08 program year and presents findings on participation in TxPEP events, program implementation and quality, and the impact of participation in TxPEP on principals, their schools, and students. The report concludes with a discussion of the limitations of the evaluation for assessing program impact and provides suggestions for conducting future evaluations of the program.

Overview of the TxPEP Program

In 2006, the 79th Texas Legislature, Third Special Session, passed House Bill 1 (HB 1), which includes a mandate to develop several school interventions for the purpose of improving educator excellence. HB 1 codified in Section 11.203, Texas Education code, permitted the use of up to $3.6 million for the development of TxPEP and its first year of implementation. The purpose of TxPEP is to improve student academic achievement, graduation rates, and teacher retention by improving principals' leadership skills. The program is designed specifically to help principals learn sound business and management practices. Principals from campuses that received a rating of academically unacceptable (AU) for the first time in 2006–07 were required to participate in the 2007-08 TxPEP program; however, any principal or principal-in-training, regardless of AU status, was able to attend.

The Texas Education Agency (TEA) contracted with the American Productivity and Quality Center (APQC) and its partners at the University of Houston–Victoria School of Business Administration to develop and implement TxPEP. The first year of the program was implemented between September 2007 and June 2008. During the first year, TxPEP participants were required to attend an initial and final summit meeting, three workshops, and five required webinars. Several optional webinars were also offered. Attendance at the summit meetings, the three workshops, and the five required webinars was mandatory for participants from AU campuses.

Key Evaluation Questions

The evaluation of 2007-08 TxPEP program includes both a formative component (focusing on program implementation and quality) and a summative component (focusing on program impact). The formative evaluation addresses the following questions regarding program participation, implementation, and quality:

- Who participated in TxPEP? (characteristics of participants' schools)

- Were TxPEP events well attended?

- Did TxPEP attendance patterns vary with principal and school characteristics (e.g., participants' years of experience as principal, campus rating, student-teacher ratio, percentages of minority students in the school)?

- Is the program being implemented with fidelity (i.e., as planned)?

- Is the program being implemented with high quality?

- Is the program content relevant to participants' needs and to their day-to-day work in schools?

- Is the program useful in helping participants develop leadership knowledge and skills? Do participants incorporate what they learn in their day-to-day work in schools?

The summative evaluation addresses the following questions regarding program impact:

- What is the impact of the TxPEP program on participants' leadership abilities?

- What impact do various amounts of program participation have on TxPEP participants' leadership abilities?

- What is the impact of principals' participation in TxPEP on school-level factors such as teacher retention?

- What impact do various amounts of program participation have on school-level factors?

- Does a change in principal leadership abilities lead to a change in any school-level factors?

- Does a change in principal leadership abilities lead to a change in any school-level factors that then lead to a change in student achievement or other student outcomes such as student attendance rates?

In addressing the formative questions, the following sources of data were used:

- TxPEP attendance data obtained from APQC

- Interviews with TEA and APQC program staff and cohort consultants (consultants provided guidance and support to 5 to10 TxPEP participants assigned to each cohort group)

- A survey of cohort consultants

- Interviews and focus groups with principals participating in TxPEP

- Daily checklists/logs completed by TxPEP participants and principals from a matched comparison group

- Items on the usefulness of the TxPEP program that were included in the fall 2008 Principal Leadership Survey completed by TxPEP participants

In addressing the summative questions, the following sources data were used:

- The Principal Leadership Survey administered in fall 2007, spring 2008, and fall 2008 to TxPEP participants and comparison principals

- The Leadership Practices Inventory (LPI) and the 21st Century Principal Assessment administered in fall 2007 and spring 2008 to TxPEP participants by APQC

- A teacher survey administered in spring 2008 to teachers whose principals were either TxPEP participants or comparison principals

- Administrative data on principal, school, and student characteristics, including student performance on the 2007-08 Texas Assessment of Knowledge and Skills (TAKS), obtained from TEA for TxPEP participants and comparison principals

Findings

This report highlights and expands upon the following findings regarding program participation, program implementation and quality, the relevance and utility of the program to principals' daily work in schools, and the relationship between program participation and growth in principals' leadership abilities and improvements in school performance and student performance over the period during which the 2007-08 program was implemented.

Program Participation

- A total of 306 principals from 291 schools participated in the 2007-08 TxPEP program.

- 81% ($n = 258$) of participants were from AU campuses; 19% ($n = 58$) were from non-AU campuses. The largest percentage of TxPEP participants were from elementary schools and suburban school districts, which is consistent with the distribution of schools and districts within the state.

- Program participation was initially high, but it declined over the course of the program.

  - Attendance rates at the initial summit meeting and the first three workshops were highest, with 84% or more of participants attending.

  - Attendance rates at required webinars were considerably lower, with approximately 60 to 70% of participants attending.

  - Optional webinars were not well attended. Between 15% and 30% of participants attended each of the optional webinars.

  - Only 28% of all participants attended all 10 required events; 23% attended 9 of the 10 events. A little over a quarter of participants (27%) attended five or fewer required events.

- Principals were more likely to participate in components of the program that were required and were less likely to follow through with components that were not required, such as implementing a professional development plan.

Program Implementation and Quality

- Interviews with TxPEP program staff suggest that the program was implemented with fidelity to stated program objectives. Principals who participated in interviews and focus groups reported that they found the program content to be of high quality, mostly relevant to their needs, and useful in helping them develop specific leadership skills and knowledge.

- Aspects of the program that participants found particularly useful were networking with other principals, working with experienced principals who served as consultants to the program, and having opportunities to reflect on their leadership practices.

- Participants also commented favorably on the format and topics of the webinars.

- Several participants noted that the webinars and workshop sessions on data use and data-driven decision making were useful in helping them understand how to use data to set school improvement goals.

- Interview and focus group participants generally agreed that they would prefer a greater emphasis on practical strategies that are relevant to their work in schools. Many found the program's emphasis on business and management models too removed from their responsibilities as principals.

- Participants generally agreed that they would prefer more options for selecting courses and webinars and noted that the program would be more useful and relevant if it were differentiated according to participants' needs and experience.

Relevance and Utility of TxPEP to Principals' Daily Work in Schools

- Analyses of daily checklists/logs completed by TxPEP participants and comparison principals in January/February, March/April, May, and September 2008 suggest that program participants found program content relevant to their responsibilities as principals and useful in their daily work.

  - On the checklists completed in January/February 2008, five months after the start of TxPEP, program participants were more likely than comparison principals to report spending more time on activities related to the leadership areas emphasized by the program. These initial differences between groups persisted over time.

  - On the January/February 2008 checklists, TxPEP participants were significantly less likely than comparison principals to report that they were *very effective* at providing strong leadership in the areas on which they spent time. However, the effectiveness self-ratings of TxPEP participants increased slightly over time while comparison principals' ratings remained stable.

  - For all leadership areas emphasized by the program, approximately 60% to 65% of the TxPEP participants who responded to the principal checklists reported that they were incorporating what they had learned into their daily work *to a moderate* or *to a great extent* on all four sets of checklists completed between January/February and September 2008.

- The vast majority of TxPEP participants (more than 80%) who responded to the fall 2008 Principal Leadership Survey ($n = 128$) reported that they had incorporated what they learned from the program in both their daily work and in their strategic planning *to a moderate* or *to a great extent*.

Program Impact on Principals' Leadership Abilities

- Analyses of TxPEP participants' and comparison principals' self-ratings of their leadership abilities over time suggest that TxPEP may have had a positive impact on participants' leadership abilities.

  - TxPEP participants' leadership scores increased significantly between the first and third administration of the principal survey for five of the six leadership areas measured. In contrast, the leadership scores of comparison principals remained relatively stable across survey administrations. However, these findings are based on self-report data rather than objective data on increases in TxPEP participants' leadership abilities, which limits inferences regarding program impact on participants' leadership abilities. In addition, response rates for the principal surveys used to obtain principals' leadership ratings declined over time, which could bias responses if systematic differences exist between survey respondents and nonrespondents.

  - Teacher ratings of TxPEP participants' leadership abilities were significantly higher for TxPEP participants who attended a high number of TxPEP events than they were for participants who attended a low number of events, suggesting that higher levels of program participation may have a greater impact on principals' leadership abilities than lower levels of program participation. However, alternative explanations for this finding cannot be ruled out. For example, principals with higher levels of program participation may be more motivated or dedicated than those with lower levels of participation which might account for the differences found in teachers' ratings.

  - Analyses of TxPEP participants' leadership ratings from the fall 2007 and spring 2008 LPI and 21st Century Principal Assessment revealed only slight increases for some of the leadership domains measured. In contrast to principals' ratings of their leadership abilities obtained from the Principal Leadership Surveys, both the LPI and 21st Century Principal Assessment provide general measures of leadership ability and do not specifically focus on the leadership areas emphasized by the program.

Program Impact on School and Student Performance

- No evidence was found of program impact on 2007-08 school performance indicators. These indicators were based on teacher and principal ratings of perceived improvements in teacher performance and satisfaction over the course of the 2007-08 school year. Administrative data on school-level outcomes of interest such as teacher retentions rates were not yet available from TEA and therefore could not be analyzed.

- No evidence was found of positive program impact on student performance on the 2007-08 TAKS and no substantial evidence was found of positive program impact on teacher or principal ratings of perceived improvements in student performance over the course of the 2007-08 school year.

- Although campus ratings improved between 2007 and 2008 for the majority of schools within the TxPEP participant sample, campus ratings vary substantially from year to year.

Given this variability, it would be difficult to attribute improvements in campus ratings to principals' participation in TxPEP.

Summary and Implications

The evaluation findings have several implications for both the future implementation of TxPEP and the assessment of program impact.

Barriers to Program Participation and Suggestions for Program Improvements

- Several barriers to program participation mentioned in participant interviews and focus groups are noted that may help to explain the decline in attendance rates over the course of the program (e.g., scheduled meetings and workshop that required participants to spend too much time away from their campuses; scheduling webinars at times that were inconvenient for participation; and participation in other school improvement initiatives that vied for participants' time). These barriers suggest the need for greater flexibility in the scheduling and format of TxPEP program offerings.

- Closer monitoring of program participation and completion of program requirements is suggested as another way to help ensure that participants are fulfilling program requirements.

- Participant feedback on aspects of the program that were not meeting their needs are noted, including difficulty in applying business management models and practices to educational contexts, participants' preference for greater options in selecting courses and webinars, and their desire for program offerings that are differentiated to accommodate participants' needs and experience.

Program Adjustments for the 2008-08 School Year

The following changes in the TxPEP program for the 2008–09 school year address most participants' suggestions for program improvements and may help to increase program participation:

- The program has been substantially reorganized to allow participants greater flexibility in selecting courses and webinars that address their individual needs and levels of experience; to provide coaching and support; to reduce barriers to program participation; and to relate business management models and practices to educational contexts.

- Provisions for closer monitoring of program participation and completion of program requirements have also been made.

Limitations of the Evaluation

There are several limitations to evaluation of TxPEP that make it difficult to draw causal inferences regarding the program's impact on participants, their schools, and students. The following limitations are noted:

- **Self-report data.** Analyses of changes in participants' leadership abilities and participants' implementation of program content are based on self-report measures,

which are subject to potential bias. Ideally, self-report measures should be supplemented with ratings from objective observers to better assess whether changes in principals' leadership abilities have actually occurred.

- **Response Rates.** Low response rates to principal and teacher surveys and principal checklists introduce another source of potential bias to survey and checklist responses.

- **Alternative Explanations.** While the evaluation findings suggest that TxPEP participants' leadership abilities increased over the course of their participation in the program and that teachers' ratings of principal leadership were higher for participants with high levels of program participation, there are plausible alternative explanations for these findings.

- **Time Frame of Evaluation.** There are several limitations to the evaluation of program impact on schools and students related to the short time frame between program implementation and program outcomes.

  - Administrative data were not yet available on several school- and student-level outcomes of interest such as teacher retention rates and student promotion and graduation rates. Although teachers and principals were asked to indicate whether improvements in these school- and student-level indicators had occurred, perception data are less reliable than administrative data for assessing improvement.

  - While 2007-08 student TAKS data were available for analysis, the data were obtained in March 2007 at which time TxPEP participants would have experienced at most seven months of the program. It is unlikely that the program would have had any impact on student achievement after so short a period of time.

Recommendations for Future Evaluations

One explanation for the failure to detect program effects at the school level may be that better measures are needed of school-level implementation and short-term outcomes. To determine whether the program is having an impact on schools and teachers during early stages of implementation, data are needed related to what school improvement goals participants are trying to achieve, what aspects of the program they are implementing to achieve them, and how successful they are with implementation.

Program requirements regarding participants' implementation of program content also need to be clarified so that appropriate measures of school-level implementation can be developed. Although participants in the 2007-08 TxPEP program were expected to implement an individual professional development plan, findings from interviews with program staff suggest that many participants did not implement a plan. For the 2008-09 TxPEP program, participants are required to implement a professional development plan, and learning coaches will be responsible for monitoring implementation. TEA might consider asking learning coaches to complete a formal assessment for each participant to provide data on participants' progress in implementing their professional development plans.

TEA might also consider collecting additional data from participants in the 2007-08 TxPEP program to determine whether they are applying (or continuing to apply) information or

strategies learned from the program. School and student outcome data (e.g., teacher retention rates, student graduation/promotion rates, and student performance on the TAKS) might also be collected and analyzed over time to determine whether improvements occur on these indicators at schools led by principals who participate in the TxPEP program.

Recommendations Regarding Program Sustainability

Several of the changes to the TxPEP program for the 2008-09 school year are aligned with recommendations for professional development programs for principals. However, as yet there appear to be no plans to follow up with participants after they have completed the program or to extend participation in learning networks beyond the nine-month period of the program. Encouraging program participants to continue to participate in these learning networks may help to ensure the sustainability of program objectives beyond the period of formal program participation.

Introduction

This report on the evaluation of TxPEP conducted by Learning Point Associates provides an overview of program content and organization during its first year of implementation (2007-08) and describes the overall evaluation design. The report then describes the methods used for collecting data during the 2007-08 program year and presents findings on participation in TxPEP events, program implementation and quality, and the impact of participation in TxPEP on principals, their schools, and students. The report concludes with a discussion of the limitations of the evaluation for assessing program impact and provides suggestions for conducting future evaluations of the program.

Overview of the TxPEP Program

In 2006, the 79th Texas Legislature, Third Special Session, passed House Bill 1 (HB 1), which includes a mandate to develop several school interventions for the purpose of improving educator excellence. HB 1 codified in Section 11.203, Texas Education code, permitted the use of up to $3.6 million for the development of TxPEP and its first year of implementation (Texas Education Agency, 2007a). The purpose of TxPEP is to improve student academic achievement, graduation rates, and teacher retention by improving principals' leadership skills. The program is designed specifically to help principals learn sound business and management practices. Principals from campuses that received a rating of academically unacceptable (AU) for the first time in 2006–07 were required to participate in the 2007-08 TxPEP program; however, any principal or principal-in-training, regardless of AU status, was able to attend. A total of 306 principals participated in the program, 248 from AU campuses and 58 from non-AU campuses.[1]

The legislation creating TxPEP reflects current research on the principles of good school leadership. An overview of relevant research can be found in Appendix A. TxPEP focuses on six content areas that were emphasized in the Texas Education Agency's (Texas Education Agency, 2007b) request for qualifications (RFQ) for program development and that are aligned with current research on effective principal practices:

- Change management and strategic planning
- Building learning communities, including team building and collaboration
- Data-driven decision making
- Fiscal/resource management
- School/program evaluation
- Ethical leadership

TEA contracted with APQC and its partners at the University of Houston–Victoria School of Business Administration to develop and implement TxPEP. In 2007–08, program events included an initial summit meeting, three workshops, a series of webinars, and a final summit

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[1] Several principals initially participated but later withdrew from the program; a total of 306 principals were listed as participants on the final TxPEP attendance roster.

meeting. Participants were required to attend the two summit meetings, the three workshops, and five webinars on leadership areas emphasized by the program. Participants also were required to complete the LPI (Posner & Kouzes, 1988; Posner & Kouzes, 1993) and the National Association for Secondary School Principals' 21st Century Principal Assessment (2007) at the beginning and end of the program. Both of these leadership assessments are designed to obtain feedback about the principal from multiple sources (e.g., self, supervisors, staff, and peers), a method known as 360-degree assessment. Results of the assessments were used by APQC to provide feedback to participants on their leadership strengths and weaknesses.

TxPEP workshops focused on competencies relevant to the leadership areas emphasized by the program. Table 1 lists the 2007–08 TxPEP workshop sessions and the regional locations and dates of each workshop. The leadership areas emphasized in each workshop session are noted in parentheses.

Table 1. Texas Principal Excellence Program 2007–08 Workshops

Workshop I	Locations	Dates
• Understand Your Individual Strengths and Weaknesses (Ethical Leadership) • Understand Your Organization and Articulate a Clear Vision (Change Management) • Communicate Effectively and Manage Change (Change Management) • Build Effective Teams and Collaborative Organizations (Building Learning Communities)	El Paso Dallas San Antonio Houston	October 8–9, 2007 October 10–11, 2007 October 22–23, 2007 October 24–25, 2007
Workshop II	**Locations**	**Dates**
• Understand Decision-Making Processes and Pitfalls (Change Management) • Evaluate Performance to Recognize Opportunities and Problems (School/Program Evaluation) • Make Data-Driven Decisions Through Data Visualization (Data-Driven Decision Making) • Understand How to Maximize Your Resources (Fiscal/Resource Management)	El Paso San Antonio Dallas Houston	October 29–30, 2007 November 7–8, 2007 November 13–14, 2007 November 19–20, 2007
Workshop III	**Locations**	**Dates**
• Understand Reflections and Directions of Your Leadership Progress (Ethical Leadership) • Understand Reflections and Directions of Your Organizational Progress (School/Program Evaluation)	San Antonio Houston El Paso Dallas	January 23, 2008 January 24, 2008 February 4, 2008 February 5, 2008

Source: TxPEP website: http://www.txpep.org/curriculum.html, retrieved February 15, 2008.

Specific leadership topics also were addressed in a series of required and optional webinars. The topics and dates of the webinars are listed in Table 2. To provide greater scheduling flexibility

for participants, required webinars were offered on three different days; optional webinars were offered on two different days.

Table 2. Texas Principal Excellence Program 2007–08 Webinars

Required Webinars	Dates
• Change management	December 10, 11, 12, 2007
• Fiscal management	February 11, 12, 14, 2008
• Data disaggregation	February 18, 19, 20, 2008
• Data-driven decision making	February 25, 26, 27, 2008
• Ethical leadership	April 7, 8, 9, 2008
Optional Webinars	**Dates**
• Monitoring continuous improvement	November 26, 27, 2007
• Diversity management	December 3, 5, 2007
• Strategic planning	January 14, 15, 2008
• Goal setting	January 28, 29, 2008
• Team building	March 4, 5, 2008
• Quality processes	Mach 25, 26, 2008
• Performance management	March 31, April 1, 2008
• Best practices	April 16, 17, 2008
• Problem solving	April 22, 23, 2008
• Conflict resolution	April 29, 30, 2008

Source: TxPEP website: http://www.txpep.org/webinars.html, retrieved February 15, 2008.

In September 2007, participants were given an opportunity to participate in an additional webinar on human resources and capacity building that was presented by the National Center for Educational Achievement. This webinar was not part of the series of webinars developed specifically for the program.

An additional feature of the program included training in the use of the IBM Reinventing Educational Change Toolkit, a free online tool that suggests approaches for implementing systemic change in schools. Participants were able to access and use the toolkit on their own. (The IBM Reinventing Educational Change Toolkit is available at: http://www.reinventingeducation.org/RE3Web/.)

All participants were assigned to cohort groups of 5 to10 principals that were led by a consultant to the program. Cohort consultants were current or recently retired principals who were hired to provide guidance and support to principals in their cohort groups. Cohort consultants typically communicated with principals in their cohort through group conference calls, individual phone calls, e-mail, and discussion boards available through WebCT, an online learning environment.

Evaluation Design

Learning Point Associates' evaluation of TxPEP includes both a formative component (focusing on program processes) and a summative component (focusing on program outcomes) using a mixed methods design.[2] As a formative evaluation, its purpose is to provide TEA with feedback about aspects of the program that appear to be working well and aspects that appear to be less relevant or useful to participants. Such information helps to inform improvements to program design and implementation. As a summative evaluation, its purpose is to assess TxPEP's worth or value based on the extent to and respects in which it accomplishes its goals: to improve participating principals' leadership abilities and by doing so improve school outcomes and student outcomes, including student academic performance.

For the formative evaluation, data on program attendance were obtained from APQC for each of the scheduled program events. Data about implementation and quality were obtained through frequent cycles of feedback from participating principals and program staff. For the summative evaluation, a quasi-experimental design[3] was used to evaluate the impact of TxPEP on principals, their schools, and students. TxPEP participants were matched to nonparticipating Texas principals with similar characteristics from similar schools using administrative data obtained from TEA. When program participants and nonparticipants are well matched on a range of characteristics, then differences between the two groups on post-program measures of performance can be attributed with much greater confidence to the program rather than to initial differences between the groups.

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[2] A mixed methods design employs both quantitative and qualitative methods of data collection and analysis. Quantitative methods such as surveys and assessments provide data that can be quantified and analyzed using statistical techniques. Qualitative methods such as interviews provide narrative data that typically are analyzed by identifying common themes as well as areas of agreement or disagreement among those interviewed.

[3] A quasi-experimental design is similar to an experimental design but does not use random assignment (assignment by chance) to treatment and control groups. For the TxPEP program, principals from AU campuses are required to attend; therefore, random assignment to treatment and control groups could not be used. In a "true" experiment, the treatment group receives some type of treatment, such as an innovative program of instruction, while the control group does not receive the treatment. To ensure that participants in both groups are essentially equivalent in all respects except for receiving or not receiving the treatment, individuals typically are randomly assigned to the treatment and control groups. Any differences in the pretreatment characteristics of the two groups occur only by chance. Once the program is administered to individuals in the treatment group, specific outcomes thought to be the result of program participation (e.g., student achievement) are measured and compared with similar outcomes for the control group. If the treatment group has better outcomes (e.g., higher student achievement) than the control group, this difference can be attributed to the treatment because the groups are similar in all other respects. Quasi-experimental designs seek to achieve similarity in the pretreatment characteristics of the treatment and control group (usually referred to as the comparison group in quasi-experiments) by means other than random assignment. One technique for achieving similarity between groups is matching. For example, individuals in the two groups might be matched according to similarities in individual characteristics (e.g., age, gender, prior achievement). Matching is most effective when the characteristics on which the groups are matched are related to the outcome of interest. For example, prior student achievement generally is highly predictive of later achievement; it is therefore important that the treatment and comparison groups be similar with respect to prior achievement and other characteristics known to be associated with achievement outcomes.

Research Questions

The formative evaluation addressed the following questions regarding program participation, implementation, and quality:

1. Who participated in TxPEP? (characteristics of participants' schools)

2. Were TxPEP events well attended?

3. Did TxPEP attendance patterns vary with principal and school characteristics (e.g., participants' years of experience as principal, campus rating, student-teacher ratio, percentages of minority students in the school)?

4. Is the program being implemented with fidelity (i.e., as planned)?

5. Is the program being implemented with high quality?

6. Is the program content relevant to participants' needs and to their day-to-day work in schools?

7. Is the program useful in helping participants develop leadership knowledge and skills? Do participants incorporate what they learn in their day-to-day work in schools?

The summative evaluation addressed the following questions on program impact:

1. What is the impact of the TxPEP program on participants' leadership abilities?

2. What impact do various amounts of program participation have on TxPEP participants' leadership abilities?

3. What is the impact of principals' participation in TxPEP on school-level factors such as teacher retention?

4. What impact do various amounts of program participation have on school-level factors?

5. Does a change in principal leadership abilities lead to a change in any school-level factors?

6. Does a change in principal leadership abilities lead to a change in any school-level factors that then lead to a change in student achievement or other student outcomes such as student attendance rates?

The following theory of action which is based on the goals of the program—to improve student academic achievement, graduation rates, and teacher retention by improving principals' leadership skills—underlies these research questions:

- Implementation of TxPEP with high fidelity and high quality, including high relevance and utility to participants, will lead to improvement in participating principals' leadership abilities in areas emphasized by the TxPEP curriculum.

- Improvement in participating principals' leadership abilities in areas emphasized by the TxPEP curriculum will lead to improvement in school-level indicators, including teacher retention.

- Improvement in participating principals' leadership abilities in areas emphasized by the TxPEP curriculum will lead indirectly to improvement in student outcomes through improvement in school-level variables such as teacher retention.

Organization of the Report

The next section of the report describes the methods used to obtain data to address the research questions noted above. Evaluation findings are then presented on TxPEP participation, program implementation and quality, relevance and utility of the program to principals' daily work in schools, and the impact of the program on principal leadership abilities, school outcomes, and student outcomes. The report concludes with a discussion of the implications of these findings for assessing the overall effectiveness of TxPEP.

Data and Methods

Learning Point Associates used multiple data sources to obtain information on TxPEP program participation, the fidelity and quality of program implementation, and the leadership abilities of the TxPEP participants and comparison principals. In addition, administrative data on characteristics of principals, their schools and students, including students' performance on the TAKS, were obtained from TEA for the five years prior to program implementation for both TxPEP participants and comparison principals. Students' 2007–08 TAKS scores and other student performance data, including student attendance and student disciplinary incidents, were also obtained from TEA for use in assessing the impact of TxPEP program participation on schools and students during the period during which the program was implemented (2007–08). Data on attendance at TxPEP events and assessment data from the LPI and 21st Century Principal Assessment were obtained from APQC.

Table 3 summarizes the data-collection methods, the timing of administration, the respondent sample, and the number of respondents for each administration.

Table 3. Data-Collection Methods, Timing, Respondent Sample, and Respondents

Data-Collection Methods	Timing of Data Collection	Respondent Sample		Number of Respondents	
Program Participation					
TxPEP attendance records (APQC)	After each workshop or webinar	NA		NA	
Program Implementation and Quality					
Interviews with TEA program staff	December 2007 May/June 2008 October 2008	2 1 1		2 1 1	
Interviews with APQC program staff and cohort consultants	December 2007 February 2008 May/June 2008	APQC: 2 per round Consultants: 2 per round		APQC: 2 per round Consultants: 2 per round	
Survey of cohort consultants	July 2008	46		38	
Focus groups with TxPEP participants	December 2007 Feb/March 2008	18 18		11 9	
Interviews with TxPEP participants	May/June 2008 September 2008	18 18		18 12	
Principal daily checklists/logs for TxPEP and comparison group principals		TxPEP	Comparison	TxPEP	Comparison
	Jan/Feb 2008 March/Apr 2008 May 2008 September 2008	312 310 306 306	617 617 311 617	164 126 71 45	169 89 47 85

Table 3. Data-Collection Methods, Timing, Respondent Sample, and Respondents (continued)

Data-Collection Methods	Timing of Data Collection	Respondent Sample		Number of Respondents	
Principals' Leadership Abilities					
Principal Leadership Survey completed by TxPEP and comparison group principals	Fall 2007 Spring 2008 Fall 2008	TxPEP 312 306 306	Comparison 617 311 617	TxPEP 256 174 132	Comparison 266 146 181
Leadership Practices Inventory (LPI) completed by TxPEP participants and observers (APQC)	Fall 2007 Spring 2008	TxPEP 318 306	Observers 318 306	TxPEP 318 259	Observers 303 259
21st Century Principal Assessment completed by TxPEP participants and observers (APQC)	Fall 2007 Spring 2008	TxPEP 318 306	Observers 318 306	TxPEP 314 265	Observers 314 265
Teacher survey on school and leadership characteristics of TxPEP and comparison group principals	Spring 2008	TxPEP Full-time teachers 291 campuses	Comparison Full-time teachers 311 campuses	TxPEP 2,225 teachers 131 campuses	Comparison 2,122 teachers 107 campuses
Principal and School Characteristics					
Administrative data on characteristics of principals, their schools, and students (TEA)	Fall 2007 Summer 2008	NA		NA	

Source: Evaluators' analysis of interview, focus group, survey, and assessment administration records.

Notes: Organizations other than Learning Point Associates that collected data are noted in parentheses under data collection methods. APQC refers to the American Productivity and Quality Center (APQC), the developers and implementers of the TxPEP program. TEA refers to the Texas Education Agency. Because some TxPEP participants withdrew from the program, respondent samples for principal surveys, checklists, and assessments decreased over time. A total of 306 individuals from 291 campuses participated in TxPEP throughout the program. Comparison principals were oversampled by 100%. For the May 2008 principal checklists and the spring 2008 Principal Leadership Survey and teacher survey, only comparison principals who had previously participated in the evaluation were asked to complete the checklists and surveys. This decision was made because the intention was to examine individual responses over time where possible. However, because response rates were low, the evaluation team decided to ask all principals in the comparison group sample to complete the principal checklists and the Principal Leadership Survey in September 2008.

TxPEP participants were required to complete the fall 2007 and spring 2008 LPI and 21st Century Principal Assessment and the majority did so. Participation in interviews, focus groups, principal checklists, and principal and teacher surveys, however, was voluntary. As shown in Table 3 the number of TxPEP and comparison principals who responded to surveys and checklists declined over the course of the evaluation. The spring 2008 principal and teacher surveys and the May 2008 principal checklists were administered toward the end the school year, a particularly busy time of year for principals and teachers, which may have contributed to the

decline in response rates. By September 2008, when the third Principal Leadership Survey and the fourth round of principal checklists were administered, several TxPEP and comparison principals had moved to other schools or retired. Because we were no longer had valid e-mail addresses for these principals, we were unable to reach them to request their participation in the surveys and checklists. In addition, several Texas schools were closed the week the September 2008 checklists were administered due to weather (Hurricane Ike). As a result, many principals were unable to complete the checklists. The administration of the checklists could not be extended due to analysis and reporting deadlines for the evaluation. The decline in response rates introduces potential bias in responses to the surveys and checklists. This issue is addressed in discussing the evaluation findings.

A brief description of the data-collection methods is included below. Copies of the data collection instruments are included in Appendix B. Detailed information on methods used for data collection, including sample selection and administration, and the selection of a group of comparison principals is included in Appendix C.

Program Participation Data

Data about program registration and attendance, obtained from APQC, provided documentation regarding who participated in the program and the extent of their participation. APQC recorded attendance at all TxPEP events, including the summit meetings, workshops, and webinars.

Data on Program Implementation and Quality

Data on program implementation and quality were obtained from the following sources: interviews with program staff, a survey of cohort consultants, principal focus groups, principal interviews, principal daily checklists, and items regarding the usefulness of the program that were included in the fall 2008 Principal Leadership Survey completed by TxPEP participants.

Interviews With Program Staff

Interviews were conducted with TEA and APQC program staff and cohort consultants to obtain information about program development, implementation, and the perceived quality of program offerings. Two members of TEA's program staff who were directly involved with vendor selection and program review were selected to be interviewed; two APQC staff members who were directly involved with program development and implementation also were selected. In addition, two of the 48 cohort consultants for the program were randomly selected to participate in interviews. (See Appendix C for details regarding sample selection, administration, and questions asked of interview participants.)

Survey of Cohort Consultants

A cohort consultant survey was developed to obtain feedback on the frequency with which cohort consultants communicated with principals in their cohort and the types of support they provided to cohort members. (See Appendix C for details regarding survey administration and content.)

Principal Focus Groups

Focus groups were conducted by phone with a sample of TxPEP participants in December 2007 and February/early March 2008 to obtain formative feedback on program quality, relevance, and utility, and suggestions for program improvements. Separate focus groups were organized for elementary, middle, and high school principals. A total of 18 principals (6 elementary, 6 middle school, and 6 high school principals) was selected to participate in both focus groups. (See Appendix C for details regarding sample selection, focus group administration, and topics addressed.)

Principal Interviews

Additional principal focus groups were planned for spring and fall 2008, but because of difficulties in identifying times when principals were available to meet as a group, interviews were instead conducted with a sample of TxPEP participants in May/early June 2008 and in September 2008. The same principals who had been asked to participate in the principal focus groups also were asked to participate in the May/June interviews. To reduce burden on principals and to obtain feedback from principals we had not yet talked with, a new sample of elementary, middle school, and high school principals was selected for interviews in September 2008. The principal interview protocols addressed the same topics as the focus group protocols, but were updated to ask about principals' recent experiences with the program. (See Appendix C for details regarding sample selection, administration, and topics addressed.)

Principal Daily Checklists

A principal checklist was developed to obtain daily log information on the relevance of TxPEP program offerings to principals' work in schools and the extent to which principals were incorporating what they had learned from the program into their daily activities. An abbreviated version of the checklist was also developed for comparison principals. TxPEP participants were asked to indicate the extent to which they were incorporating what they had learned from the program in their daily work; this question was omitted from the checklists administered to comparison principals. All TxPEP participants and comparison principals were asked to complete the checklist for five consecutive days at four different times over the course of the program: January/early February; March/early April; May, and September 2008. (See Appendix C for details regarding checklist administration and content.)

Principal Survey Items Regarding the Usefulness of TxPEP to Participants

The fall 2008 Principal Leadership Survey that was administered to TxPEP participants included several questions regarding the usefulness of the program; these questions were omitted from the fall 2008 Principal Leadership Survey for comparison principals. Respondents were asked to indicate the extent to which they were using what they had learned from the program in strategic planning and in their daily work in schools. They were also asked to indicate how useful TxPEP had been in helping them develop specific types of skills and knowledge. Suggestions for program improvements were also requested (an open-ended item).

Data on Principals' Leadership Abilities

Data on TxPEP participants' leadership abilities were obtained from three sources: the Principal Leadership Survey; the LPI and the 21st Century Principal Assessment; and a teacher survey administered to teachers of TxPEP and comparison principals. The LPI and 21st Century Principal Assessment are commercially available assessments that were administered to TxPEP participants by APQC in September 2007 when the program began and in June 2008 just before the end of the program. These surveys and assessments are described below.

Principal Leadership Survey

Learning Point Associates developed three Web-based Principal Leadership Surveys to measure principals' perceived effectiveness or knowledge in the six leadership areas emphasized by TEA in its description of the TxPEP program (Texas Education Agency, 2007b). The same measures of principals' perceived effectiveness or knowledge were included in all three surveys to assess change over time in principals' responses. The three surveys were administered to both TxPEP participants and comparison principals. Principals were asked to rate their *effectiveness* with respect to change management, building learning communities, and data-driven decision making. These are areas in which principals are likely to be actively engaged in planning and decision-making. Principals were asked to rate their *knowledge* of ethical leadership, fiscal/resource management, and school/program evaluation. These are areas in which principals may be less knowledgeable about best practices and less able to assess their leadership effectiveness.[4] (See Appendix C for details regarding survey administration and content.)

LPI and 21st Century Principal Assessment

Web-based versions of the LPI and 21st Century Principal Assessment were administered to TxPEP participants by APQC in September 2007 and June 2008 and provide additional measures of participants' leadership abilities. Both assessments include self-ratings and observer ratings (i.e., ratings by supervisors or colleagues). The LPI is based on research conducted by Posner and Kouzes (1988; 1993) on effective leadership practices and was developed to measure the extent to which leaders implement these practices. The 21st Century Principal Assessment was developed by the National Association of Secondary School Principals. The assessment is aligned with the Interstate School Leaders Licensure Consortium leadership standards and identifies skills that principals need to acquire to become effective leaders. The assessment typically is used as a diagnostic tool to help school leaders and prospective principals identify strengths and weaknesses. (See Appendix C for details regarding assessment administration and content.)

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[4] In addition to measures of principals' perceived effectiveness or knowledge in the leadership areas emphasized by TxPEP, the spring 2008 Principal Leadership Survey included an item set that asked principals to indicate the extent to which they agreed or disagreed with a series of statements regarding perceived improvements in student and teacher performance over the course of the 2007–08 school year. As noted earlier, the fall 2008 Principal Leadership Survey administered to TxPEP participants included several questions regarding the usefulness of the TxPEP program that were not asked of comparison principals.

Teacher Survey

Learning Point Associates developed a teacher survey to obtain data from teachers on their perceptions of school leadership, the school learning environment, opportunities for teacher collaboration and decision-making, teacher retention rates, promotion/graduation rates, and student engagement and performance. Teachers whose principals were either TxPEP participants or comparison principals were asked to complete the survey in spring 2008. The survey asked teachers to assess principals' effectiveness in the leadership areas emphasized by TxPEP and to assess aspects of school and student performance that have been shown to be associated with effective school leadership. (See Appendix C for details regarding survey administration and content.)

Data on Characteristics of Principals, Their Schools, and Students

Administrative Data

Administrative data were obtained from TEA on the characteristics of TxPEP participants, their schools, and students for the four years prior to program implementation and the program implementation year (2007–08). Principal characteristics included age, gender, race/ethnicity, educational level (less than a bachelor's degree, bachelor's degree, master's degree, or doctorate), and number of times the principal changed schools in the past five years. School characteristics included the following:

- Campus rating (AU status)

- Accountability rating (under No Child Left Behind)

- Total number of students

- Number of full-time instructional staff

- Student-teacher ratio

- Student attendance rates

- Percentage of minority students

- Percentage of economically disadvantaged students

- Percentage of limited English proficient students

- Percentage of special education students

- Percentage of students meeting TAKS proficiency standards in reading

- Percentage of students meeting TAKS proficiency standards in mathematics

- Disciplinary actions per student

Data for 2007–08 also were obtained for technical assistance team status,[5] school type (elementary, elementary/secondary,[6] middle, or high), district type (rural, urban, suburban, charter),[7] grade range, percentage of teachers with advanced degrees, and average teaching experience (in years) of teachers in the school.

Data on characteristics of principals and their schools were used to determine whether there was systematic variation among TxPEP participants in program attendance and leadership abilities. Several of these variables were also used in matching comparison principals with TxPEP participants. (See Appendix C for a description of procedures used in selecting a matched comparison group.)

To determine whether participation in TxPEP had an impact on student performance, students' overall reading and mathematics scale scores[8] for the TAKS (first administration) were obtained for 2006–07 and 2007–08 by grade. Data also were obtained on student characteristics that might be associated with test performance. These data included student gender, race/ethnicity, special education status, limited English proficiency status, and economically disadvantaged status.

Survey Data

Items were included in the spring 2008 Principal Leadership Survey and teacher survey that asked respondents to assess the extent to which performance on several school and student performance indicators (e.g., teacher retention, student achievement) had improved over the course of the 2007–08 school year. Data were requested from TEA but not yet available for 2007–08 for the following school and student outcomes: teacher retention rates, student attendance rates, and promotion/graduation rates.

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[5] In Texas, schools rated as academically acceptable in a given year are assigned a technical assistance team if the school would not have met the performance standards used for the following school year (Texas Education Code, §39.1322, Technical Assistance and Campus Intervention Teams). For example, if a school was rated as academically acceptable in 2006–07 but did not meet performance standards for 2007–08, it would have been assigned a technical assistance team. The technical assistance team helps the school execute a school improvement plan and other improvement strategies.

[6] Elementary/secondary schools include students in kindergarten through 12th grade.

[7] The nine TEA district type categories were collapsed into four categories: rural, urban, suburban, and charter. Rural includes "independent town" and "rural;" urban includes "major urban" and "other central city;" suburban includes "major suburban," "other central city suburban," "nonmetropolitan fast growing," and "nonmetropolitan stable;" charter includes only "charter."

[8] Raw scores (the number of items correctly answered on a subject-area test) on the TAKS are converted to scale scores which provide a comparison of scores to a standard of achievement set by the state; scale scores also adjust for difference in the difficulty of test items included in different administrations of the test. Scale scores are used to assess whether a student has met or exceeded the state standard for subject-area performance at a given grade level.

Evaluation Findings

This section summarizes the evaluation findings from analyses of data on TxPEP program participation, program implementation and quality, the relevance and utility of TxPEP to principals' daily work, and program impact on principals, their schools, and students.

Program Participation

Findings regarding program participation address the following research questions:

- Who participated in TxPEP? (characteristics of participants' schools)

- Were TxPEP events well attended?

- Do TxPEP attendance rates vary with principal and school characteristics (e.g., participants' years of experience as principal, campus rating, student-teacher ratio, percentage of minority students in the school)?

A question that is addressed in later analyses is whether varying levels of participation in TxPEP are related to differences in participants' ratings of their leadership abilities. One might expect higher rates of participation to be associated with higher leadership ratings since participants would be exposed to more program content and have more opportunities to develop their leadership skills. Because of the potential importance of TxPEP participation to the assessment of program impact, several analyses of program attendance patterns were conducted.

Data on program participation and participants' school affiliations were obtained from APQC. Additional data on the characteristics of participants' schools were obtained from TEA. A total of 306 individuals from 291 different schools participated throughout the program.[9]

Who Participated in TxPEP?

TxPEP participants came from schools with diverse characteristics. Characteristics examined include campus rating (AU versus non-AU), school type (elementary, elementary/secondary, middle, and high school), district type (urban, rural, suburban, and charter), and technical assistance team (TAT) status.[10]

As illustrated in Figure 1, both principals from campuses rated as AU and non-AU participated in TxPEP. Elementary, middle, and high schools were all represented within the participant sample, as were rural, urban, suburban, and charter schools.

- Of the 306 TxPEP participants, 81% (*n* = 248) were from AU campuses and 19% (*n* = 58) were from non-AU campuses.

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[9] As of December 2008, there were 314 program participants. APQC attendance records indicate that eight of these individuals withdrew from the program before the end of the program; these individuals have been excluded from analyses of attendance data.

[10] Schools are assigned technical assistance teams by TEA. Schools rated as academically acceptable in a given year (e.g., 2006–07) are assigned a technical assistance team if the school would not have met the performance standards used for the following school year (e.g., 2007–08).

- Only 5% of participants (*n* = 15) were from schools that had been assigned a technical assistance team.

- With respect to school type, the greatest percentage (40%) of participants were from elementary schools (*n* = 121).

- With respect to district type, the greatest percentage of participants (40%) were from suburban districts (*n* = 122).

The distribution of TxPEP participants by school type and district type is consistent with the distribution of schools within the state as whole. It is therefore not surprising that greater percentages of participants were from elementary schools and suburban districts.

Figure 1. Breakdown of Texas Principal Excellence Program Participants by School Characteristics (*N* = 306)
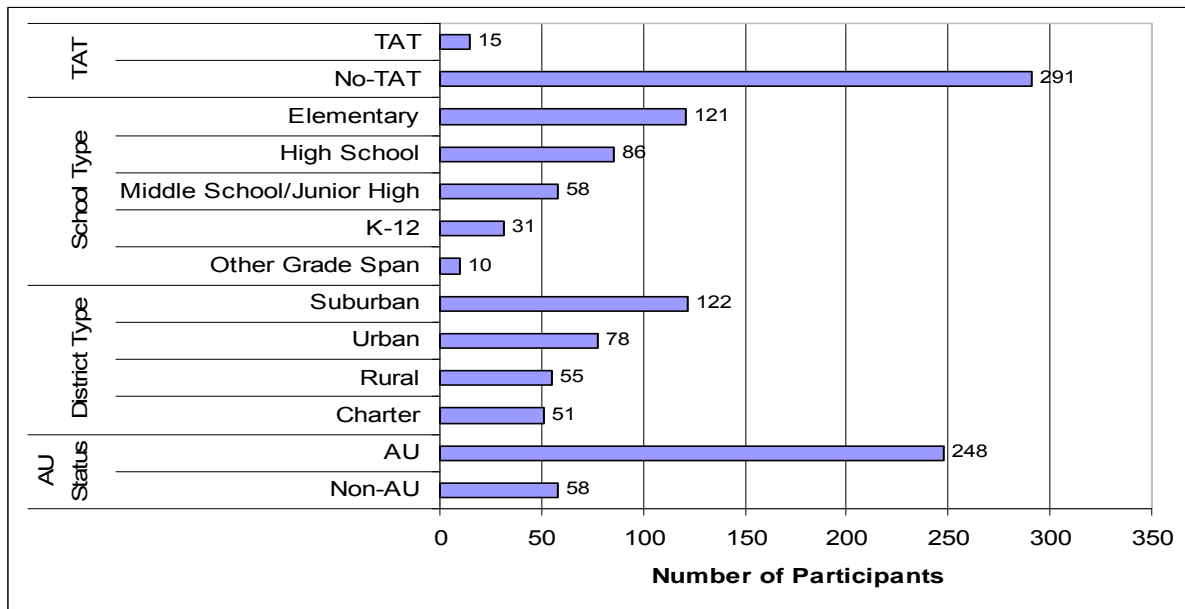
Source: Evaluator analysis of TxPEP attendance data.
Notes: TAT indicates that participants are from schools with a technical assistance team. K–12 indicates that participants are from elementary/secondary schools. Other Grade Span indicates that the grades taught do not correspond to one of the other categories of school type (e.g., schools with grade spans of prekindergarten through first grade or kindergarten through seventh grade). AU indicates a campus rating of academically unacceptable. Non-AU indicates a campus rating other than academically unacceptable.

Table 4 presents a breakdown of the schools of TxPEP participants by Texas educational service center (ESC) region. Of the 291 schools represented by TxPEP participants, information on ESC region was available for 287 of them. All but one region, ESC Region 14 (Abilene), is represented in the participant sample. The regions with the largest percentages of TxPEP participants (16% each) are ESC Region 4 (Houston) and ESC Region 10 (Richardson).

**Table 4. TxPEP Participants' Schools by
Texas Educational Service Center Regions (*N* = 291)**

Educational Service Center Region	*N*	Percent
1. Edinburg	19	6.6%
2. Corpus Christi	15	5.2%
3. Victoria	10	3.5%
4. Houston	46	16.0%
5. Beaumont	9	3.1%
6. Huntsville	26	9.1%
7. Kilgore	9	3.1%
8. Mt. Pleasant	6	2.1%
9. Wichita Falls	1	0.3%
10. Richardson	47	16.4%
11. Ft. Worth	7	2.4%
12. Waco	14	4.9%
13. Austin	24	8.4%
14. Abilene	0	0.0%
15. San Angelo	1	0.3%
16. Amarillo	7	2.4%
17. Lubbock	8	2.8%
18. Midland	8	2.8%
19. El Paso	12	4.2%
20. San Antonio	18	6.3%

Source: Evaluator analysis of TxPEP attendance data.

Were TxPEP Events Well Attended?

Overall, attendance rates varied considerably over the course of the program. Some events were well attended and others were not.

- Attendance rates at the initial summit meeting and the three workshops were highest, with 84% or more of participants attending.

- Attendance rates at required webinars were considerably lower, with approximately 60% to 70% of participants attending each of the required webinars.

- Few participants attended all required events. Only 28% of participants attended all 10 required events; an additional 23% attended 9 of the 10 events. A little over a quarter of participants (27%) attended five or fewer of these events.

- Although attendance at required events was mandatory for principals from AU campuses, the percentage who attended required events was similarly low: only 30% attended all 10 events, while 24% attended 9 of the 10 events. Approximately 23% attended five or fewer required events.

- Optional webinars were not well attended. Between 15% and 30% of participants attended each of the optional webinars. The majority of participants (more than 60%) attended two or fewer of these optional events.

Table 5 presents a summary of the attendance rates for each of the required TxPEP events (overall and for principals from AU and non-AU campuses). Attendance rates were highest at the initial summit meeting and the three workshops for principals from both AU and non-AU campuses. Attendance rates at the five required webinars ranged from 58% for the webinar on data-driven decision making to 67% for the webinar on change management. For all ten events, attendance rates were higher for principals from AU campuses than for those from non-AU campuses. Because program participation was voluntary for principals from non-AU campuses but mandatory for those from AU campuses, this difference in attendance rates is not surprising. Notably, however, a large percentage of principals from AU campuses did not attend all required events, particularly required webinars.[11]

Table 5. Attendance at Required Workshops, Summit Meetings, and Webinars (N = 306)

Required Events	Overall		AU (N = 248)		Non-AU (N = 58)	
	n	**Percent**	*N*	**Percent**	*n*	**Percent**
Initial Summit Meeting	300	98.0%	246	99.2%	54	93.1%
Workshop 1	295	96.4%	241	97.2%	54	93.1%
Workshop 2	273	89.2%	231	93.1%	42	74.4%
Workshop 3	257	84.0%	218	87.9%	39	67.2%
Final Summit Meeting	226	73.9%	194	78.2%	32	55.2%
Change Management Webinar	206	67.3%	173	69.8%	33	56.9%
Ethical Leadership Webinar	186	60.8%	157	63.3%	29	50.0%
Data Disaggregation Webinar	185	60.5%	154	62.1%	31	53.4%
Fiscal Management Webinar	181	59.2%	149	60.1%	32	55.2%
Data-Driven Decision Making Webinar	177	57.8%	148	59.7%	29	50.0%

Source: Evaluator analysis of TxPEP attendance data.
Note: AU refers to participants from campuses rated academically unacceptable; non-AU refers to participants from campuses not rated academically unacceptable.

Table 6 presents attendance rates at optional TxPEP webinars, both overall and for principals from AU and non-AU campuses.

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[11] TEA program staff maintained records of participants from AU campuses who did not fulfill program requirements and followed up with them to arrange for completion of these requirements.

Table 6. Attendance at Optional Webinars (*N* = 306)

Optional Events	Overall		AU (*N* = 248)		Non-AU (*N* = 58)	
	n	Percent	*n*	Percent	*n*	Percent
Human Resources and Capacity Building	87	28.4%	73	29.4%	14	24.1%
Diversity Management	87	28.4%	75	30.2%	12	20.7%
Monitoring Continuous Improvement	84	27.5%	70	28.2%	14	24.1%
Goal Setting	78	25.5%	64	25.8%	14	24.1%
Strategic Planning	60	19.6%	50	20.2%	10	17.2%
Team Building	60	19.6%	51	20.6%	9	15.5%
Quality Processes	54	17.6%	43	17.3%	11	19.0%
Conflict Resolution	49	16.0%	43	17.3%	6	10.3%
Best Practices	46	15.0%	37	14.9%	9	15.5%
Performance Management	43	14.1%	35	14.1%	8	13.8%
Problem Solving	43	14.1%	34	13.7%	9	15.5%

Source: Evaluator analysis of TxPEP attendance data.
Note: The National Center for Educational Achievement (NCEA) presented the human resources and capacity building webinar.

Attendance at optional webinars was generally low, with between 14% and 28% of all participants attending. The attendance rates of principals from AU campuses were slightly higher than those of principals from non-AU campuses with the exception of the webinars on quality processes, best practices, and problem solving.

Attendance data also were analyzed to determine how many required and optional events participants attended. Figure 2 shows the number of required events attended by the 306 TxPEP participants. Figure 3 shows the number of optional events attended by participants.[12]

As shown in Figure 2, only 28% of participants (*n* = 87) attended all ten required events; 23% (*n* = 70) attended nine of the ten events. Approximately 27% of participants (*n* = 83) attended five or fewer required events. Attendance patterns for principals from AU campuses were similar to those of the group as a whole: 30% (*n* = 74) attended all ten required events; 24% (*n* = 59) attended nine events; and 23% (*n* = 58) attended five or fewer events (analysis not shown).

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[12] For webinars, participants were required to pass a quiz to receive continuing education credits for attending. Only participants who passed the quiz are included in webinar attendance counts.

**Figure 2. Number of Required Events Attended by Participants
in the Texas Principal Excellence Program (*N* = 306)**
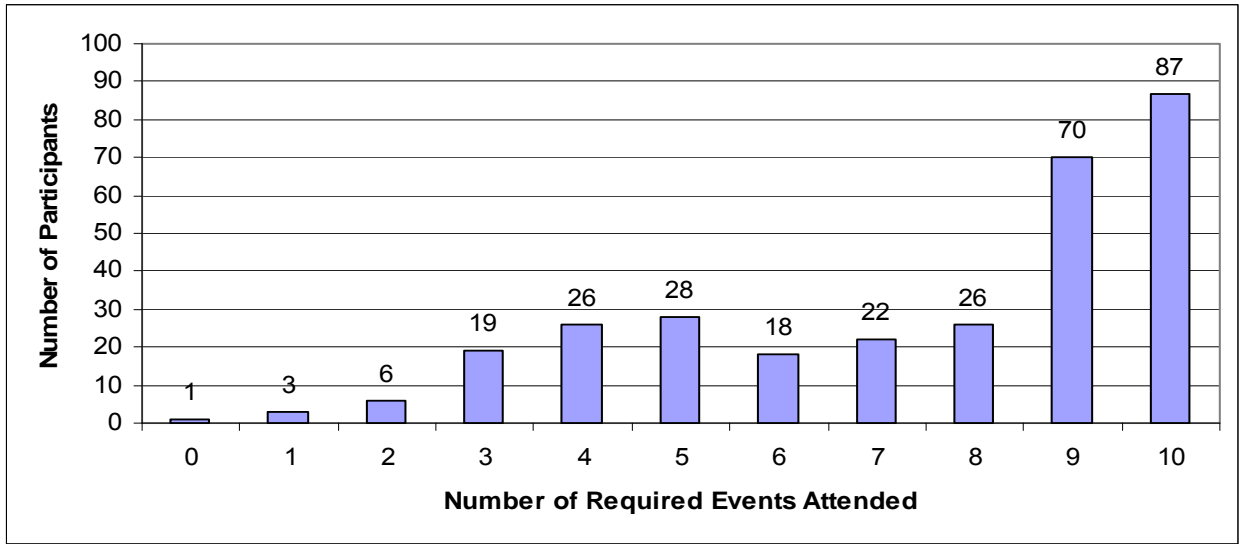
Source: Evaluator analysis of TxPEP attendance data.

As shown in Figure 3, few participants attended the optional events. Approximately 65% of participants (*n* = 200) attended two or fewer optional events; 38% (*n* = 115) attended none of the optional events.

**Figure 3. Number of Optional Events Attended by Participants
in the Texas Principal Excellence Program (*N* = 306)**
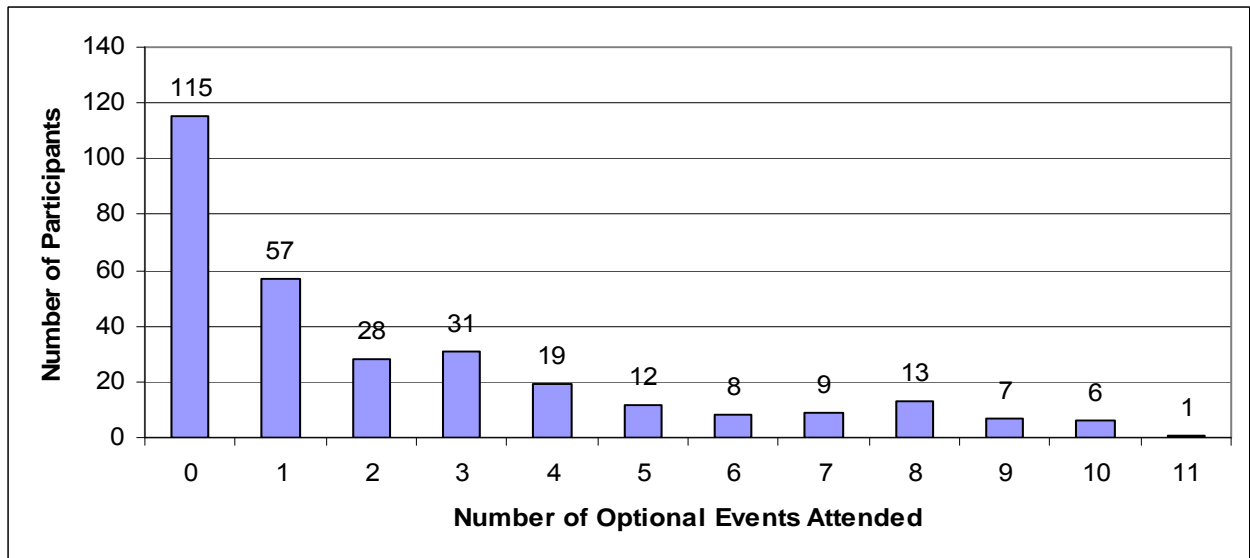
Source: Evaluator analysis of TxPEP attendance data.

Barriers to Participation. In interviews and focus groups, TxPEP participants noted several barriers to full participation in TxPEP. Travel to workshops and summit meetings was problematic for some, and several participants reported that the program required them to spend

too much time away from their campuses. In addition, some participants were involved in other school improvement initiatives that competed for their time. Given time constraints, many participants were unwilling to participate in optional events. Several participants also noted that the webinars were scheduled at inconvenient times. In general, interview and focus group participants expressed a desire for greater flexibility in the scheduling of events, and a reduction in the number of events that required them to be away from their campuses. Several also expressed a desire for greater options in selecting courses and webinars that best met their individual needs.

Did Attendance Patterns Vary With Participant Characteristics?

Attendance patterns were found to vary by participant characteristics.

- Participants from AU campuses had higher rates of attendance at both required and optional events than those from non-AU campuses.

- Participants whose schools had higher student-teacher ratios or higher percentages of students meeting TAKS reading proficiency standards also had higher attendance rates at required and optional events.

Classification of Attendance Patterns. To determine whether TxPEP attendance patterns varied by principal and school characteristics, differences in participants' attendance patterns were first identified using a classification technique known as cluster analysis.[13] (A description of technical procedures used to classify the attendance patterns of TxPEP participants can be found in Appendix D.) Using this clustering technique, TxPEP participants were classified into the following three groups:

- Low/Low: low attendance at both required and optional events

- High/Low: high attendance at required events and low attendance at optional events

- High/High: high attendance at both required and optional events

Of the 306 TxPEP participants, 30% ($n = 92$) were in the Low/Low group; 52% ($n = 158$) were in the High/Low group; and 18% ($n = 56$) were in the High/High group. The number of events attended by participants in each of these groups is summarized below.

- Participants in the Low/Low group attended, on average, 4 of the 10 required events and none of the optional events.

- Participants in the High/Low group attended, on average, 9 required events and 2 optional events.

- Participants in the High/High group attended, on average, 9 required events and 7 optional events.

Characteristics Associated With Attendance Patterns. Logistic regression analyses were conducted to understand the relationship between principal and school characteristics and TxPEP

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[13] Cluster analysis creates groups (or "clusters") in a manner that minimizes the differences in the characteristics within those groups while also maximizing the differences in characteristics between those groups.

attendance patterns. This analytic technique can be used to estimate the likelihood that individuals with certain characteristics will belong to one category rather than another. In this instance, the categories of interest were the three attendance groups identified above. Principal characteristics and school characteristics were analyzed to determine whether they were associated with membership in one of these three groups. (See Appendix E for a more detailed description of this analysis.)

- Principal characteristics included gender, race/ethnicity, level of education, number of times a principal has changed schools (in the past five years), and salary in 2007–08.[14]

- School characteristics (2007–08) were separately analyzed and included AU status, TAT status, teacher experience, percentage of teachers with advanced degrees, total number of students, student-teacher ratio, disciplinary actions per student, percentage of students meeting TAKS proficiency standards in reading, percentage of minority students, percentage of economically disadvantaged students, percentage of limited English proficient students, and percentage of special education students.[15]

None of the principal characteristics was found to be significantly associated with either an increased or decreased likelihood of being in the Low/Low, High/Low, or High/High attendance groups.[16] However, of the 12 school characteristics that were included in the model, 3 were found to be significantly associated with TxPEP participants' attendance patterns: campus rating (AU versus non-AU), student-teacher ratio, and percentage of students meeting TAKS reading proficiency standards.[17]

- AU status was significantly related to the likelihood of principals attending a high number of required and optional events.

  - Principals from AU schools were approximately 6 times (or 600%) more likely to attend a high number of required and optional events (High/High) than to attend a low number of events (Low/Low).

  - Principals from AU schools were approximately 7 times (or 700%) more likely to attend a high number of required events and a low number of optional events (High/Low) than to attend a low number of events (Low/Low).

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[14] Principal experience, measured in years, was found to be associated with salary and therefore was excluded from analyses. Salary was used rather than principal experience because TEA data on principal experience was available only for the previous five years. Although TxPEP participants who completed the spring and fall 2008 Principal Leadership Survey were asked to report their total years of experience as principal, this information was available only for TxPEP participants who had completed the survey.

[15] For the 250 TxPEP participants for whom TEA data on school and principals characteristics were available, the distribution of participants across the attendance groups was almost identical to the distribution for all participants: 30% ($n = 75$) were in the Low/Low group; 53% ($n = 133$) were in the High/Low group; and 17% ($n = 42$) were in the High/High group.

[16] A statistically significant relationship is one that is unlikely to occur by chance.

[17] In each instance, all other independent variables in the model (e.g., percentage of minority students, teacher experience) were held at a constant value (e.g., the average value for the group as a whole). In looking at the relationship between AU status and attendance patterns, for example, a principal from an AU campus would be much more likely to attend required or optional events when compared with a similar principal from a non-AU campus (e.g., one whose school had the same percentage of minority students, teachers with the same level of teacher experience, and other school characteristics included in the model).

- Student-teacher ratio also was significantly related to the likelihood of attending a high number of required or optional events.

  ▪ Principals who were from schools with higher student-teacher ratios (more students per teacher) were 1.43 times (or 43%) more likely to attend a high number of required and optional events (High/High) than to attend a low number of these events (Low/Low).

  ▪ In addition, principals who were from schools with higher student-teacher ratios were 1.21 times (or 21%) more likely to attend a high number of required events and a low number of optional events (High/Low) than to attend a low number of these events (Low/Low).

- Finally, percentage of students meeting TAKS reading proficiency standards was associated with high attendance at required and optional events. This finding suggests that as the percentage of proficient students increased, principals were 1.12 times (or 12%) more likely to attend a high number of required and optional events (High/High) than to attend a low number of these events (Low/Low).

Interpretation of Findings. Because principals from AU campuses were required to participate in TxPEP, it is not surprising that these principals were likely to attend a high rather than a low number of required events. However, principals from AU campuses were likely to attend optional as well as required events, suggesting that they tended to be invested in the program.

A possible explanation for the relationship between student-teacher ratio and patterns of attendance at TxPEP events may be that principals from schools with higher student-teacher ratios (and thus greater teacher workloads) are more motivated to improve their leadership skills. Principals of these schools may have greater difficulty in attracting and retaining experienced and qualified teachers and be more motivated to participate in professional development activities that offer them opportunities to learn effective management practices.[18]

Once other variables are controlled for in the analytic model, there is an independent association between student reading proficiency on the 2007-08 TAKS and higher levels of attendance at TxPEP events. This positive relationship might suggest that principals who are more committed to improving their leadership skills (as indicated by their higher level of attendance) are more likely to be from campuses with higher percentages of students who read at proficient levels (all other factors being equal).

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[18] An examination of the correlations among the school characteristics analyzed also indicates that higher student-teacher ratios are significantly associated with higher percentages of economically disadvantaged, limited English proficient, and minority students, and lower levels of teacher experience and student proficiency in reading. Correlations indicate the degree to which variables are associated with one another. Two variables are positively correlated if high values of one variable are associated with high values of the other variable. The variables are negatively correlated if high values of one variable are associated with low values of the other variable. Correlations among school variables included in analyses of attendance patterns are presented in Appendix F.

Program Implementation and Quality

Findings regarding program implementation and quality address the following research questions:

- Is the program being implemented with fidelity (i.e., as planned)?

- Is the program being implemented with high quality?

- Is the program content relevant to participants' needs?

- Is the program useful in helping participants develop leadership knowledge and skills?

Findings on program implementation and the perceived quality, relevance, and usefulness of TxPEP are presented below. Many of these findings were presented in the interim evaluation report, which summarized the results of principal focus groups and interviews with program staff conducted in December 2007. These initial findings have been supplemented with findings from focus groups and interviews conducted between February and September 2008. Results of a cohort consultant survey are also presented as are participants' ratings of the program's usefulness and their comments and suggestions for improving the program which were obtained from the fall 2008 Principal Leadership Survey. The findings from later rounds of data collection are generally consistent with those presented in the interim report.

Was the Program Implemented With Fidelity?

Interviews with TEA and APQC program staff and cohort consultants suggest that the TxPEP program was implemented with fidelity to stated program objectives. In addition, of 38 cohort consultants who completed surveys, 84% ($n = 32$) reported that their role was implemented as planned. The approved curriculum and delivery mechanisms that were established for the program in 2006 were, for the most part, implemented as planned.

During the first year of TxPEP, a few changes were made in the program design that was originally submitted by APQC. Some changes were made at request of TEA (e.g., a greater program emphasis on business tools and processes in line with the legislative intent for the program). Other changes were due to circumstances beyond APQC's control, such as having to schedule an additional summit meeting in September 2007 to accommodate principals attending a professional development program scheduled concurrently with the initial TxPEP summit meeting. One aspect of the program that was not implemented entirely as intended in the initial year of the program was the limited range of course options offered to participants. Participants were given fewer choices with respect to courses and online activities than TEA had originally envisioned and had limited opportunities to tailor their professional development to their individual needs.

What Were Participants' Perceptions of Program Quality, Relevance, and Usefulness?

Feedback from 20 focus group participants, 30 principal interviews, 6 cohort consultant interviews, and the cohort consultant survey suggest that participants found the program content was of high quality and mostly relevant to their needs. Responses to the fall 2008 principal survey suggest that the majority of participants also found the program useful. Open-ended comments on the program provided by 52 of 128 respondents to the fall 2008 principal survey were generally consistent with the types of comments and suggestions made by principals who participated in interviews or focus groups. Findings from the focus groups and interviews are summarized below.

Perceptions of Program Quality and Relevance

- Participants reported that the program was well organized, well run, and relevant to their leadership roles.

- The format and topics of the webinars were well received by principals. Principals found that the webinars were most relevant to their leadership role, and appreciated the topics and the flexibility of the webinar format.

- TxPEP provided opportunities for self-reflection and personal growth. Principals appreciated the opportunity that was offered by the 360-degree LPI and 21st Century Principal Assessment to reflect on their leadership practices. Findings from the fall 2008 interviews indicate that TxPEP gave principals an opportunity to reconsider their leadership skills. As one principal interviewed stated:

  > I believe that it has made me do a lot of looking at myself to see how I can improve. I've always been a lifelong learner. But I have not often had to assess how I really apply that information or put it to good use. So that was really an eye opening experience for me. And I think I approach things a little bit differently [now]. I'm a little bit slower to take action, but when I do I advance with a little more confidence.

- Participants valued the opportunities TxPEP provided to network with one another and to work with their cohort consultant. In addition, participants enjoyed meeting in person with their cohort group and cohort consultant at the summits and workshops.

- Cohort consultants served as resources throughout the program. Cohort consultants surveyed reported that they were most effective at communicating TxPEP requirements (82% *very effective*) and providing suggestions or feedback regarding leadership strategies (55% *very effective*). In addition, 95% of the 38 cohort consultants surveyed reported that they acted as a sounding board for principals' ideas and strategies. The vast majority of cohort consultants (92%) *agreed* or *strongly agreed* that they were successful in providing support to principals, and that they received the resources they needed to support the principals in their cohort (87% *agreed* or *strongly agreed*). A detailed summary of findings from the cohort consultant survey is presented in Appendix G.

Perceptions of Program Usefulness

- Participants reported that the information presented on data use and data-driven decision making was very useful. They found the data-visualization exercise to be particularly useful in understanding how to use data to set school improvement goals. Cohort consultants who were surveyed indicated that the topics they most frequently discussed with principals in their group were data-driven decision making and evaluating school initiatives and programs. Of the 38 cohort consultants who responded to the survey, 37% reported discussing data-driven decision making *often* or *very often* with principals; 42% gave the same responses for school and program evaluation.

- In interviews conducted with TxPEP participants in fall 2008, principals discussed lessons learned from the program. Examples included recognizing the importance of building positive relationships with staff, and learning how to delegate to team members.

- Most participants who were surveyed reported that TxPEP was useful in helping them develop leadership knowledge and skills. As shown in Figure 4, approximately 90% of the 128 TxPEP principals who completed the fall 2008 Principal Leadership Survey indicated that TxPEP had helped them identify their strengths and weaknesses as a leader *to a moderate* or *to a great extent*. More than 80% indicated that the program had helped them improve their understanding or skills in other areas emphasized by the program *to a moderate* or *to a great extent*. Less than 15% of respondents reported that TxPEP had helped them *to a minimal extent* in developing leadership skills and knowledge in the areas asked about; 5% or fewer reported the program had *not* been helpful in developing their leadership skills or knowledge.

Figure 4. Principal Survey Responses on the Extent to Which TxPEP Was Useful in Developing Leadership Skills (*N* = 128)
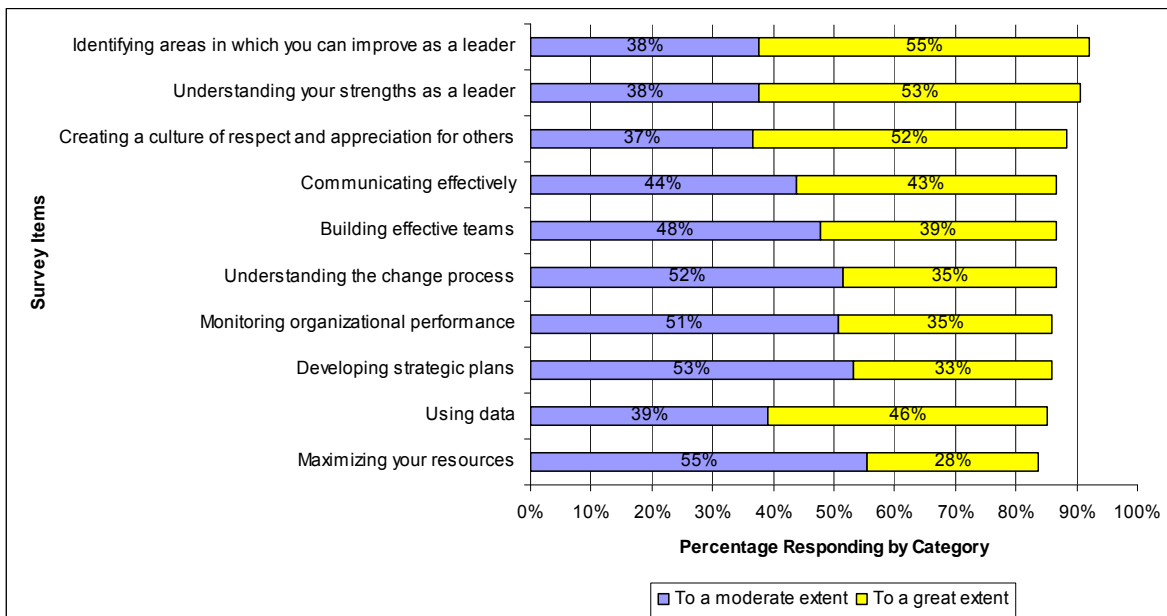
Source: Evaluator analysis of responses to items on the fall 2008 Principal Leadership Survey.

What Aspects of the Program Worked Less Well for Participants?

While participants' feedback on the quality, relevance, and usefulness of TxPEP was generally positive, both participants and program staff identified aspects of the program that participants found less relevant or useful.

- Several principals who were interviewed or participated in focus groups indicated that TxPEP did not present them with any new information, and, if anything, was a refresher course on topics they covered in their graduate programs.

- Interviews and focus groups with principals indicate that TxPEP would be more useful if participants were divided into groups based on years of experience, by school size, or by school level. As one principal noted, schools have needs based on the size of their district, and they "struggle for different reasons." Another principal stated that Workshop III was more relevant because "we were broken up by elementary and secondary schools."

- Overall, principals noted that they would find TxPEP more relevant if they had more choice about what courses or webinars to attend. In interviews, program staff noted that principals want to learn, but what they want to learn differs depending on their experience and the circumstances in their schools. They asserted that professional development cannot be a one-size-fits-all approach.

- The program's focus on business models and processes did not resonate with the majority of TxPEP participants who were interviewed or participated in focus groups. Principals who participated in focus groups and interviews articulated that the emphasis on business leadership practices felt removed from their actual day-to-day leadership responsibilities. One focus group participant spoke about the gap between the program providers and TxPEP participants in the following way:

  > The person presenting leadership strategies has never been a principal.
  > That's very difficult. I know leadership strategies are leadership
  > strategies in the business world and the education world, but if you've
  > never been a principal it's kind of hard to get buy-in if you've never been
  > there in our shoes.

- Participants did not use WebCT or the IBM Change Toolkit to the extent expected by the program. Based on data collected from interviews and focus groups with principals, the IBM Change Toolkit was not practical for principals to use. While principals thought that the IBM Change Toolkit had good potential for use, they reported that they did not have time to implement it. Although principals found WebCT an easy application to use, it appears that it was primarily used to view webinars rather than for participating in cohort discussions. Based on data from the cohort consultant survey, 53% of respondents indicated that WebCT was used either *not at all* or *less than every two months*.

- Principals were more likely to participate in the parts of TxPEP that were required, and not follow-through with components that were not required, such as implementing the leadership development plan. In interviews, APQC noted that principals tended not to follow-through with optional components, like the leadership development plan, primarily because they were not held accountable for regularly referring to the plan. In

addition, some principals only sporadically communicated with their cohort consultant. Results of the cohort consultant survey suggest that most cohort consultants communicated regularly with members of their cohort through e-mail, group conference calls, and individual phone conversations with cohort members.[19] Despite the efforts of the cohort consultants, some principals chose not to participate in e-mail exchanges or conference calls with their cohort consultants.

What Were Perceived Barriers to Leadership Change?

Several barriers to leadership change and principal buy-in emerged from data collected from principals, program staff, and cohort consultants. Barriers to participation in TxPEP included resistance from principals, scheduling challenges, distance to workshops, limited face-to-face contact, principals' desire to improve TAKS scores, and the multiple demands of the principal role. Findings from focus groups and interviews with principals, program staff, and cohort consultants are summarized below:

- Several focus group participants indicated that they found the workshop presentations to be too abstract and theoretical. Participants wanted hands-on strategies that they could immediately apply.

- Finding time to participate in TxPEP activities was challenging for some participants. Cohort consultants and principals reported that TxPEP took principals off campus too much. In addition, competing initiatives such as Campus Intervention Teams vied for principals' time, and mandatory webinars were held at inconvenient times for some participants.

- Other perceived barriers to change included poorly qualified teachers that principals felt powerless to remove; a narrow focus on raising student test scores to the exclusion of more systemic approaches to change; and the belief on the part of some principals that they do not need to enhance their leadership skills.

What Suggestions Were Offered for Improving TxPEP?

Principals and program staff offered several suggestions for program improvements:

- Provide participants with access to educational leaders who have demonstrated success in AU schools.

- Hold the TxPEP summits and workshops during the summer to better align with school schedules.

- Find ways to make management and leadership models more relevant to principals.

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[19] Of the 38 cohort consultant who were surveyed, all reported communicating at least monthly with cohort members via e-mail, and more than half (55%) reported that they communicated weekly via e-mail. More than 80% reported that they conducted group conference calls with cohort members on a monthly basis; another 6% reported that they conducted group conference calls more frequently. In addition, almost 70% of survey respondents indicated that they had one-on-one conversations with individual cohort members at least monthly. (See Appendix G, Table G1, for a summary of responses to survey questions regarding the frequency with which cohort consultants communicated with members of their cohort.)

- Provide participants with more choices with respect to course offerings.

- Provide more incentives to encourage principals to become active participants in the program as well as allocating additional funds to cohort consultants so that they can find and use creative ways to work, assist, and encourage their cohorts.

Relevance and Utility of TxPEP to Principals' Daily Work

Findings regarding the program's relevance and utility to principals' daily work in schools address the following research questions.

- Is the program content relevant to the day-to-day work of participating principals?

- Do participants incorporate what they learned from the program in their day-to-day work in schools?

In contrast to the previous section which focused on TxPEP's relevance to principals' professional development needs and its usefulness in helping participants acquire leadership skills and knowledge, the findings presented in this section focus on the extent to which participants spent time on the leadership areas emphasized by the program and used what they learned in working on activities related to those leadership areas.

Data that specifically address these questions come from two sources: (1) principal daily checklists; and (2) questions on the fall 2008 Principal Leadership Survey that asked principals to indicate the extent to which they had incorporated what they had learned from TxPEP into their daily work and their strategic planning.

For the principal checklists, both TxPEP participants and comparison principals were asked to complete brief daily logs or checklists for five consecutive days at four different time periods: late January/early February, late March/early April, June, and September 2008. On each daily checklist, respondents were asked to estimate the amount of time they spent on activities related to each of the six leadership areas emphasized by TxPEP (none, less than one hour, 1–3 hours, or 3 hours or more) and to rate their effectiveness in providing strong leadership in the areas in which they reported spending time. TxPEP participants also were asked to indicate the extent to which they were incorporating information learned through TxPEP into their daily work.

A total of 220 TxPEP participants and 238 comparison principals completed at least one checklist across the four different time periods. Table 7 reports the total number of checklists completed by principals during each of the time periods. Although respondents were asked to complete the checklists daily for the five working days in one week, some completed fewer than five checklists for a given time period; the total number of checklists completed equals the sum across all respondents of the number of checklists they completed during a given time period.[20]

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[20] Only 15 TxPEP participants and 10 comparison principals completed all four rounds of principal checklists. Of those who completed three rounds of checklists, 41 were TxPEP participants and 30 were comparison principals; of those who completed two rounds of checklists, 59 were TxPEP participant and 62 were comparison principals. The model used to analyze the data does not limit analysis to principals with all four data points; it can accommodate missing data.

**Table 7. Number of Daily Checklists Completed by TxPEP
Participants and Comparison Principals, 2008**

Group	Time Periods			
	1 **Jan/Feb**	**2** **March/April**	**3** **June**	**4** **Sept**
TxPEP	570	462	204	152
Comparison	587	318	148	290

Source: Evaluator analysis of principal checklist responses.

Checklist findings are organized around specific questions that have implications for the relevance and utility of the program to participants.

Did TxPEP and Comparison Principals Differ in Time Spent on Leadership Activities?

Analyses of the principal checklists revealed that there were differences in the amount of time TxPEP and comparison principals reported spending on leadership activities.

- On the checklists completed in January/February 2008, five months after the start of TxPEP, program participants reported spending significantly more time on activities related to the leadership areas emphasized by the program than did comparison principals.

- There were no significant changes in the responses of either group between January/February and September 2008, suggesting that differences between groups were maintained over time.

Analytic Approach. It was expected that TxPEP participants might be more likely than comparison principals to spend time on activities related to these leadership areas given the program's emphasis on enhancing principals' leadership skills in these areas. To test this hypothesis, checklist data were analyzed using hierarchical linear modeling (HLM), a technique that takes into account the nested nature of the responses (individual checklist responses, nested within time periods, nested within persons).[21] (See Appendix H for a detailed description of procedures used in analyzing checklist data.)

To control for factors other than program participation that might account for differences in principals' time estimates, several additional variables were tested for inclusion in the model:

- Principal characteristics included gender, race/ethnicity, current salary (2007-08), educational level, and number of school changes as a principal over the past five years.

- School characteristics included AU status, TAT status, teacher experience, percentage of teachers with advanced degrees, total number of students, student-teacher ratio, disciplinary actions per student, percentage of students meeting TAKS reading proficiency standards, percentage of students meeting TAKS mathematics proficiency

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[21] Of the TxPEP participants and comparison principals who completed checklists, 334 (155 TxPEP participants and 179 comparison principals) had sufficient data to be included in the model and could be linked with TEA data on school and principal characteristics.

standards, and percentage of minority students, economically disadvantaged students, limited English proficient students, and special education students.[22]

Variables that were selected for inclusion in the model were entered at the "person-level" (level 3) of a three-level model, with responses to checklists items at level 1, nested within time periods at level 2, nested within persons at level 3. The model examined differences in time spent by TxPEP and comparison principals for the January/February 2008 checklists and then examined change in time spent by each of the groups between January/February and September 2008.[23]

Magnitude of Differences Between Groups. Results of this analysis revealed fairly substantial differences in the time use estimates of TxPEP and comparison principals.

- On the January/February 2008 checklists, TxPEP participants were 1.43 times (or 43%) as likely as similar principals in the comparison group to select a higher response category in reporting time spent on activities related to the leadership areas emphasized by TxPEP (e.g., they were more likely to select *more than 3 hours* as opposed to *1–3 hours*).

- Time estimates did not change significantly between January/February and September 2008 for either TxPEP participants or comparison principals. The estimates of TxPEP participants remained higher than those of comparison principals across the four time periods.

These findings suggest that TxPEP participants found TxPEP program content relevant to their daily work in schools and spent more time on leadership activities related to program content than did principals in the comparison group.

Did TxPEP and Comparison Principals Differ in Their Effectiveness Ratings?

Analysis of TxPEP and comparison principals' effectiveness ratings from the principal checklists did reveal differences between the two groups:

- On the January/February 2008 checklists, TxPEP participants were significantly less likely than comparison principals to report that they were *very effective* at providing strong leadership in the areas on which they spent time.

- However, the effectiveness ratings of TxPEP participants increased slightly over time while comparison principals' ratings remained stable.

Analytic Approach. The same method used for the analysis of reported time spent on leadership activities was used to analyze respondents' effectiveness ratings. Ratings of individual checklist

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[22] Some variables used in the analyses, such as student-teacher ratio, were principal averages (e.g., the ratio was averaged over the number of schools in which an individual had served as principal during the past five years). For other variables, the 2007-08 values of variables were used. See Appendix H, Tables H1 − H5 for the models and specific variables used in each analysis.

[23] The analytic model used is a growth model that looks at initial differences between groups and then at changes in their responses over time. If no significant change in ratings is found across time periods, as is the case in this analysis, then it can be inferred that initial differences between groups, which are significant, are maintained over time. Differences between groups were not tested for each time period.

items at level 1 were nested within time periods entered at level 2, which were in turn nested within persons (level 3). Characteristics of principals and schools were entered at the person level to control for factors other than program participation that might account for differences in principals' effectiveness ratings. The analytic model examined differences in effectiveness ratings by TxPEP and comparison principals for the January/February checklists and then examined change over time in the effectiveness ratings of each of the groups.

Because TxPEP participants were in the process of acquiring or enhancing their leadership skills, it was thought that they might initially rate themselves lower on effectiveness than comparison principals since they might not yet have developed confidence in their ability to effectively use the knowledge and skills they were acquiring. However, over time, some increase might be expected in TxPEP participants' ratings relative to comparison principals.

Magnitude of Differences Between Groups. Although TxPEP participants were more likely to than comparison principals to report spending more time on activities related to the leadership areas emphasized by TxPEP, their effectiveness ratings were substantially lower than those of comparison principals on the first set of principal checklists. However, this difference did decrease over time.

- For the January/February 2008 checklists, TxPEP participants were 39% less likely to select a higher effectiveness rating than similar comparison principals (e.g., they were less likely to select *very effective* as opposed to *moderately effective*).

- Between January/February and September 2008, TxPEP participants showed positive growth in ratings of effectiveness relative to comparison principals, a result that approaches statistical significance ($p < .08$).

By September 2008, there were no differences in the effectiveness ratings of TxPEP and comparison principals (see Appendix H, Figure H2 for a graphical display of the average effectiveness ratings of the two groups over time.) While the increase in TxPEP participants' effectiveness ratings is small, it does suggest that TxPEP may have had some positive impact on participants' leadership abilities.

Did TxPEP Participants' Responses Vary With Attendance Levels?

Analysis of the relationship between TxPEP participants' checklist responses and their attendance levels at required and optional TxPEP events revealed that the amount of time participants reported spending on leadership activities varied significantly with attendance level.

- On the January/February 2008 checklists, TxPEP participants who had higher levels of attendance at TxPEP events were more likely to provide higher estimates (e.g., *3 hours or more* rather than *1–3 hours*) of time spent on leadership activities than similar participants who attended fewer events.

- Estimates of time spent on leadership activities did not change significantly for participants with either higher or lower attendance levels over the eight month period in which checklist data were collected, suggesting that the initial differences between groups were maintained over time.

Analytic Approach. Using the same methods described for the two previous analyses, a second set of models that included only TxPEP participants was developed to determine the relationship between attendance at TxPEP events and (1) principal ratings of time spent on leadership activities; (2) effectiveness in providing strong leadership; and (3) the extent to which participants were incorporating information learned through TxPEP. Attendance levels at required and optional TxPEP events were classified, respectively, as Low/Low, High/Low, and High/High. For each of the three models, responses to individual checklist items (level 1) were nested within time periods (level 2), which were in turn nested within individuals (level 3). Principals and schools characteristics were included as control variables at level 3. Each model examined differences in responses by participants' attendance levels for the January/February 2008 checklists and changes in the responses of each group between January/February and September 2008.

It was thought that higher levels of attendance by TxPEP participants and greater exposure to leadership best practices might result in greater investments of time in activities related to areas emphasized by the program, a greater sense of self-efficacy in working on activities related to those areas, and a greater incorporation of program content into their day-to-day work.

Magnitude of Differences Between Groups. Results of these analyses revealed fairly substantial differences in time use estimates between principals with higher and lower levels of attendance at TxPEP events.

- On the January/February checklists, TxPEP participants who reported attending a greater number of events were 1.33 times (or 33%) more likely than similar participants[24] who attended fewer events to select a higher response category (e.g., *more than 3 hours* of time spent on leadership activities as opposed to *1–3 hours*).

- There was no significant change in time spent for the three groups (Low/Low, High/Low, and High/High) between January/February and September 2008, suggesting that differences between groups were maintained over time.

No significant differences were found among attendance groups with respect to ratings of leadership effectiveness or incorporation of information learned from TxPEP either for the January/February 2008 checklists or over the eight month period in which data were collected.

Because participants with higher attendance levels would have been exposed to more program offerings than those with lower levels of attendance, they may have found it difficult to apply everything they were learning over the short time period in which checklist data were collected or to develop confidence in their ability to implement effective leadership practices. It may be too early to determine whether varying levels of program participation have a differential impact on leadership effectiveness.

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[24] Analytic models controlled for differences in principal and school characteristics so the comparison is to principals who are similar with respect to these characteristics.

Have Participants Incorporated What They Learned From TxPEP?

Findings from both the principal checklists and the fall 2008 Principal Leadership Survey indicate that the majority of TxPEP participants have applied what they learned from TxPEP *to a moderate* or *to a great extent* in their daily work and in their strategic planning.

Descriptive analyses of responses to the principal checklist revealed a consistent pattern of responses to items that asked participants the extent to which they were incorporating what they had learned from TxPEP into their daily activities:

- Approximately half (45% to 50%) of the respondents indicated that they were incorporating what they had learned *to a moderate extent* on each of the four checklists administered between January/February and September 2008

- Approximately 15% reported that they did so *to a great extent* across on all four checklists.

On the fall 2008 Principal Leadership Survey, TxPEP participants also were asked to indicate the extent to which they had incorporated what they learned from TxPEP into their daily work and into their strategic planning. These questions were designed to elicit a more global assessment of the utility of the program for participants, in contrast to the daily assessments provided on the checklists. The distribution of responses was similar for both questions.

Figure 5 presents the responses for strategic planning. The majority of participants (more than 80%) reported that they had incorporated information about all leadership areas emphasized by TxPEP *to a moderate* or *to a great extent*. The responses for Data-Driven Decision Making and Ethical Leadership were particularly positive, with 52% of the 128 respondents reporting that they had incorporated information about this leadership area *to a great extent* and 44% reporting that they had incorporated information about Ethical Leadership *to a great extent* in their strategic planning. Less than 15% of respondents reported that they had incorporated what they learned *to a minimal extent* in their strategic planning; 5% or fewer reported they had *not* incorporated what they had learned. (See Appendix I for a detailed summary of TxPEP participants' responses to these questions.)

**Figure 5. Principal Survey Responses on the Extent to Which
Information From TxPEP Was Incorporated Into Strategic Planning ($N = 128$)**
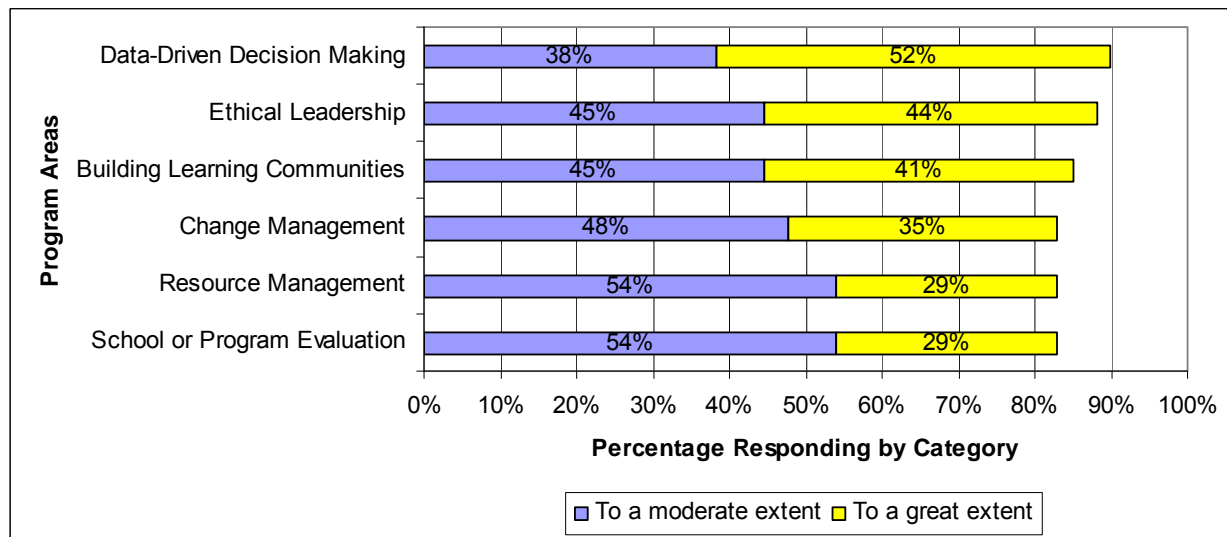
Source: Evaluator analysis of responses to items on the fall 2008 Principal Leadership Survey.

Summary

Overall, findings from the principal checklists and from items on the fall 2008 principal survey focusing on the application of information learned from TxPEP suggest that TxPEP participants found program content both relevant to their responsibilities as principals and useful in carrying out those responsibilities.

- TxPEP participants were more likely than comparison principals to report spending more time (e.g., *3 hours or more* rather than *1–3 hours*) on activities related to the leadership areas emphasized by TxPEP on the January/February 2008 principal checklists. There were no significant changes in the responses of either group subsequent time periods, suggesting that initial differences between groups were maintained over time.

- Although TxPEP participants were less likely than comparison principals to report that they were *very effective* at providing strong leadership on the January/February 2008 checklists, the effectiveness ratings of TxPEP participants increased over time, while comparison principals' ratings remained stable.

- TxPEP participants with high levels of attendance at TxPEP events (the High/High group) were more likely to provide higher estimates (e.g., *3 hours or more* rather than *1– 3 hours*) of time spent on activities related to the leadership areas emphasized by TxPEP than similar participants who attended fewer events.

- For all leadership areas emphasized by the program, approximately 60% to 65% of the respondents to the principal checklists reported that they were incorporating what they had learned into their daily work on various leadership activities *to a moderate* or *to a great extent* on all four sets of checklists completed between January/February and September 2008.

- The vast majority of TxPEP participants (more than 80%) who responded to the fall 2008 Principal Leadership Survey reported that they had incorporated what they learned from the program into both their daily work and into their strategic planning *to a moderate* or *to a great extent*. Responses for Data-Driven Decision Making and Ethical Leadership were particularly positive, with between 40% and 50% of respondents reporting that they have incorporated program content in these leadership areas *to a great extent*.

It should be noted, however, that response rates for the principal checklists were generally low and declined over time. On the January/February 2008 principal checklists only 53% of TxPEP participants ($n = 164$) and 27% of comparison principals ($n = 169$) completed checklists. By September 2008, when last round of checklists was administered, only 15% of TxPEP participants ($n = 45$) and 14% of comparison principals ($n = 85$) completed checklists. Although response rates for the fall 2008 Principal Leadership Survey were considerably higher than those for September 2008 principal checklists, only 42% of TxPEP participants ($n = 128$) responded to questions regarding the extent to which they had incorporated what they learned from TxPEP into their daily work and strategic planning. It is possible that the principals who responded to the checklists and the fall 2008 Principal Leadership Survey differed in systematic ways from those who did not respond to the surveys and checklists. Due to time constraints, we were unable to check for systematic differences between respondents and nonrespondents, but such analyses should be conducted to determine whether response bias exists.

In addition, the survey and checklist measures are self-report measures which could also contribute to bias in responses. Given the data available, there was no way to determine whether TxPEP principals actually spent more time than comparison principals on leadership areas emphasized by the program or incorporated what they learned from the program to the extent reported on the principal checklists and the fall 2008 Principal Leadership Survey. Respondents may have answered questions in ways that justified their investment of time in the program or that would reflect favorably on themselves. Given these potential sources of bias, these results should be interpreted with caution.

Program Impact on Principals' Leadership Abilities

Findings regarding the relationship between participation in TxPEP and principal and teacher ratings of principal leadership ability address the following research questions:

- What is the impact of the TxPEP program on participants' leadership abilities?

- What is the differential impact of varying amounts of program participation on TxPEP participants' leadership abilities?

Measures of principals' leadership abilities come from the following sources:

- The Principal Leadership Survey, administered three times over the course of the program (fall 2007, spring 2008, and fall 2008) to both TxPEP participants and comparison principals, provides baseline and post-program self-report measures of principal leadership abilities for both groups of principals.

- The teacher survey, administered to teachers of both TxPEP participants and comparison principals in spring 2008, provides post-program data on teachers' perceptions of principal leadership abilities for both groups of principals.

- The LPI and 21st Century Principal Assessment, administered to TxPEP participants (and observers) by APQC in fall 2007 and spring 2008, provide additional baseline and post-program measures of leadership abilities for program participants.

Findings from the Principal Leadership Survey are first presented, followed by findings from the teacher survey. Findings from LPI and 21st Century Principal Assessment are then presented. Findings are organized around specific questions regarding differences in the leadership ratings of TxPEP and comparison principals, changes in TxPEP participants' ratings of their leadership abilities over time, and the differential relationship of varying levels of program participation to TxPEP participants' and teachers' ratings of principals' leadership abilities.

Did TxPEP Participants' Ratings of their Leadership Abilities Increase Over Time?

Analyses of TxPEP and comparison principals' responses to the fall 2007, spring 2008, and fall 2008 Principal Leadership Surveys indicate that TxPEP participants' leadership ratings did increase across the three time points for five of the six leadership areas measured, suggesting that, overall, principals in the fall of 2008 rated their abilities higher than they did in the fall of 2007.

- Participants' leadership ratings increased significantly for Change Management, Building Learning Communities, Data-Driven Decision Making, Resource Management, and School and Program Evaluation. The only leadership area in which participants' leadership ratings did not increase significantly between the fall 2007 and fall 2008 survey administrations was Ethical Leadership.

- In contrast, comparison principals' ratings remained relatively stable across the three administrations of the survey for all leadership areas except School and Program Evaluation, which increased across the three administrations of the survey.

Scaling of Principals' Leadership Ratings. The Principal Leadership Survey asked TxPEP participants and comparison principals to rate their knowledge or effectiveness in the six leadership areas emphasized by TxPEP. Each of these leadership areas was measured by six items, and each item was rated using four response options. For each of the six leadership areas included in the fall 2007, spring 2008, and fall 2008 Principal Leadership Survey, analyses were conducted to determine whether the responses to items measuring each of these leadership areas could be summarized using a single scale score. Results of these analyses indicated that each of the item sets cohered as a scale, thereby providing a single scale score, and were reliable and valid measures of the leadership area or construct. For example, for Data-Driven Decision Making, survey respondents were asked to rate the extent to which they were effective in using data in making various types of decisions (e.g., to identify gaps in the curriculum for all students; to set learning goals for individual students; to determine topics for professional development; to set school improvement goals). Responses to these items were analyzed to determine whether there were similarities in respondents' ratings of these items.

The primary method used for the analysis of survey items was the Rasch model for ordered categories, a technique for ordering items according to the extent to which respondents endorse them (often referred to as item difficulty). Most respondents may have rated themselves as *very effective* in using data to set learning goals for individual students, indicating that they found it relatively easy to endorse the item, but few may have rated themselves as *very effective* in using data to set school improvement goals, indicating that most participating had difficulty endorsing the item. If items can be ordered in this way, they can be combined to form a single scale. Once the items are combined to form a scale, a set of scale scores can be generated summarizing individuals' responses to this set of items. An advantage of this method is that a single scale score it is easier to interpret than a group of items. In addition, multiple items that measure a single construct often tap different aspects or dimensions of the construct. Therefore, a scale has better reliability and validity than a single item. (See Appendix J for additional details on the methods used to evaluate the reliability and validity of the principal leadership scales.)

For each of the six leadership constructs included in the Principal Leadership Survey, the average difficulty for all items that comprise the scale was set at 50. Scale scores above 50 indicate positive ratings (e.g., moderate to great effectiveness), while scores below 50 indicate negative ratings (e.g., minimal to no effectiveness). Scale scores were calculated using data from all three survey administrations. Creation of a common scale across survey administrations makes it possible to directly compare scale scores for a given leadership construct.

Scale scores were created for each of the following constructs:

- Change Management (Effectiveness)
- Building Learning Communities (Effectiveness)
- Data-Driven Decision Making (Effectiveness)
- Ethical Leadership (Knowledge)
- Resource Management (Knowledge)
- School and Program Evaluation (Knowledge)

Analysis of TxPEP and Comparison Principals' Leadership Ratings. HLM was used to determine whether scale scores for the six leadership constructs listed above differed for TxPEP participants and comparison principals across the three survey administrations. (See Appendix J for a detailed description of the procedures used for this analysis.) All models were two-level with time (repeated responses) at level 1 nested within level 2, which modeled principal and school-level factors. Because several factors other than program participation might account for differences in principals' scale scores, several principal and school characteristics were included in the models. Failure to control for these characteristics could lead to an overstating or understating of the between TxPEP program participation and principals' leadership scale scores.

Some variables included in the analysis were "principal averages." Principal average variables represent the average of that variable for an individual principal for up to the last five years. For example, if a principal had worked in Texas for three years and during those three years worked

in three schools with the total number of students at each school being 600, 620 and 640, then the "principal average" for total number of students associated with that principal would be 620. The variables that were tested for inclusion in the final models were:

- 2007–08 values for percentage of economically disadvantaged students, percentage of limited English proficiency students, percentage of minority students, percentage of special education students, total number of students, number of times a principal changed schools (in the past five years), percentage of students meeting TAKS mathematics proficiency standards, and percentages of students meeting TAKS reading proficiency standards.

- Principal averages for percentage of economically disadvantaged students; percentage of limited English proficiency students, percentage of minority students, percentage of special education students, total number of students, and teacher-student ratio.

Each principal from the TxPEP campuses (approximately 300) and the comparison campuses (approximately 600) were invited to complete the survey at three different time points. Had each principal completed the survey at each time point there would have been approximately 2,700 (900 x 3) survey responses. A total of 1,155 responses were collected (562 from TxPEP participants and 593 from comparison principals) across the three administrations of the survey. Some respondents did not complete all sections of the surveys; therefore, the number of responses for each of the leadership constructs varies (Figures 6 through 10 below report differences in the number of responses for different constructs).

Changes in TxPEP and Comparison Principals' Leadership Ratings. As noted earlier, TxPEP participants' leadership ratings increased significantly for five of the six leadership constructs measured on the Principal Leadership Survey. Figures 6 through 10 present the average scale scores for these five constructs at each survey administration for both TxPEP participants and comparison principals.[25] Because scale scores are not equated across constructs, comparisons between constructs (e.g., Change Management to Building Learning Communities) cannot be made. As can be seen in the figures, scale scores for TxPEP principals consistently increased from fall 2007 to fall 2008 whereas scores for the comparison principals remained relatively stable.

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[25] The average scale scores presented in Figures 6 through 10 are model-adjusted average scores, meaning they reflect adjustments for differences in the school and principal characteristics of TxPEP participants and comparison principals within analytic models.

Figure 6. Change Management: Average Scale Scores (*N* = 1,155)
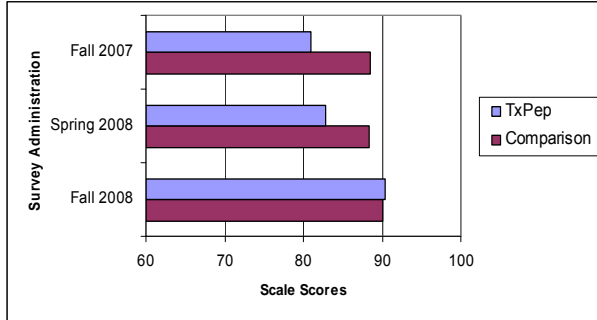
Source: Evaluator analysis of responses to the Principal Leadership Survey.

Figure 7. Building Learning Communities: Average Scale Scores (*N* = 1,149)
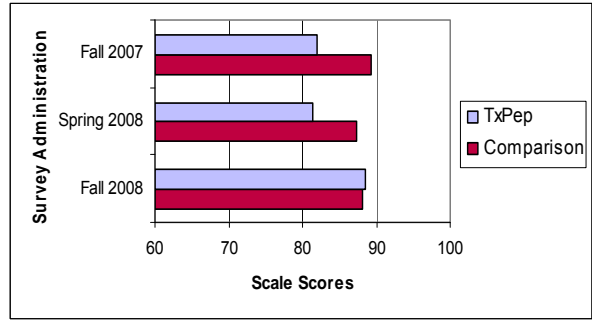
Source: Evaluator analysis of responses to the Principal Leadership Survey.

Figure 8. Data-Driven Decision Making: Average Scale Scores (*N* = 1,147)
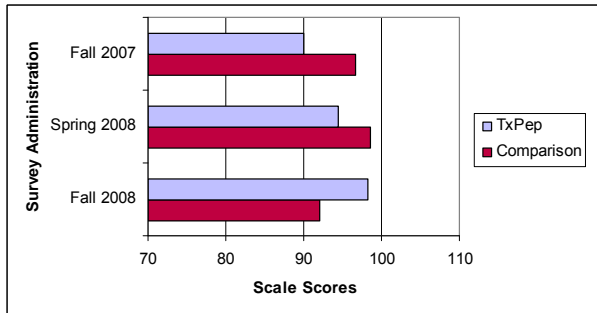
Source: Evaluator analysis of responses to the Principal Leadership Survey.

Figure 9. Resource Management: Average Scale Scores (*N* = 1,143)
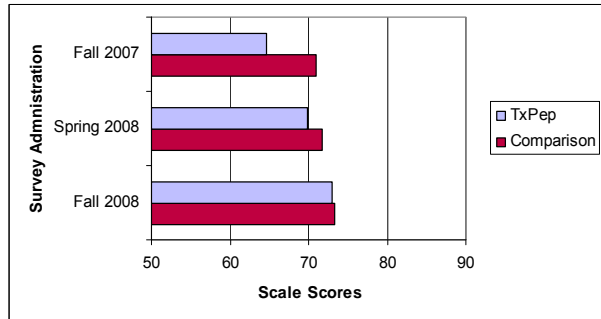
Source: Evaluator analysis of responses to the Principal Leadership Survey.

Figure 10. School and Program Evaluation: Average Scale Scores (*N* =1,149)
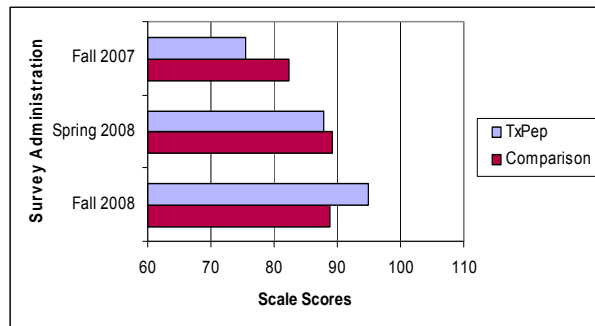
Source: Evaluator analysis of responses to the Principal Leadership Survey.

Overall, these findings suggest that participation in TxPEP is positively associated with participants' leadership ratings. For five of the six leadership constructs examined, TxPEP participants' scale scores increased for each survey administration whereas those of the comparison principals remained relatively stable. Again, however, these results should be interpreted with caution. They are based on self-ratings that may be biased in various ways as noted earlier (e.g., by a desire to make a good impression, as a reflection of time or effort invested in the program as opposed to actual improvement in leadership skills). The respondent sample also may be biased. Response rates to the survey declined over time, so there may be systematic differences between those who respond to the survey and those who did not.

Is There a Differential Relationship Between Varying Amounts of Program Participation and Participants' Leadership Ratings?

Analyses of the relationship between TxPEP participants' leadership ratings and their attendance levels at TxPEP events revealed a significant relationship for only one leadership construct, Data-Driven Decision Making. These findings suggest that varying amounts of program participation were unrelated to principals' leadership ratings for five of the six constructs measured. In addition, for Data-Driven Decision Making, there was no consistent pattern of differences in participants' leadership ratings for this constructs across attendance levels.

Analytic Approach. To explore the relationship between different levels of attendance at the TxPEP events and participants' leadership ratings, TxPEP participants' leadership ratings from all three administrations of the Principal Leadership Survey were analyzed by TxPEP attendance levels using a repeated measures generalized linear regression model. A repeated measures analysis uses repeated measurements on the same individuals over time. This type of analysis can be used to determine whether a change has occurred over time in an outcome of interest (e.g., leadership ratings) in response to a particular treatment or intervention (e.g., TxPEP program participation).

Variations in treatment effects, sometimes referred to as "dosage" effects, can also be examined using this method of analysis. In this instance, the effect of interest is whether varying levels of program participation, as measured by attendance at TxPEP required and optional events, are significantly associated with participants' leadership ratings. (See Appendix J for details regarding the procedures used for this analysis.) For example, did the leadership ratings of participants with the higher levels of attendance show increases over time, while the leadership ratings of participants with lower levels of attendance remained stable or declined?

Attendance levels at TxPEP required and optional events were classified as High/High, High/Low, and Low/Low as in previous analyses of attendance data. The distribution across the attendance categories for the 246 participants included in the analysis was approximately equal to the distribution across the full sample of TxPEP participants. Various school- and principal-level factors were included in the models in order to control for systematic differences between participants. The same variables tested for inclusion in the models in the analysis of changes in principals' scale scores over time were also tested for inclusion in models used in the current analysis. (See Appendix J for details on the procedures used.)

Findings. As noted above, analyses of the participants' scale scores for the six leadership constructs revealed significant differences across attendance levels only for Data-Driven Decision Making. Figure 11 shows the average scale scores for this construct across the three administrations of the Principal Leadership Survey by attendance group.

The analysis of the average Data-Driven Decision Making scores for the attendance groups over time revealed the following:

- The High/High group ratings were highest at the first survey administration and lowest at the second administration, with an increase from the second to the third administration.

- The High/Low group ratings increased over the three administrations.

- The changes for the Low/Low group were similar to those of the High/High group, with ratings decreasing and then increasing. However, their initial ratings are considerably lower than those of the High/High group.

**Figure 11. Participants' Data-Driven Decision Making Scale Scores
by Survey Administration and Attendance Levels (*N* = 246)**
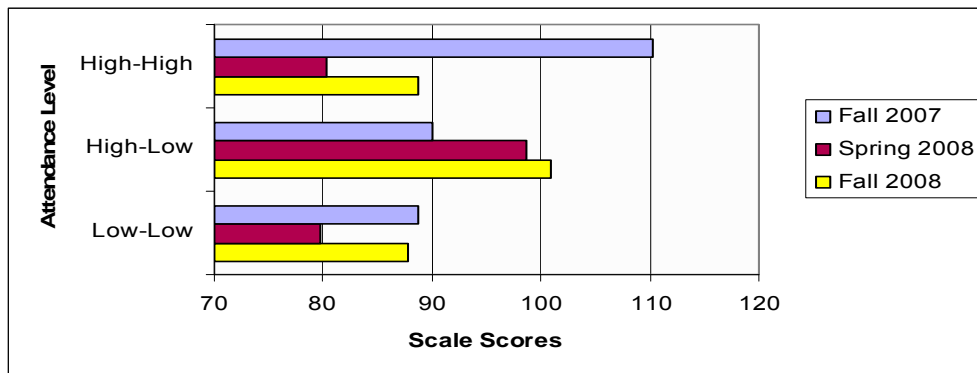
Source: Evaluator analysis of TxPEP attendance data and TxPEP participants' responses to the Principal Leadership Survey.

The increase in the average ratings of the High/Low group across survey administrations is in the direction one would expect if the program is providing participants with the knowledge and skills needed to use data effectively for various types of decision making (e.g., identifying gaps in the curriculum, setting priorities for school improvement, identifying areas for teacher professional development). Through attending workshops and webinars focusing on data use and data-driven decision making, participants develop skills in using data that result in higher self-ratings on measures of data-driven decision making over the three administrations of the survey.

The changes in average leadership ratings for participants in the other two groups are more difficult to explain. Participants in both groups may have initially overestimated their skills in using data effectively and then revised their initial estimates after learning about effective ways of using data. Members of the High/High group may have been motivated to participate in additional TxPEP events (optional as well as required) to improve their skills. Their higher levels of participation may have contributed to the increase in their ratings on measures of data-driven decision making between the second and third surveys.

For participants in the Low/Low group, the decrease in average ratings for Data-Driven Decision Making from the first to the second survey clearly did not motivate them to attend more TxPEP events. Nevertheless, their self-ratings on Data-Driven Decision Making increased from the second to the third survey. One possible explanation for this finding is that members of this group did acquire some knowledge and skills through participating in the few events they attended, which contributed to an increase in their ratings on the third survey. An alternative explanation is that participants in this group essentially withdrew from the program after attending only a few events and were not exposed to additional professional development activities that may have challenged them to develop their knowledge and skills.[26] In the absence of new challenges, their self-ratings increased.

Because there is no clear pattern of differences across the three attendance groups with respect to participants' leadership ratings for Data-Driven Decision Making, it is difficult to draw any conclusions about the relationship between varying levels of program participation and participants' self ratings for this construct. In addition, no relationship between attendance levels and participants' leadership ratings was found for the other five constructs, suggesting that, overall, there is no strong or consistent relationship between varying amounts of program participation and participants' leadership self-ratings.

Did Teachers' Ratings of Principal Leadership Differ for TxPEP and Comparison Schools?

Teacher ratings of principals' leadership differed significantly for TxPEP and comparison schools on all but one of six constructs included in the teacher survey.

- There were no differences between groups in teacher ratings for Data Use.

- For the other constructs, teachers' ratings of principal leadership were significantly higher for comparison schools than for TxPEP schools. However, these differences were relatively small in magnitude.

These differences indicate that teachers from TxPEP schools rated their principals lower than teachers from comparison schools rated their principals on most of the leadership constructs measured. If improvements in TxPEP participants' leadership skills occurred over the course of the program, such growth is not confirmed by their teachers' ratings nine months into the program.

Scaling of Teachers' Ratings of Principal Leadership. On the spring 2008 teacher survey, teachers at the schools of both TxPEP participants and comparison principals were asked to indicate the extent to which they agreed or disagreed with a series of statements about characteristics of their school and principal. Characteristics were grouped by topic and included school management and safety (school environment), involvement of teachers in school decision making (shared leadership), the use of data to inform decisions (data use), and school leadership, particularly in areas emphasized by TxPEP (e.g., change management and ethical leadership).

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[26] An examination of attendance at the webinars on data disaggregation and data-driven decision making revealed that only 4 of the 92 members of the Low/Low group attended either the data disaggregation webinar or the data-driven decision making webinar.

Each of the survey topics was measured by multiple items, and each item was rated using four response options.

Individual item ratings were converted into a single scale, meaning that the items all measure aspects of a single construct. (See Appendix K for details on the methods used to evaluate the reliability and validity of the teacher scales.) For each construct, the average difficulty of endorsement for all items that comprise the scale was set at 50; scale scores above 50 indicate positive ratings (e.g., agreement or strong agreement with statements), while scores below 50 indicate negative ratings (e.g., disagreement or strong disagreement).

Scale scores were created for each of the following leadership constructs:

- School Environment

- Shared Leadership

- School Leadership (overall)

- Change Management

- Ethical Leadership

- Data Use

Analysis of TxPEP and Comparison Teachers' Ratings of Principal Leadership. Two types of analyses were conducted using the teacher survey scale scores: HLM and propensity score analysis. Propensity score analysis is a technique that can be used to match respondents from TxPEP and comparison schools on a wide range of characteristics. This analysis was conducted in order to analyze the data of only those respondents that were most similar to each other from among the two groups of schools.[27] Since the findings from the HLM parallel those from the propensity score analysis, and the HLM uses the full data set rather than a subset of matched respondents, findings are discussed according to the results of the HLMs. (For details on the specific procedures used see Appendix K.)

All models were two-level with teacher responses at level 1 nested within schools at level 2. Several school characteristics were included in the models to control for systematic differences between the schools of TxPEP and comparison principals. The following characteristics were tested for inclusion in the final models:

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[27] Tests of differences between TxPEP and comparison schools were conducted after matching using propensity score analysis for the following variables: percent minority, percent economically disadvantaged, percent special education, percent limited English proficiency, teacher student ratio, teacher experience, district type, and school type. Differences were tested using the teacher as the unit of analysis and the school as the unit of analysis. In the analyses using the teacher as the unit of analyses, significant differences between TxPEP and comparison teachers were found for the percentage of economically disadvantaged students in the school and the total number of students in the school. However, when the school was used as the unit of analysis, there were no differences between TxPEP and comparison schools for any of the variables. (See Appendix K for detailed results of these analyses.)

- Principal characteristics: current principal salary (used as a proxy for principal experience)

- School characteristics: teacher experience, percentage of teachers with advanced degrees, campus rating (AU versus non-AU), total number of students, student-teacher ratio, number of student disciplinary actions,[28] percentage of students meeting TAKS reading proficiency standards, percentage of minority students, percentage of economically disadvantaged students, percentage of limited English proficient students, and percentage of special education students.

A total of 4,437 teachers responded to the survey (2,225 teachers from 130 TxPEP schools and 2,122 teachers from 107 comparison schools). In some instances teachers did not complete all sections of the survey; therefore, the number of responses varies for each construct.[29]

Differences in Teachers' Ratings for TxPEP and Comparison Schools. Results of these analyses are summarized below.

- No significant differences were found between groups for Data Use.

- For the other five leadership constructs measured, the principal ratings of teachers from TxPEP schools were significantly lower than those of teachers from comparison schools.

Table 8 presents the average scale scores for teachers from TxPEP and comparison schools for constructs that showed significant differences between groups; differences in the average scale scores for the two groups are also shown.[30] Because scale scores are not equated across constructs, comparisons between scale scores for different constructs (e.g., School Environment to Shared Leadership) cannot be made.

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[28] Number of disciplinary incidents was divided by total number of students in order to get a ratio or percentage of incidents.

[29] Due to time constraints, we did not check for systematic differences between the schools of teachers who responded to the survey and those who did not.

[30] The average scale scores presented in Table 8 are model-adjusted scores, meaning they reflect adjustments for differences in the characteristics of TxPEP and comparison schools within analytic models.

**Table 8. Differences in Average Scale Scores of Teachers
From TxPEP and Comparison Schools (*N* = 4,437)**

Construct	TxPEP (*n* = 2,225)	Comparison (*n* = 2,122)	Difference
Change Management	58.9	71.6	-12.7**
School Environment	52.6	62.8	-10.2***
School Leadership	54.8	63.5	-8.9**
Shared Leadership	56.9	64.4	-7.5**
Ethical Leadership	72.4	79.8	-7.4*

Source: Evaluator analysis of responses to the teacher survey completed
by teachers from TxPEP and comparison schools.
* *p* < .05; ** *p* < .01; *p* < .001

To understand the magnitude of differences in the scale scores of the two groups, each difference score was compared with the standard deviation (SD)[31] of the scores for the two groups. In all cases, differences were one-half or less of one standard deviation (≤ 0.5 SD). This indicates that there is considerable overlap in teachers' scale scores for the two groups. If the means of the two groups were equal, then 50% of the scores in each group would be above the mean and 50% would be below the mean. A difference of 0.5 SD in the average scores of the two groups for a given construct indicates that that 69% of teachers from comparison schools have scores that are above the mean of the TxPEP teachers (50% of TxPEP teachers have scores above their mean). Since the differences between groups are all ≤ 0.5 SD, these differences are relatively small.[32]

Because teacher ratings were obtained at only one time point (spring 2008), it was not possible to determine whether teacher ratings of principal leadership changed over the course of the TxPEP program.

Is There a Differential Relationship Between Varying Amounts of TxPEP Program Participation and Teachers' Ratings of Principal Leadership?

Analyses of the relationship between teacher ratings of principal leadership and principals' attendance levels at TxPEP events revealed significant relationships for five of the six constructs included in the teacher survey.

- There were no significant differences among the three attendance groups in teachers' Data Use scale scores.

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[31] The standard deviation is a measure of the variation in a distribution. If all values in a distribution are close together, then the standard deviation will be small. The standard deviation is calculated by taking the square root of the average squared, summed, deviations from the mean.

[32] This comparison assumes a normal distribution of scale scores. Distributions of all teacher scales scores were checked for normality. With the exception of Ethical Leadership, scale scores for all leadership constructs were normally distributed. The distribution for Ethical Leadership was close to normal.

- For the other five constructs, all significant differences were between the groups with highest and lowest levels of attendance at TxPEP required and optional events. In all cases, teachers whose principals had the highest levels of attendance rated their principals higher on leadership than teachers whose principals had the lowest levels of attendance.

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These findings suggest that there may be a differential relationship between varying amounts of TxPEP program participation and teachers' ratings of principal leadership.

To explore the relationship between different levels of attendance at the TxPEP events and teachers' ratings of principal leadership, the ratings of teachers from TxPEP schools were analyzed by TxPEP attendance levels. HLM was used, with teacher responses at level 1 nested within schools at level 2. Attendance levels at TxPEP required and optional events were classified as High/High, High/Low, and Low/Low as in previous analyses. The distribution across the attendance categories for the 120 participants whose schools were included in the analysis was approximately equal to the distribution across the full sample of TxPEP participants.[33] Various school- and principal-level factors were included in the models in order to control for systematic differences between participants. The same variables used in the previous analysis were tested for inclusion in the current model. (See Appendix K for details regarding the procedures used.)

Table 9 presents the average scale scores of teachers by the attendance levels of their principals at TxPEP events. Differences in the average scale scores for High/High and Low/Low and groups are also shown.[34] Because scale scores are not equated across constructs, comparisons between scale scores for different constructs (e.g., School Environment to Shared Leadership) cannot be made.

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[33] Participation in the teacher survey was voluntary. Of the 291 schools represented with the TxPEP participant sample, teachers from 130 schools responded to the survey; TEA data on principal and school characteristics were available for 120 of these schools.

[34] The average scale scores presented in Table 9 are model-adjusted scores, meaning they reflect adjustments for differences in the characteristics of TxPEP and comparison schools within analytic models.

**Table 9. Teachers' Average Scale Scores by Their
Principals' Attendance Levels at TxPEP Events**

Construct	Low/Low (1)	High/Low (2)	High/High (3)	Difference (3:1)
Change Management	42.9	58.7	69.5	26.6*
School Environment	43.2	52.6	54.7	11.5**
School Leadership	43.0	55.0	60.4	17.4**
Shared Leadership	43.0	53.0	58.3	15.7**
Ethical Leadership	58.4	72.6	82.4	24.0**

Source: Evaluator analysis of TxPEP attendance data and teacher responses to the teacher
survey administered to teachers at participants' schools.
Notes: The number of teachers from TxPEP schools who responded to survey items measuring the
constructs varied across constructs. Teacher *N*'s ranged from 2,016 for Change Management to 2,081
for School Environment.
* *p* < .05; ** *p* < .01

While the differences in teacher scale scores between the highest and lowest attendance groups
are not large (all are ≤ 0.5 SD), the consistency in the increases across attendance may indicate
that higher levels of program participation positively influence teachers' ratings of principal
leadership. However, alternative explanations might account for these findings. For example,
principals with higher attendance levels may be more motivated or hard-working than those with
lower attendance levels. Teachers' higher ratings of principals with high levels of attendance
may reflect differences in the characteristics of principals in the three attendance groups that
existed prior to program participation rather than differences resulting from program
participation.

**Do Teachers From TxPEP and Comparison Schools Differ in Their Assessments of Their
School's Teaching and Learning Environment?**

Several items on the teacher survey could not be combined to form a unitary scale. These items
asked teachers to rate their level of agreement with statements about the following aspects of
their school's teaching and learning environment: shared expectations and responsibilities;
encouragement and scheduled times for teacher collaboration; and availability and quality of
opportunities for professional development.

Descriptive analyses of responses to these items revealed small but consistent differences in the
responses of teachers from TxPEP and comparison schools. A brief summary of these
differences is provided below. A more detailed summary is provided in Appendix L.

- There was a slightly greater percentage among comparison teachers than among teachers
  from TxPEP schools who *strongly agreed* that teachers set high expectations and
  standards for themselves and their students, felt responsible for helping each other
  improve instruction, and helped monitor discipline for the whole school, not just in their
  classrooms. The differences were generally less than 6.5%.

- There was a slightly greater percentage among comparison teachers than among teachers from TxPEP schools who *strongly agreed* that teachers in their school consistently share ideas and have scheduled times to meet and collaborate. These differences were generally less than 6%.

- There was a slightly greater percentage among comparison teachers than among teachers from TxPEP schools who *strongly agreed* that funds were available for teacher professional development; that they were encouraged to take advantage of professional development opportunities; and that professional development activities allowed them time to learn about best practices and to focus on aspects of their teaching they were trying to improve. These differences were generally less than 7.5%.

Overall, these findings suggest that differences in teachers' perceptions of their school's teaching and learning environments between TxPEP and comparison schools are small. As a group, comparison schools may have a slight advantage with respect to teacher working conditions, collaboration, and academic standards and expectations. However, these are descriptive analyses with no controls for systematic differences that might exist in the characteristics of schools and teachers in the two groups, so no inferences can be made regarding differences between the groups.

Analyses of differences in teacher responses to these items by principals' attendance levels were not conducted because of the difficulty of interpreting differences in response patterns for individual items. Because the items do not combine to form a scale, there is no common metric for comparing responses across individual items.

Did TxPEP Participants' LPI and 21st Century Principal Assessment Ratings Increase Over Time?

Analyses of self- and observer ratings for LPI and 21st Century Principal Assessment revealed few changes in ratings between the fall 2007 and spring 2008 administrations of the assessments.[35] In all cases, differences in ratings were quite small for all leadership practices or traits measured. Responses to individual items were not available for either the LPI of the 21st Century Principal Assessment. Only average ratings of all items measuring a given leadership domain were available for TxPEP participants and observers who completed assessments.[36] Therefore, it was not possible to create scales from items measuring these leadership domains. Instead, descriptive analyses were conducted of self- and observer average ratings for the two assessments.

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[35] Self-ratings refer to TxPEP participants' ratings; observer ratings refer to the ratings of TxPEP participants by supervisors, colleagues, or others who provided separate ratings of TxPEP participants' leadership behaviors or traits.

[36] Based on information received from APQC, test developers computed average ratings by summing the ratings for the items measuring each leadership domain and then dividing by the number of items. These averages are not scale scores. They do not take into account differences that may exist between items in "difficulty" (i.e., the extent to which respondents endorse particular items). Because only average ratings were made available to the evaluators, it was not possible to conduct analyses to determine whether particular items cohered as scales or to assess scale reliability and validity (assuming items were found to cohere as scales).

Table 10 presents the average self- and observer ratings on the fall 2007 and spring 2008 administrations of the LPI.[37] Unlike the Principal Leadership Survey, which was designed specifically to measure the six leadership areas emphasized by TxPEP, the LPI was developed to measure general leadership ability. However, it is possible to link the leadership behaviors measured by the LPI to some of the leadership areas emphasized by TxPEP. The TxPEP leadership area most closely associated with each of the practices listed in Table 10 is indicated in italics.

As Table 10 shows, the average ratings of both self and observers are high for the fall 2007 assessment. The average self- and observer ratings for all leadership domains are approximately 8 on a 10 point scale. These ratings remain essentially unchanged on the spring 2008 assessment. There is also little variation in ratings across individuals. The standard deviations for both self and observers are between 0.90 and 1.26 for the fall 2007 administration and between 0.80 and 1.20 for the spring 2008 administration, indicating that all individual ratings are very close to the mean. (See Appendix N for descriptive statistics for the LPI fall 2007 and spring 2008 self- and observer ratings.)

Table 10. Average Self- and Observer Ratings on the
Leadership Practices Inventory (Fall 2007 and Spring 2008)

Leadership Practices	Respondent	Fall 2007	Spring 2008	Difference
Model the Way	Self	8.30	8.34	0.04
Ethical Leadership	Observer	8.60	8.57	-0.03
Inspire a Shared Vision	Self	8.06	8.21	0.15
Change Management	Observer	8.57	8.63	0.06
Challenge the Process	Self	7.84	8.01	0.17
Change Management	Observer	8.35	8.39	0.04
Enable Others to Act	Self	8.56	8.60	0.04
Building Learning Communities	Observer	8.77	8.77	0.00
Encourage the Heart	Self	8.19	8.09	-0.10
Building Learning Communities	Observer	8.58	8.56	-0.02

Source: Evaluator analysis of TxPEP participants' and observers' responses to the fall 2007 and spring 2008 administrations of the Leadership Practices Inventory.
Notes: Of the 306 individuals who participated in TxPEP throughout the program, 293 completed the fall 2007 LPI, and observer ratings were available for 286 of them; 259 participants completed the spring 2008 LPI, and observer ratings were available for all 259. Multiple observers could rate the same principal. However, an average observer rating was calculated for each TxPEP participant to facilitate comparisons between self- and observer ratings.

Differences over time in the average ratings on the two assessments are very small for all leadership practices measured.

- The largest differences in ratings are for Inspire a Shared Vision and Challenge the Process, leadership domains that are associated with Change Management. Average self-

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[37] Analyses were restricted to participants who remained active throughout the program ($N = 306$) and also completed the fall 2007 and/or spring 2008 administrations of the LPI.

ratings increased by 0.15 points for Inspire a Shared Vision and by 0.17 points for Challenge the Process between the fall 2007 and spring 2008 administrations of the LPI.

- All other changes are a tenth of a point or less; a few are slightly negative, indicating a slight decrease in average ratings between fall 2007 and spring 2008 administrations.

Table 11 presents the average self- and observer ratings for the fall 2007 and spring 2008 administrations of the 21st Century Principal Assessment.[38] The 21st Century Principal Assessment measures ten leadership skills or traits relevant to principals' roles. Although the 21st Century Principal Assessment was not designed specifically to measure the leadership areas emphasized by TxPEP, the leadership skills and traits measured by the assessment can be linked to these leadership areas. The TxPEP leadership area or areas most closely associated with each of the leadership skills or traits listed in Table 11 are indicated in italics.

As Table 11 shows, the average self- and observer ratings are high for the fall 2007 assessment. The average self- and observer ratings for all leadership skills or traits are approximately 4 on a 5-point scale. These ratings remain essentially unchanged on the spring 2008 assessment. As with the LPI, there is also little variation in ratings across individuals. The standard deviations for self-ratings are between 0.50 and 0.80 for the fall administration and between 0.50 and 0.80 for the spring administration, indicating that all individual ratings are very close to the mean; the standard deviations for observer ratings are even smaller. (See Appendix N for descriptive statistics for the 21st Century Principal Assessment fall 2007 and spring 2008 self- and observer ratings.)

Table 11. Average Self- and Observer Ratings on the
21st Century Principal Assessment (Fall 2007 and Spring 2008)

Leadership Skills/Traits	Respondent	Fall 2007	Spring 2008	Difference
Setting Instructional Direction	Self	4.06	4.09	0.03
Building Learning Communities	Observer	4.38	4.37	-0.01
Teamwork	Self	4.28	4.26	-0.02
Building Learning Communities	Observer	4.39	4.35	-0.04
Sensitivity	Self	4.15	4.10	-0.05
Building Learning Communities	Observer	4.31	4.27	-0.04
Judgment	Self	4.08	4.09	0.01
Data-Driven Decision Making or Change Management	Observer	4.35	4.37	0.02
Results Orientation	Self	4.14	4.11	-0.03
School/Program Evaluation	Observer	4.35	4.35	0.00
Organizational Ability	Self	3.92	3.98	0.06
Change Management or Resource Management	Observer	4.30	4.32	0.02
Oral Communication	Self	4.32	4.28	-0.04
Change Management or Building	Observer	4.46	4.60	0.14

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[38] Analyses were restricted to participants who remained active throughout the program ($N = 306$) and also completed the fall 2007 and/or spring 2008 administrations of the 21st Century Principal Assessment.

Learning Communities				
Written Communication	Self	4.09	4.24	0.15
Change Management or Building Learning Communities	Observer	4.56	4.60	0.04
Development of Others	Self	3.95	3.87	-0.07
Building Learning Communities	Observer	4.28	4.28	0.00
Understanding Strengths/ Weaknesses	Self	3.97	4.06	0.09
Ethical Leadership	Observer	4.42	4.42	0.00

Source: Evaluator analysis of TxPEP participants' and observers' responses to the fall 2007 and spring 2008 administrations of the 21st Century Principal Assessment.
Notes: Of the 306 individuals who participated in TxPEP throughout the program, 272 completed the fall 2007 21st Century Principal Assessment, and observer ratings were available for all 272; 265 participants completed the spring 2008 21st Century Principal Assessment, and observer ratings were available for all 265. Multiple observers could rate the same principal. However, an average observer rating was calculated for each TxPEP participant to facilitate comparisons between self and observer ratings.

Differences in the average ratings on the two assessments are very small for all leadership skills or traits measured.

- The largest differences in ratings are for Oral and Written Communication, both of which focus on leadership practices associated with Change Management and Building Learning Communities; average observer ratings increased by 0.14 points for Oral Communication and average self-ratings increased by 0.15 points for Written Communication between the fall and spring administrations of the 21st Century Principal Assessment.

- All other changes are a tenth of a point or less; a few are slightly negative, indicating a slight decrease in average ratings between assessment administrations.

Overall, there was no meaningful change in the average ratings of participants and observers across the two administrations of either the LPI or 21st Century Principal Assessment.

Summary

Analyses of TxPEP participants and comparison principals' leadership scale scores across the three administrations of the Principal Leadership Survey suggest that TxPEP may be having an impact on participants' leadership abilities.

- TxPEP participants' leadership scores increased significantly between the first and third administration of the principal survey for five of the six leadership constructs that were measured: Change Management, Building Learning Communities, Data-Driven Decision Making, Resource Management, and School and Program Evaluation. In contrast, the leadership scores of comparison principals remained relatively stable across survey administrations for all constructs except School and Program Evaluation, which did show a significant increase for comparison principals.

- Analyses of the differential relationship between varying levels of program participation and TxPEP participants' leadership scale scores revealed only one significant difference for Data-Driven Decision Making. Because there is no clear pattern of differences across the three attendance groups with respect to participants' leadership ratings for Data-

Driven Decision Making, it is difficult to draw any conclusions about the relationship between varying levels of program participation and participants' leadership ratings for this construct.

Analysis of differences in teachers' ratings of principal leadership for TxPEP and comparison schools were mixed but still offered some evidence of potential program impact.

- Teacher ratings were higher for comparison schools than for TxPEP schools for five of the six constructs measured. The magnitude of these differences was relatively small. In all cases, however, the ratings of teachers from TxPEP schools were significantly lower than those of teachers from comparison schools.

- Descriptive analyses of teachers' responses to questions regarding the teaching and learning environment of their schools revealed that a slightly higher percentage of teachers from comparison schools relative to TxPEP schools *strongly agreed* that teachers had high standards and expectations for themselves and their students and that opportunities for teacher collaboration and professional development were made available to them, but the overall distribution of responses to these items were similar for teachers at both TxPEP and comparison schools.

- The analysis of the differential relationship between varying amounts of TxPEP program participation and teachers' ratings of principal leadership does suggest that higher levels of participation are associated with higher teacher ratings of principal leadership. For five of the six constructs measured, teacher ratings of principal leadership were significantly higher for TxPEP participants who attended a higher number of required and optional events than they were for participants who attended fewer events. However, these differences were relatively small (≤ 0.5 SD).

Descriptive analyses of differences in TxPEP participants' leadership ratings on the fall 2007 and spring 2008 administrations of the LPI and 21st Century Principal Assessment yielded no meaningful differences in participants' leadership ratings between the fall 2007 and spring 2008 assessments. There were increases for only some measures of leadership practices or traits, and in all cases these differences were small (less than 0.20 points).

While the findings regarding the increase in TxPEP participants' leadership ratings over time and the positive relationship between levels of program participation and teacher ratings of principal leadership suggest that TxPEP may be having a positive impact on principals' leadership skills, these findings need to be interpreted with caution as previously noted. TxPEP participants' leadership ratings are self-ratings that may be biased (e.g., reflecting time or effort invested in the program or a desire to make a favorable impression rather than a change in actual leadership abilities). No objective evidence is available to indicate that principals' leadership skills actually improved. In addition, response rates for the Principal Leadership Survey declined over time and the responses could be biased if systematic differences exist between survey respondents and nonrespondents.

Although the relationship between program participation levels and teacher ratings of principal leadership might indicate that greater program participation results in greater improvements in leadership abilities, alternative explanations for this finding cannot be ruled out. Principals with higher levels of program participation may be more motivated or dedicated than those with lower

levels of participation, and teacher ratings may reflect differences in the characteristics of principals in the three attendance groups that existed prior to their participation in TxPEP rather than differences resulting from levels of participation. In addition, response rates to the teacher survey were relatively low. Teachers from 130 of 291 TxPEP schools and 107 of 311 comparison schools responded to the teacher survey. Analyses of differences between TxPEP and comparison schools revealed no significant differences between schools in the two groups. However, responses could be biased if systematic differences exist between schools that participated in the survey and those that did not.

Program Impact on School-Level Outcomes

Findings regarding the relationship between participation in TxPEP and school-level outcomes such as teacher retention and attendance rates address the following research questions:

- What is the impact of principals' participation in TxPEP on school-level factors such as teacher retention?

- What is the differential impact of varying amounts of program participation on school-level factors?

TEA data on outcomes such as teacher retention rates and teacher attendance were not available for the 2007–08 school year and therefore could not be used in these analyses.[39] To obtain data on perceived improvements in the school-level performance indicators, both teachers and principals were asked to rate the extent to which they agreed that there had been improvements in teacher performance or satisfaction over the course of the 2007–08 school year. The following indicators were included in the both the spring 2008 Principal Leadership Survey and the spring 2008 teacher survey. These items were also completed by principals and teachers from comparison schools.

- Improvements in teacher attendance

- An increase in teachers' openness to learning new instructional strategies

- An increase in teachers' use of problem-based instructional strategies

- Greater teacher satisfaction with professional development activities

An additional item was included in the principal survey that asked respondents to rate the extent to which they agreed that teacher retention rates had improved over the course of the school year. On the teacher survey, respondents were asked if they planned to remain at their school in 2008–09. Teachers who responded "no" to this questions were then asked to indicate whether their decision to leave was voluntary (e.g., for reasons other than reassignment to another school, reduced student enrollments, or other factors beyond their control).

Responses to the items asking respondents to rate improvements in teacher performance were analyzed to determine whether they could be combined into one or more scales. For the teacher survey, responses to the teacher improvement items were combined to form a school improvement scale. Teacher scale scores were created for this construct. Principal responses to

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[39] TEA data on teacher retention rates for 2007–08 will not be available until March 2009.

questions regarding perceived improvements in teacher performance and satisfaction did not cohere as scales. Therefore descriptive analyses of principals' responses to individual survey items were conducted.[40]

Do Teachers' School Improvement Ratings Differ for TxPEP and Comparison Schools?

Teachers' school improvement ratings did differ for teachers from TxPEP and comparison schools. The school improvement ratings of teachers from comparison schools were significantly higher than those of teachers from TxPEP schools.

Both propensity score analysis and HLM were used to analyze teachers' ratings of perceived improvements in teacher satisfaction and performance. The same methods used in analyzing teachers' ratings of principal leadership were used for the current analysis. Because the findings from the HLM parallel those from the propensity score analysis and the HLM uses the full data set rather than a subset of matched schools, findings are discussed according to the results of the HLMs.

A two-level HLM was used with teacher responses at level 1 nested within schools at level 2. Several school characteristics were included in the models to control for systematic differences between the schools of TxPEP and comparison principals. The following characteristics were tested for inclusion in the final models:

- Principal characteristics: current principal salary (used as a proxy for principal experience)

- School characteristics: teacher experience, percentage of teachers with advanced degrees, campus rating (AU versus non-AU), total number of students, student-teacher ratio, number of student disciplinary actions,[41] percentage of students meeting TAKS proficiency standards, percentage of minority students, percentage of economically disadvantaged students, percentage of limited English proficient students, and percentage of special education students

The average scale score for teachers from TxPEP schools was 7.0 points lower than the average scale score for teachers from comparison schools. This represents a small difference (≤ 0.5 SD) between the two groups. The average scale score for the TxPEP teachers was 49.0 and for the comparison teachers it was 56.0.

Descriptive analyses were also conducted of teachers' responses to questions on the teacher survey that asked whether they intended to remain at their school in the 2008–09 school year or were planning to leave by choice. Slightly more teachers from TxPEP schools planned to leave their schools voluntarily than teachers from comparison schools (14% versus 9%).

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[40] As noted earlier, items that can be combined to form a scale are generally more reliable and valid than individual survey items, and the reliability of the scales can be assessed. Typically individual survey items are not analyzed using inferential techniques because they are not reliable measures.

[41] Number of disciplinary incidents was divided by total number of students in order to get a ratio or percentage of incidents.

Overall, teacher ratings on school improvement indicators were lower for teachers from TxPEP schools than for teachers from comparison schools.

Is There a Differential Relationship Between Varying Amounts of Program Participation and Teachers' School Improvement Ratings?

No evidence was found of a differential relationship between varying amounts of program participation and the school improvement ratings of teachers from TxPEP schools.

HLM was used to model the relationship between participant attendance levels and teachers' school improvement ratings, with teacher responses at level 1 nested within schools at level 2. TxPEP participants' attendance levels at required and optional events were classified as High/High, High/Low, and Low/Low as in previous analyses. Various school- and principal-level factors were included in the models in order to control for systematic differences between participants. The same variables used in analyses of teacher ratings of principal leadership were tested for inclusion in the current model. (See Appendix K for details on the procedures used.) No significance differences were found among the three attendance groups (Low/Low, High/Low, and High/High) in teachers' school improvement ratings.

What Is the Relationship Between TxPEP Participation and Principals' Perceptions of School Improvement?

On three of the five measures of perceived improvements in school-level performance, greater percentages of TxPEP principals *agreed* or *strongly agreed* that improvements were occurring. In all cases, however, differences were slight (between 6% and 8%). Overall the responses to these items were similar for both groups.

Findings from descriptive analyses of TxPEP and comparison principals' responses to questions regarding perceived improvements in teacher satisfaction, retention, and performance over the course of the 2007–08 school year are summarized below. A more detailed summary of these responses is presented in Appendix M.

- A greater percentage of TxPEP participants than of comparison principals *agreed* or *strongly agreed* that teacher attendance had improved over the course of the 2007–08 school year (74% of TxPEP participants versus 66% of comparison principals).

- Similar percentages of TxPEP participants and comparison principals *agreed* or *strongly agreed* that teachers were more open to learning new instructional strategies (91% of TxPEP participants and 93% of comparison principals).

- A greater percentage of TxPEP participants than of comparison principals *agreed* or *strongly agreed* that teachers were making greater use of problem-based learning strategies (89% of TxPEP participants versus 83% of comparison principals).

- A greater percentage of TxPEP participants than of comparison principals *agreed* or *strongly agreed* that teachers were more satisfied with professional development activities (88% of TxPEP participants versus 82% of comparison principals).

- A lower percentage of TxPEP participants than of comparison principals *agreed* or *strongly agreed* that teacher retention rates had improved at their schools over the course of the year (82% of TxPEP participants versus 87% of comparison principals).

Although these findings suggest that a slightly greater percentage of TxPEP participants and comparison principals reported improvements in teacher attendance, greater use of problem-based learning strategies by teachers, and teacher satisfaction with professional development activities, these are descriptive analyses with no controls for systematic differences that might exist in the characteristics of schools and principals in the two groups, so no inferences can be made regarding differences between the groups. In addition, these are self-report measures which may reflect bias. TxPEP participants may have felt more pressured than comparison principals to report improvements given the mandatory participation in the program for most participants (those from AU campuses). Systematic differences between survey respondents and nonrespondents may also exist that could introduce bias.

Program Impact on Student Performance

There was one research question that this evaluation set out to answer with regard to change in student achievement:

- Does a change in principal leadership abilities lead to a change in any school-level factors such as teacher retention that then lead to a change in student achievement?

However, no evidence of improvements in school-level performance indicators was found. TxPEP teachers' ratings of perceived improvements in teacher satisfaction and performance were significantly lower than those of comparison teachers. Descriptive analysis of principals' responses to a set of similar questions revealed only slight differences in the percentage of principals who *agreed* or *strongly agreed* that improvements had occurred in teacher attendance, teacher satisfaction with professional development activities, and teachers' use of problem-based learning strategies.

Because no differences in school-level performance indicators were found, student achievement data were first analyzed to see if there were any differences between TxPEP and comparison schools in levels of achievement. If such differences were found, then analyses could be conducted to determine whether or not changes in principal leadership abilities were related to (or predictive of) changes in student academic achievement.

Following TxPEP Participation, Do TxPEP and Comparison Schools Differ With Respect to Student Achievement?

These analyses are based on data from TAKS testing which occurred in March 2008 at which time TxPEP participants would have experienced the program for about seven months. As is reported below, differences in student achievement were found between TxPEP and comparison schools. Specifically, student achievement was significantly lower at the TxPEP schools for several of the grade levels examined.

Student achievement data were analyzed separately for mathematics and reading for each grade level for which student data were available (grades 3–11) using HLM. All models were either two- or three-level with students nested in schools and schools nested in districts.[42] Longitudinal analysis could not be carried out using scale scores because the test scores for each grade are not vertically equated.

Various student level characteristics were included in the models in order to account for systematic differences among the different groups of students. Variables tested for their contribution to the model included: prior academic achievement (as measured by the test scores from 2006–07), minority status, special education status, limited English proficiency status, and gender. Economically disadvantaged status was not included in the modeling because it was highly correlated with minority status and there was more missing data for this variable than for

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[42] Two-level models were used when the models would not converge using a three-level model.

the minority status variable. (See Appendix O for details regarding the procedures used for these analyses.)

Differences in Students' Reading Scores. The results of the modeling indicated that there were significant differences between TxPEP and comparison schools for reading achievement on the 2007-08 TAKS in five of the nine grades analyzed. However, all of these differences indicate that students from TxPEP schools scored significantly lower than those from comparison schools. It is important to note that there was no way to adjust for prior academic achievement of students in grade 3 (because students are not tested in grade 2). Therefore any differences in academic ability between TxPEP and comparison schools (in 2006-07), prior to the implementation of the TxPEP program, could not be included in the modeling for grade 3 reading scores.

Differences in 2007-08 TAKS reading scores of students from TxPEP and comparison schools are summarized below:

- Grade 3: TxPEP schools had an average scale score 33.6 points lower than comparison schools ($p < .001$).

- Grade 5: TxPEP schools had an average scale score 10.5 points lower than comparison schools ($p = .04$).

- Grade 6: TxPEP schools had an average scale score 20.1 points lower than comparison schools ($p = .02$).

- Grade 8: TxPEP schools had an average scale score 10.0 points lower than comparison schools ($p = .009$).

- Grade 9: TxPEP schools had an average scale score 15.3 points lower than comparison schools ($p = .006$).

Because the results indicate that the only significant differences for reading were negative (i.e., comparison schools outperformed TxPEP schools) no additional analyses were conducted to see if changes in principal leadership abilities led to changes in student academic achievement.

Differences in Students' Mathematics Scores. The results of the modeling indicated that there were no significant differences in mathematics achievement between TxPEP and comparison schools for eight of the nine grade levels analyzed. There was, however, a difference in academic performance for third-grade students.

- Grade 3: TxPEP schools had an average scale score 50.3 points lower than comparison schools ($p < .001$).

Did the Campus Ratings of TxPEP Participants Improve from 2007 to 2008?

Campus ratings are based on state indicators of performance, including student performance on the TAKS.[43] A descriptive analysis was conducted to determine whether the campus ratings of TxPEP participants improved between August 2007 and August 2008. Results of this analysis are summarized below.

- Of the 237 TxPEP campuses that were rated AU in 2007, 72% ($n = 170$) were rated as either academically acceptable ($n = 144$) or recognized ($n = 26$) in 2008; 22% ($n = 52$) maintained their AU campus rating in 2008. Campus ratings data for 2008 were unavailable for 6% ($n = 15$) of these schools.

- Of the 41 TxPEP campuses that were rated academically acceptable ($n = 39$) or recognized ($n = 2$) in 2007, only 2 received an AU rating in 2008.[44]

Although these findings indicate that campus ratings improved for the majority of schools represented within the TxPEP participant sample, campus ratings vary substantially from year to year. For example, of the 276 schools that were rated AU in 2007, only 22% ($n = 61$) were rated AU in 2006, while 72% ($n = 198$) were rated academically acceptable or higher in 2006 (Texas Education Agency, 2007c). Similarly, of the 286 schools rated as AU in 2006, only 16% ($n = 46$) were rated AU in 2005, while 79% ($n = 227$) were rated as academically acceptable or higher in 2005 (Texas Education Agency, 2006).[45] Given the variability in campus ratings from year to year, it would difficult to attribute improvement in a school's campus rating to a principal's participation in TxPEP.

What Is the Relationship Between TxPEP Participation and Teachers' Perceptions of Student Improvement?

No significant differences in teachers' student improvement ratings were found between TxPEP and comparison schools. In addition, no relationship was found between TxPEP attendance levels and teachers' student improvement ratings. Both findings suggest that TxPEP participation was not related to teachers' perceptions of student improvement.

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[43] As noted in the *2008 Accountability Manual* for Texas (Texas Education Agency, 2008), "The state accountability system assigns ratings to every campus and district in the Texas public education system each year. In most cases the system assigns one of four rating labels—ranging from lowest to highest—*Academically Unacceptable*, *Academically Acceptable*, *Recognized*, and *Exemplary*. To determine the rating label, the system evaluates indicators of performance, including assessment results on the state standardized assessment instruments as well as longitudinal completion rates and annual dropout rates. Generally, campuses and districts earn ratings by having performance that meets absolute standards or by demonstrating sufficient improvement toward the standard. In addition to evaluating performance for all students, the performance of individual groups of students is held to the rating criteria. The student groups are defined to be the major ethnic groups and the group of students designated as economically disadvantaged. All of the evaluated groups must meet the criteria for a given rating category in order to earn that label" (p. 1).

[44] Of the 291 campuses represented within the TxPEP sample, 2007 campus ratings data was unavailable for 12 of them; 1 school was unrated in both 2007 and 2008. These schools were classified as non-AU in the other analyses presented in this report.

[45] Of the 276 schools rated as AU in 2007, 17 were either not rated or did not exist in 2006. Of the 286 schools rated as AU in 2006, 13 were either not rated or did not exist in 2005.

Both teachers and principals were asked to rate the extent to which they agreed that there had been improvements on various student-level performance indicators over the course of the 2007–08 school year. The following indicators were included in the both the spring 2008 Principal Leadership Survey and the spring 2008 teacher survey. These items were also completed by principals and teachers from comparison schools:

- Decreases in student disciplinary problems

- Improvements in attendance rates for all students

- Higher levels of student engagement

- Improvements in students' standardized test scores

- Improvements in student promotion/graduation rates

Responses to items asking respondents to rate improvements in student performance were analyzed to determine whether they could be combined into one or more scales. For the teacher survey, responses to the student improvement items were combined to form a student improvement scale. Teacher scale scores were created for this construct. Principal responses to questions regarding perceived improvements in student performance did not cohere as scales. Therefore descriptive analyses of principals' responses to individual survey items were conducted.

Both propensity score analysis and HLM were used to analyze teachers' student improvement ratings. Because the findings from the HLM parallel those from the propensity score analysis and the HLM uses the full data set rather than a subset of matched schools, findings are discussed according to the results of the HLMs.

A two-level HLM was used with teacher responses at level 1 nested within schools at level 2. Several school characteristics were included in the models to control for systematic differences between the schools of TxPEP and comparison principals. These were the same set of school characteristics that were examined in previous analysis of teacher scale scores. No significant differences were found between TxPEP and comparison schools in teachers' student improvement ratings.

The relationship between varying amounts of program participation and teachers' student improvement ratings was also examined using HLM, with teacher responses at level 1 nested within schools at level 2. TxPEP participants' attendance levels at required and optional events were classified as High/High, High/Low, and Low/Low as in previous analyses. Various school- and principal-level factors were included in the models in order to control for systematic differences between participants. The same variables used in analyses of teacher ratings of principal leadership abilities were tested for inclusion in the current model. No significant differences in teachers' student improvement ratings were found among the three attendance groups.

What is the Relationship Between TxPEP Participation and Principals' Perceptions of Student Improvement?

On three of the five indicators of perceived improvements in student performance, greater percentages of TxPEP principals *agreed* or *strongly agreed* that improvements were occurring. In all cases, however, differences were small (between 6% and 8%).

Findings from descriptive analyses of TxPEP and comparison principals' responses to questions regarding perceived improvements in student performance over the course of the 2007–08 school year are summarized below. A more detailed summary of responses to these items is presented in Appendix M.

- A greater percentage of TxPEP participants than of comparison principals *agreed* or *strongly agreed* that there were fewer student disciplinary problems (90% of TxPEP participants versus 82% of comparison principals).

- A greater percentage of TxPEP participants than of comparison principals *agreed* or *strongly agreed* that student attendance had improved for all students (77% of TxPEP participants versus 69% of comparison principals).

- A lower percentage of TxPEP principals than of comparison principals *agreed* or *strongly agreed* that students were more engaged (91% of TxPEP participants versus 95% of comparison principals).

- Similar percentages of TxPEP and comparison principals *agreed* or *strongly agreed* that students' standardized test scores were improving (93% of TxPEP participants versus 94% of comparison principals).

- A greater percentage of TxPEP principals than of comparison principals *agreed* or *strongly agreed* that student graduation/promotion rates had improved (94% of TxPEP participants versus 88% of comparison principals).

Summary

Overall, no substantial evidence was found of a relationship between TxPEP program participation and student achievement or teacher and principal perceptions of improvement on various student performance indicators. The only significant differences between TxPEP and comparison groups were negative, meaning that in five of the nine grades analyzed students in TxPEP schools had significantly lower reading scores than students in comparison schools; third grade students in TxPEP schools also had significantly lower scores in mathematics than students in comparison schools.

With the exception of the grade 3 analysis, these findings can be interpreted as follows. Even when taking into account differences in academic achievement prior to the implementation of the TxPEP program, students in the TxPEP schools are still demonstrating academic performance that is worse than students in the selected comparison schools. This difference, however, does not indicate that the TxPEP program was unsuccessful or detrimental to student achievement; it simply suggests that the students in the program schools are still underperforming when compared to students in a selected group of non-program schools.

Although campus ratings, which are based primarily on students' performance on the TAKS, improved between 2007 and 2008 for the majority of schools within the TxPEP participant sample, it would be difficult to attribute this improvement to principals' participation in TxPEP given the substantial variability in campus ratings from year to year.

Summary and Implications

Overall, findings with respect to program implementation and quality are quite positive, suggesting that the program worked well in many respects for participants. However, a few findings suggest the need for some adjustments in program planning and implementation. Findings with regard to program attendance also point to the need for some program adjustments. Attendance at TxPEP required events declined over the course of the program, even among principals from AU campuses whose attendance at these events was mandatory. As noted below, several changes to the program that may address these issues have been made for the 2008–09 school year.

Findings on program impact provide some evidence suggesting that TxPEP participation may be positively related to the leadership abilities of principals who participated in the program. However, the findings are based on participants' self-ratings of leadership ability and need to be confirmed with evidence from other sources. No substantial evidence of positive program impact on participants' schools and students was found.

Program Participation

Attendance at TxPEP required events was high at the initial summit meeting and first three workshops. However, only 60% to 70% of participants attended required webinars. In addition, attendance at optional webinars was under 30%. Overall, only 28% of all participants, and 30% of participants from AU campuses, attended all required events. Approximately a quarter of participants in both groups attended five or fewer required events.

Interviews and focus groups conducted with program participants provide some insights into the low attendance rates of some participants. Several interview or focus group participants noted that the program required them to spend too much time away from their schools. Travel to workshops and summit meetings was also problematic for some. Several participants noted that webinars were held at inconvenient times, making it difficult for them to participate. In addition, some principals were involved in several school improvement initiatives that vied for their time.

Overall, these findings suggest that principals may need greater flexibility with respect to the scheduling and format of program events. Closer monitoring of program participation might also help to ensure that participants fulfill program requirements. Several changes to program will be made in the 2008–09 year that should provide greater flexibility in the program format and closer monitoring of program participation and completion. These changes, which are discussed in greater detail below, may help to increase attendance rates.

Program Implementation and Quality

Feedback on program implementation and quality, including the relevance and usefulness of program content, was generally favorable. Interview and focus group participants reported that the program was well organized and well run, and that program content was of high quality and mostly relevant to their needs. Interview and focus group participants identified several aspects of the program that they found particularly useful. These included opportunities to network with

other principals, to work with cohort consultants, and to reflect on their leadership practices. Several participants noted that the webinars and workshop sessions on data use and data-driven decision making were useful in helping them understand how to use data to set school improvement goals. Participants also commented favorably on the format and topics of the webinars. Responses to the principal checklists and to items on the fall 2008 principal survey regarding program utility indicate that the majority of respondents incorporated what they learned in both their daily work and their strategic planning.

Participants also offered several suggestions for program improvements. Interview and focus group participants generally agreed that they would prefer a greater emphasis on practical strategies that are relevant to their work in schools. Many found the program's emphasis on business and management models too removed from their responsibilities as principals and too difficult to apply to educational contexts. Participants also agreed that they would prefer more options for selecting courses and webinars. Many noted that the program would be more useful and relevant if it were differentiated based on participants' needs and experience. Most interview and focus group participants reported that they had not used the IBM Change Toolkit or participated in WebCT discussion groups.

TEA and APQC program staff have been responsive to participant feedback and suggestions for program improvements. In interviews, APQC staff reported that several adjustments to the program were made during the 2007–08 school year based on participant feedback. For example, cohort consultants were asked to attend the third workshop to provide participants with opportunities to meet with them. Separate discussion groups were also organized for elementary and secondary principals at the third workshop to allow for more focused discussion of issues relevant to principals in each group. Participant suggestions for program improvements have also informed changes to the program for 2008–09 school year.

Program Adjustments for the 2008–09 School Year

TEA program staff report that TxPEP has been substantially reorganized for the 2008–09 school year. Program changes that are currently being implemented are summarized below. These changes address recommendations for program improvements made in the interim evaluation report (Hoogstra et al., 2008) as well as the suggestions of program participants noted above.

- In its second year, the program will continue to focus on business and management practices, but content will be tied more closely to educational contexts.

- The IBM Change Toolkit is not being used and the WebCT discussion board has been replaced by a Learning Management System (LMS), a web-based system designed to deliver program content and to facilitate collaborative learning.

- TxPEP will be coordinated with a school's Campus Intervention Team to reduce the demands placed on principals of academically unacceptable schools who participate in multiple initiatives. As noted on the TxPEP website, "The action plans in TxPEP will support and integrate the statutorily required campus improvement plans that all schools must have" (See http://www.txpep.org/year2_faqs.html).

- Cohorts, which have been renamed TxPEP Learning Networks for the program's second year, will be formed regionally, based on common interests and needs. Full participation in a TxPEP Learning Network is required.

- Cohort consultants, now referred to as learning coaches, will be trained to support principals' professional development and will provide individual coaching to participants.

- Participants will share their 360-degree assessment results with their learning coach and work with their coach design a professional development plan that is informed by assessment results. Principals will also be placed in regional learning networks with other principals who need coaching in the same areas.

- Learning coaches will play a more active role in monitoring whether principals implement what they have learned from their participation in TxPEP through journaling, portfolio management, and rubric assessments.

- TxPEP will be individualized and customized to principals' needs. Content will address various development needs, experience levels, and learning styles.

- TxPEP participants will spend less time away from their campuses. Only two meetings have been scheduled for the 2008–09 school year: a fall orientation meeting and a spring completion meeting. The meetings will be held in four regional locations to provide greater accessibility to participants. [46]

- A significant portion of the program content will be delivered on-line and can be accessed at participants' convenience. Approximately 400 courses will be offered via webinar or book study. Participants will be required to complete one webinar in each of seven key program content areas.

Provisions for closer monitoring of program participation and completion have also been made. As noted on the program website, http://www.txpep.org/registration_registration.html, "participation in and completion of the program will be monitored by members of the Campus Intervention Team (CIT) and a participant's direct supervisor. Periodic reports of a participant's progress will be made available for these monitoring purposes. Failure to participate or complete the program will be reported and managed consistent with the processes established for reporting on other CIT recommendations and implementation progress" (see Texas Education Code section 39.1323)."

Program Impact on Principals' Leadership Abilities

Evaluation findings regarding the relationship between TxPEP participation and participants' ratings of their leadership skills and knowledge suggest that the TxPEP program may be having a positive impact on principals' leadership abilities. TxPEP participants' self-ratings of their

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[46] For ESC regions 9, 11, and 12, the 2008-09 TxPEP fall orientation meeting was held in Arlington on October 13–14, 2008. For ESC regions 14, 15, 16, 17, 18, and 19, the fall orientation meeting was held in Dallas on October 15–16, 2008. For ESC regions 7, 8, and 10, the fall orientation meeting was held in Dallas on October 16–17, 2008. For ESC regions 1, 2, 3, 13, and 20, the fall orientation meeting was held in San Antonio on October 27–28, 2008. For ESC regions 4, 5, and 6, the fall orientation meeting was held in Houston on October 29–30, 2008. (See http://www.txpep.org/participantinformation_fallorientationmtgs.html.)

leadership abilities increased significantly between the first and third administration of the Principal Leadership Survey for five of the six leadership constructs measured: Change Management, Building Learning Communities, Data-Driven Decision Making, Resource Management, and School and Program Evaluation. For each of these constructs, TxPEP participants' average scale scores were initially lower than those of the comparison principals but were the same or higher by the third administration of the survey. Comparison principals' leadership scores remained relatively stable across survey administrations for all leadership constructs except School and Program Evaluation, which increased across the three survey administrations.

Findings from analyses of teachers' ratings of principal leadership were mixed. Teachers' average scale scores were lower for TxPEP schools than for comparison schools on five of the six leadership constructs measured, although differences between groups were relatively small (≤ 0.5 SD). However, findings regarding the differential relationship between varying amounts of TxPEP program participation and teachers' ratings of principal leadership suggest that the program may have had an impact on principal leadership abilities. For five of the six constructs measured, teacher ratings of principal leadership abilities were significantly higher for principals with high levels of program participation than for principals with low levels of program participation, although these differences were small (≤ 0.5 SD).

Program Impact on Schools

No evidence was found of positive program impact on school-level performance indicators after nine months of implementation. On measures of perceived school improvement, the average scale scores of teachers from TxPEP schools were significantly lower than those of teachers from comparison schools, although this difference was small (≤ 0.5 SD). No relationship was found between TxPEP participants' levels of program participation and teachers' school improvement ratings. Descriptive analyses of principals' responses to individual school improvement items revealed small differences in the responses of TxPEP and comparison principals. On three of the five school improvement measures, a slightly greater percentage of TxPEP principals (6% to 8%) *agreed* or *strongly agreed* that improvements had occurred over the course of the school year. On the measure of perceived improvement in teacher retention rates, a slightly lower percentage of TxPEP principals (5%) *agreed* or *strongly agreed* that retention rates had improved. There were no differences between the two groups on the remaining school improvement measure.

Program Impact on Students

No evidence was found of program impact on student achievement or perceived improvements in student performance after seven to nine months of implementation. The reading scores of students in TxPEP schools were significantly lower than those of students in comparison schools for five of the nine grade levels examined (Grades 3, 5, 6, 8, and 9). No significant differences in student mathematics achievement were found between groups for eight of the nine grade levels examined. However, the mathematics scores of third-graders in TxPEP schools were significantly lower than those of third-graders in comparison schools. Campus ratings, which are based primarily on students' performance on the TAKS, improved between 2007 and 2008 for the majority of schools within the TxPEP participant sample. However, it would be difficult to

attribute improvements in these ratings to principals' participation in TxPEP given the substantial variability in the ratings from year to year.

On measures of perceived student improvement, no differences were found in the average scale scores of teachers from TxPEP and comparison schools. In addition, no relationship was found between TxPEP participants' attendance levels and teachers' student improvement ratings. Descriptive analyses of principals' responses to individual student improvement items revealed small differences in the responses of TxPEP and comparison principals. On three of the five student improvement measures, a greater percentage of TxPEP principals (6% to 8%) *agreed* or *strongly agreed* that improvements had occurred over the course of the school year. On the measure of student engagement, a lower percentage of TxPEP principals (4%) *agreed* or *strongly agreed* that students were more engaged than they had been the previous year. There were no differences between groups on the remaining student improvement measures.

Limitations of the Evaluation

Self-Report Data. As noted throughout this report, there were several limitations to evaluating the impact of TxPEP on principal leadership abilities and school and student performance. The assessment of growth in participants' leadership abilities is based on self-report measures, which are subject to bias. Ideally, self-report measures should be supplemented with ratings from objective observers of principals' leadership abilities. While teacher ratings of principal leadership were obtained in spring 2008, no baseline measures were obtained from teachers due to time and budget constraints. Therefore, changes in teacher ratings over the course of the program could not be assessed.

Data on implementation of program content by TxPEP participants was also limited by being self-report data. The principal checklists were used to assess the extent to which TxPEP participants spent time on activities related to the leadership areas emphasized by the program and the extent to which they incorporated what they had learned into their daily work in schools. Similarly, on the fall 2008 Principal Leadership Survey, survey respondents were asked to indicate the extent to which they had incorporated what they had learned into their daily work and their strategic planning. The findings suggest that TxPEP participants who responded to the checklists and surveys spent more time on activities related to the leadership areas emphasized by TxPEP than comparison principals and the majority reported that they incorporated what they had learned in their daily work and strategic planning. Again, however, the checklist and survey measures used were self-report measures. We have no objective data regarding whether participants who responded to the surveys and checklists actually implemented what they learned or implemented it with fidelity to program objectives.

Response Rates. Low response rates to principal and teacher surveys and principal checklists introduce another source of potential bias to survey and checklist responses. If respondents and nonrespondents systematically differed on key characteristics, then the responses obtained would be biased. Time constraints did not allow us to test for systematic differences between respondents and nonrespondents.

Alternative Explanations. While the findings suggest that TxPEP participants' leadership abilities increased over the course of their participation in the program, alternative explanations for this finding are possible. For example, participants' self-ratings of their leadership abilities may be a reflection of time or effort invested in the program rather than of actual increases in leadership abilities.

Similarly, the finding that teachers' ratings of principal leadership were higher for participants with high levels of program participation might be explained by factors other than principals' greater exposure to program content. Because participants were not randomly assigned to attendance groups, principals in different attendance groups may have differed with respect to characteristics that existed prior to program participation. For example, those who attended more TxPEP events may have been more hard-working or more committed to school improvement, which could account for teachers' higher ratings of their leadership ability.

Time Frame of Evaluation. There are also several limitations to the evaluation of program impact related to the short time frame between program implementation and program outcomes. Administrative data were not yet available on several school- and student-level outcomes of interest such as teacher retention rates and student promotion and graduation rates. Although teachers and principals were asked to indicate whether improvements in these school- and student-level indicators had occurred, perception data are less reliable than administrative data for assessing improvement. Teachers may not know whether promotion rates have increased for students as a whole and may respond to the question based on the promotion rates of students in their classes. Respondents' answers to such questions can be biased in several ways that are difficult to measure. Administrative data are less likely to be biased because procedures have been established for collecting and reporting the data. The data also can be more easily checked for inconsistencies or inaccuracies.

Although 2007-08 student TAKS data were available for analysis, the data were obtained in March 2007 at which time TxPEP participants would have experienced at most seven months of the program. It is unlikely that the program would have had any impact on student achievement after so short a period of time. Research on the relationship between principal leadership and student achievement indicates that this relationship is typically indirect; principals influence student learning achievement by providing teachers and staff with the training and support needed to succeed, by ensuring the school is effectively managed and well staffed, and by setting direction for school improvement efforts (see, e.g., Hallinger & Heck, 1996; Leithwood et al., 2004). In the course of seven months, it is unlikely that principals would have had time to make the kinds of organizational changes that would lead to improvements in student achievement.

Recommendations for Future Evaluations

Given the limitations in evaluating program impact outlined above, the finding that TxPEP had no effect on school- and student-level outcomes does not necessarily mean that the program had no impact at these levels or will have no impact in the future. One explanation for the failure to detect program effects at the school level may be that better measures are needed of both school-level implementation and short-term outcomes. The types of leadership practices that TxPEP was designed to promote, such as data-driven decision making, involve interrelated processes that

help to build the capacity of the school to improve both teaching and learning. Goldring et al. (2007) have argued that

> [E]ffective leadership rests on six key processes: planning, implementing, supporting, advocating, communicating, and monitoring. As depicted in a systems view of organizations, these processes are interconnected and recursive as well as highly reactive to one another. For example, to *monitor* teaching for high-quality instruction and *advocate* for all students, leaders first need to *plan* for the collection of key data, *communicate* both the need for the data and the results, *implement* changes based on the information gleaned from the monitoring, and *support* teachers to help them improve their instruction.

TxPEP provides professional development related to all of these processes. Clearly, participants will not be able implement all of them at once. To determine whether the program is having an impact on schools and teachers, data are needed related to what school improvement goals participants are trying to achieve, what aspects of the program they are implementing to achieve them, and how successful they are with implementation.

Program requirements regarding participants' implementation of program content also need to be clarified so that appropriate measures of school-level implementation can be developed. Although participants in the 2007-08 TxPEP program were expected to create an individual professional development plan that related program content to professional development and school improvement goals, there was no formal requirement that participants submit a professional development plan and no systematic follow-up by program staff to review the plans and determine whether participants were implementing them. Findings from interviews with APQC program staff and cohort consultants suggest that many participants viewed the professional development plan as optional and did not implement it. To address this issue, APQC made the development of a professional development plan a requirement for participants in the 2008-09 program. In addition, learning coaches are being asked to take an active role in monitoring participants' implementation of the plan during the second year of the program. TEA might consider asking learning coaches to complete a formal assessment for each participant to provide data on participants' progress in implementing their professional development plans. School-based structured observations of participants by learning coaches or an external evaluator might also be conducted to obtain additional data on participants' implementation of program content.

TEA might also consider collecting additional data from participants in the 2007-08 TxPEP program to determine whether they are applying (or continuing to apply) information or strategies learned from the program. Data might also be collected from teachers at participants' schools and compared with data obtained from the spring 2008 teacher survey to determine whether teachers' ratings of principal leadership increase over time. School and student outcome data (e.g., teacher retention rates, student graduation/promotion rates, and student performance on the TAKS) might also be collected and analyzed over time to determine whether improvements occur on these indicators at schools led by principals who participate in the TxPEP program.

Recommendations Regarding Program Sustainability

Based on a review of the literature on principal professional development programs, Nicholson, Harris-John, and Schimmel (2005) argue that "development activities are most effective when they support site-based/school-embedded initiatives; when they are closely linked to educators' daily work—to school initiatives that focus on improved teaching and student learning; and when they provide sufficient time to analyze, implement, evaluate, and re-implement strategies designed to support school improvement" (p. 31). They also suggest that professional development needs to be ongoing rather than episodic and integrated into a process of continuous school improvement. Several of the changes to the TxPEP program for the 2008-09 school year align with these recommendations for professional development programs, including focusing program content on school contexts, coordinating TxPEP with a school's Campus Intervention Team, creating regionally based learning networks, and requiring participants to complete a reflective journal/portfolio. However, as yet there appear to be no plans to follow up with participants after they have completed the program or to extend participation in learning networks beyond the nine-month period of the program. Encouraging program participants to continue to participate in these learning networks might help to ensure the sustainability of program objectives beyond the period of formal program participation.

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Appendix A
Overview of Research on Principal Leadership

Recent research on principal leadership suggests that principals have a greater impact on student learning than any other factor except the quality of classroom instruction (Leithwood, Seashore Louis, Anderson, & Wahlstrom, 2004). Moreover, the relationship of successful leadership to student achievement has been shown to be even more pronounced in schools with the greatest needs, such as high-poverty and low-performing schools. For many of these schools, the principal is central to transforming the school. Most findings from reports on blue-ribbon schools list school leadership as a major factor in turning around a low-performing school. School leadership also has been shown to have a strong relationship to school climate, teacher satisfaction, working conditions, and teacher retention, which in turn have been shown to be critical to turning around struggling schools (Anderman, Belzer, & Smith, 1991; Berry, Smylie, & Fuller, 2008; Krug, 1992; Wynn, Carboni, & Patall, 2007).

A growing consensus on the attributes of successful school leaders suggests that principals influence student achievement through two important pathways: the support and development of effective teachers and the implementation of effective organizational processes (Davis, Darling-Hammond, LaPointe, & Meyerson, 2005). Increasingly, this consensus is reflected in professional leadership standards for principals and preparation and licensing requirements.

Although current standards emphasize the importance of instructional leadership, which is a traditional focus of principal preparation programs, the standards place equal emphasis on management practices and organizational processes that will help principals transform schools into effective organizations that foster teaching and learning. Such practices typically have not been emphasized in principal preparation programs.

In reporting on their review of research on school leadership, Davis et al. (2005) observed that

> Standards for leadership programs as well as research on leadership behaviors that influence school improvement support the need to change and/or re-prioritize the content of many preparation and development programs (Jackson & Kelley, 2002; Knapp, Copland, & Talbert, 2003). Such changes include developing knowledge that will allow school leaders to better promote teaching and learning, the development of collaborative decision-making strategies, distributed leadership practices, a culture of collegiality and community, processes for organizational change and renewal, and the development of management competence in the analysis and use of data and instructional technologies to guide school improvement activities (Waters, Marzano, & McNulty, 2003; Knapp et al., 2003). (p. 9)

Davis et al. (2005) note that ethical leadership also is an area of increasing interest, particularly as it relates to issues of diversity, race and gender, and equity (see also Murphy, 2006). In a review of university-based educational leadership programs, Levine (2005) similarly argues that principal leadership programs should include basic courses in both management and education. Recommended management courses include finance, human resources, organizational leadership and change, educational technology, and negotiation. Given the current emphasis on

management and organizational leadership skills, a number of professional development programs for principals, including TxPEP, are being conducted in partnership with business schools (Levine, 2005).

While the research on school leadership suggests the need for principal leadership programs that address principals' responsibilities as organizational leaders, there is little empirical evidence regarding how these programs contribute to improvements in either leadership practices or school and student performance. In a recent review of research on principal professional development programs, Nicholson, Harris-John, and Schimmel (2005) observe that "[There is a] …virtual absence of any scientifically based research linking professional development to changes in administrator behavior, school functioning, or student learning" (p. 3). Lesnick and Goldring (2008) concur with this assessment and note that a key gap in the literature is the absence of research on how principals implement what they learn in professional development programs when they return to their schools and how such implementation contributes to improvements in school and student performance.

Research on systemic reform and professional development more generally, however, provides some guidelines for designing effective professional development programs. As Nicholson et al. (2005) note, this research suggests that "development activities are most effective when they support site-based/school-embedded initiatives; when they are closely linked to educators' daily work—to school initiatives that focus on improved teaching and student learning; and when they provide sufficient time to analyze, implement, evaluate, and re-implement strategies designed to support school improvement" (p. 31). This research suggests that professional development activities for both principals and teachers need to be ongoing rather than episodic and integrated into a process of continuous school improvement.

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Appendix B
Evaluation Instruments

Several instruments developed by Learning Point Associates were used to evaluate the 2007-08 Texas Principal Excellence Program (TxPEP). The following instruments are included in Appendix B:

- Program Staff Interview Protocols

    - Texas Education Agency (TEA) Staff Interview Protocol (December 2007)

    - American Productivity and Quality Center (APQC) Staff Interview Protocol (the same protocol was used in December 2007 and February/March 2008)

    - Cohort Consultant Interview Protocol (the same protocol was used in December 2007 and February/March 2008)

    - TEA Staff Interview Protocol (June 2008)

    - APQC Staff Interview Protocol (May/June 2008)

    - Cohort Consultant Interview Protocol (May/June 2008)

    - TEA Staff Interview Protocol (October 2008)

- Cohort Consultant Survey (July 2008)

- Principal Focus Group Protocol for TxPEP Participants (the same protocol was used in December 2007 and February/March 2008)

- Principal Interview Protocols (separate protocols for May/June 2008 and September 2008)

- Principal Daily Checklists for TxPEP and Comparison Principals (the same two checklists were used for all four rounds (January/February, March/April, May/June, and September 2008)

- The Principal Leadership Surveys for TxPEP and Comparison Principals (fall 2007, spring 2008, and fall 2008)

- The Teacher Survey of School Characteristics for Teachers Whose Principals Were TxPEP Participants or Comparison Principals (spring 2008)

Texas Principal Excellence Program
TEA Staff Interview Protocol
(December 2007)

Introduction

Hello, I am _____with Learning Point Associates. I am a member of the team that is conducting the evaluation of the Texas Principal Excellence Program (TxPEP).

Thank you for taking the time for this interview. It should take about 30 minutes. The purpose of the interview is to obtain information on the implementation of the TxPEP program for purposes of providing formative feedback on the program.

Before we start, I just want to note that in our reporting of findings, you will not be identified by name. However, there is a possibility that those who read the report will infer or assume that you were one of those interviewed.

I would like to tape-record our interview in order to accurately capture everything you tell me. Do I have your permission to record this interview with you? [Note: If the respondent agrees to be taped, then turn on the tape recorder and note that you need to ask again, for the record, if you have their permission to tape the interview. If the respondent wishes not to be tape-recorded, take notes, but do not proceed with recording.]

Respondent

Respondent Code:		**Date:**	
Interviewer:		**Start Time:**	**End Time:**
Is this interview taped?			

TEA Staff Interview Protocol (December 2007)

1. Can you tell me about the role you have played so far in the TxPEP program? *(to be asked only the first time the person is interviewed)*

   Probe: Do you have any responsibility for monitoring the implementation of the program?

2. Could you describe TEA's process for developing a program that is relevant to participants' responsibilities as principals? *(to be asked only the first time the person is interviewed)*

   Left deliberately open-ended. If respondent asks which responsibilities, ask "what responsibilities come to mind?"

3a. Please describe how you selected a vendor to prepare the curriculum and implement the program. *(to be asked only the first time the person is interviewed)*

3b. Could you describe the process for approving the curriculum?
    (to be asked only the first time the person is interviewed)

4a. In your view, is the program being implemented as originally planned?

   Probe: If departures from the proposed program are mentioned, ask the reason for the changes.

4b. Could you comment on the quality of the program offerings?

   Provide examples of quality if needed: expertise of presenters and other program staff, quality of program content, clarity of presentations and materials.

5a. What do you think are the biggest stumbling blocks for participants in changing their leadership practices?

   Examples might include lack of time to implement what is being learned, resistance to change, lack of support, insufficient skills or knowledge.

5b. What is TxPEP doing to address this issue (e.g., in terms of its curriculum and delivery mechanisms)?

6. Is there anything you think it is important to add about the implementation of the TxPEP program thus far?

Texas Principal Excellence Program
APQC Staff Interview Protocol
(December 2007 and February/March 2008)

Introduction

Hello, I am _____ with Learning Point Associates. I am a member of the team that is conducting the evaluation of the Texas Principal Excellence Program (TxPEP).

Thank you for taking the time for this interview. It should take about 30 minutes. The purpose of the interview is to obtain information on the implementation of the TxPEP program for purposes of providing formative feedback on the program.

Before we start, I just want to note that in our reporting of findings, you will not be identified by name. However, there is a possibility that those who read the report will infer or assume that you were one of those interviewed.

I would like to tape-record our interview in order to accurately capture everything you tell me. Do I have your permission to record this interview with you? [Note: If the respondent agrees to be taped, then turn on the tape recorder and note that you need to ask again, for the record, if you have their permission to tape the interview. If the respondent wishes not to be tape-recorded, take notes, but do not proceed with recording.]

Respondent

Respondent Code:		Date:	
Interviewer:		Start Time:	End Time:
Is this interview taped?			

APQC Staff Interview Protocol (December 2007 and February/March 2008)

1. Can you tell me about the role you have played so far in the TxPEP program? *(to be asked only the first time the person is interviewed)*

   Probe: Do you have any responsibility for monitoring the implementation of the program?

2. In your view, is the program being implemented as planned?

   Probe: If departures from the proposed program are mentioned, ask the reason for the changes.

3. Have participants provided you with any feedback on the relevance of the program offerings to their responsibilities as leaders of school improvement efforts?

   Left deliberately open-ended. If respondent asks which responsibilities, ask "What responsibilities come to mind?"

4. Do you think participants are generally satisfied with the quality of the program offerings based on the formal and/or informal feedback you've received so far?

   Provide examples of quality if needed: expertise of presenters and other program staff, quality of program content, clarity of presentations and materials.

5a. Do you know if participants are applying what they are learning in their schools?

5b. *If so,* How do you know?
    If not, Are principals expected to work on assignments or tasks related to program topics between workshop sessions? Is someone checking to see if they are working on these?

6. Do you think principals are acquiring the knowledge and skills you anticipated from their participation in the program?

   Probe: Based on what you've observed or heard from participants and program staff, are principals having any difficulty in understanding or applying the information or strategies being presented?

7a. What do you think are the biggest stumbling blocks for participants in changing their leadership practices?

   Examples might include lack of time to implement what is being learned, resistance to change, lack of support, insufficient skills or knowledge.

7b. What is TxPEP doing to address this issue (e.g., in terms of its curriculum and delivery mechanisms)?

8. Is there anything you think it is important to add about the implementation of the TxPEP program thus far?

Texas Principal Excellence Program
Cohort Consultant Interview Protocol
(December 2007 and February/March 2008)

Introduction

Hello, I am _____ with Learning Point Associates. I am a member of the team that is conducting the evaluation of the Texas Principal Excellence Program (TxPEP).

Thank you for taking the time for this interview. It should take about 30 minutes. The purpose of the interview is to obtain information on the implementation of the TxPEP program for purposes of providing formative feedback on the program.

Before we start, I just want to note that in our reporting of findings, you will not be identified by name.

I would like to tape-record our interview in order to accurately capture everything you tell me. Do I have your permission to record this interview with you? [Note: If the respondent agrees to be taped, then turn on the tape recorder and note that you need to ask again, for the record, if you have their permission to tape the interview. If the respondent wishes not to be tape-recorded, take notes, but do not proceed with recording.]

Respondent

Respondent Code:		Date:	
Interviewer:		Start Time:	End Time:
Is this interview taped?			

Cohort Consultant Interview Protocol (December 2007 and February/March 2008)

1. Could you describe your role as a cohort consultant for TxPEP program? *(to be asked only the first time the person is interviewed)*

    Probe: How often do you meet or talk with principals? In what ways do you provide support to them?

    Note: As outlined on the TxPEP website, cohort consultants' responsibilities include providing ongoing support and guidance; arranging online meetings with participants to offer support and monitor progress in developing leadership capacity; serving as trouble shooters for participants who are seeking assistance; communicating with principals on a regular basis and facilitating shared learning and practice; communicating with TxPEP leadership on progress of the cohort and cohort members.

2. In your view is the cohort consultant component of TxPEP being implementing as planned (i.e., as described to you when you joined the program)?

    Probe: Are there tasks you haven't been able to complete or to complete as planned in your role as a cohort consultant?

3. Based on your work with participants, could you comment on the relevance of the program offerings to participants' responsibilities as principals?

    Left deliberately open-ended. If respondent asks which responsibilities, ask "what responsibilities come to mind?"

4a. Could you comment on the quality of the program offerings?

    Provide examples of quality if needed: quality of program content, clarity of materials and presentations, expertise of presenters.

4b. What have you heard from participants about the quality of the program?

5a. Do you know if participants are applying what they are learning in their schools?

5b. *If so,* How do you know?

    Probe: Do you provide support or assistance in implementing particular practices or strategies?

6. Based on what you've observed or been told, are principals having any difficulty in understanding or applying the concepts and practices they are learning about in TxPEP?

7a. What do you think is the biggest stumbling block for participants in changing their leadership practices? *Examples might include lack of time to implement what is being learned, resistance to change, lack of support, insufficient skills or knowledge.*

7b. What is TxPEP doing to address this issue (e.g., in terms of its curriculum and delivery mechanisms)?

8. Is there anything you think it is important to add about the implementation of the TxPEP program thus far?

Texas Principal Excellence Program
TEA Staff Interview Protocol
(June 2008)

Introduction

Hello, I am _____with Learning Point Associates. I am a member of the team that is conducting the evaluation of the Texas Principal Excellence Program (TxPEP).

Thank you for taking the time for this interview. It should take about 30 minutes. The purpose of the interview is to obtain information on the implementation of the TxPEP program for purposes of providing formative feedback on the program.

Before we start, I just want to note that in our reporting of findings, you will not be identified by name. However, there is a possibility that those who read the report will infer or assume that you were one of those interviewed.

I would like to tape-record our interview in order to accurately capture everything you tell me. Do I have your permission to record this interview with you? [Note: If the respondent agrees to be taped, then turn on the tape recorder and note that you need to ask again, for the record, if you have their permission to tape the interview. If the respondent wishes not to be tape-recorded, take notes, but do not proceed with recording.]

Respondent

Respondent Code:		**Date:**	
Interviewer:		**Start Time:**	**End Time:**
Is this interview taped?			

1. What changes have been made to the TxPEP curriculum since the beginning of the program? *(Probe: What prompted the changes?)*

2. What role have you played in reviewing and approving proposed changes to the program?

3. Describe the quality of the program offerings. (*Probe: expertise of presenters and program staff, content, clarity of presentation and materials.*)

4. What do you think are the biggest barriers to principal participation?

5. What is TEA doing to address problems with program participation (e.g., principals who do not attend required workshops or webinars)? *(Probe: Can participants attend make up sessions? How does that work?)*

6. Describe the strengths of the program this year.

7. What aspects of TxPEP need improvement?

8. What changes are planned for next year? *(Probe: What prompted the changes?)*

9. Is there anything you think it is important to add about the implementation of the TxPEP program thus far?

Texas Principal Excellence Program
APQC Staff Interview Protocol
(May/June 2008)

Introduction

Hello, I am _____with Learning Point Associates. I am a member of the team that is conducting the evaluation of the Texas Principal Excellence Program (TxPEP).

Thank you for taking the time for this interview. It should take about 30 minutes. The purpose of the interview is to obtain information on the implementation of the TxPEP program for purposes of providing formative feedback on the program.

Before we start, I just want to note that in our reporting of findings, you will not be identified by name. However, there is a possibility that those who read the report will infer or assume that you were one of those interviewed.

I would like to tape-record our interview in order to accurately capture everything you tell me. Do I have your permission to record this interview with you? [Note: If the respondent agrees to be taped, then turn on the tape recorder and note that you need to ask again, for the record, if you have their permission to tape the interview. If the respondent wishes not to be tape-recorded, take notes, but do not proceed with recording.]

Respondent

Respondent Code:		Date:		
Interviewer:		Start Time:	End Time:	
Is this interview taped?				

1. What changes have been made to the curriculum since the beginning of the program? *(Probe: What prompted the changes?)*

2. Have participants provided you with any feedback on the relevance of the program offerings to their responsibilities as leaders of school improvement efforts*? (Probe: What types of feedback have you received?)*

3. What kinds of feedback, if any, have you received on the IBM Change Toolkit?

4. What kinds of feedback, if any, have you received on WebCT?

5. Do you think participants are generally satisfied with the quality of the program offerings based on feedback you've received so far?

6. Do you think principals are acquiring the knowledge and skills you anticipated from their participation in the program? *If yes,* Could you provide some examples? *If no,* Why not?

7. Have participants provided any feedback on their work with their cohort consultants? *If yes,* What kinds of feedback?

8. Do you know if participants are applying what they are learning? *If yes,* How do you know? *(Probe: Have you received informal feedback from participants? Reports from cohort consultants? Information on participants' progress on their Leadership Development Plans?)*

9. What do you think are the biggest barriers to principal participation?

10. What is APQC doing to address these barriers (e.g., in terms of its curriculum and delivery mechanisms)?

11. Describe the strengths of the program.

12. What aspects of TxPEP need improvement?

13. What changes in the program are planned for next year? *(Probe: What prompted the changes?)*

14. Is there anything you think it is important to add about the implementation of the TxPEP program thus far?

Texas Principal Excellence Program
Cohort Consultant Interview Protocol
(May/June 2008)

Introduction

Hello, I am **_____** *with Learning Point Associates. I am a member of the team that is conducting the evaluation of the Texas Principal Excellence Program (TxPEP).*

Thank you for taking the time for this interview. It should take about 30 minutes. The purpose of the interview is to obtain information on the implementation of the TxPEP program for purposes of providing formative feedback on the program.

Before we start, I just want to note that in our reporting of findings, you will not be identified by name.

I would like to tape-record our interview in order to accurately capture everything you tell me. Do I have your permission to record this interview with you? [Note: If the respondent agrees to be taped, then turn on the tape recorder and note that you need to ask again, for the record, if you have their permission to tape the interview. If the respondent wishes not to be tape-recorded, take notes, but do not proceed with recording.]

Respondent

Respondent Code:		**Date:**	
Interviewer:		**Start Time:**	**End Time:**
Is this interview taped?			

Cohort Consultant Interview Protocol (May/June 2008)

1. How often do you meet or talk with principals? In what ways do you provide support to them?

2. Have you helped cohort members work on their Leadership Development Plans?

3. Based on your work with participants, could you comment on the relevance of the program offerings to participants' responsibilities as principals?

4. Could you comment on the quality of the program offerings? *(Probe: quality of program content, clarity of materials and presentations, expertise of presenters.)*

5. What have you heard from participants about the quality of the program?

6. Do you know if participants are applying what they are learning in their schools? *If so,* How do you know? *(Probe: Do you provide support or assistance in implementing particular practices or strategies?)*

7. Do you know if members your cohort group are using the IBM Change Toolkit? *If yes,* Can you provide some examples of how they are using it?

8. Could you describe how the group is using WebCT? (*Probe: Are there posted discussion questions? Do members regularly log in to review and respond to postings?)*

9. Do cohort members find WebCT useful?

10. Based on what you've observed or been told, are principals having any difficulty in understanding or applying the concepts and practices they are learning about in TxPEP?

11. What do you think is the biggest stumbling block for participants in changing their leadership practices? *Examples might include lack of time to implement what is being learned, resistance to change, lack of support, insufficient skills or knowledge.*

12. What is TxPEP doing to address this issue (e.g., in terms of its curriculum and delivery mechanisms)?

13. Is there anything you think it is important to add about the implementation of the TxPEP program thus far?

Texas Principal Excellence Program
TEA Staff Interview Protocol
(October 2008)

Introduction

Hello, I am _____with Learning Point Associates. I am a member of the team that is conducting the evaluation of the Texas Principal Excellence Program (TxPEP).

Thank you for taking the time for this interview. It should take about 30 minutes. The purpose of the interview is to obtain information on the implementation of the TxPEP program for purposes of providing formative feedback on the program.

Before we start, I just want to note that in our reporting of findings, you will not be identified by name. However, there is a possibility that those who read the report will infer or assume that you were one of those interviewed.

I would like to tape-record our interview in order to accurately capture everything you tell me. Do I have your permission to record this interview with you? [Note: If the respondent agrees to be taped, then turn on the tape recorder and note that you need to ask again, for the record, if you have their permission to tape the interview. If the respondent wishes not to be tape-recorded, take notes, but do not proceed with recording.]

Respondent

Respondent Code:		**Date:**	
Interviewer:		**Start Time:**	**End Time:**
Is this interview taped?			

TEA Staff Interview Protocol (October 2008)

1. Describe the strengths of TxPEP in the first year.

2. What changes were made to the program for the second year? *(Probe: What prompted the changes?)*

3. What role have you played in reviewing and approving proposed changes to the program?

4. Describe the quality of the program offerings *(Probe: expertise of presenters and program staff, content, clarity of presentation and materials).*

5. What do you think were the biggest barriers to principal participation in the first year?

6. How have these barriers been addressed in the second year of the program?

7. How will TEA address problems with program participation (e.g., principals who do not attend required workshops or webinars)? *(Probe: Can participants attend makeup sessions?)*

8. Is there anything you think it is important to add about the implementation of the TxPEP program thus far?

Texas Principal Excellence Program (TxPEP)
Cohort Consultant Survey
(July 2008)

Introduction

This survey is designed to obtain insights from cohort consultants regarding the Texas Principal Excellence Program (TxPEP). Results of the survey will inform recommendations to the Texas Education Agency on how to clarify the roles and responsibilities of cohort consultants as well as how to address leadership practices that are critical to principals' success.

The survey asks you to share your perspective on the facilitators, barriers, and successes you encountered while providing support to your specific cohort of principals. Although your participation is voluntary, it is a critical contribution to informing improvements to the TxPEP program. The survey will take approximately ten minutes to complete.

Confidentiality

The survey is being conducted by Learning Point Associates, an independent nonprofit education organization under contract to the Texas Education Agency. Your responses will remain confidential No one affiliated with the TxPEP program or the Texas Education Agency will view individual survey responses, and results will be reported in the aggregate only.

Survey Assistance

If you have questions or concerns about the survey, contact Karen Drill at 800-356-2735 or karen.drill@learningpt.org.

We appreciate your time and contribution. Thank you for your participation!

1. **In your role as cohort consultant for TxPEP, how many principals did you assist (please do not include those that dropped out)?**

    DROP DOWN MENU 1–20.

2. **On average, how often did you communicate with the principals in your cohort in the following ways?**

Communication	Not at All	Every Two Months	Monthly	Every Two Weeks	Weekly
a. E-mail	O	O	O	O	O
b. One-on-one phone conversations	O	O	O	O	O
c. Cohort conference calls	O	O	O	O	O
d. Face-to-face at TxPEP events	O	O	O	O	O
e. Face-to-face on other occasions	O	O	O	O	O
f. WebCT	O	O	O	O	O
g. Other. Please specify:	O	O	O	O	O

3. **How often did principals in your cohort ask about, or want to discuss, the following leadership areas?**

Leadership Areas	Never	Rarely	Sometimes	Often	Very Often
a. Managing change	O	O	O	O	O
b. Building learning communities	O	O	O	O	O
c. Making data-driven decisions	O	O	O	O	O
d. Serving as ethical leaders in their schools	O	O	O	O	O
e. Managing resources	O	O	O	O	O
f. Evaluating school initiatives and programs	O	O	O	O	O
g. Other. Please specify:	O	O	O	O	O

4. TxPEP focused on the six leadership areas listed below. In your opinion, how relevant to the responsibilities of school principals are each of these leadership areas?

Leadership Areas	Not at all Relevant	Minimally Relevant	Moderately Relevant	Very Relevant	Not Sure
a. Change management	O	O	O	O	O
b. Building learning communities	O	O	O	O	O
c. Data-driven decision making	O	O	O	O	O
d. Ethical leadership	O	O	O	O	O
e. Resource management	O	O	O	O	O
f. School or program evaluation	O	O	O	O	O

5. How effective do think you have been in your role as cohort consultant in providing the following types of support to principals in your cohort?

Support	Not at all Effective	Minimally Effective	Moderately Effective	Very Effective	Not Sure
a. Communicating TxPEP requirements	O	O	O	O	O
b. Facilitating conference calls	O	O	O	O	O
c. Facilitating discussions on leadership best practices	O	O	O	O	O
d. Assisting cohort members with their professional development plans	O	O	O	O	O
e. Developing a learning community among cohort members	O	O	O	O	O
f. Providing support for using the IBM Change Toolkit	O	O	O	O	O
g. Providing suggestions or feedback regarding leadership strategies	O	O	O	O	O

6. **Have you provided any of the following additional types of support to the principals in your cohort?** *Check all that apply.*

    O   Recruiting quality staff

    O   Retaining quality staff

    O   Providing professional development to staff

    O   Maintaining staff morale

    O   Improving instruction in tested areas

    O   Acting as a sounding board for principal ideas and strategies

    O   Collaborating with other cohort consultants to provide professional development support

    O   Other types of support that you provided to principals? Please specify

    _____

7. **In your opinion, is your role as cohort consultant being implemented as planned (i.e., as described to you when you joined the program)?**

    O   Yes

    O   No

    O   Not Sure

8. **Please indicate the extent to which you agree or disagree with the following statements.**

Support	Strongly Disagree	Disagree	Agree	Strongly Agree
a. I have been successful in providing support to principals in my cohort.	O	O	O	O
b. I am satisfied with the level of support I have provided principals in my cohort.	O	O	O	O
c. I have been provided with the resources needed to help me support the principals in my cohort.	O	O	O	O
d. I have received sufficient support from TxPEP to support the professional development needs of principals in my cohort.	O	O	O	O

9. **Please identify the top 3 resources you used to help facilitate your work with the principals in your cohort.**

    a. Resource 1_____

    b. Resource 2_____

    c. Resource 3_____

10. **Please identify the top 3 barriers you encountered while working with the principals in your cohort.**

    a. Barrier 1_____

    b. Barrier 2_____

    c. Barrier 3_____

11. **Do you plan on returning as a cohort consultant (or learning coach) next year?**

    O   Yes

    O   No

    O   Undecided

12. **Please provide any suggestions for improving the TxPEP program.** *For example, what other types of support do you think TxPEP participants need? Are there ways to make the program more useful and relevant to participants?* **(open-ended)**

Educational Experience

13. **How many years of teaching experience do you have?**

    DROP DOWN MENU

14. **How many years of experience as a principal do you have?**

    DROP DOWN MENU

15. **How many years of experience as a district administrator do you have?**

    DROP DOWN MENU

Thank you for completing the survey.

Texas Principal Excellence Program
Focus Group Protocol
(December 2007 and February/March 2008)

Annotated Agenda for Facilitators

(Goal: 45–60 minutes; current design: 45–60 minutes)

_____

Welcome and Introductions (10–15 minutes)

Hello, I am _____with Learning Point Associates. I am a member of the team that is conducting the evaluation of the Texas Principal Excellence Program (TxPEP).

Thank you for taking the time to talk with us. Our discussion should take about 45 to 60 minutes. Before we start, I just want to reassure you that your responses to my questions will be completely confidential, and in our reporting of findings, respondents will not be identified in any way. To help preserve confidentiality, we also ask participants not to talk about what specific individuals have said in the focus group. Do you have any questions about our confidentiality policy?

The information you share with us will be used to help inform the TxPEP professional development initiative. The Texas Education Agency (TEA) has contracted with Learning Point Associates, a nonprofit educational organization, to conduct the external evaluation of TxPEP. Learning Point Associates is interested in gathering insights from principals participating in TxPEP on the quality of program, the knowledge and skills gained through the program, and their relevance and use. Data collected from the focus group discussions will inform TEA's efforts to support professional development programs that develop and enhance critical leadership practices that impact Texas students and educators.

We would like to tape-record our discussion in order to accurately capture everything you tell us. Do I have your permission to record this discussion? [Note: If the respondents wish not to be tape-recorded, take notes, but do not proceed with recording.]

Let's take a few minutes for introductions. Please share the following information with the rest of the group:

- First name
- Length of time as a principal overall and in your current school
- Location of school and a sentence about the school

Principal Focus Group Protocol (December 2007 and February/March 2008)

Group Discussion (45 minutes)

1. How relevant have the topics covered in TxPEP been to your responsibilities as principal?

    Intentionally open-ended. We want to see what responsibilities they focus on. If they need a prompt, ask, "What responsibilities come to mind?"

    Probe: Can you provide some examples of topics that were particularly relevant? Less relevant?

2. What do you think of the quality of the TxPEP program so far?

    Provide examples of quality if needed:
    The program content
    The expertise of the presenters
    The clarity of the presentations
    The materials (handouts, notebooks)

3. Looking across all of the TxPEP activities you've participated in, what are some of the most important ideas, skills, and strategies you've learned so far? Think of three.

    Give them a minute. Have someone there to take notes and summarize/categorize the responses.

4. Have you been able to apply what you're learning in the TxPEP program? *If so*, Can you give me some examples?

5. Are you receiving help from the program in applying what you're learning? What kind of help?

6. Overall, what is going well with the TxPEP program?

7. What could be improved?

Ask only if time:

8. Think back to the question about applying what you're learning from TxPEP. How is that going? What are some of the difficulties or challenges you're encountering?

Wrap Up (5 minutes)

Thank you for a rich discussion today. We really appreciated the feedback you have given us, and look forward to our next conversation. Do you have any questions?

Texas Principal Excellence Program
Principal Interview Protocol
(May/June 2008)

Introduction

Hello, I am _____with Learning Point Associates. I am a member of the team that is conducting the evaluation of the Texas Principal Excellence Program (TxPEP).

Thank you for taking the time for this interview. It should take about 20 minutes. The purpose of the interview is gather insights from principals participating in TxPEP on the quality of program, the knowledge and skills gained through the program, and its relevance and use. Data collected from the interviews will inform TEA's efforts to support professional development programs that develop and enhance critical leadership practices that impact Texas students and educators.

Before we start, I just want to assure you that your responses to my questions will be completely confidential, and in our reporting of findings, respondents will not be identified in any way. Do you have any questions about our confidentiality policy?

I would like to tape-record our interview in order to accurately capture everything you tell me. Do I have your permission to record this interview with you? [Note: If the respondent agrees to be taped, then turn on the tape recorder and note that you need to ask permission again to get it on the record. If the respondent wishes not to be tape-recorded, take notes, but do not proceed with recording.]

Respondent

Respondent Code:		Date:	
Interviewer:		Start Time:	End Time:
Is this interview taped?			

Principal Interview Protocol (May/June 2008)

1. Think about Workshop III and the webinars you've participated in since Workshop III. How relevant have TxPEP topics been to your responsibilities as principal?
   (*Probe: Most relevant? Least relevant?*)

2. What did you think of the quality of the Workshop III compared to the others you have attended?

3. What do you think of the quality of the webinars*?*

4. How useful is the IBM Change Tool Kit?

5. How useful is WebCT? *(Probe: How are participants using WebCT?)*

6. Think about Workshop III and the webinars you've participated in since the third workshop. What, if anything, have you learned? *(e.g., skills, ideas, strategies)*

7a. Have you been able to apply what you're learning in the TxPEP program? *If so,* Can you give me some examples?

7b. Have there been any challenges in applying what you're learning?

8a. Has it been useful working with your cohort consultant?

   If yes, In what ways?

   If no, Why not?

8b. Tell me how you communicate with your cohort consultant. *(e.g., phone, e-mail; frequency)*

9. Overall, what is going well with the TxPEP program?

10 As far as you can tell, has APQC made any changes in the TxPEP program in response to participant feedback? *If yes,* What changes?

11. What could (still) be improved?

12. Is there anything else you think it is important for me to know about your experiences with the TxPEP program?

Thank you very much for participating in the interview.

Texas Principal Excellence Program
Principal Interview Protocol
(September 2008)

Introduction

Hello, I am _____ with Learning Point Associates. I am a member of the team that is conducting the evaluation of the Texas Principal Excellence Program (TxPEP).

Thank you for taking the time for this interview. It should take about 20 minutes. The purpose of the interview is gather insights from principals who participated in TxPEP on the quality of program, the knowledge and skills gained through the program, and its relevance and use. Data collected from the interviews will inform TEA's efforts to support professional development programs that develop and enhance critical leadership practices that impact Texas students and educators.

Before we start, I just want to assure you that your responses to my questions will be completely confidential, and in our reporting of findings, respondents will not be identified in any way. Do you have any questions about our confidentiality policy?

I would like to tape-record our interview in order to accurately capture everything you tell me. Do I have your permission to record this interview with you? [Note: If the respondent agrees to be taped, then turn on the tape recorder and note that you need to ask permission again to get it on the record. If the respondent wishes not to be tape-recorded, take notes, but do not proceed with recording.]

Respondent

Respondent Code:		Date:	
Interviewer:		Start Time:	End Time:
Is this interview taped?			

Principal Interview Protocol (September 2008)

1. Think about the activities you participated in last year as part of TxPEP *(i.e., workshops, webinars, and your cohort group).* How relevant were they to your responsibilities as principal? (*Probe: Most relevant? Least relevant?*)

2. What, if anything, did you learn through your participation in TxPEP? *(e.g., skills, ideas, strategies)*

3. Was your participation in TxPEP useful for planning for the upcoming academic year? *If so, How?*

4. Overall, what impact did participation in TxPEP have on you and your role as a school leader? (*Probe: Last year? This year?*)

5. Have you had any challenges in applying concepts from TxPEP? *If so,* What were they?

6. Did you receive any help from program staff in applying what you learned in TxPEP? What kind of help?

7. Overall, what did you think of the quality of TxPEP? (*Probe: What aspects were of higher quality than others?*)

8. Overall, what went well with TxPEP?

9. What improvements could be made to the program?

10. Is there anything else you think it is important for me to know about your experiences with the TxPEP program?

Thank you very much for participating in the interview.

Texas Principal Excellence Program
Principal Daily Checklist for TxPEP Participants
(January/February, March/April, May/June, and September 2008)

Findings from this checklist will be used for the evaluation of the Texas Principal Excellence Program (TxPEP). The checklists will help the Texas Education Agency (TEA) gain a better understanding of the role of principal leadership in school improvement efforts. We would like you to complete the following checklist at the end of the day for **one week.** If you miss a day, you can go back and fill out the checklist for the previous day.

Completing the Checklist

We have organized principal activities into six leadership areas. Please provide a general estimate of how much time you may have spent on activities associated with each area—none, less than 1 hour, 1–3 hours, 3 or more hours.

We know that the work of principals is complex and varied and that, on any given day or in any given week, you may not work on some of the areas included in the checklist. If you did not spend time working on an area that is listed, just indicate "None" and move to the next item. Additional activities can be added in the space provided. The checklist should take approximately 10 minutes to complete.

The Importance of Your Participation

Although your participation is voluntary, it is critical to evaluating the effectiveness of TxPEP for principals and making ongoing improvements to the program. Your responses will remain completely confidential; no one but the project staff at Learning Point Associates, the external evaluator for TxPEP, will have access to these checklists. Responses will be reported in the aggregate only, and no individuals will be identified in reports or summaries of the data. In completing this checklist, please remember that this is an evaluation of the TxPEP program, *not* an evaluation of you as principal. If you need any assistance, please contact Karen Drill at 773-288-7640 or karen.drill@learningpt.org.

Accessing the Daily Checklists

To access the checklist for a specific day, please click on the link below for that day. Your answers will be automatically saved.

        □ Monday, *(Date to be filled in automatically)*

        □ Tuesday, *(Date to be filled in automatically)*

        □ Wednesday, *(Date to be filled in automatically)*

        □ Thursday, *(Date to be filled in automatically)*

        □ Friday, *(Date to be filled in automatically)*

Principal Daily Checklist for TxPEP Participants (January/February, March/April, May/June, and September 2008)

Did you work today?

☐ Yes (CONTINUE)
☐ No (sick day, vacation day, personal day, etc.) (EXIT)

Principal Daily Checklist for TxPEP Participants (January/February, March/April, May/June, and September 2008)

Please take a minute to review the examples provided for each leadership area. Click here to view the examples. *(Descriptions appear on next page.)*

We have included an "Other" category. If you engaged in activities that you feel were important but do not fit into one of the six areas, please tell us about the activity by specifying it under "Other" and then respond to the same questions.

Review your activities for today, and answer the following questions for each of the leadership areas:

- **How much time did you spend working on activities (planning, thinking, implementing, delegating, and supervising) in the leadership area? Please select "None" for areas you spent virtually no time on.**

- **In the areas in which you worked, how effective did you think you were in providing strong leadership?**

- **To what extent did you incorporate information learned through TxPEP in your work in that area?**

Leadership Areas	How much time did you spend today working on this leadership area?				If you worked on this area today, how effective do you think you were in providing strong leadership?				If you worked on this area today, to what extent did you incorporate information learned through TxPEP?			
	None	Less Than 1 Hour	1–3 Hours	More Than 3 Hours	Not Effective	Minimally Effective	Moderately Effective	Very Effective	Not At All	To a Minimal Extent	To a Moderate Extent	To a Great Extent
Change management	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Building learning communities	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Data-driven decision making	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
School or program evaluation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Ethical leadership	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Resource management	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other (specify)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Principal Daily Checklist for TxPEP Participants (January/February, March/April, May/June, and September 2008)

Descriptions to appear in a pop-up window by clicking on an embedded hyperlink:

Examples of Each Leadership Area

Change Management

- Strategic planning and goal setting

- Developing and communicating a vision of change for the school

- Building consensus around that vision

- Analyzing organizational problems and proposing solutions related to change efforts

- Managing conflicts associated with change

- Identifying and addressing the needs and interests of students, parents, teachers, and staff regarding change efforts

- Building alliances outside the school to support change efforts

- Addressing district initiatives

Building Professional Learning Communities

- Providing instructional leadership (e.g., ensuring that teachers receive feedback on their instruction)

- Supporting teacher and staff professional development

- Encouraging and providing opportunities for collaboration among teachers

- Engaging teachers and staff in decision making

- Communicating standards and goals for teaching and learning to teachers or students

- Recognizing and celebrating the accomplishments of teachers or students with respect to teaching and learning

- Engaging parents' support for the achievement of academic standards and goals

- Promoting a positive school climate

Principal Daily Checklist for TxPEP Participants (January/February, March/April, May/June, and September 2008)

Data-Driven Decision Making

Compiling and using a variety of data sources for purposes such as the following:

- Identifying gaps in the curriculum

- Setting learning goals for individual students

- Reassigning students to classes or groups

- Determining topics for teacher professional development

- Setting school improvement goals

School or Program Evaluation

- Monitoring progress in meeting school or program goals (e.g., monitoring classroom instruction)

- Developing or overseeing the use of evaluation instruments (e.g., surveys, observation protocols)

- Overseeing the collection, analysis, and/or interpretation of school or program evaluation data

Ethical Leadership

- Discussing ethical issues with teachers, students, and/or parents (e.g., cheating on a test, plagiarism, violating a school policy)

- Reflecting on actions or decisions (your own or others') to ensure that they are fair, honest, nondiscriminatory, and ethical (i.e., in accordance with the Revised Code of Ethics and Standard Practices for Texas Educators)

- Resolving conflicts among competing interests within the school based on ethical criteria

- Providing opportunities to share and discuss diverse views and opinions

Resource Management

- Preparing budgets or budget reports

- Seeking grants

- Mobilizing community resources

- Managing personnel (recruiting, hiring, supervising, evaluating, problem solving)

- Overseeing building operations (schedules, space allocation, maintenance, vendors)

Texas Principal Excellence Program
Principal Daily Checklist for Comparison Principals
(January/February, March/April, May/June, and September 2008))

As a comparison group principal for the Texas Principal Excellence Program (TxPEP) evaluation, your responses will help the Texas Education Agency (TEA) understand how TxPEP impacts the leadership practices of principals participating in the program. We would like you to complete the following checklist at the end of the day for **one week.** If you miss a day, you can go back and fill out the checklist for the previous day.

Completing the Checklist

We have organized principal activities into six leadership areas. Please provide a general estimate of how much time you may have spent on activities associated with each area—none, less than 1 hour, 1–3 hours, 3 or more hours.

We know that the work of principals is complex and varied and that, on any given day or in any given week, you may not work on some of the areas included in the checklist. If you did not spend time working on an area that is listed, just indicate "None" and move to the next item. Additional activities can be added in the space provided. The checklist should take approximately 10 minutes to complete.

The Importance of Your Participation

Although your participation is voluntary, it is critical to evaluating the effectiveness of TxPEP for principals and making ongoing improvements to the program. Your responses will remain completely confidential; no one but the project staff at Learning Point Associates, the external evaluator for TxPEP, will have access to this data. Responses will be reported in the aggregate only, and no individuals will be identified in reports or summaries of the data. In completing this checklist, please remember that this is an evaluation of the TxPEP program, *not* an evaluation of you as principal. If you need any assistance, please contact Karen Drill at 312-288-7640 or karen.drill@learningpt.org.

Accessing the Daily Checklists

To access the checklist for a specific day, please click on the link below for that day. Your answers will be automatically saved.

□ Monday, *(Date to be filled in automatically)*

□ Tuesday, *(Date to be filled in automatically)*

□ Wednesday, *(Date to be filled in automatically)*

□ Thursday, *(Date to be filled in automatically)*

□ Friday, *(Date to be filled in automatically)*

Principal Daily Checklist for Comparison Principals (January/February, March/April, May/June, and September 2008)

Did you work today?

□ Yes (CONTINUE)
□ No (sick day, vacation day, personal day, etc.) (EXIT)

Principal Daily Checklist for Comparison Principals (January/February, March/April, May/June, and September 2008)

Please take a minute to review the examples provided for each leadership area. Click here to view the examples. *(Descriptions appear on next page.)*

We have included an "Other" category. If you engaged in activities that you feel were important but do not fit into one of the six areas, please tell us about the activity by specifying it under "Other" and then respond to the same questions.

Review your activities for today, and answer the following questions for each of the leadership areas:

- **How much time did you spend working on activities (planning, thinking, implementing, delegating, and supervising) in the leadership area? Please select "None" for areas you spent virtually no time on.**

- **In the areas in which you worked, how effective did you think you were in providing strong leadership?**

Leadership Areas	How much time did you spend today working on this leadership area?				If you worked on this area today, how effective did you think you were in providing strong leadership?			
	None	Less Than 1 Hour	1–3 Hours	More Than 3 Hours	Not Effective	Minimally Effective	Moderately Effective	Very Effective
Change management	☐	☐	☐	☐	☐	☐	☐	☐
Building learning communities	☐	☐	☐	☐	☐	☐	☐	☐
Data-driven decision making	☐	☐	☐	☐	☐	☐	☐	☐
School or program evaluation	☐	☐	☐	☐	☐	☐	☐	☐
Ethical leadership	☐	☐	☐	☐	☐	☐	☐	☐
Resource management	☐	☐	☐	☐	☐	☐	☐	☐
Other (specify)	☐	☐	☐	☐	☐	☐	☐	☐

Principal Daily Checklist for Comparison Principals (January/February, March/April, May/June, and September 2008)

Descriptions to appear in a pop-up window by clicking on an embedded hyperlink:

Examples of Each Leadership Area

Change Management

- Strategic planning and goal setting

- Developing and communicating a vision of change for the school

- Building consensus around that vision

- Analyzing organizational problems and proposing solutions related to change efforts

- Managing conflicts associated with change

- Identifying and addressing the needs and interests of students, parents, teachers, and staff regarding change efforts

- Building alliances outside the school to support change efforts

- Addressing district initiatives

Building Professional Learning Communities

- Providing instructional leadership (e.g., ensuring that teachers receive feedback on their instruction)

- Supporting teacher and staff professional development

- Encouraging and providing opportunities for collaboration among teachers

- Engaging teachers and staff in decision making

- Communicating standards and goals for teaching and learning to teachers or students

- Recognizing and celebrating the accomplishments of teachers or students with respect to teaching and learning

- Engaging parents' support for the achievement of academic standards and goals

- Promoting a positive school climate

Principal Daily Checklist for Comparison Principals (January/February, March/April, May/June, and September 2008)

Data-Driven Decision Making

Compiling and using a variety of data sources for purposes such as the following:

- Identifying gaps in the curriculum

- Setting learning goals for individual students

- Reassigning students to classes or groups

- Determining topics for teacher professional development

- Setting school improvement goals

School or Program Evaluation

- Monitoring progress in meeting school or program goals (e.g., monitoring classroom instruction)

- Developing or overseeing the use of evaluation instruments (e.g., surveys, observation protocols)

- Overseeing the collection, analysis, and/or interpretation of school or program evaluation data

Ethical Leadership

- Discussing ethical issues with teachers, students, and/or parents (e.g., cheating on a test, plagiarism, violating a school policy)

- Reflecting on actions or decisions (your own or others') to ensure that they are fair, honest, nondiscriminatory, and ethical (i.e., in accordance with the Revised Code of Ethics and Standard Practices for Texas Educators)

- Resolving conflicts among competing interests within the school based on ethical criteria

- Providing opportunities to share and discuss diverse views and opinions

Resource Management

- Preparing budgets or budget reports

- Seeking grants

- Mobilizing community resources

- Managing personnel (recruiting, hiring, supervising, evaluating, problem solving)

- Overseeing building operations (schedules, space allocation, maintenance, vendors)

Texas Principal Excellence Program
Principal Leadership Survey for TxPEP Participants
(Fall 2007)

Learning Point Associates is an independent nonprofit education organization that is conducting an evaluation of the Texas Principal Excellence Program (TxPEP), as mandated by the Texas Education Agency (TEA). One of the goals of the evaluation is to provide TEA with feedback on the impact of TxPEP on the leadership practices of participating principals. In addition, the evaluation, with input from principals like you, will help inform recommendations made to TEA on how to refine TxPEP to better address leadership practices that are critical for a principal's success in improving student achievement, graduation rates, and school-level outcomes.

The evaluation findings will be based on a variety of sources, including this survey. This survey is designed to obtain baseline information on TxPEP participants' knowledge and application of concepts and practices in the key leadership areas emphasized by TxPEP. The survey will take approximately 15 to 20 minutes to complete.

Although your participation is voluntary, it is a critical contribution to evaluating the impact of TxPEP on principals and informing ongoing improvements to the program. Your responses to survey questions will remain confidential, and responses will be reported in the aggregate only. In completing this survey, please remember that this is an evaluation of the TxPEP program, *not* an evaluation of you as principal. If you have questions or concerns about the survey, contact Karen Drill at 800-356-2735 or karen.drill@learningpt.org.

We appreciate your time and contribution. Thank you for your participation!

Principal Leadership Survey for TxPEP Participants (Fall 2007)

Section 1. Participant Status in TxPEP

1. Are you participating in the Texas Principal Excellence Program?

      O Yes

      O No

The next three sections of the survey ask you to indicate your *effectiveness* in implementing specific practices related to key areas of principal leadership.

Section 2. Change Management

2. Indicate how effective you are at doing each of the following:	Not Doing	Not Effective	Minimally Effective	Moderately Effective	Very Effective
a. Assessing the needs and interests of all members of the school community (students, teachers, parents, staff) before initiating change	O	O	O	O	O
b. Articulating a vision of change that reflects the beliefs, values, and commitments of the school community	O	O	O	O	O
c. Building consensus among all members of the school community (teachers, students, parents, staff) around a shared vision for change	O	O	O	O	O
d. Using theories of change to guide the development of school improvement efforts	O	O	O	O	O
e. Establishing specific goals for implementing change	O	O	O	O	O
f. Evaluating the effects of change on school culture	O	O	O	O	O
g. Managing conflicts associated with change	O	O	O	O	O

Section 3. Building Learning Communities

3. Indicate how effective you are at doing each of the following:	Not Doing	Not Effective	Minimally Effective	Moderately Effective	Very Effective
a. Creating opportunities for teachers and staff to share ideas and beliefs about schooling, teaching, and learning	O	O	O	O	O
b. Establishing and maintaining shared and distributed leadership	O	O	O	O	O
c. Preserving regularly scheduled time for professional collaboration	O	O	O	O	O
d. Maintaining high academic expectations and standards for all teachers and students	O	O	O	O	O
e. Providing opportunities for teachers to learn about and implement evidence-based "best" practices	O	O	O	O	O
f. Creating a school culture focused on learning	O	O	O	O	O
g. Celebrating the achievement of school goals	O	O	O	O	O

Section 4. Data-Driven Decision Making

4. Indicate how effective you are at doing each of the following:	Not Doing	Not Effective	Minimally Effective	Moderately Effective	Very Effective
a. Compiling data in formats useful for analysis and decision-making needs	O	O	O	O	O
b. Analyzing and interpreting data to uncover patterns and relationships	O	O	O	O	O
c. Using data to identify gaps in the curriculum for all students	O	O	O	O	O
d. Using data to set learning goals for individual students	O	O	O	O	O
e. Using data to assign or reassign students to classes or groups	O	O	O	O	O
f. Using data to determine topics for professional development	O	O	O	O	O
g. Using data to set school improvement goals	O	O	O	O	O

Principal Leadership Survey for TxPEP Participants (Fall 2007)

The next three sections of the survey ask you rate your *knowledge* or *understanding* of specific concepts or practices related to key areas of principal leadership.

Section 5. Ethical Leadership

5. Rate your knowledge or understanding of each of the following:	Little or No Knowledge	Some Knowledge	Moderate Knowledge	Extensive Knowledge
a. Establishing clear ethical standards that all members of the school (teachers, students, and staff) are expected to follow	O	O	O	O
b. Serving as a model of ethical behavior for others in the school	O	O	O	O
c. Strategies to reinforce ethical conduct for everyone in the school (e.g., establishing consequences for violating ethical standards)	O	O	O	O
d. Decision making based on established ethical standards	O	O	O	O
e. Ethical principles for resolving conflicts among competing interests in the school	O	O	O	O
f. Strategies for fostering appreciation for diverse views and opinions	O	O	O	O
g. Methods for assessing your effectiveness as an ethical leader	O	O	O	O

Section 6. Resource Management

6. Rate your knowledge or understanding of each of the following:	Little or No Knowledge	Some Knowledge	Moderate Knowledge	Extensive Knowledge
a. Strategies for mobilizing funding (e.g., state or federal grants) to advance the goals of the school	O	O	O	O
b. Using performance data to make decisions about resource allocations	O	O	O	O
c. Promoting organizational efficiency through effective budget management	O	O	O	O
d. Securing additional funds through grant writing	O	O	O	O
e. Managing human resources to support school improvement goals (e.g., making appropriate teacher assignments, selecting qualified personnel)	O	O	O	O
f. Establishing a staff development program in the school	O	O	O	O
g. Developing partnerships (e.g., with businesses, community organizations, government, higher education institutions)	O	O	O	O

Section 7. School and Program Evaluation

7. Rate your current understanding or knowledge of the following:	Little or No Knowledge	Some Knowledge	Moderate Knowledge	Extensive Knowledge
a. Key elements of good program evaluation	O	O	O	O
b. Evaluation and assessment strategies	O	O	O	O
c. Procedures for monitoring progress in meeting school/program goals including quality assurance checks	O	O	O	O
d. Development of evaluation instruments (e.g., surveys, structured interviews, focus groups)	O	O	O	O
e. Approaches to building teams to collect and process data related to school or program goals	O	O	O	O
f. Strategies for building staff capacity to analyze and interpret evaluation findings	O	O	O	O
g. Using evaluation findings to inform decision making	O	O	O	O

Thank you for taking the time to complete the survey.

Texas Principal Excellence Program
Principal Leadership Survey for Comparison Principals
(Fall 2007)

Learning Point Associates is an independent nonprofit education organization that is conducting an evaluation of the Texas Principal Excellence Program (TxPEP), as mandated by the Texas Education Agency (TEA). One of the goals of the evaluation is to provide TEA with input from principals like you on the leadership practices that are critical for a principal's success in improving student achievement, graduation rates, and school-level outcomes. To accomplish this goal, information is being collected from both program participants and nonparticipants. Your assistance with this evaluation will help inform ongoing improvements to professional development activities designed for and delivered to principals, particularly those sponsored by TEA.

The evaluation findings will be based on a variety of sources, including this survey. This survey is designed to obtain information on principals' knowledge and application of concepts and practices in key leadership areas. The survey will take 15 to 20 minutes to complete.

Although your participation is voluntary, it is a critical contribution to informing ongoing improvements to professional development for principals. Your responses to survey questions will remain confidential, and responses will be reported in the aggregate only. If you have questions or concerns about the survey, contact Karen Drill at 1-800-356-2735 or karen.drill@learningpt.org.

We appreciate your time and contribution. Thank you for your participation!

Principal Leadership Survey for Comparison Principals (Fall 2007)

Section 1. Participant Status in TxPEP

1. Are you participating in the Texas Principal Excellence Program?

    O Yes

    O No

Principal Leadership Survey for Comparison Principals (Fall 2007)

The next three sections of the survey ask you to indicate your *effectiveness* in implementing specific practices related to key areas of principal leadership.

Section 2. Change Management

2. Indicate how effective you are at doing each of the following:	Not Doing	Not Effective	Minimally Effective	Moderately Effective	Very Effective
a. Assessing the needs and interests of all members of the school community (students, teachers, parents, staff) before initiating change	O	O	O	O	O
b. Articulating a vision of change that reflects the beliefs, values, and commitments of the school community	O	O	O	O	O
c. Building consensus among all members of the school community (teachers, students, parents, staff) around a shared vision for change	O	O	O	O	O
d. Using theories of change to guide the development of school improvement efforts	O	O	O	O	O
e. Establishing specific goals for implementing change	O	O	O	O	O
f. Evaluating the effects of change on school culture	O	O	O	O	O
g. Managing conflicts associated with change	O	O	O	O	O

Section 3. Building Learning Communities

3. Indicate how effective you are at doing each of the following:	Not Doing	Not Effective	Minimally Effective	Moderately Effective	Very Effective
a. Creating opportunities for teachers and staff to share ideas and beliefs about schooling, teaching, and learning	O	O	O	O	O
b. Establishing and maintaining shared and distributed leadership	O	O	O	O	O
c. Preserving regularly scheduled time for professional collaboration	O	O	O	O	O
d. Maintaining high academic expectations and standards for all teachers and students	O	O	O	O	O
e. Providing opportunities for teachers to learn about and implement evidence-based "best" practices	O	O	O	O	O
f. Creating a school culture focused on learning	O	O	O	O	O
g. Celebrating the achievement of school goals	O	O	O	O	O

Section 4. Data-Driven Decision Making

4. Indicate how effective you are at doing each of the following:	Not Doing	Not Effective	Minimally Effective	Moderately Effective	Very Effective
a. Compiling data in formats useful for analysis and decision-making needs	O	O	O	O	O
b. Analyzing and interpreting data to uncover patterns and relationships	O	O	O	O	O
c. Using data to identify gaps in the curriculum for all students	O	O	O	O	O
d. Using data to set learning goals for individual students	O	O	O	O	O
e. Using data to assign or reassign students to classes or groups	O	O	O	O	O
f. Using data to determine topics for professional development	O	O	O	O	O
g. Using data to set school improvement goals	O	O	O	O	O

The next three sections of the survey ask you rate your *knowledge* or *understanding* of specific concepts or practices related to key areas of principal leadership.

Section 5. Ethical Leadership

5. Rate your knowledge or understanding of each of the following:	Little or No Knowledge	Some Knowledge	Moderate Knowledge	Extensive Knowledge
a. Establishing clear ethical standards that all members of the school (teachers, students, and staff) are expected to follow	O	O	O	O
b. Serving as a model of ethical behavior for others in the school	O	O	O	O
c. Strategies to reinforce ethical conduct for everyone in the school (e.g., establishing consequences for violating ethical standards)	O	O	O	O
d. Decision making based on established ethical standards	O	O	O	O
e. Ethical principles for resolving conflicts among competing interests in the school	O	O	O	O
f. Strategies for fostering appreciation for diverse views and opinions	O	O	O	O
g. Methods for assessing your effectiveness as an ethical leader	O	O	O	O

Section 6. Resource Management

6. Rate your knowledge or understanding of each of the following:	Little or No Knowledge	Some Knowledge	Moderate Knowledge	Extensive Knowledge
a. Strategies for mobilizing funding (e.g., state or federal grants) to advance the goals of the school	O	O	O	O
b. Using performance data to make decisions about resource allocations	O	O	O	O
c. Promoting organizational efficiency through effective budget management	O	O	O	O
d. Securing additional funds through grant writing	O	O	O	O
e. Managing human resources to support school improvement goals (e.g., making appropriate teacher assignments, selecting qualified personnel)	O	O	O	O
f. Establishing a staff development program in the school	O	O	O	O
g. Developing partnerships (e.g., with businesses, community organizations, government, higher education institutions)	O	O	O	O

Section 7. School and Program Evaluation

7. Rate your current understanding or knowledge of the following:	Little or No Knowledge	Some Knowledge	Moderate Knowledge	Extensive Knowledge
a. Key elements of good program evaluation	O	O	O	O
b. Evaluation and assessment strategies	O	O	O	O
c. Procedures for monitoring progress in meeting school/program goals including quality assurance checks	O	O	O	O
d. Development of evaluation instruments (e.g., surveys, structured interviews, focus groups)	O	O	O	O
e. Approaches to building teams to collect and process data related to school or program goals	O	O	O	O
f. Strategies for building staff capacity to analyze and interpret evaluation findings	O	O	O	O
g. Using evaluation findings to inform decision making	O	O	O	O

Thank you for taking the time to complete the survey.

Texas Principal Excellence Program
Principal Leadership Survey for TxPEP and Comparison Principals
(Spring 2008)

Learning Point Associates is an independent nonprofit education organization that is conducting an external evaluation of the Texas Principal Excellence Program (TxPEP), as mandated by the Texas Education Agency (TEA). One of the goals of the evaluation is to provide TEA with input from principals on the leadership practices that are critical for a principal's success in improving student achievement, graduation rates, and school-level outcomes. To accomplish this goal, information is being collected from both program participants and non-participants. Your assistance with this evaluation will help inform ongoing improvements to professional development activities designed for and delivered to principals, particularly those sponsored by TEA.

The evaluation findings will be based on a variety of sources, including this survey. This survey is designed to obtain follow-up information on principals' knowledge and application of concepts and practices in key leadership areas. The survey will take approximately 15-20 minutes to complete.

Although your participation is voluntary, it is a critical contribution to informing ongoing improvements to professional development for principals. Your responses to survey questions will remain confidential, and responses will be reported in the aggregate only. If you have questions or concerns about the survey, contact Karen Drill at 800-356-2735 or karen.drill@learningpt.org.

We sincerely appreciate your time and contribution. Thank you for your participation!

Principal Leadership Survey for TxPEP Participants and Comparison Principals (Spring 2008)

Section 1. Principal Experience

1a. Including this school year, how many years have you been principal at your *current* school?

    O 1 year or less

    O 2 to 4 years

    O 5 to 10 years

    O 11 to 15 years

    O 16 or more years

1b. Including this school year, how many *total* years of experience do you have as a principal?

    O 1 year or less

    O 2 to 4 years

    O 5 to 10 years

    O 11 to 15 years

    O 16 or more years

Principal Leadership Survey for TxPEP Participants and Comparison Principals (Spring 2008)

The next three sections of the survey ask you to indicate your *effectiveness* in implementing specific practices related to key areas of principal leadership.

Section 2. Change Management

2. Indicate how effective you are at doing each of the following:	Not Doing	Not Effective	Minimally Effective	Moderately Effective	Very Effective
a. Assessing the needs and interests of all members of the school community (students, teachers, parents, staff) before initiating change	O	O	O	O	O
b. Articulating a vision of change that reflects the beliefs, values, and commitments of the school community	O	O	O	O	O
c. Building consensus among all members of the school community (teachers, students, parents, staff) around a shared vision for change	O	O	O	O	O
d. Using theories of change to guide the development of school improvement efforts	O	O	O	O	O
e. Establishing specific goals for implementing change	O	O	O	O	O
f. Evaluating the effects of change on school culture	O	O	O	O	O
g. Managing conflicts associated with change	O	O	O	O	O

Section 3. Building Learning Communities

3. Indicate how effective you are at doing each of the following:	Not Doing	Not Effective	Minimally Effective	Moderately Effective	Very Effective
a. Creating opportunities for teachers and staff to share ideas and beliefs about schooling, teaching, and learning	O	O	O	O	O
b. Establishing and maintaining shared and distributed leadership	O	O	O	O	O
c. Preserving regularly scheduled time for professional collaboration	O	O	O	O	O
d. Maintaining high academic expectations and standards for all teachers and students	O	O	O	O	O
e. Providing opportunities for teachers to learn about and implement evidence-based "best" practices	O	O	O	O	O
f. Creating a school culture focused on learning	O	O	O	O	O
g. Celebrating the achievement of school goals	O	O	O	O	O

Section 4. Data-Driven Decision Making

4. Indicate how effective you are at doing each of the following:	Not Doing	Not Effective	Minimally Effective	Moderately Effective	Very Effective
a. Compiling data in formats useful for analysis and decision-making needs	O	O	O	O	O
b. Analyzing and interpreting data to uncover patterns and relationships	O	O	O	O	O
c. Using data to identify gaps in the curriculum for all students	O	O	O	O	O
d. Using data to set learning goals for individual students	O	O	O	O	O
e. Using data to assign or reassign students to classes or groups	O	O	O	O	O
f. Using data to determine topics for professional development	O	O	O	O	O
g. Using data to set school improvement goals	O	O	O	O	O

Principal Leadership Survey for TxPEP Participants and Comparison Principals (Spring 2008)

The next three sections of the survey ask you rate your *knowledge* or *understanding* of specific concepts or practices related to key areas of principal leadership.

Section 5. Ethical Leadership

5. Rate your knowledge or understanding of each of the following:	Little or No Knowledge	Some Knowledge	Moderate Knowledge	Extensive Knowledge
a. Establishing clear ethical standards that all members of the school (teachers, students, and staff) are expected to follow	O	O	O	O
b. Serving as a model of ethical behavior for others in the school	O	O	O	O
c. Strategies to reinforce ethical conduct for everyone in the school (e.g., establishing consequences for violating ethical standards)	O	O	O	O
d. Decision making based on established ethical standards	O	O	O	O
e. Ethical principles for resolving conflicts among competing interests in the school	O	O	O	O
f. Strategies for fostering appreciation for diverse views and opinions	O	O	O	O
g. Methods for assessing your effectiveness as an ethical leader	O	O	O	O

Principal Leadership Survey for TxPEP Participants and Comparison Principals (Spring 2008)

Section 6. Resource Management

6. Rate your knowledge or understanding of each of the following:	Little or No Knowledge	Some Knowledge	Moderate Knowledge	Extensive Knowledge
a. Strategies for mobilizing funding (e.g., state or federal grants) to advance the goals of the school	O	O	O	O
b. Using performance data to make decisions about resource allocations	O	O	O	O
c. Promoting organizational efficiency through effective budget management	O	O	O	O
d. Securing additional funds through grant writing	O	O	O	O
e. Managing human resources to support school improvement goals (e.g., making appropriate teacher assignments, selecting qualified personnel)	O	O	O	O
f. Establishing a staff development program in the school	O	O	O	O
g. Developing partnerships (e.g., with businesses, community organizations, government, higher education institutions)	O	O	O	O

Section 7. School and Program Evaluation

7. Rate your current understanding or knowledge of the following:	Little or No Knowledge	Some Knowledge	Moderate Knowledge	Extensive Knowledge
a. Key elements of good program evaluation	O	O	O	O
b. Evaluation and assessment strategies	O	O	O	O
c. Procedures for monitoring progress in meeting school/program goals including quality assurance checks	O	O	O	O
d. Development of evaluation instruments (e.g., surveys, structured interviews, focus groups)	O	O	O	O
e. Approaches to building teams to collect and process data related to school or program goals	O	O	O	O
f. Strategies for building staff capacity to analyze and interpret evaluation findings	O	O	O	O
g. Using evaluation findings to inform decision making	O	O	O	O

The following questions ask you to reflect on changes in student behavior, teaching, and student learning from last school year to this school year.

Section 8. School Improvement

8. Rate the extent to which you agree or disagree with the following statements *when compared to last year*:	Strongly Disagree	Disagree	Agree	Strongly Agree
a. There are fewer discipline problems at my school.	O	O	O	O
b. Student attendance improved for *all* students at my school.	O	O	O	O
c. There is greater student engagement at my school.	O	O	O	O
d. Teacher attendance improved at my school.	O	O	O	O
e. Teachers at my school are more open to learning new instructional strategies.	O	O	O	O
f. Teachers at my school are making greater use of problem based learning strategies.	O	O	O	O
g. Teachers at my school are more satisfied with professional development activities.	O	O	O	O
h. Students' standardized test scores are improving at my school.	O	O	O	O
i. Student promotion and graduation rates are improving at my school.	O	O	O	O
j. Teacher retention rates are improving at my school.	O	O	O	O

Thank you for taking the time to complete the survey.

Texas Principal Excellence
Principal Leadership Survey for TxPEP Participants
(Fall 2008)

Learning Point Associates is an independent nonprofit education organization that is conducting an external evaluation of the Texas Principal Excellence Program (TxPEP), as mandated by the Texas Education Agency (TEA). One of the goals of the evaluation is to provide TEA with feedback on the impact of TxPEP on the leadership practices of participating principals. In addition, the evaluation will help inform recommendations made to TEA on how to refine TxPEP to better address leadership practices that are critical for a principal's success in improving student achievement, graduation rates, and school-level outcomes.

This survey is designed to obtain follow-up information on TxPEP participants' knowledge and application of concepts and practices in the key leadership areas emphasized by TxPEP, particularly in planning for the 2008-2009 academic year. Questions are similar to those asked in previous surveys to allow for a comparison of responses over time. The survey will take approximately 20 minutes to complete.

Although your participation is voluntary, it is a critical to evaluating the impact of TxPEP on principals and informing ongoing improvements to the program. Your responses to survey questions will remain confidential, and responses will be reported in the aggregate only. In completing this survey, please remember that this is an evaluation of the TxPEP program, *not* an evaluation of you as principal. If you have questions or concerns about the survey, contact Karen Drill at 800-356-2735 or karen.drill@learningpt.org.

We appreciate your time and contribution. Thank you for your participation!

Section 1. Principal Experience

1a. Excluding this school year, how many years have you been principal at your *current* school?

    O 1 year or less

    O 2 to 4 years

    O 5 to 10 years

    O 11 to 15 years

    O 16 or more years

1b. Excluding this school year, how many total years of experience do you have as a principal?

    O 1 year or less

    O 2 to 4 years

    O 5 to 10 years

    O 11 to 15 years

    O 16 or more years

Principal Leadership Survey for TxPEP Participants (Fall 2008)

The next three sections of the survey ask you to indicate your *effectiveness* in implementing specific practices related to key areas of principal leadership.

Section 2. Change Management

2. Indicate how effective you are at doing each of the following:	Not Doing	Not Effective	Minimally Effective	Moderately Effective	Very Effective
a. Assessing the needs and interests of all members of the school community (students, teachers, parents, staff) before initiating change	O	O	O	O	O
b. Articulating a vision of change that reflects the beliefs, values, and commitments of the school community	O	O	O	O	O
c. Building consensus among all members of the school community (teachers, students, parents, staff) around a shared vision for change	O	O	O	O	O
d. Using theories of change to guide the development of school improvement efforts	O	O	O	O	O
e. Establishing specific goals for implementing change	O	O	O	O	O
f. Evaluating the effects of change on school culture	O	O	O	O	O
g. Managing conflicts associated with change	O	O	O	O	O

Section 3. Building Learning Communities

3. Indicate how effective you are at doing each of the following:	Not Doing	Not Effective	Minimally Effective	Moderately Effective	Very Effective
a. Creating opportunities for teachers and staff to share ideas and beliefs about schooling, teaching, and learning	O	O	O	O	O
b. Establishing and maintaining shared and distributed leadership	O	O	O	O	O
c. Preserving regularly scheduled time for professional collaboration	O	O	O	O	O
d. Maintaining high academic expectations and standards for all teachers and students	O	O	O	O	O
e. Providing opportunities for teachers to learn about and implement evidence-based "best" practices	O	O	O	O	O
f. Creating a school culture focused on learning	O	O	O	O	O
g. Celebrating the achievement of school goals	O	O	O	O	O

Section 4. Data-Driven Decision Making

4. Indicate how effective you are at doing each of the following:	Not Doing	Not Effective	Minimally Effective	Moderately Effective	Very Effective
a. Compiling data in formats useful for analysis and decision-making needs	O	O	O	O	O
b. Analyzing and interpreting data to uncover patterns and relationships	O	O	O	O	O
c. Using data to identify gaps in the curriculum for all students	O	O	O	O	O
d. Using data to set learning goals for individual students	O	O	O	O	O
e. Using data to assign or reassign students to classes or groups	O	O	O	O	O
f. Using data to determine topics for professional development	O	O	O	O	O
g. Using data to set school improvement goals	O	O	O	O	O

Principal Leadership Survey for TxPEP Participants (Fall 2008)

The next three sections of the survey ask you rate your *knowledge* or *understanding* of specific concepts or practices related to key areas of principal leadership.

Section 5: Ethical Leadership

5. Rate your knowledge or understanding of each of the following:	Little or No Knowledge	Some Knowledge	Moderate Knowledge	Extensive Knowledge
a. Establishing clear ethical standards that all members of the school (teachers, students, and staff) are expected to follow	O	O	O	O
b. Serving as a model of ethical behavior for others in the school	O	O	O	O
c. Strategies to reinforce ethical conduct for everyone in the school (e.g., establishing consequences for violating ethical standards)	O	O	O	O
d. Decision making based on established ethical standards	O	O	O	O
e. Ethical principles for resolving conflicts among competing interests in the school	O	O	O	O
f. Strategies for fostering appreciation for diverse views and opinions	O	O	O	O
g. Methods for assessing your effectiveness as an ethical leader	O	O	O	O

Section 6: Resource Management

6. Rate your knowledge or understanding of each of the following:	Little or No Knowledge	Some Knowledge	Moderate Knowledge	Extensive Knowledge
a. Strategies for mobilizing funding (e.g., state or federal grants) to advance the goals of the school	O	O	O	O
b. Using performance data to make decisions about resource allocations	O	O	O	O
c. Promoting organizational efficiency through effective budget management	O	O	O	O
d. Securing additional funds through grant writing	O	O	O	O
e. Managing human resources to support school improvement goals (e.g., making appropriate teacher assignments, selecting qualified personnel)	O	O	O	O
f. Establishing a staff development program in the school	O	O	O	O
g. Developing partnerships (e.g., with businesses, community organizations, government, higher education institutions)	O	O	O	O

Section 7. School and Program Evaluation

7. Rate your current understanding or knowledge of the following:	Little or No Knowledge	Some Knowledge	Moderate Knowledge	Extensive Knowledge
a. Key elements of good program evaluation	O	O	O	O
b. Evaluation and assessment strategies	O	O	O	O
c. Procedures for monitoring progress in meeting school/program goals including quality assurance checks	O	O	O	O
d. Development of evaluation instruments (e.g., surveys, structured interviews, focus groups)	O	O	O	O
e. Approaches to building teams to collect and process data related to school or program goals	O	O	O	O
f. Strategies for building staff capacity to analyze and interpret evaluation findings	O	O	O	O
g. Using evaluation findings to inform decision making	O	O	O	O

When you attend a training session, it may seem potentially useful at the time, but you may or may not apply what you learned. In answering the next three questions, please think about the extent to which you have actually used or applied what you learned in the TxPEP program over the past several months.

Section 8. Usefulness of TxPEP to Principals' Typical Responsibilities

To what extent have you incorporated into your daily work what you learned from the TxPEP program in the following areas?	Not at All	To a Minimal Extent	To a Moderate Extent	To a Great Extent
Change management	O	O	O	O
Building learning communities	O	O	O	O
Data-driven decision making	O	O	O	O
School or program evaluation	O	O	O	O
Ethical leadership	O	O	O	O
Resource management	O	O	O	O

Section 9. Usefulness of TxPEP in Strategic Planning

To what extent have you incorporated into your strategic planning what you have learned from the TxPEP program in the following areas?	Not at All	To a Minimal Extent	To a Moderate Extent	To a Great Extent
Change management	O	O	O	O
Building learning communities	O	O	O	O
Data-driven decision making	O	O	O	O
School or program evaluation	O	O	O	O
Resource management	O	O	O	O
Ethical leadership	O	O	O	O

Section 10. Usefulness of TxPEP in Developing Knowledge and Skills

To what extent has what you learned in the TxPEP program helped you in the following areas?	Not at All	To a Minimal Extent	To a Moderate Extent	To a Great Extent
Understanding your strengths as a leader	O	O	O	O
Identifying areas in which you can improve as a leader	O	O	O	O
Understanding the change process	O	O	O	O
Communicating effectively	O	O	O	O
Developing strategic plans	O	O	O	O
Building effective teams	O	O	O	O
Maximizing your resources	O	O	O	O
Using data	O	O	O	O
Monitoring organizational performance	O	O	O	O
Creating a culture of respect and appreciation for others	O	O	O	O

Section 11. Comments and Suggestions

Is there anything else you would like to tell us about the TxPEP program? Please share your comments or suggestions for improving the program below.

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Thank you for taking the time to complete the survey.

Texas Principal Excellence Program
Principal Leadership Survey for Comparison Principals
(Fall 2008)

You have been asked to complete this survey as a member of a comparison group of principals. The survey is being administered by Learning Point Associates, an independent nonprofit education organization that is conducting an external evaluation of the Texas Principal Excellence Program (TxPEP) as mandated by the Texas Education Agency (TEA). One of the goals of the evaluation is to provide TEA with input from principals on the leadership practices that are critical for a principal's success in improving student achievement, graduation rates, and school-level outcomes. To accomplish this goal, information is being collected from both program participants and non-participants. Your assistance with this evaluation will help inform ongoing improvements to professional development activities designed for and delivered to principals, particularly those sponsored by TEA.

The evaluation findings will be based on a variety of sources, including this survey. This survey is designed to obtain follow-up information on principals' knowledge and application of concepts and practices in key leadership areas. Questions are similar to those asked in previous surveys to allow for a comparison of responses over time. The survey will take approximately 15-20 minutes to complete.

Although your participation is voluntary, it is a critical contribution to informing ongoing improvements to professional development for principals. Your responses to survey questions will remain confidential, and responses will be reported in the aggregate only. If you have questions or concerns about the survey, contact Karen Drill at 800-356-2735 or karen.drill@learningpt.org.

We sincerely appreciate your time and contribution. Thank you for your participation!

Principal Leadership Survey for Comparison Principals (Fall 2008)

Section 1. Principal Experience

1a. Excluding this school year, how many years have you been principal at your *current* school?

    O 1 year or less

    O 2 to 4 years

    O 5 to 10 years

    O 11 to 15 years

    O 16 or more years

1b. Excluding this school year, how many *total* years of experience do you have as a principal?

    O 1 year or less

    O 2 to 4 years

    O 5 to 10 years

    O 11 to 15 years

    O 16 or more years

The next three sections of the survey ask you to indicate your *effectiveness* in implementing specific practices related to key areas of principal leadership.

Section 2. Change Management

2. Indicate how effective you are at doing each of the following:	Not Doing	Not Effective	Minimally Effective	Moderately Effective	Very Effective
a. Assessing the needs and interests of all members of the school community (students, teachers, parents, staff) before initiating change	O	O	O	O	O
b. Articulating a vision of change that reflects the beliefs, values, and commitments of the school community	O	O	O	O	O
c. Building consensus among all members of the school community (teachers, students, parents, staff) around a shared vision for change	O	O	O	O	O
d. Using theories of change to guide the development of school improvement efforts	O	O	O	O	O
e. Establishing specific goals for implementing change	O	O	O	O	O
f. Evaluating the effects of change on school culture	O	O	O	O	O
g. Managing conflicts associated with change	O	O	O	O	O

Section 3. Building Learning Communities

3. **Indicate how effective you are at doing each of the following:**	**Not Doing**	**Not Effective**	**Minimally Effective**	**Moderately Effective**	**Very Effective**
a. Creating opportunities for teachers and staff to share ideas and beliefs about schooling, teaching, and learning	O	O	O	O	O
b. Establishing and maintaining shared and distributed leadership	O	O	O	O	O
c. Preserving regularly scheduled time for professional collaboration	O	O	O	O	O
d. Maintaining high academic expectations and standards for all teachers and students	O	O	O	O	O
e. Providing opportunities for teachers to learn about and implement evidence-based "best" practices	O	O	O	O	O
f. Creating a school culture focused on learning	O	O	O	O	O
g. Celebrating the achievement of school goals	O	O	O	O	O

Section 4. Data-Driven Decision Making

4. Indicate how effective you are at doing each of the following:	Not Doing	Not Effective	Minimally Effective	Moderately Effective	Very Effective
a. Compiling data in formats useful for analysis and decision-making needs	O	O	O	O	O
b. Analyzing and interpreting data to uncover patterns and relationships	O	O	O	O	O
c. Using data to identify gaps in the curriculum for all students	O	O	O	O	O
d. Using data to set learning goals for individual students	O	O	O	O	O
e. Using data to assign or reassign students to classes or groups	O	O	O	O	O
f. Using data to determine topics for professional development	O	O	O	O	O
g. Using data to set school improvement goals	O	O	O	O	O

Principal Leadership Survey for Comparison Principals (Fall 2008)

The next three sections of the survey ask you rate your *knowledge* or *understanding* of specific concepts or practices related to key areas of principal leadership.

Section 5: Ethical Leadership

5. Rate your knowledge or understanding of each of the following:	Little or No Knowledge	Some Knowledge	Moderate Knowledge	Extensive Knowledge
a. Establishing clear ethical standards that all members of the school (teachers, students, and staff) are expected to follow	O	O	O	O
b. Serving as a model of ethical behavior for others in the school	O	O	O	O
c. Strategies to reinforce ethical conduct for everyone in the school (e.g., establishing consequences for violating ethical standards)	O	O	O	O
d. Decision making based on established ethical standards	O	O	O	O
e. Ethical principles for resolving conflicts among competing interests in the school	O	O	O	O
f. Strategies for fostering appreciation for diverse views and opinions	O	O	O	O
g. Methods for assessing your effectiveness as an ethical leader	O	O	O	O

Section 6: Resource Management

6. Rate your knowledge or understanding of each of the following:	Little or No Knowledge	Some Knowledge	Moderate Knowledge	Extensive Knowledge
a. Strategies for mobilizing funding (e.g., state or federal grants) to advance the goals of the school	O	O	O	O
b. Using performance data to make decisions about resource allocations	O	O	O	O
c. Promoting organizational efficiency through effective budget management	O	O	O	O
d. Securing additional funds through grant writing	O	O	O	O
e. Managing human resources to support school improvement goals (e.g., making appropriate teacher assignments, selecting qualified personnel)	O	O	O	O
f. Establishing a staff development program in the school	O	O	O	O
g. Developing partnerships (e.g., with businesses, community organizations, government, higher education institutions)	O	O	O	O

Section 7. School and Program Evaluation

7. Rate your current understanding or knowledge of the following:	Little or No Knowledge	Some Knowledge	Moderate Knowledge	Extensive Knowledge
a. Key elements of good program evaluation	O	O	O	O
b. Evaluation and assessment strategies	O	O	O	O
c. Procedures for monitoring progress in meeting school/program goals including quality assurance checks	O	O	O	O
d. Development of evaluation instruments (e.g., surveys, structured interviews, focus groups)	O	O	O	O
e. Approaches to building teams to collect and process data related to school or program goals	O	O	O	O
f. Strategies for building staff capacity to analyze and interpret evaluation findings	O	O	O	O
g. Using evaluation findings to inform decision making	O	O	O	O

Thank you for taking the time to complete the survey.

Texas Principal Excellence Program
Teacher Survey of School Characteristics
(Spring 2008)

This survey is designed to obtain teacher feedback on the teaching and learning environment in your school. These results will inform improvements to the Texas Principal Excellence Program (TxPEP).

The survey will take about 10-15 minutes to complete. Although your participation is voluntary, it is critical to helping the Texas Education Agency (TEA) develop professional development activities for principals that positively impact teachers, students, and schools.

The effectiveness of the survey is dependent on your honest response to the survey items. Please know that your anonymity is guaranteed. No one in your school, district, or state will be able to view individual survey responses, and reports on results will not include data that could identify individuals.

The survey is being conducted by Learning Point Associates, an independent nonprofit education organization under contract to TEA. If you have questions or concerns about the survey, contact Karen Drill at 800-356-2735 or karen.drill@learningpt.org.

We appreciate your time and contribution. Thank you for your participation!

1. Indicate the extent to which you agree or disagree with the following statements about your school's environment.

School Environment	Strongly Disagree	Disagree	Agree	Strongly Agree
a. My school is a safe place to work.	O	O	O	O
b. The quality of my school's facilities supports teaching.	O	O	O	O
c. My school provides adequate instructional materials.	O	O	O	O
d. My school is well managed.	O	O	O	O

2. Indicate the extent to which you agree or disagree with the following statements about teaching and learning in your school.

Teaching and Learning	Strongly Disagree	Disagree	Agree	Strongly Agree
a. Teachers have high academic expectations and standards for *all* students.	O	O	O	O
b. Teachers set high standards for themselves.	O	O	O	O
c. Teachers feel responsible to help each other improve instruction.	O	O	O	O
d. Teachers help monitor discipline in the entire school, not just in their classroom.	O	O	O	O

3. Indicate the extent to which you agree or disagree with the following statements about shared leadership in your school.

Shared Leadership	Strongly Disagree	Disagree	Agree	Strongly Agree
a. Teachers consistently share ideas and beliefs about schooling, teaching, and learning.	O	O	O	O
b. Teachers are encouraged to voice their concerns.	O	O	O	O
c. Teachers are closely involved in the decision making process about school issues (e.g., school improvement plans).	O	O	O	O
d. Teachers are given opportunities to actively contribute to the school's success.	O	O	O	O
e. Teachers are given opportunities to develop into leaders.	O	O	O	O
f. Teachers have scheduled times to meet and collaborate with other teachers in their grade level or subject area.	O	O	O	O

4. Indicate the extent to which you agree or disagree with the following statements about leadership in your school.

School Leadership	Strongly Disagree	Disagree	Agree	Strongly Agree
a. The principal builds consensus among all members of the school community (i.e., students, teachers, parents, and staff) around a shared vision for change.	O	O	O	O
b. The principal sets clear goals for school improvement.	O	O	O	O
c. The principal assesses the needs and interests of all members of the school community (i.e., students, teachers, parents, and staff) when introducing new initiatives.	O	O	O	O
d. The principal provides useful feedback to teachers about their teaching practices.	O	O	O	O
e. The principal regularly evaluates the effectiveness of programs or initiatives within the school.	O	O	O	O
f. The principal uses program evaluation findings to inform decision making.	O	O	O	O
g. There are funds and resources available to allow teachers to take advantage of professional development activities.	O	O	O	O
h. The principal actively seeks resources for our school.	O	O	O	O
i. The principal effectively manages budgets to advance the goals of the school.	O	O	O	O
j. The principal acts with integrity.	O	O	O	O
k. The principal encourages respect for others.	O	O	O	O
l. The principal enforces standards of ethical conduct for everyone in the school.	O	O	O	O

5. Indicate the extent to which you agree or disagree with the following statements about professional development opportunities in your school.

Professional Development	Strongly Disagree	Disagree	Agree	Strongly Agree
a. The principal encourages teachers to take advantage of professional development opportunities.	O	O	O	O
b. Professional development opportunities allow me to work on aspects of my teaching that I am trying to improve.	O	O	O	O
c. Professional development opportunities provide me with time to learn about evidence-based best practices.	O	O	O	O

6. Indicate the extent to which student achievement data are used to make the following types of decisions in your school.

Data Use	Not at All	To a Minimum Extent	To a Moderate Extent	To a Great Extent
a. Identifying individual students who need assistance	O	O	O	O
b. Assigning or reassigning students to classes or groups	O	O	O	O
c. Identifying and correcting gaps in the curriculum for all students	O	O	O	O
d. Identifying areas where teachers need to strengthen their instruction	O	O	O	O
e. Setting school improvement goals	O	O	O	O

7. Including this school year, how many years have you been teaching at your *current* school?

     O   1 year or less

     O   2 to 4 years

     O   5 to 7 years

     O   8 to 10 years

     O   11 or more years

If "1 year or less" skip to Question 9.

8. Based on your experiences and observations, rate the extent to which you agree or disagree with the following statements about your school *when compared to last year*.

Compared to last year, this year...	Strongly Disagree	Disagree	Agree	Strongly Agree
a. There are fewer discipline problems at my school.	O	O	O	O
b. Student attendance improved for *all* students at my school.	O	O	O	O
c. There is greater student engagement at my school.	O	O	O	O
d. Teacher attendance has improved at my school.	O	O	O	O
e. Teachers at my school are more open to learning new instructional strategies.	O	O	O	O
f. Teachers at my school are making greater use of problem based learning strategies.	O	O	O	O
g. Teachers at my school are more satisfied with professional development activities.	O	O	O	O
h. Students' standardized test scores are improving at my school.	O	O	O	O
i. Student promotion and graduation rates are improving at my school.	O	O	O	O

9. Are you planning to stay at your school next year?

O Yes

O No

If yes, skip to Question 11.

10. Did any of the following contribute to your decision to leave your school? (*Select all that apply.*)

O   Lack of mentorship and/or school support

O   Limited opportunities for professional growth

O   Dissatisfaction with school leadership

O   Not feeling valued

O   Student discipline

O   Safety and school climate

O   Other. Please specify: _____

Teaching Background

11. Please indicate your current employment status:
    - O Regular full-time teacher
    - O Regular part-time teacher
    - O Permanent substitute teacher
    - O Instructional coach
    - O Specialist
    - O Instructional aide/teaching assistant
    - O Other. Please specify:_____

12. Including this school year, how many *total* years of teaching experience do you have?
    - O 1 year or less
    - O 2 to 4 years
    - O 5 to 7 years
    - O 8 to 10 years
    - O 11 or more years

13. What grade level(s) do you currently teach? (*Select all that apply.*)
    - O Elementary (PK–5)
    - O Middle or junior high school (6–8)
    - O High school (9–12)
    - O Other. Please specify: _____

14. How long have you worked with the current principal in this school?
    - O One year or less
    - O 2 to 4 years
    - O 5 or more years

Thank you for your taking the time to complete the survey.

Appendix C
Interview, Focus Group, and Survey Administration and Comparison Group Selection

Appendix C includes a description of the procedures used in administering interviews, focus groups, and surveys, as well as descriptions of the types of questions included in each protocol or survey. In addition, descriptions of the items included in the LPI and the 21st Century Principal Assessment and the procedures used in administering these assessments are provided. Procedures used in selecting a principal comparison group also are described.

Interviews with Program Staff

Sample Selection

To identify program staff who could be interviewed regarding the development and quality of the TxPEP program, the evaluation team requested the names of TEA program staff who were involved in the selection of the TxPEP vendor (APQC) and the review of program design and content. A similar request was made to APQC for the names of program staff involved in the development and implementation of the TxPEP program and the names of principals serving as cohort consultants. Two members of TEA's program staff who were directly involved with vendor selection and program review were selected to participate in interviews. Two APQC staff members who were involved with program development and implementation also were selected. Two of the 48 cohort consultants for the program were selected randomly to be interviewed. E-mails were sent to each of these individuals requesting their participation in the interviews. All agreed to be interviewed.

Administration

Interviews were scheduled individually and conducted by a member of the evaluation team. Respondents were asked for permission to record the interviews. All respondents agreed. The digital recordings were uploaded to a secure website and retrieved by a transcription company under contract with Learning Point Associates. Transcripts were analyzed to identify common themes and possible differences in perceptions among those interviewed.

Interviews with TEA program staff were conducted with two TEA program staff members in December 2007. Follow-up interviews with one of these staff members were conducted in June and October 2008. (The other TEA staff member who was initially interviewed was involved only in the development and early implementation of TxPEP.) Interviews with two APQC staff members and two cohort consultants were conducted in December 2007, February/March 2008, May/June 2008, and September 2008.

Interview Protocols

Similar interview protocols were developed for each of these groups. Those who were interviewed were asked to comment on the following aspects of the TxPEP program:

- Their role in developing or implementing the program (asked of TEA and APQC program staff)

- Whether they thought the program was being implemented as planned (i.e., as described in the approved curriculum and program materials)

- The relevance and quality of the program offerings (based on their own perceptions, or for APQC staff, based on formal or informal feedback received from participants)

- Whether they knew if participants were applying what they were learning and, if so, what formal or informal data were available regarding participants' application of TxPEP content (asked only of APQC staff and cohort consultants)

- Whether they thought participants were acquiring the knowledge and skills anticipated from their participation in the program (asked only of APQC staff)

- What feedback they had received from participants, if any, on WebCT and the IBM Change Toolkit (asked in follow-up interviews with APQC program staff) and how participants were using these tools (asked in follow-up interviews with cohort consultants)

- The frequency with which cohort consultants were meeting with principals and the types of support cohort consultants provided to principals (asked in follow-up interviews with cohort consultants)

- Perceived barriers to participants in changing their leadership practices

- What APQC program staff were doing to address these perceived barriers (e.g., in terms of curriculum and delivery mechanisms)

- What changes, if any, had been made over the course of the program in response to participant feedback (asked in follow-up interviews with APQC program staff)

- What changes, if any, had been made to the curriculum or program offerings in response to participant feedback (asked in follow-up interviews with APQC staff) and what changes in the program are planned for 2008–09 (asked in follow-up interviews with TEA program staff)

TEA program staff members also were asked to describe TEA's process for developing a program relevant to principals' needs, the process used to select a vendor for the program, and the process used to approve the TxPEP curriculum.

Cohort Consultant Survey

Administration

The names and e-mails address of the 48 individuals who served as cohort consultants during the 2007–08 TxPEP program were requested from APQC in June 2008. APQC supplied current e-mail addresses for 46 of these individuals. E-mails were sent to these 46 cohort consultants in late June 2008 asking them to complete the survey by July 15, 2008; a survey link was included in the e-mail. A reminder e-mail was sent the following week. Of the 46 cohort consultants who

were asked to participate in the survey in July 2008, 38 completed the survey for a response rate of 83 percent.

Survey Measures

The cohort consultant survey included questions on the following topics:

- The frequency with which the cohort consultants communicated with principals in their cohort by each of the following methods: e-mail; one-on-one phone conversations; group conference calls with cohort members; face-to-face meetings at TxPEP events; face-to-face meetings on other occasions; WebCT

- The perceived relevance of the six leadership areas emphasized by TxPEP to principals' day-to-day responsibilities

- The frequency with which cohort members asked about, or wanted to discuss topics related to the six leadership areas emphasized by TxPEP

- Cohort consultants' perceived effectiveness in providing various types of support to principals such as communicating TxPEP program requirements, facilitating discussions on leadership best practices, and assisting cohort members with their professional development plans

- Cohort consultants' satisfaction with the support they had provided to principals

- Cohort consultants' satisfaction with the resources and support they had received from the program

- Suggestions for improving TxPEP

Principal Focus Groups

Sample Selection

Participants for participant focus groups were selected based on four criteria: (1) the principal's campus rating (AU or non-AU); (2) completion of the initial Principal Leadership Survey; (3) school grade level: elementary or elementary/secondary, middle, and high school; and (4) district type: urban (major urban, other central city); suburban (major suburban, other central city suburban, nonmetropolitan stable); rural (independent town, rural), and charter. Because TxPEP participation is required of principals of AU schools and these principals constituted the majority of TxPEP participants, the sample of potential focus group members was restricted to principals from AU campuses. Within this group, the sample was further restricted to those who had completed the initial Principal Leadership Survey because it was assumed that these principals were more likely to respond to the request to participate in a focus group. The other criteria ensured that principals who were selected would represent participants as whole with respect to school type and district type. Principals who had completed the survey were divided into three groups by school type (elementary, middle, and high school). Within each of these groups, one to two principals were randomly selected from each district type.

The final focus group sample consisted of 12 elementary, 12 middle school, and 12 high school principals who were from the full range of district types represented in the participant sample. Nine principals within each group were sent an e-mail requesting their participation in one of the three focus groups. If a principal indicated that he or she did not wish to participate, a replacement principal was selected. Follow-up calls were made to each principal to confirm participation in a focus group via conference call. The goal was to convene three focus groups of six participants each. Additional principals were invited in case some were unable to participate due to scheduling conflicts. Those invited to participate were offered several potential meeting times. Times that worked best for the majority of participants in each focus group were chosen for convening the groups. Several of those invited were not able to attend, however.

Two rounds of principal focus groups were conducted: in December 2007 and in late February/early March 2008. The same focus group sample of 12 elementary school, 12 middle school, and 12 high school principals served as the participant pool for both rounds of focus groups. A total of 11 principals participated in the first round of focus groups; a total of 9 principals participated in the second round of focus groups.

Table C1 provides a breakdown of focus group participants by school type (elementary, middle, and high school) and district type (rural, urban, and suburban) for the December 2007 and February/March 2008 focus groups. All focus group participants were from AU campuses.

Table C1. TxPEP Focus Group Participants by
Administration Date, School Type, and District Type ($N = 20$)

Administration Date	School Type	n	District Type		
			Urban ($n = 5$)	Suburban ($n = 6$)	Rural ($n = 9$)
December 2007	Elementary	4	1	1	2
	Middle	4	0	2	2
	High	3	0	1	2
February/March 2008	Elementary	3	2	0	1
	Middle	3	1	1	1
	High	3	1	1	1

Source: Evaluator analysis of characteristics of TxPEP focus group participants.

Administration

The focus groups were led by two members of the TxPEP evaluation team at Learning Point Associates. The three December 2007 focus groups were held on December 12th, 13th and 19th. The three February/March 2008 focus groups were held February 26th, February 28th, and March 11th. Separate focus groups were held for elementary, middle, and high school principals in December 2007. Principals who were invited to participate in the February/March focus groups were given a choice of attending any of the three focus groups to provide greater scheduling flexibility to participants. Each focus group lasted approximately 50 minutes. Participants in each focus group were asked for their permission to record the conversation. All participants agreed. The digital recordings were uploaded to a secure website and retrieved by a

transcription company under contract to Learning Point Associates. Transcripts then were analyzed to identify common themes and patterns of response across participants and focus groups.

Focus Group Protocols

Focus group participants were asked to comment on the following aspects of the TxPEP program:

- The relevance of TxPEP topics to participants' responsibilities as principals

- The quality of the program thus far

- Important skills, strategies, or ideas learned from their participation in TxPEP

- Applicability of TxPEP to principals' work

- Help received from program staff in applying what they had learned

- Aspects of the program that were going well

- Suggestions for program improvements

- Difficulties or challenges

Principal Interviews

Additional principal focus groups had been planned for spring and fall 2008, but because of difficulties in identifying times when principals were available to meet as a group, interviews were instead conducted with individual principals in May/early June 2008 and in September 2008.

Sample Selection

The sample of principals used in the selection of focus group participants also was used in selecting principals for the initial round of principal interviews in May/June 2008. Because several of those who were asked to participate were unable to do so, the pool of potential participants was expanded to include some principals from non-AU campuses. To reduce respondent burden and to obtain feedback from principals we had not yet talked with, a new sample of elementary, middle school, and high school principals was selected for interviews in September 2008 using the same procedures describer earlier for the selection of focus group participants.

Principals in the interview sample were initially contacted by phone to request their participation in an interview. E-mail requests were sent to principals who could not be reached by phone. If a principal indicated that he or she did not wish to participate, a replacement principal was selected. Individual follow-up e-mails were sent to principals who agreed to an interview to confirm the date and time of the interview.

All 18 principals who were asked to participate in the May/June 2008 interviews did so; 16 were from AU campuses and 2 were from non-AU campuses. Interviews were completed with 12 of the 18 principals selected for the September 2008 interviews. Interviews could not be scheduled with some principals because schools were closed due to weather (Hurricane Ike). All 12 of the principals interviewed in September 2008 were from AU campuses.

Table C2 provides of breakdown of interview participants by school type (elementary, middle, and high school) and district type (rural, urban, suburban, and charter) for the May/June and September 2008 interviews.

**Table C2. Principal Interview Participants by
Administration Date, School Type, and District Type ($N = 30$)**

Administration Date	School Type	N	District Type			
			Urban ($n = 9$)	Suburban ($n = 14$)	Rural ($n = 6$)	Charter ($n = 1$)
May/June 2008	Elementary	6	3	2	1	0
	Middle	7	2	3	2	0
	High	5	2	2	1	0
September 2008	Elementary	4	1	1	1	1
	Middle	3	1	2	0	0
	High	5	0	4	1	0

Source: Evaluator analysis of characteristics of principals who participated in principal interviews.

Administration

The interviews were conducted by four members of the TxPEP evaluation team at Learning Point Associates. Each interview lasted approximately 20 minutes. Principals who were interviewed were asked for their permission to record the interview. All but one principal agreed. The digital recordings were uploaded to a secure website and retrieved by a transcription company under contract to Learning Point Associates. Transcripts (or written notes when transcripts were lacking) were analyzed to identify common themes and patterns of response across participants.

Interview Protocols

The principal interview protocols asked about the same topics as the focus group protocols, but were updated to ask about principals' recent experiences with the program. The May/June 2008 interviews asked specifically for principals' perceptions of the quality and relevance of the third TxPEP workshop and the webinars offered in spring 2008; their perceptions of the usefulness of WebCT and the IBM Change Toolkit, and the frequency and usefulness of their communications with their cohort consultants. The interviews conducted in September 2008 asked principals to reflect on the overall quality and relevance of TxPEP program to their responsibilities as principals and included questions regarding the usefulness of the program in planning for the upcoming academic year and the program's impact on them as school leaders.

Principal Checklists

Administration

All TxPEP participants and comparison principals were asked to complete web-based daily checklists for five consecutive days at four different times over the course of the program: January/early February, March/early April, June, and September 2008. Learning Point Associates e-mailed each TxPEP participant and comparison principal requesting that they complete the principal checklists. Instructions as well as unique user names and passwords were included in the e-mail. The participants also were assured of the confidentiality of their responses. The e-mail included an embedded link to the online checklists.

For the January/February and March/April checklists, checklists were administered over three consecutive weeks with a third of the principals in each group (TxPEP and comparison) being asked to complete the checklists in one of these three weeks. The purpose of staggering the administration of the checklists was to provide a broader sampling of weeks during which the checklists were completed.

The January/February 2008 checklists were administered during the following weeks:

- January 21st through January 25th
- January 28th through February 1st
- February 4th through February 8th

The March/April 2008 checklists were administered during the following weeks:

- March 17th through March 21st
- March 24th through March 28th
- March 31st through April 4th

Because principals were asked to complete principal surveys as well as checklists in May and September 2008, TxPEP participants and comparison principals were asked to complete checklists during the same one-week period in May and September to reduce overlap in administration dates for the checklists and surveys. The May 2008 checklists were administered from May 26th through May 30th; the September 2008 checklists were administered from September 15th through September 19th.

Response rates for each of the four rounds of checklists are presented in Table C3.

Table C3. Responses Rates for the Principal Checklists

Administration Date	TxPEP Participants	Comparison Principals
January/February 2008	53% (164/312)	27% (169/617)
March/April 2008	41% (126/310)	14% (89/617)
May 2008	23% (71/306)	15% (47/311)
September 2008	15% (45/306)	14% (85/617)

Source: Evaluator analysis of response rates for the principal checklists.

In each case, response rates are based on the number of principals who were asked to complete the checklists. Any TxPEP participant who had withdrawn from the program was removed from the list of those asked to complete the checklists; the total number of participants therefore varies across rounds. Comparison principals were oversampled by 100%. Some comparison principals were dropped from the initial sample because they notified us that they did not wish to participate or because valid e-mail addresses could not be found for them; the total number of comparison principals reflects this adjustment.[1]

For the third round of checklists, administered in May 2008, only comparison principals who had previously participated in the evaluation were asked to complete the checklists. This decision was made because our intention was to examine individual responses over time where possible. However, because response rates for the checklists were low, we decided to ask all principals in the comparison group sample to complete the checklists in September 2008.

Checklist Measures

The principal checklists asked principals to:

- Provide estimates of how much time they spent each day on activities related to the six leadership areas emphasized by TxPEP

- Rate their effectiveness in working on activities on which they had spent time

- Indicate the extent to which they had incorporated information learned through TxPEP in working on activities on which they had spent time (asked only of TxPEP participants)

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[1] The total number of TxPEP and comparison principals reflects the number of principals we attempted to contact. However, we were not able to reach all principals via e-mail, particularly in later waves of data collection. By September 2008, when the final round of checklists was administered, several principals in each group had either changed schools or retired, and their e-mail addresses were no longer valid.

Principal Leadership Survey

Administration

The initial web-based Principal Leadership Survey was administered in late September through early November 2007 to TxPEP participants to obtain baseline measures of participants' perceived leadership effectiveness and knowledge. Participants were initially asked to respond to the survey by October 5, 2007. To increase response rates, the deadline was extended to November 11, 2007.

The same survey was administered to comparison principals in December 2007 and early January 2008. The administration of the survey to comparison principals was delayed because the data needed to select the comparison group sample could not be obtained until late November 2007. Follow-up surveys were administered to both groups in spring 2008 (May 13th to June 6th) and fall 2008 (September 1st through September 12th).

Learning Point Associates e-mailed each TxPEP participant and comparison principal, requesting that they complete the Principal Leadership Survey. Instructions as well as unique user names and passwords were included in the e-mail. The participants also were assured of the confidentiality of their responses. Reminders were sent on a weekly basis to participants who had not yet completed the survey.

Response rates for each of the surveys are presented in Table C4.

Table C4. Response Rates for the Principal Leadership Surveys

Administration Date	TxPEP Participants	Comparison Principals
Fall 2007	82% (256/312)	43% (266/617)
Spring 2008	57% (174/306)	47% (146/311)
Fall 2008	43% (132/306)	29% (181/617)

Source: Evaluator analysis of response rates for the Principal Leadership Surveys.

For the fall 2007 Principal Leadership Survey, 275 TxPEP participants completed the survey, but 19 withdrew from the program early in fall 2007 and were excluded from the calculation of response rates. For the spring 2008 survey, only comparison principals who had previously completed evaluation instruments were asked to complete the survey. This decision was made because our intention was to look at individual responses over time where possible. However, in an effort to increase the number of survey respondents, all principals in the comparison group sample were asked to complete the fall 2008 survey.

Survey Measures

The Principal Leadership Survey measures principals' perceived effectiveness or knowledge in the six leadership areas emphasized by TEA in its description of the TxPEP program.

- Change management

- Building learning communities

- Data-driven decision making

- Fiscal/resource management

- School/program evaluation

- Ethical leadership

Principals were asked to rate their effectiveness with respect to change management, building learning communities, and data-driven decision making. These are areas in which principals are likely to be actively engaged in planning and decision-making. Participants were asked to rate their knowledge of ethical leadership, fiscal/resource management, and school/program evaluation. These are areas in which principals may be less knowledgeable about best practices and less able to assess their leadership effectiveness. Response categories for items measuring leadership effectiveness range from 1 (not effective) to 4 (very effective). Response categories for items measuring leadership knowledge range from 1 (little or no knowledge) to 4 (extensive knowledge). The items measuring principals' knowledge or effectiveness were included in all three surveys to allow for a comparison of responses over time.

The spring 2008 survey included an additional set of questions that asked TxPEP participants and comparison principals to assess changes between 2006–07 and 2007–08 on a variety of school and student performance indicators (e.g., improved teacher attendance; increased teacher satisfaction with professional development activities; increased teacher retention rates; reductions in student disciplinary problems; improved student attendance; increased student engagement; and improved standardized test scores). These items were included only on the spring 2008 survey.

The fall 2008 survey included several questions regarding the usefulness of the program that were asked only of TxPEP participants. Respondents were asked to indicate the extent to which they were using what they had learned about each of the six leadership areas in strategic planning and in their daily work in schools. They also were asked to indicate how useful TxPEP had been in helping them develop specific types of skills and knowledge (e.g., understanding the change process, building effective teams) and to provide suggestions for improving the program.

LPI and 21st Century Principal Assessment

Administration

Web-based versions of the LPI and 21st Century Principal Assessment were administered to TxPEP participants by APQC in September 2007 and June 2008 through arrangements with the assessment developers. Both provide additional measures of participants' leadership abilities. The data from the fall 2007 and spring 2008 administrations of the LPI and 21st Century Principal Assessment were obtained from APQC for use in assessing changes in participants' leadership abilities over time. Both assessments include self-ratings and observer ratings (i.e., ratings by supervisors or colleagues). Observer ratings were obtained by averaging across all observers for a given participant. The response rates for each of these assessments are presented in Table C5.

Table C5. Response Rates for the Leadership Practices Inventory and the 21st Century Principal Assessment

Administration Date	Leadership Practices Inventory		21st Century Principal Assessment	
	Self	Observer	Self	Observer
Fall 2007	100% (318/318)	95% (303/318)	99% (314/318)	99% (314/318)
Spring 2008	85% (259/306)	85% (259/306)	87% (265/306)	87% (265/306)

Source: Evaluator analysis of response rates for the Leadership Practices Inventory and 21st Century Principal Assessment.
Note: Multiple observers could rate the same principal. However, an average observer rating was calculated for each TxPEP participant to facilitate comparisons between self and observer ratings.

Assessment Measures

LPI. The LPI is based on research conducted by Posner and Kouzes (1988; 1993) on effective leadership practices. Through extensive interviews and surveys with leaders from a variety of public and private organizations, Posner and Kouzes identified five practices that characterize exemplary leaders. The LPI was developed to measure the extent to which leaders implement these practices. Unlike the Principal Leadership Survey, which was designed specifically to measure the six leadership areas emphasized by TxPEP, the LPI was developed to measure general leadership ability. However, it is possible to link the leadership behaviors measured by the LPI to some of the leadership areas emphasized by TxPEP. The five practices measured by the LPI, together with examples of behaviors that are associated with these practices, are summarized below. The TxPEP leadership area most closely associated with each of these practices is indicated in parentheses.

- Modeling the way (Ethical leadership)
  - Finding your voice by clarifying your personal values
  - Setting an example by aligning actions with shared values
- Inspiring a shared vision (Change management)

- ▪ Envisioning the future by imagining exciting and ennobling possibilities
- ▪ Enlisting others in a common vision by appealing to shared aspirations
- Challenging the process (Change management)
  - ▪ Searching for opportunities by seeking innovative ways to change, grow, and improve
  - ▪ Experimenting and taking risks by constantly generating small wins and learning from mistakes
- Enabling others to act (Building learning communities)
  - ▪ Fostering collaboration by promoting cooperative goals and building trust
  - ▪ Strengthening others by sharing power and discretion
- Encouraging the heart (Building learning communities)
  - ▪ Recognizing contributions by showing appreciation for individual excellence
  - ▪ Celebrating the values and victories by creating a spirit of community

Each of the five practices is measured by six items. Respondents are asked to indicate the frequency with which they engage in specific behaviors related to each practice. Response categories range from 1 (almost never) to 10 (almost always).

The LPI has been shown to be a reliable and valid measure of leadership ability. Results across survey administrations have been shown to be consistent (an indicator of reliability). Results also are significantly correlated with a range of performance measures, indicating that the inventory is a valid measure of leadership ability (Posner & Kouzes, 1988; Posner & Kouzes, 1993). (See the LPI website for additional details: https://www.lpionline.com/lpi/helpInfo/aboutLPI.jsp.)

21st Century Principal Assessment. The 21st Century Principal Assessment was developed by the National Association of Secondary School Principals (NASSP). The assessment is aligned with the Interstate School Leaders Licensure Consortium leadership standards and identifies skills that principals need to acquire to become effective leaders. The assessment typically is used as a diagnostic tool to help school leaders and prospective principals identify their strengths and weaknesses.

The 21st Century Principal Assessment measures ten leadership practices or traits relevant to four broad skill sets. Although the assessment was not designed specifically to measure the leadership areas emphasized by TxPEP, the leadership practices and traits that are measured by the assessment can be linked to these leadership areas. The ten leadership practices or traits measured by the 21st Century Principal Assessment are summarized below by skill set. The TxPEP leadership areas most closely associated with each of these ten practices or traits are indicated in parentheses.

- Instructional leadership
  - ▪ Setting instructional direction (Building learning communities)
  - ▪ Teamwork (Building learning communities)

- ▪ Sensitivity (Building learning communities)
- • Solving complex problems
  - ▪ Judgment (Data-driven decision making or Change management)
  - ▪ Results orientation (School/program evaluation)
  - ▪ Organizational ability (Change management or Resource management)
- • Communication
  - ▪ Oral communication (Change management or Building learning communities)
  - ▪ Written communication (Change management or Building learning communities)
- • Developing self and others
  - ▪ Development of others (Building learning communities)
  - ▪ Understanding your own strengths and weakness (Ethical leadership)

Each of these practices or traits is measured by multiple items. Respondents are asked to indicate the frequency with which they engage in specific behaviors related to each practice or trait. Response categories range from 1 (never) to 5 (almost always). (See the NASSP website for additional details about the 21st Century Principal Assessment: http://www.principals.org/s_nassp/sec_inside.asp?CID=%2039&DID=39.)

Teacher Survey

Teachers whose principals were either TxPEP participants or comparison principals were asked to complete a teacher survey in May 2008 (May 12th to May 31st). The survey asked teachers to assess aspects of their school's teaching and learning environment, including their principal's effectiveness in the providing leadership in areas emphasized by TxPEP. Only principals from comparison schools that had previously participated in the evaluation were sent the request to complete the teacher survey because it was thought they would be most likely to encourage teachers to participate.

Administration

E-mails were sent to TxPEP and comparison principals explaining the purpose of the survey (to obtain teacher feedback on the school's teaching and learning environment) and asking them to forward the survey link to full-time instructional staff at their school. Each survey link contained an identifier for the school so that responses from each school could be tracked. To access the survey, teachers entered their e-mail address, which allowed them to return to the survey if they exited before completing all sections.

To encourage teacher participation, a random drawing was announced for schools that had response rates of 75% or higher. To let schools know their progress in achieving a 75% response rate, the number of survey respondents as of May 21, 2008 were counted and compared to number of full-time instructional staff at the school in the previous school year (2006–07) using

data obtained from TEA. Principals of each school were e-mailed their school's response rates on May 22nd with a request to encourage teachers to complete the survey by May 31st if the school had not yet achieved a 75% response rate.

A total of 12 schools were selected in the random drawing (six from TxPEP schools and six from comparison schools). Within each group, the first three schools selected each received a $300 stipend; the next two schools selected received a $400 stipend, and the final school selected received a $500 stipend. The drawing was held in July 2008 and checks were sent to principals of each of the schools selected with a letter announcing their school's selection and explaining how the drawing was conducted. Recipients were informed that the stipend could be used at the school's discretion to support school programs or activities. An e-mail announcement also was sent to all schools that had been asked to participate in the survey announcing the schools that had been selected in the drawing.

Of the 306 TxPEP schools that were asked to participate in the survey, a total of 131 schools (2,225 teachers overall) responded for a school response rate of 43%. Of the 311 comparison schools that were asked to participate, 107 schools (2,122 teachers overall) responded for a school response rate of 34%. Among the TxPEP schools, 28 schools had response rates of 75% or higher; among comparison schools, 29 schools had response rates of 75% or higher.

Survey Measures

The teacher survey asked teachers to indicate the extent to which they agreed or disagreed with statements regarding characteristics of their schools and principals. Statements were organized by the following topics:

- School environment (school safety, quality of facilities, adequacy of materials)

- Teaching and learning environment (presence of high standards and expectations)

- Shared leadership (involvement of teachers in school decision-making)

- School leadership (principal leadership in the areas of change management, ethical leadership, school/program evaluation, and resource management)

- Professional development (opportunities for and quality of teacher professional development)

- Data use (use of student achievement data to inform various school decisions)

Each of these topics was measured by a minimum of three items. Measures of school leadership included a total of 12 items. Within the area of school leadership, change management, ethical leadership, school and program evaluation, and resource management were each measured by three items. Response categories for all items on the teacher survey ranged from 1 (strongly disagree) to 4 (strongly agree).

Teachers also were asked to indicate the extent to which they agreed or disagreed with several statements regarding improvements in teacher and student performance over the course of the 2007–08 school year (e.g., improved teacher attendance; increased teacher satisfaction with professional development activities; increased teacher retention rates; reductions in student

disciplinary problems; improved student attendance; increased student engagement; and improved standardized test scores). These questions were asked only of teachers who had been at the school for more than one year.

Teachers also were asked whether they planned to remain at their school in 2008–09 and, if not, what reasons contributed to their decision to leave (including reasons such as dissatisfaction with school leadership and lack of mentorship or support).

Incentives for Comparison Principals

Principals in the comparison group were asked to complete the fall 2007, spring 2008, and fall 2008 Principal Leadership Surveys and the four rounds of principal checklists (administered in January/February, March/April, May, and September 2008). To encourage participation in the evaluation, a random drawing was announced for comparison principals. Eight principals who had participated in the evaluation were randomly selected to receive an individual stipend of $250. To increase the chances that principals who had completed several surveys and/or checklists would be selected, the rules for the drawing were that a principal's name would be entered in the drawing each time he or she completed a survey or set of checklists. The random drawing was held in November 2008. In December 2008, checks for $250 were sent to principals who were selected in the drawing with a letter announcing that they had been selected and informing them that they could spend the stipend in any way they wished. An e-mail also was sent to all comparison principals who had been asked to participate in the survey announcing the principals who had been selected in the drawing.

Comparison Group Selection

The comparison group of principals and their schools was chosen using propensity score matching. This method uses a set of variables to predict the likelihood of group membership. That is, based on a series of principal and school characteristics obtained from TEA, the probability (or propensity) of a principal being in the TxPEP group versus the comparison group was calculated for each principal in the sample. These scores were then matched across the two groups yielding a list of individual schools that most resembled the TxPEP schools. Because the response rate from comparison principals was expected to be approximately 50%, a total of 672 schools was selected to serve as comparison schools to the TxPEP schools.

Two sets of variables were used to calculate the likelihood of being a principal of a TxPEP or a comparison school. One set used mostly average values (over the five years prior to and including 2006-07) associated with the individual principals; the other set used average values associated with the individual campuses because data on individual principals were not available. The variables listed below represent either principal or school averages.

- Average TAKS percent passing (all tests)
- Number of times a principal changed schools
- Number of years as principal
- Average principal salary

- Average percent economically disadvantaged students

- Average percent special education students

- Average percent limited English proficient students

- Average total number of students

- Average student-teacher ratio (number of students per teacher)

- Current TAKS percent passing (all tests)

- Current principal salary

- Current percent economically disadvantaged students

- Current percent special education students

- Current percent limited English proficiency students

- Current total number of students

- School type (grade range)

- District type

In order to select a sufficient number of comparison schools, matching was performed three times for each data file (using principal averages and campus averages, respectively). The results were as follows:

- Using 5,641 records—with principal averages—the analysis selected 414 schools for comparison (146 first match; 137 second match; 131 third match).

- Using 5,209 records—with campus averages—the analysis selected 258 schools for comparison (89 first match; 55 second match; 114 third match).

Prior to selection of the comparison campuses, independent samples t-tests revealed several of the covariates to be significantly different between TxPEP and non-TxPEP schools. After matching, using the principal averages, there were no differences between TxPEP and comparison campuses on any of the covariates. After matching, using the campus averages, there were no differences on most of the covariates between the two groups. The covariates that were significantly different between the two groups were: average TAKS percent passing (all tests), average percent special education students, average total students, and current percent special education students. In addition, using both methods, the distribution of schools across school type and district type were approximately equal.

Analysis of differences between TxPEP and comparison campuses was performed for all response data (i.e., principal surveys and teacher surveys). Findings of those analyses revealed very few significant differences between the groups; for those differences that were significant, the magnitude of the differences was small and unlikely to be substantively meaningful.

The following tables show the values of the covariates before matching schools and after selecting a group of schools to use as the comparison group for TxPEP schools. The first group

of tables presents the tests of differences prior to matching. The second group presents the results after matching using principal average values as the covariates. The third group presents the results after matching on campus average values.

Results of Comparisons Between Groups Before Matching

In looking at approximately 5,400 campuses in Texas, there were significant differences in most of the demographic characteristics between TxPEP and non-TxPEP campuses. Variables were examined, as mentioned above, with respect to an average value for the principal, the average value for the campus, and the current school's value. There are three series of tables that follow: C6, C7 and C8. The C6 tables present the analysis comparing the covariates in TxPEP and non-TxPEP schools prior to matching. The C7 tables present the analysis comparing the covariates in TxPEP schools and comparison schools when selection of comparison schools was based on principal averages for covariates. The C8 tables present the analysis comparing the covariates in TxPEP schools and comparison schools when selection of the comparison schools was based on campus averages.

Table C6A demonstrates that there were significant differences between TxPEP and non-TxPEP schools on several of the covariates prior to matching. Schools in the two groups differed on the following variables (average principal salary approached significance at $p = .09$):

- Average TAKS percent passing (all tests)
- Number of times a principal changed schools
- Number of years as principal
- Principal average economically disadvantaged students
- Principal average limited English proficient students
- Average student-teacher ratio
- Current principal salary
- Current economically disadvantaged students
- Current limited English proficient students

Selecting comparison schools based on principal averages was much more effective in equalizing the groups than selecting comparison schools based on campus averages. Table C7A shows that there are no significant differences between TxPEP and comparison schools on any of the covariates after matching using principal averages. However, Table C8A shows that schools in TxPEP and those selected for comparison based on campus averages differed significantly on the following covariates:

- School average TAKS percent passing (all tests)
- School average special education students
- School average total students
- Current special education students

For those variables that were categorical, analyses of frequency were explored for these three groups (prior to comparison group selection, after comparison group selection based on principal averages, and after comparison group selection based on campus averages). After matching, the distribution within the various categories was approximately equal across TxPEP and comparison schools (see tables C7B, C7C, C8B, and C8C). Prior to comparison group selection it was not expected that distribution would be equal.

Table C6A. T-Tests Comparing TxPEP and non-TxPEP Schools Before Schools Were Matched Using Propensity Scores

Variable	T-Test			
	Method	DF	t -value	Pr > |t|
Average TAKS percent passing (all tests)	Pooled	5397	9.45	<.0001
Number of times principal changed schools	Pooled	5639	-5.46	<.0001
Number of years as principal	Pooled	5639	3.07	0.002
Average principal salary	Pooled	5639	-1.7	0.09
Principal average economically disadvantaged students	Pooled	5639	-7.31	<.0001
Principal average special education students	Satterthwaite	198	-0.22	0.83
Principal average limited English proficient students	Pooled	5639	-3.07	0.002
Average total students	Satterthwaite	201	0.05	0.96
Average student-teacher ratio	Satterthwaite	194	1.95	0.05
Current principal salary	Pooled	5639	-4.38	<.0001
Current economically disadvantaged students	Pooled	5616	-8.07	<.0001
Current special education students	Satterthwaite	202	-0.34	0.74
Current limited English proficient students	Pooled	5309	-2.99	0.003
Current total students	Satterthwaite	201	0.35	0.73

Source: Evaluator analysis of differences in characteristics of TxPEP and non-TxPEP schools prior to matching using propensity scores.
Note: Satterthwaite refers to the Welch-Satterthwaite t-test, which is an alternative to the pooled-variance t-test, and is used when the assumption that the two populations have equal variances seems unreasonable.

**Table C6B. Frequencies of Current School Type by Group
(TxPEP and non-TxPEP) Prior to Matching**

Current School Type	Non-TxPEP	TxPEP
	n	*N*
	%	%
Elementary school	3215	85
	58.96%	45.21%
Elementary/secondary	256	14
	4.69%	7.45%
High school	911	57
	16.71%	30.32%
Junior high school	239	6
	4.38%	3.19%
Middle school	832	26
	15.26%	13.83%
Total	5453	188

Source: Evaluator analysis of characteristics of TxPEP and
non-TxPEP schools prior to matching.

**Table C6C. Frequencies of Current District Type by Group
(TxPEP and non-TxPEP) Prior to Matching**

Current District Type	Non-TxPEP	TxPEP
	n	*N*
	%	%
Missing	13	0
	0.02%	0.00%
Charter	113	17
	2.07%	9.04%
Independent town	372	10
	6.82%	5.32%
Major suburban	1307	22
	23.97%	11.70%
Major urban	908	46
	16.65%	24.47%
Nonmetropolitan fast-growing	57	1
	1.04%	0.05%
Nonmetropolitan stable	645	31
	11.83%	16.49%
Other central city	799	21
	14.65%	11.17%
Other central city suburban	737	18
	13.52%	9.57%
Rural	502	22
	9.21%	11.70%
Total	5453	188

Source: Evaluator analysis of characteristics of TxPEP and non-TxPEP schools prior to matching.

Table C6D. Differences in Means Between TxPEP and Non-TxPEP Schools Prior to Matching

Variable	Group	*N*	Mean	Standard Error
Average TAKS percent passing (all tests)	Non-TxPEP	5219	60.33	0.29
	TxPEP	180	45.60	1.19
	Difference		*14.73*	*1.56*
Number of times principal changed schools	Non-TxPEP	5453	1.51	0.01
	TxPEP	188	1.80	0.07
	Difference		*-0.29*	*0.05*
Number of years as principal	Non-TxPEP	5453	4.33	0.02
	TxPEP	188	4.06	0.10
	Difference		*0.27*	*0.09*
Average principal salary	Non-TxPEP	5453	68269.00	185.17
	TxPEP	188	70022.00	1383.40
	Difference		*-1752.00*	*1029.70*
Principal average economically disadvantaged students	Non-TxPEP	5453	0.55	0.004
	TxPEP	188	0.70	0.02
	Difference		*-0.14*	*0.02*
Principal average special education students	Non-TxPEP	5453	0.12	0.001
	TxPEP	188	0.12	0.01
	Difference		*0.00*	*0.01*
Principal average limited English proficient students	Non-TxPEP	5453	0.15	0.002
	TxPEP	188	0.19	0.02
	Difference		*-0.04*	*0.01*
Average total students	Non-TxPEP	5453	650.51	6.19
	TxPEP	188	649.01	32.81
	Difference		*1.50*	*33.89*
Average student-teacher ratio	Non-TxPEP	5285	11.41	0.04
	TxPEP	183	11.00	0.21
	Difference		*0.41*	*0.21*
Current principal salary	Non-TxPEP	5453	74990.00	201.15
	TxPEP	188	79960.00	1838.00
	Difference		*-4970.00*	*1135.60*
Current economically disadvantaged students	Non-TxPEP	5431	0.58	0.004
	TxPEP	187	0.73	0.01
	Difference		*-0.16*	*0.02*
Current special education students	Non-TxPEP	5426	0.12	0.001
	TxPEP	188	0.12	0.01
	Difference		*0.00*	*0.01*

**Table C6D. Differences in Means Between TxPEP
and Non-TxPEP Schools Prior to Matching (continued)**

Variable	Group	*N*	Mean	Standard Error
Current limited English proficient students	Non-TxPEP	5141	0.16	0.003
	TxPEP	170	0.21	0.02
	Difference		*-0.05*	*0.01*
Current total students	Non-TxPEP	5453	623.03	6.59
	TxPEP	188	610.64	34.78
	Difference		*12.39*	*36.07*
Current school type	Non-TxPEP	5453	2.12	0.02
	TxPEP	188	2.33	0.10
	Difference		*-0.21*	*0.11*
Current district type	Non-TxPEP	5453	5.24	0.03
	TxPEP	188	5.14	0.18
	Difference		*0.10*	*0.17*

Source: Evaluator analysis of characteristics of TxPEP and non-TxPEP schools prior to matching
Note: Difference represents the TxPEP mean subtracted from the non-TxPEP mean; that is,
 a positive value indicates that the non-TxPEP mean is higher than the TxPEP mean.

Results of Comparisons Between Groups After Matching Using Average Principal Values to Estimate Propensity Scores

Table C7A. T-Tests Comparing TxPEP and Comparison Schools After Schools Were Matched Using Propensity Scores Based on Principal Average Values

Variable	Method	DF	t Value	Pr > |t|
Principal average TAKS percent passing (all tests)	Pooled	826	0.19	0.85
Number of times principal changed schools	Pooled	826	-1.54	0.12
Number of years as principal	Satterthwaite	824	-0.75	0.45
Average principal salary	Pooled	826	1.29	0.20
Principal average economically disadvantaged students	Satterthwaite	823	-0.08	0.93
Principal average special education students	Pooled	826	1.12	0.27
Principal average limited English proficient students	Pooled	826	-0.85	0.39
Principal average total students	Satterthwaite	825	-0.73	0.47
Principal average student-teacher ratio	Pooled	826	0.71	0.48
Current principal salary	Satterthwaite	824	1.30	0.19
Current economically disadvantaged students	Satterthwaite	822	-0.05	0.96
Current special education students	Pooled	826	0.97	0.33
Current limited English proficient students	Pooled	826	0.34	0.74
Current total students	Pooled	826	-0.89	0.37

Source: Evaluator analysis of differences in characteristics of TxPEP and comparison schools after matching using principal average values.
Note: Satterthwaite refers to the Welch-Satterthwaite t-test, which is an alternative to the pooled-variance t-test, and is used when the assumption that the two populations have equal variances seems unreasonable.

Table C7B. Frequencies of Current School Type by Group (Comparison and TxPEP) After Matching Using Principal Average Values

Current School Type	Comparison	TxPEP
	N	*n*
	%	%
Elementary school	230	207
	55.56%	50.00%
Elementary/secondary	21	11
	5.07%	2.66%
High school	73	114
	17.63%	27.54%
Junior high school	11	16
	2.66%	3.86%
Middle school	79	66
	19.08%	15.94%
Total	414	414

Source: Evaluator analysis of characteristics of TxPEP and comparison schools after matching using principal average values.

Table C7C. Frequencies of Current District Type by Group (Comparison and TxPEP) After Matching Using Principal Average Values

Current District Type	Comparison	TxPEP
	N	*n*
	%	%
Missing	2	0
	0.05%	0.00%
Charter	14	4
	3.38%	0.10%
Independent town	22	30
	5.31%	7.25%
Major suburban	79	56
	19.08%	13.53%
Major urban	114	110
	27.54%	26.57%
Nonmetropolitan fast-growing	1	3
	0.02%	0.07%
Nonmetropolitan stable	43	71
	10.38%	17.15%
Other central city	62	52
	14.98%	12.56%
Other central city suburban	47	52
	11.35%	12.56%
Rural	30	36
	7.25%	8.70%
Total	414	414

Source: Evaluator analysis of characteristics of TxPEP and comparison schools after matching using principal average values.

**Table C7D. Differences in Means Between TxPEP and Comparison Schools
After Matching Using Principal Average Values**

Variable	TxPEP	N	Mean	Std Err
Principal average TAKS percent passing (all tests)	Comparison	414	48.58	0.98
	TxPEP	414	48.34	0.72
	Difference		*0.24*	*1.22*
Number of times principal changed schools	Comparison	414	1.71	0.04
	TxPEP	414	1.80	0.04
	Difference		*-0.09*	*0.06*
Number of years as principal	Comparison	414	4.25	0.06
	TxPEP	414	4.32	0.06
	Difference		*-0.06*	*0.08*
Average principal salary	Comparison	414	68963.00	578.34
	TxPEP	414	67809.00	682.72
	Difference		*1154.20*	*894.75*
Principal average economically disadvantaged students	Comparison	414	0.69	0.01
	TxPEP	414	0.69	0.01
	Difference		*-0.001*	*0.01*
Principal average special education students	Comparison	414	0.13	0.005
	TxPEP	414	0.12	0.002
	Difference		*0.01*	*0.01*
Principal average limited English proficient students	Comparison	414	0.20	0.01
	TxPEP	414	0.21	0.01
	Difference		*-0.01*	*0.01*
Principal average total students	Comparison	414	684.07	22.82
	TxPEP	414	707.13	22.01
	Difference		*-23.06*	*31.70*
Principal average student-teacher ratio	Comparison	414	11.28	0.15
	TxPEP	414	11.14	0.13
	Difference		*0.14*	*0.20*
Current principal salary	Comparison	414	76132.00	630.77
	TxPEP	414	74947.00	658.36
	Difference		*1184.50*	*911.76*
Current economically disadvantaged students	Comparison	414	0.73	0.01
	TxPEP	414	0.73	0.01
	Difference		*-0.001*	*0.01*

Table C7D. Differences in Means Between TxPEP and Comparison Schools After Matching Using Principal Average Values (continued)

Variable	TxPEP	N	Mean	Standard Error
Current special education students	Comparison	414	0.12	0.005
	TxPEP	414	0.12	0.002
	Difference		*0.01*	*0.01*
Current limited English proficient students	Comparison	414	0.22	0.01
	TxPEP	414	0.21	0.01
	Difference		*0.01*	*0.02*
Current total students	Comparison	414	642.13	24.59
	TxPEP	414	671.73	22.31
	Difference		*-29.60*	*33.20*

Source: Evaluator analysis of differences in characteristics of TxPEP and comparison schools after matching using principal average values.
Note: Difference represents the TxPEP mean subtracted from the comparison mean; that is, a positive value indicates that the comparison mean is higher than the TxPEP mean.

Results of Comparisons Between Groups After Matching Using Average Campus Values to Estimate Propensity Scores

Table C8A. T-Tests Comparing TxPEP and Comparison Schools After Schools Were Matched Using Propensity Scores Based on Campus Average Values

Variable	Method	DF	t Value	Pr > |t|
School average TAKS percent passing (all tests)	Pooled	514	2.53	0.01
School average economically disadvantaged students	Satterthwaite	511	1.81	0.07
School average special education students	Pooled	514	-2.36	0.02
School average limited English proficient students	Satterthwaite	508	1.36	0.17
School average total students	Pooled	514	-2.36	0.02
School average student-teacher ratio	Pooled	514	-0.68	0.49
Current economically disadvantaged students	Pooled	514	1.61	0.11
Current special education students	Pooled	514	-2.45	0.01
Current limited English proficient students	Satterthwaite	509	1.25	0.21
Current total students	Pooled	514	0.68	0.50

Source: Evaluator analysis of differences in characteristics of TxPEP and comparison schools after matching using campus average values.
Note: Satterthwaite refers to the Welch-Satterthwaite t-test, which is an alternative to the pooled-variance t-test, and is used when the assumption that the two populations have equal variances seems unreasonable.

**Table C8B. Frequencies of Current School Type by Group
(Comparison and TxPEP) After Matching Using
Campus Average Values**

Current School Type	Comparison *n* %	TxPEP *n* %
Elementary school	114	98
	44.19%	37.98%
Elementary/secondary	15	19
	5.81%	7.36%
High school	72	79
	27.91%	30.62%
Junior high school	13	6
	5.04%	2.33%
Middle school	44	56
	17.05%	21.71%
Total	258	258

Source: Evaluator analysis of characteristics of TxPEP and
comparison schools after matching using campus average values.

**Table C8C. Frequencies of Current District Type by Group
(Comparison and TxPEP) After Matching Using
Campus Average Values**

Current District Type	Comparison	TxPEP
	n	*n*
	%	%
Charter	36	53
	13.95%	20.54%
Independent town	33	37
	12.79%	14.34%
Major suburban	29	14
	11.24%	5.43%
Major urban	36	27
	13.95%	10.47%
Nonmetropolitan fast-growing	20	28
	7.75%	10.85%
Nonmetropolitan stable	56	43
	21.71%	16.67%
Other central city	42	29
	16.28%	11.24%
Other central city suburban	6	27
	2.33%	10.47%
Total	258	258

Source: Evaluator analysis of characteristics of TxPEP and
comparison schools after matching using campus average values.

**Table C8D. Differences in Means Between TxPEP and Comparison Schools
After Matching Using Campus Average Values**

Variable	TxPEP	N	Mean	Std Err
School average TAKS percent passing (all tests)	Comparison	258	53.23	1.28
	TxPEP	258	49.20	0.94
	Difference		*4.03*	*1.59*
School average economically disadvantaged students	Comparison	258	0.67	0.01
	TxPEP	258	0.63	0.01
	Difference		*0.04*	*0.02*
School average special education students	Comparison	258	0.12	0.003
	TxPEP	258	0.14	0.01
	Difference		*-0.02*	*0.01*
School average limited English proficient students	Comparison	258	0.15	0.01
	TxPEP	258	0.13	0.01
	Difference		*0.02*	*0.01*
School average total students	Comparison	258	0.12	0.003
	TxPEP	258	0.14	0.01
	Difference		*-0.02*	*0.01*
Average student-teacher ratio	Comparison	258	13.95	0.20
	TxPEP	258	14.12	0.16
	Difference		*-0.17*	*0.25*
Current economically disadvantaged students	Comparison	258	0.68	0.01
	TxPEP	258	0.65	0.02
	Difference		*0.03*	*0.02*
Current special education students	Comparison	258	0.11	0.003
	TxPEP	258	0.13	0.01
	Difference		*-0.02*	*0.01*
Current limited English proficient students	Comparison	258	0.15	0.01
	TxPEP	258	0.13	0.01
	Difference		*0.02*	*0.02*
Current total students	Comparison	258	659.99	42.43
	TxPEP	258	624.33	31.17
	Difference		*35.66*	*52.65*

Source: Evaluator analysis of differences in characteristics of TxPEP and comparison schools after matching using campus average values.
Note: Difference represents the TxPEP mean subtracted from the comparison mean; that is, a positive value indicates that the comparison mean is higher than the TxPEP mean.

Appendix D
Findings From the K-Means Cluster Analysis
of Principal Attendance Data

This appendix describes the procedures used for classifying TxPEP participants according to their levels of attendance at required and optional TxPEP events. A total of 21 professional development events were offered by TxPEP. Of these events, 10 were required and 11 were optional.

Scope

Participants in TxPEP were provided with professional development opportunities in various content areas. One objective of the TxPEP evaluation was to better understand the relationship between attendance at the professional development events and various principal and school characteristics.

Analytic Options

To better understand the nature of the attendance at optional and required events, attendance could be quantified using either univariate or multivariate techniques. To compute attendance and attendance scores using univariate methods would include either summed counts of events attended (e.g., 3, 4, or 5 events attended), or proportions of attended events (i.e., the number of events attended divided by the total number of events). For instance, the professional development events were classified as being either required or optional. Therefore, univariate scores could be computed as the sum of all 21 events or separately as the sum of the 10 required events and the sum of the 11 optional events. This univariate method, however, takes into consideration only one type of classification at a time: required events, optional events, or total events. Alternatively, multivariate techniques allow for the concurrent analysis of both required and optional events. In other words, a multivariate analysis allows for a computation of an attendance score based on multiple characteristics of attendance. This is desirable since attendance at TxPEP events was neither solely required for all 21 events nor solely optional for all 21 events—some of the events were required and some of the events were optional. Therefore the attendance data were modeled using a multivariate cluster analysis technique. This technique assigned participants to groups based on their attendance at required and optional events.

Description of K-means Cluster Analysis

Cluster analysis is a classification technique used to create groups (or "clusters") in a manner that minimizes differences in characteristics within groups while also maximizing differences in characteristics between groups. In this analysis, TxPEP principals were classified according to patterns of attendance at required and optional events. Therefore, principals within each group should be similar to one another in terms of attendance at TxPEP training events and dissimilar to principals in other groups.

Principal Grouping Characteristics

K-means cluster analysis was used to group TxPEP principals into clusters according to similar attendance characteristics. Principals had the opportunity to attend two summit meetings, three workshops, and sixteen webinars. Among the 21 training events offered, specific events were either required or optional. Principals were grouped according to attendance at required events (i.e., summits 1 and 2; workshops 1, 2, and 3; and webinars 4, 7, 8, 9, and 13) and optional events (i.e., webinars 1, 2, 3, 5, 6, 10, 11, 12, 14, 15, and 16). The number of events attended for both required and optional events was used to create the groups.

Analytical Procedure

K-means cluster analysis creates groups using Euclidean distance between cluster centers. First, cluster centers are generated randomly, followed by several iterations whereby the values for each case (e.g., required attendance and optional attendance) are arranged based on the closest Euclidean distance to the center of the cluster. This process continues until either the iteration limit has been reached or the cluster center changes less than 2 percent from the previous iteration.

Using SPSS 15.0, k-means cluster analysis was employed to create groups of principals according to the two grouping variables (required attendance and optional attendance). K-means cluster analysis allows the researcher to select a predetermined number of groups. In selecting an appropriate number of hypothesized groups, important considerations exist such as group size, interpretability, and meaningfulness. Given that two variables were used to create groups and principals were expected to attend either a high or low number of events for each of the two variables, four groups were initially created. Due to low group membership in one of the groups (low attendance at required events and high attendance at optional events), the creation of three groups followed. This three group analysis resulted in a more robust distribution of group membership and thus better interpretability and meaningfulness of the groups: low attendance at required and optional events (Low/Low); high attendance at required events and low attendance at optional events (High/Low); and high attendance at both required and optional events (High/High).

Validation of Groups

Tukey post hoc analysis was used to confirm that the three groups were significantly different from one another in terms of the average number of required and optional events attended by principals within each group (see Table D1). This analysis revealed that all three groups differed significantly from one another in between-group variation based on the number of both required and optional events attended by principals in each group.

Table D1. Tukey Post Hoc Comparisons of the Three Attendance Groups ($N = 306$)

Attendance Categories	Groups of Principals										
	Low/Low(1)			High/Low (2)			High/High (3)			Post Hoc	
	M	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*F* (2, 303)	Comparisons
Required events	4.04	1.31	92	9.06	1.11	158	8.61	1.30	56	531.88	2 > 3 > 1
Optional events	0.24	0.69	92	1.65	1.33	158	7.30	2.77	56	586.13	3 > 2 > 1

Source: Evaluator analysis of TxPEP attendance data.
Note. All post hoc comparisons are $p < .05$.

Findings From Cluster Analysis

The cluster analysis revealed the following groups of principals:

1. Low/Low: low attendance at both required and optional events
2. High/Low: high attendance at required events and low attendance at optional events
3. High/High: high attendance at both required and optional events.

Principals in the Low/Low group attended, on average, 4.04 (out of 10) required events and 0.24 (out of 11) optional events; principals in the High/Low group attended, on average, 9.06 required events and 1.65 optional events; principals in the High/High group attended, on average, 8.61 required events and 7.30 optional events. Although all three groups differed significantly from one another with respect to the number of required and optional events attended, there is no practical difference between the average number of required events attended for the High/Low (9.06) and High/High (8.61) groups; therefore, rather than referring to the number of required events in the High/High group as "moderately high," for practicality and meaningfulness of interpretation, principals within this group are referred to as having attended a "high" number of required events.

Importantly, this classification revealed that there is not a linear relation between attending required and optional events. That is, attending a high number of required events does not mean that an individual also attended a high number of optional events, and attending a low number of required events does not mean that an individual also attended a low number of optional events.

Appendix E
Attendance Analysis

This appendix describes the procedures used in analyzing TxPEP attendance data. A brief summary of the clustering analysis used to classify TxPEP participants according to their attendance at TxPEP required and optional events is first presented followed by a description of the multinomial logistic regression analyses used to identify principal and school characteristics associated with different attendance patterns.

Cluster Analysis

Cluster analysis (described in Appendix D) was conducted to understand patterns of principal attendance at TxPEP professional development events. This analysis classified principals according to two salient dimensions—attendance at required and optional events—resulting in three distinct groups of principals. A brief description of the three groups of principals classified from the cluster analysis—grouped according to low or high participation in required and optional events—is presented below:

- Low/Low (i.e., low attendance at required events; low attendance at optional events)

- High/Low (i.e., high attendance at required events; low attendance at optional events)

- High/High (i.e., high attendance at required events; high attendance at optional events)

Multinomial Logistic Regression

Multinomial logistic regression analyses were conducted to understand the relationship between principal and school characteristics and the likelihood of attending TxPEP required and optional professional development events. The outcome measure was the classification of principal attendance described above. Various principal and school characteristics were modeled separately to understand the extent to which these characteristics were related to either an increased or decreased likelihood of being in one of the three attendance groups. That is, the logistic regression models tested the following three likelihoods:

- The likelihood of TxPEP participants being in the High/High group compared to the Low/Low group

- The likelihood of participants being in the High/Low group compared to the Low/Low group

- The likelihood of participants being in the High/High group compared to the High/Low group

Statistical significance was determined for each of the three likelihoods by evaluating its respective log likelihood estimate ($p < .05$).

The results of the principal characteristics model and the school characteristics model are presented separately.

Collinearity Diagnostics

Before principal or school variables were entered into either of their respective multinomial logistic regression models, collinearity diagnostics were performed to assess the correlations among the covariates in the model. The following indicators were used to detect collinearity: Variance Inflation Factor (VIF) and Tolerance (TOL), as well as an examination of eigenvalues and proportion of variance. Variables were removed if the VIF exceeded 10.0, if the TOL was below 0.1, and/or if eigenvalues were low compared to a high proportion of variance. Removing variables that met these diagnostic criteria resulted in a more stable model.

Collinearity diagnostics were conducted for the two models of principal characteristics and school characteristics separately predicting membership in one of the three attendance groups. Due to collinearity, principal experience was removed from the model pertaining to principal characteristics; teacher full-time equivalence (FTE) was removed from the model pertaining to school characteristics.

Principal Characteristics

Five principal variables were modeled in order to understand the extent to which they might be related to either an increased or decreased likelihood of attending a high and/or low number of required and optional professional development events. The principal characteristics included in the modeling were:

- Current salary

- Number of school changes (i.e., the number times that a principal changed schools in the five years prior to and including 2007-08)

- Gender

- Ethnicity

- Level of education (i.e., no bachelor's, bachelor's, master's, doctorate)

With the exception of number of school changes, all variables are based on 2007-08 data. Principal experience, measured in years, was not modeled for two reasons. First, experience and current salary were highly correlated and including both in the modeling would lead to unstable estimates (collinearity). Second, the data on principal experience only represent experience for the past five years. Current salary is likely a better proxy for experience in that higher paid principals tend to have more experience than lower paid principals. Therefore, modeling current salary results in a more methodologically sound and meaningful analysis.

Findings. The multinomial logistic regression models examining the relationship between principal characteristics and attendance classification yielded no significant results (see Tables E1A and E1B). None of the principal variables were significantly related to either an increased or decreased likelihood of being in the Low/Low, High/Low, or High/High attendance group.

Attendance Analysis

Table E1A. Principal Characteristics and Principal Attendance (*N* = 250)
(Reference Group: Low/Low)

Parameter	Group	df	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Odds Ratio
Intercept	High/High	1	0.916	1.841	0.247	0.619	
Intercept	High/Low	1	0.489	1.411	0.120	0.729	
Current salary	High/High	1	-0.014	0.015	0.883	0.348	0.986
Current salary	High/Low	1	-0.020	0.011	3.100	0.078	0.980
Number of school changes	High/High	1	-0.241	0.197	1.505	0.220	0.786
Number of school changes	High/Low	1	-0.109	0.119	0.844	0.358	0.897
Gender	High/High	1	-0.027	0.394	0.005	0.946	0.974
Gender	High/Low	1	0.284	0.296	0.924	0.337	1.329
Principal ethnicity	High/High	1	0.076	0.124	0.380	0.537	1.079
Principal ethnicity	High/Low	1	0.050	0.092	0.297	0.586	1.051
Principal education	High/High	1	-0.050	0.450	0.012	0.911	0.951
Principal education	High/Low	1	0.413	0.350	1.390	0.239	1.511

Source: Evaluator analysis of TxPEP attendance data and administrative data on principal characteristics.
Note: Number of school changes refers to the number of times a principal changed schools during the five years prior to and including 2007-08. All other values are based on 2007-08 data.

Table E1B. Principal Characteristics and Principal Attendance (*N* = 250)
(Reference Group: High/Low)

Parameter	Group	df	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Odds Ratio
Intercept	High/High	1	0.426	1.711	0.062	0.803	
Current Salary	High/High	1	0.006	0.014	0.175	0.676	1.006
School Changes	High/High	1	-0.132	0.188	0.493	0.483	0.876
Gender	High/High	1	-0.311	0.360	0.743	0.389	0.733
Principal Ethnicity	High/High	1	0.026	0.114	0.053	0.818	1.027
Principal Education	High/High	1	-0.463	0.422	1.201	0.273	0.629

Source: Evaluator analysis of TxPEP attendance data and administrative data on principal characteristics.
Note: Number of school changes refers to the number of time a principal changed schools in the five years prior to and including 2007-08. All other variables are based on 2007-08 data.

School Characteristics

Twelve school characteristics were modeled in order to understand the extent to which they relate to either an increased or decreased likelihood of attending a high and/or low number of required and optional professional development events. These characteristics included:

Attendance Analysis

- Campus rating (AU versus non-AU)
- Technical Assistance Team (TAT) status
- Percentage of teachers with advanced degrees
- Teacher experience (in years)
- Total number of students
- Student-teacher ratio
- Percentage of economically disadvantaged students
- Percentage of minority students
- Percentage of students with limited English proficiency
- Percentage of special education students
- Percentage of students meeting TAKS reading proficiency standards
- Disciplinary actions per student

All variables represent 2007-08 values. Teacher FTE was not included in the multinomial logistic regression analysis of school characteristics because this variable was highly correlated with total number of students (collinearity). The ratio of teacher FTE to total number of students (teacher FTE divided by total number of students) also was highly correlated with student-teacher ratio. The variable corresponding to the percentage of students meeting TAKS proficiency standards in mathematics was not used because it was highly correlated with the percentage of students meeting TAKS proficiency standards in reading.

Findings. Based on the school characteristics listed above, the multinomial logistic regression models tested the following three likelihoods:

- The likelihood of TxPEP participants being in the High/High group compared to the Low/Low group
- The likelihood of participants being in the High/Low group compared to the Low/Low group
- The likelihood of participants being in the High/High group compared to the High/Low group

Statistical significance was determined for each of the three likelihoods by evaluating its respective log likelihood estimate ($p < .05$).

The following predictors were significant: campus rating (AU versus non-AU), student-teacher ratio, and percentage of students meeting TAKS proficiency standards in reading (see Tables E2A and E2B). These variables significantly predicted the likelihood of TxPEP participants being in the Low/Low, High/Low, or High/High group.

Table E2A. School Characteristics and Principal Attendance (*N* = 232)
(Reference Group: Low/Low)

Parameter	Group	*df*	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Odds Ratio
Intercept	High/High	1	-18.425	4.580	16.186	<.0001	
Intercept	High/Low	1	-5.616	3.211	3.058	0.080	
Academically Unacceptable (AU) campus rating	High/High	1	1.789	0.775	5.326	0.021	5.982
Academically Unacceptable (AU) campus rating	High/Low	1	1.951	0.568	11.806	0.001	7.037
Technical Assistance Team (TAT) status	High/High	1	-0.161	1.346	0.014	0.905	0.851
Technical Assistance Team (TAT) status	High/Low	1	1.343	0.807	2.771	0.096	3.829
Disciplinary actions per student	High/High	1	0.047	0.263	0.032	0.858	1.048
Disciplinary actions per student	High/Low	1	-0.042	0.178	0.055	0.815	0.959
Percentage of economically disadvantaged students	High/High	1	0.011	0.020	0.267	0.605	1.011
Percentage of economically disadvantaged students	High/Low	1	-0.010	0.015	0.407	0.524	0.990
Percentage of teachers with advanced degrees	High/High	1	-0.031	0.025	1.555	0.213	0.969
Percentage of teachers with advanced degrees	High/Low	1	-0.003	0.016	0.038	0.845	0.997
Percentage of students with limited English proficiency	High/High	1	-0.008	0.014	0.320	0.572	0.992
Percentage of students with limited English proficiency	High/Low	1	0.006	0.010	0.314	0.575	1.006
Percentage of minority students	High/High	1	0.030	0.016	3.369	0.066	1.031
Percentage of minority students	High/Low	1	0.005	0.011	0.181	0.671	1.005
Percentage of special education students	High/High	1	-0.004	0.058	0.005	0.942	0.996
Percentage of special education students	High/Low	1	0.022	0.040	0.307	0.579	1.023
Student-teacher ratio	High/High	1	0.358	0.129	7.705	0.006	1.430
Student-teacher ratio	High/Low	1	0.194	0.096	4.058	0.044	1.214
Teacher experience (in years)	High/High	1	0.081	0.079	1.047	0.306	1.084
Teacher experience (in years)	High/Low	1	0.053	0.057	0.873	0.350	1.054
Number of total students	High/High	1	-0.001	0.001	2.772	0.096	0.999
Number of total students	High/Low	1	-0.001	0.000	10.825	0.001	0.999
Percentage of students meeting TAKS reading standards	High/High	1	0.115	0.037	9.869	0.002	1.122
Percentage of students meeting TAKS reading standards	High/Low	1	0.032	0.026	1.544	0.214	1.033

Source: Evaluator analysis of TxPEP attendance data and administrative data on school characteristics.
Note: All variables represent 2007–08 values.

Table E2B. School Characteristics and Principal Attendance (*N* = 232)
(Reference Group: High/Low)

Parameter	Group	*df*	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Odds Ratio
Intercept	High/High	1	-12.809	3.999	10.259	0.001	
Academically Unacceptable (AU) campus rating	High/High	1	-0.162	0.780	0.043	0.835	0.850
Technical Assistance Team (TAT) status	High/High	1	-1.504	1.325	1.287	0.257	0.222
Disciplinary actions per student	High/High	1	0.089	0.247	0.129	0.719	1.093
Percentage of economically disadvantaged students	High/High	1	0.020	0.018	1.286	0.257	1.020
Percentage of teachers with advanced degrees	High/High	1	-0.028	0.023	1.509	0.219	0.973
Percentage of students with limited English proficiency	High/High	1	-0.013	0.012	1.273	0.259	0.987
Percentage of minority students	High/High	1	0.025	0.015	3.057	0.080	1.026
Percentage of special education students	High/High	1	-0.027	0.052	0.262	0.609	0.974
Teacher-student ratio	High/High	1	0.164	0.111	2.179	0.140	1.179
Teacher experience (in years)	High/High	1	0.028	0.070	0.161	0.688	1.028
Number of total students	High/High	1	0.000	0.001	0.683	0.409	1.000
Percentage of students meeting TAKS reading standards	High/High	1	0.083	0.032	6.687	0.010	1.086

Source: Evaluator analysis of TxPEP attendance data and administrative data on school characteristics.
Note: All variables represent 2007–08 values.

Attendance Analysis

Campus Ratings. The multinomial logistic regression analysis yielded two significant log likelihood estimates for campus rating.

- AU status was significantly related to the likelihood of principals being in the High/High group compared to the Low/Low group ($p = .021$) yielding an odds ratio of 5.98 (see Table E2A). This result suggests that principals from AU campuses were 5.98 times (or 598 percent) more likely to attend a high number of required events and a high number of optional events (High/High group) as opposed to attending a low number of required events and a low number of optional events (Low/Low group).

- AU status was significantly related to the likelihood of principals being in the High/Low group compared to the Low/Low group ($p < .001$) yielding an odds ratio of 7.04 (see Table E2A). This result suggests that principals from AU campuses were 7.04 times (or 704 percent) more likely to attend a high number of required events and a low number of optional events (High/Low group) as opposed to attending a low number of required events and a low number of optional events (Low/Low group).

Together, these results suggest that principals from AU schools were more likely to attend both required and optional TxPEP professional development events.

Student-teacher Ratio. The multinomial logistic regression analysis yielded two significant log likelihood estimates for student-teacher ratio.

- Student-teacher ratio was significantly related to the likelihood of principals being in the High/High group compared to the Low/Low group ($p = .006$) yielding an odds ratios of 1.43 (see Table E2A). This result suggests that principals who were from schools with higher student-teacher ratios were 1.43 times (or 43%) more likely to be in the High/High group as opposed to the Low/Low group.

- Student-teacher ratio predicted the likelihood of principals being in the High/Low group compared to the Low/Low group ($p = .044$) yielding an odds ratio of 1.21 (see Table E2A). This result suggests that principals who were from schools with higher student-teacher ratios were 1.21 times (or 21%) more likely to be in the High/Low group as opposed to the Low/Low group.

Taken together, these results suggest that principals from schools with a higher student-teacher ratio were more likely to attend both required and optional TxPEP events.

Student Reading Proficiency. The multinomial logistic regression analysis yielded two significant log likelihood estimates for percentage of students meeting TAKS reading proficiency standards.

- Percentage of students meeting TAKS reading proficiency standards was significantly related to the likelihood of principals being in the High/High group compared to principals in the Low/Low group ($p = .002$) yielding an odds ratio of 1.12 (see Table E2A). This finding suggests that as the percentage of students who meet TAKS reading proficiency standards increases, principals are 1.12 times (or 12%) more likely to be in the High/High group as opposed to the Low/Low group.

Attendance Analysis

- Percentage of students meeting TAKS reading proficiency standards was significantly related to the likelihood of principals being in the High/High group compared to principals in the High/Low group ($p = .01$) yielding an odds ratio of 1.09 (see Table E2B). This result suggests that as the percentage of students who meet TAKS reading proficiency standards increases, principals are 1.09 (or 9%) times more likely to be in the High/High group as opposed to the High/Low group.

Generally, these results suggest that principals from schools with higher percentages of students meeting TAKS reading proficiency standards were more likely to attend both required and optional TxPEP professional development events.

Appendix F
Means, Cross-Tabulations, and Correlations for Variables Included in Analyses of Attendance Patterns

This appendix presents means, cross-tabulations, and correlations for variables included in analyses of TxPEP attendance patterns. Continuous data (e.g., principal salary, student disciplinary actions) are presented as means for each of the following three attendance groups:

- Low/Low (i.e., low attendance at required events; low attendance at optional events)

- High/Low (i.e., high attendance at required events; low attendance at optional events)

- High/High (i.e., high attendance at required events; high attendance at optional events)

Categorical data (e.g., gender, ethnicity) are presented as the percentage of principals sharing a given characteristic (such as being female) within each of the three attendance groups. Correlations among continuous school variables also are presented. All data presented below are merely descriptive. Inferences are based on the outcomes from multinomial logistic regression analyses; the tables below are meant to be a descriptive supplement to the analysis rather than an inferential substitute.

Principal Variables

Table F1. Mean 2007–08 Principal Salary by Attendance Group (*N* = 250)

Attendance Group	*n*	Mean	*SD*	Minimum	Maximum
Low/Low	75	76.2	15.9	45.0	110.0
High/Low	133	72.7	12.4	45.0	107.9
High/High	42	73.4	13.3	47.0	101.5

Source: Evaluator analysis of TxPEP attendance data and administrative data on principal characteristics.
Note: Raw salary data were divided by 1,000 (e.g., 76.2 is equivalent to $76,200).

**Table F2. Cross-Tabulation of Principal's Number of School Changes
by Attendance Group (*N* = 250)**

Number of School Changes	Attendance Group		
	Low/Low (*n* = 75)	High/Low (*n* = 133)	High/High (*n* = 42)
1 (*n* = 66)	22.7%	60.6%	16.7%
2 (*n* = 97)	26.8%	51.6%	21.7%
3 (*n* = 68)	42.7%	45.6%	11.8%
4 (*n* = 17)	29.4%	64.7%	5.9%
5 (*n* = 1)	0.0%	0.0%	100.0%
14 (*n* = 1)	0.0%	100.0%	0.0%

Source: Evaluator analysis of TxPEP attendance data and administrative data
on principal characteristics.
Note: Number of school changes refers to the number of times a principal
changed schools during the five years prior to and including 2007-08.

**Table F3. Cross-Tabulation of Principal Gender
by Attendance Group (*N* = 250)**

Gender	Attendance Group		
	Low/Low (*n* = 75)	High/Low (*n* = 133)	High/High (*n* = 42)
Male (*n* = 126)	32.5%	49.2%	18.3%
Female (*n* = 124)	27.4%	57.3%	15.3%

Source: Evaluator analysis of TxPEP attendance data and administrative data on
principal characteristics.

**Table F4. Cross-Tabulation of Principal Ethnicity
by Attendance Group (*N* = 250)**

Ethnicity	Attendance Group		
	Low/Low (*n* = 75)	High/Low (*n* = 133)	High/High (*n* = 42)
African-American (*n* = 63)	38.1%	47.6%	14.3%
Asian (*n* = 3)	33.3%	33.3%	33.3%
Hispanic (*n* = 70)	24.3%	60.0%	15.7%
Native American (*n* = 1)	0.0%	0.0%	100.0%
White (*n* = 113)	29.2%	53.1%	17.7%

Source: Evaluator analysis of TxPEP attendance data and administrative data on principal
characteristics.

**Table F5. Cross-Tabulation of Principal Education
by Attendance Group (*N* = 250)**

Education	Attendance Group		
	Low/Low (*n* = 75)	**High/Low (*n* = 133)**	**High/High (*n* = 42)**
No bachelors (*n* = 66)	100.0%	0.0%	0.0%
Bachelors (*n* = 97)	27.6%	51.7%	20.7%
Masters (*n* = 68)	30.6%	52.4%	17.0%
Doctorate (*n* = 17)	21.4%	71.4%	7.1%

Source: Evaluator analysis of TxPEP attendance data and administrative data on principal characteristics.

School Variables

**Table F6. Mean 2007–08 Disciplinary Actions
by Attendance Group (*N* = 244)**

Attendance Group	*n*	Mean	*SD*	Minimum	Maximum
Low/Low	71	0.9	1.2	0.0	6.5
High/Low	131	0.8	0.9	0.0	4.3
High/High	42	0.8	0.8	0.0	3.7

Source: Evaluator analysis of TxPEP attendance data and administrative data on school characteristics.
Note: Raw disciplinary actions data were transformed by dividing each unit by the total number of students; therefore the mean presented is a ratio of disciplinary actions per student.

**Table F7. Mean 2007–08 Percentage of Economically Disadvantaged
Students by Attendance Group (*N* = 250)**

Attendance Group	*n*	Mean	*SD*	Minimum	Maximum
Low/Low	75	73.9	20.4	21.8	100.0
High/Low	133	73.5	19.9	15.2	99.9
High/High	42	78.7	18.3	15.6	100.0

Source: Evaluator analysis of TxPEP attendance data and administrative data on school characteristics.
Note: Raw student data were transformed by multiplying each unit by 100; therefore the mean presented represents a whole number percentage (e.g., "73.9" equals 73.9 percent as opposed to .739).

**Table F8. Mean 2007–08 Percentage of Teachers
with Advanced Degrees by Attendance Group (*N* = 239)**

Attendance Group	*n*	Mean	*SD*	Minimum	Maximum
Low/Low	70	22.8	10.2	2.8	44.6
High/Low	131	21.3	11.8	3.0	80.9
High/High	38	21.6	9.1	5.0	39.3

Source: Evaluator analysis of TxPEP attendance data and administrative data on school characteristics.
Note: Raw teacher data were transformed by multiplying each unit by 100; therefore the mean presented represents a whole number percentage (e.g., "22.8" equals 22.8 percent as opposed to .228).

**Table F9. Mean 2007–08 Percentage of Students
with Limited English Proficiency by Attendance Group (*N* = 250)**

Attendance Group	*n*	Mean	*SD*	Minimum	Maximum
Low/Low	75	17.2	18.5	0.0	77.7
High/Low	133	19.5	23.6	0.0	99.0
High/High	42	20.9	22.0	0.0	84.3

Source: Evaluator analysis of TxPEP attendance data and administrative data on school characteristics.
Note: Raw student data were transformed by multiplying each unit by 100; therefore the mean presented represents a whole number percentage (e.g., "17.2" equals 17.2 percent as opposed to .172).

**Table F10. Mean 2007–08 Percentage of Minority Students
by Attendance Group (*N* = 250)**

Attendance Group	*n*	Mean	*SD*	Minimum	Maximum
Low/Low	75	79.0	27.0	4.1	100.0
High/Low	133	77.4	26.3	10.9	100.0
High/High	42	87.3	17.8	32.9	100.0

Source: Evaluator analysis of TxPEP attendance data and administrative data on school characteristics.
Note: Raw student data were transformed by multiplying each unit by 100; therefore the mean presented represents a whole number percentage (e.g., "79.0" equals 79.0 percent as opposed to .790).

Table F11. Mean 2007–08 Percentage of Special Education Students by Attendance Group (*N* = 250)

Attendance Group	*n*	Mean	*SD*	Minimum	Maximum
Low/Low	75	12.8	10.1	1.7	79.0
High/Low	133	11.3	5.7	0.0	33.7
High/High	42	10.3	5.0	2.8	23.6

Source: Evaluator analysis of TxPEP attendance data and administrative data on school characteristics.
Note: Raw student data were transformed by multiplying each unit by 100; therefore the mean presented represents a whole number percentage (e.g., "12.8" equals 12.8 percent as opposed to .128).

Table F12. Mean 2007–08 Student-Teacher Ratio by Attendance Group (*N* = 249)

Attendance Group	*n*	Mean	*SD*	Minimum	Maximum
Low/Low	74	13.3	3.5	8.6	35.8
High/Low	133	13.1	2.6	6.9	19.1
High/High	42	14.1	3.3	7.2	26.5

Source: Evaluator analysis of TxPEP attendance data and administrative data on school characteristics.

Table F13. Mean 2007–08 Teacher Experience by Attendance Group (*N* = 249)

Attendance Group	*n*	Mean	*SD*	Minimum	Maximum
Low/Low	74	10.22	3.6	1.4	19.7
High/Low	133	10.87	3.3	0.1	17.6
High/High	42	10.98	3.7	1.4	22.5

Source: Evaluator analysis of TxPEP attendance data and administrative data on school characteristics.

Table F14. Mean 2007–08 Total Students by Attendance Group (*N* = 250)

Attendance Group	*n*	Mean	*SD*	Minimum	Maximum
Low/Low	75	670.1	515.0	76.0	2185.0
High/Low	133	528.1	395.9	52.0	2430.0
High/High	42	623.1	462.3	21.0	1845.0

Source: Evaluator analysis of TxPEP attendance data and administrative data on school characteristics.

**Table F15. Mean 2007–08 Percentage of Students Meeting
TAKS Proficiency Standards in Reading
by Attendance Group ($N = 249$)**

Attendance Group	n	Mean	SD	Minimum	Maximum
Low/Low	75	75.4	10.0	47.0	96.0
High/Low	132	76.7	10.3	50.0	96.0
High/High	42	75.8	11.7	36.0	91.0

Source: Evaluator analysis of TxPEP attendance data and administrative data on school characteristics.

**Table F16. Cross-Tabulation of 2006–07 Campus Rating
by Attendance Group ($N = 306$)**

Campus Rating	Attendance Group		
	Low/Low ($n = 92$)	High/Low ($n = 158$)	High/High ($n = 56$)
Non-AU ($n = 58$)	39.1	47.8	13.0
AU ($n = 248$)	27.4	53.6	19.0

Source: Evaluator analysis of TxPEP attendance data and administrative data on school characteristics.
Notes: AU refers to schools rated as academically unacceptable; non-AU refers to schools with all other campus ratings.

**Table F17. Cross-Tabulation of 2007–08 Technical Assistance
Team Status by Attendance Group ($N = 250$)**

Technical Assistance Team Status	Attendance Group		
	Low/Low ($n = 75$)	High/Low ($n = 133$)	High/High ($n = 42$)
No Technical Assistance Team ($n = 237$)	29.5	53.2	17.3
Technical Assistance Team ($n = 13$)	38.5	53.9	7.7

Source: Evaluator analysis of TxPEP attendance data and administrative data on school characteristics.

Table F18. Correlations Among School Variables Used in Analyses of Attendance Data

Variable	N	1	2	3	4	5	6	7	8	9
1. Disciplinary actions	244	—								
2. Economically disadvantaged	250	-.07	—							
3. Teachers with advanced degrees	239	.11	.13†	—						
4. Limited English proficiency students	250	-.28**	.46**	-.02	—					
5. Minority students	250	-.03	.75**	.24**	.43**	—				
6. Special education students	250	.40**	-.19**	.07	-.34**	-.19**	—			
7. Student-teacher ratio	249	-.23**	.23**	.03	.36**	.30**	-.44**	—		
8. Teacher experience	249	.06	-.13*	.18	- 17**	-.21**	.19**	-.25**	—	
9. Total students	250	.09	.03	.30**	.16*	.23**	-.07	.30**	-.00	—
10. Student reading proficiency	249	.07	-.56**	-.11	-.34**	-.50**	-.01	-.26**	.19**	-.03

Source: Evaluator analysis of administrative data on school characteristics.
Note. † $p = .05$; * $p < .05$; ** $p < .01$

Appendix G
Cohort Consultant Survey Findings

This appendix provides a detailed summary of responses to questions on the cohort consultant survey, which was administered to TxPEP cohort consultants in July 2008. A total of 38 cohort consultants responded to the survey. The tables below supplement analyses of responses to the cohort consultant survey presented in the text of the report

Table G1. Frequency of Communication with Principals in Cohort Group (*N* = 38)

On average, how often did you communicate with the principals in your cohort in the following ways:	Not at All	Every Two Months or Less Frequently	Monthly	Every Two Weeks	Weekly
E-mail	0%	0%	8%	37%	55%
One-on-one phone conversations	3%	29%	40%	29%	0%
Cohort conference calls	3%	11%	82%	3%	3%
WebCT	11%	42%	32%	11%	5%
Face to face (e.g., at TxPEP events, school visits, or other occasions)	5%	87%	8%	0%	0%

Source: Evaluator analysis of responses to the TxPEP cohort consultant survey.

Table G2. Frequency of Questions Posed to Cohort Consultants About TxPEP Leadership Areas (*N* = 38)

How often did principals in your cohort ask about, or want to discuss, the following leadership areas:	Never	Rarely	Sometimes	Often	Very Often
Managing change	8%	13%	47%	24%	8%
Building learning communities	13%	26%	29%	32%	0%
Making data-driven decisions	5%	8%	50%	26%	11%
Managing resources	16%	16%	42%	18%	8%
Evaluating school initiatives and programs	11%	18%	29%	29%	13%
Serving as ethical leaders in their schools	18%	34%	32%	16%	0%

Source: Evaluator analysis of responses to the TxPEP cohort consultant survey.

Table G3. Relevance of TxPEP Leadership Areas to Principals (*N* = 38)

TxPEP focused on the six leadership areas listed below. In your opinion, how relevant to the responsibilities of school principals are each of these leadership areas?	Not at All Relevant	Minimally Relevant	Moderately Relevant	Very Relevant	Not Sure
Change management	0%	0%	16%	84%	0%
Building professional learning communities	0%	5%	16%	79%	0%
Data-driven decision making	0%	0%	3%	87%	11%
Resource management	0%	3%	32%	61%	5%
School or program evaluation	0%	0%	16%	79%	5%
Ethical leadership	0%	0%	18%	68%	13%

Source: Evaluator analysis of responses to the TxPEP cohort consultant survey.

Table G4. Cohort Consultants' Self-Reports on Their Effectiveness (*N* = 38)

How effective do you think you have been in your role as cohort consultant in providing the following types of support to principals in your cohort?	Not at All Effective	Minimally Effective	Moderately Effective	Very Effective	Not Sure
Communicating TxPEP requirements	0%	0%	18%	82%	0%
Facilitating conference calls	5%	8%	50%	34%	3%
Facilitating discussions on leadership best practices	0%	11%	50%	40%	0%
Assisting cohort members with their professional development plans	11%	32%	45%	13%	0%
Developing a learning community among cohort members	5%	29%	37%	26%	3%
Providing support for using the IBM Change Toolkit	24%	50%	21%	5%	0%
Providing suggestions or feedback regarding leadership strategies	3%	5%	37%	55%	0%

Source: Evaluator analysis of responses to the TxPEP cohort consultant survey.

Table G5. Cohort Consultants' Self-Reports on Support Provided to Principals in Their Cohort Groups (*N* = 38)

Have you provided advice or support to principals in your cohort on any of the following topics? (Select all that apply.)	No	Yes
Recruiting quality staff	40%	61%
Retaining quality staff	42%	58%
Providing professional development to staff	21%	79%
Maintaining staff morale	16%	84%
Improving instruction in tested areas	21%	79%
Acting as a sounding board for principal ideas and strategies	5%	95%
Collaborating with other cohort consultants to provide professional development support	66%	34%

Source: Evaluator analysis of responses to the TxPEP cohort consultant survey.

Table G6. Cohort Consultants' Self-Reports on the Implementation of Their Role (*N* = 38)

Fidelity of Implementation	No	Yes	Not Sure
In your opinion, has your role as cohort consultant been implemented as planned (i.e., as described to you when you joined the program)?	11%	84%	5%

Source: Evaluator analysis of responses to the TxPEP cohort consultant survey.

Table G7. Cohort Consultants' Perceptions of Support and Resources (*N* = 38)

Please indicate the extent to which you agree or disagree with the following statements.	Strongly Disagree	Disagree	Agree	Strongly Agree
I have been successful in providing support to principals in my cohort.	0%	8%	71%	21%
I am satisfied with the level of support I have provided principals in my cohort.	0%	29%	66%	5%
I have received the necessary resources to help me support the principals in my cohort.	0%	13%	63%	24%
I have received sufficient support from TxPEP to support the professional development needs of principals in my cohort.	0%	13%	47%	40%

Source: Evaluator analysis of responses to the TxPEP cohort consultant survey.

**Table G8. Cohort Consultants' Plans to Return to TxPEP
in the 2008–09 Academic Year (*N* = 38)**

Plans to Return in 2008-09 School Year	Yes	No	Undecided
Do you plan on returning as a cohort consultant (or learning coach) next year?	81%	19%	0%

Source: Evaluator analysis of responses to the TxPEP cohort consultant survey.

Appendix H
Analysis of Principal Checklist Data

This appendix describes the methods used in analyzing data from the principal checklists, which were administered to both TxPEP participants and comparison principles in January/February, March/April, June, and September 2008.

Analytic Approach

Collinearity diagnostics were conducted on all covariates. Diagnostics statistics used were: eigenvalues, proportion of variance, Variance Inflation Factor, and Tolerance values. Variables not included in the modeling were teacher full-time equivalence (FTE), principal experience (measured in number of years as principal within the five years prior to and including 2007-08), and free and reduced price lunch.

The following principal variables were included in the modeling:

- Gender

- Education (advanced degree versus no advanced degree)

- Minority status

- Current salary (used as a proxy for principal experience)

- Number of school changes as a principal (within the five years prior to and including 2007-08)

- Classification of principal attendance at TxPEP events (TxPEP principals only)

The following school variables were included in the modeling:

- Percent minority students

- Percent economically disadvantaged students

- Percent special education students

- Percent limited English proficient students

- Student-teacher ratio

- Total number of students

- Disciplinary actions per student

- Teacher experience (in years)

- Percentage of teachers with advanced degrees

- Campus Technical Assistance Team (TAT) status

- Campus rating: Academically Unacceptable (AU) versus non-AU

Analysis of Principal Checklist Data

- Percentage of students meeting TAKS reading proficiency standards
- Percentage of students meeting TAKS mathematics proficiency standards
- Student attendance

Variables for the number of school changes as a principal and classification of principal attendance at TxPEP events were treated as ordinal data. The following variables were treated as binary data: principal gender, principal education (advanced degree versus no advanced degree), principal minority status, campus TAT status (TAT team versus no TAT team), and campus rating (AU versus non-AU).

The following variables were treated as continuous data: current salary, percent minority students, percent economically disadvantaged students, percent special education students, percent limited English proficient students, student-teacher ratio, number of total students, disciplinary actions per student, teacher experience (in years), percentage of teachers with advanced degrees, percentage of students meeting TAKS reading proficiency standards, percentage of students meeting TAKS mathematics proficiency standards, and student attendance.

Several of the variables included in the models were principal averages, which were computed by averaging values for a given variable across all schools in which an individual served as principal over the five years prior to and including 2007-08. These variables included: student-teacher ratio, student attendance, percentage of teachers with advanced degrees, teacher experience (in years), and percent economically disadvantaged students. For other variables, the current (2007-08) values were used. These variables included: total number of students, percentage of students meeting TAKS mathematics proficiency standards, percentage of students meeting TAKS reading proficiency standards, disciplinary actions per student, principal salary, and campus TAT status.

Hierarchical generalized linear models (HGLM), using the log link function, were fit using HLM 6.04. All models were three levels with principal checklist item responses at level 1, nested within checklists completed during a given time period at level 2, nested in principals at level 3. Two modeling frameworks were used with the following three outcome variables: time spent working on activities related to the leadership areas emphasized by TxPEP; effectiveness in providing strong leadership in the leadership areas on which respondents spent time; and for TxPEP principals only, the extent to which respondents reported incorporating information learned through TxPEP.

The first modeling framework included a comparison between TxPEP and comparison principals for the checklist questions assessing time spent on leadership activities and effectiveness in providing strong leadership. Covariates were included as control variables. Multiple iterations of model selection occurred whereby only covariates that had p-values less than 0.20 were included in the final models.

The second modeling framework included only TxPEP principals to determine the predictive relationship between attendance at TxPEP events and principal ratings of time spent on

leadership activities, effectiveness in providing strong leadership, and the extent to which TxPEP principals reported incorporating information learned through TxPEP. Covariates were included as control variables. Multiple iterations of model selection occurred whereby only covariates that had *p*-values less than 0.20 were included in the final models.

HGLM Results

Comparing TxPEP to comparison principals, how do they differ at the initial time period (January/February 2008) and change over subsequent time periods (February/March, May, and September 2008) on time spent and effectiveness in providing strong leadership?

- With respect to time spent working on leadership activities, on the initial set of checklists (January/February 2008) TxPEP principals were 1.43 times (or 43 percent) more likely to select a higher category of time spent working on leadership activities than similar principals in the comparison group (*p* = .003) (see Table H1).

- Over the course of the program, both TxPEP and comparison principals spent slightly more time on leadership activities, but this slight change was not significantly different from the time reported on the initial January/February 2008 checklists (*p* = .697) (see Table H1).

Table H1. Time Spent Working on Leadership Activities (*N* = 334)

Fixed Effect	Coefficient	Standard Error	t-ratio	Approximate *df*	*p*-value	Odds Ratio
Intercept of time spent	-2.462	.101	-24.34	330	0.000	0.085
TxPEP participant	0.361	.118	3.06	330	0.003	1.434
Student-teacher ratio (pa)	0.009	.001	6.41	330	0.000	1.009
Total students (c)	0.0003	.000	3.52	330	0.001	1.0003
Slope of week (intercept)	0.038	.043	0.87	325	0.383	1.039
TxPEP participant	0.031	.078	0.39	325	0.697	1.031
Female	0.112	.068	1.65	325	0.101	1.119
Principal minority status	0.137	.065	2.11	325	0.036	1.147
Number of school changes	-0.056	.036	-1.52	325	0.128	0.945
Student-teacher ratio (pa)	0.006	.002	1.98	325	0.048	1.006
Percentage of students meeting TAKS mathematics standards (c)	0.003	.002	1.43	325	0.154	1.003
Student attendance (pa)	0.003	.001	1.98	325	0.048	1.003
Disciplinary actions (c)	0.106	.036	2.93	325	0.004	1.112

Source: Evaluator analysis of TxPEP principal checklist data and administrative data on principals and schools.
Note: pa = principal average (averaged across all schools in which an individual served as principal over the five years prior to and including 2007-08); c = current (2007–08) value; "Disciplinary Actions" is a ratio of the total number of disciplinary actions within a school divided by the total number of current students.

Analysis of Principal Checklist Data

Figure H1 shows the relationships among log odds for each of the time spent categories over time. Each of the six plotted lines illustrate the odds of a TxPEP or comparison principal selecting option 1 (the least amount of time spent) rather than options 2, 3, or 4; selecting option 2 rather than 3 or 4, etc.

Figure H1. Relationships Among Log Odds for Each of the Time Spent Categories Over Time ($N = 334$)
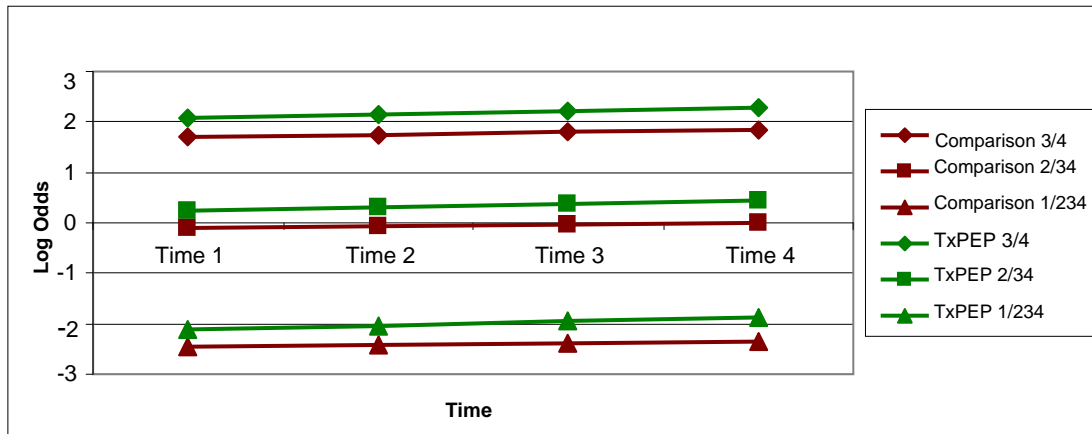
Source: Evaluator analysis of TxPEP principal checklist data and administrative data on principals and schools.

With respect to TxPEP and comparison principals indicating effectiveness in providing strong leadership, on the initial set of checklists (January/February 2008) TxPEP principals were 0.61 times as likely (or 39 percent less likely) than comparison principals to feel effective in providing strong leadership ($p = .032$) (see Table H2). Over the course of the program, TxPEP principals did show positive growth in effectiveness (relative to comparison principals) but this result only approached significance ($p = .076$) (see Table H2).

Table H2. Effectiveness Providing Strong Leadership (*N* = 334)

Fixed Effect	Coefficient	Standard Error	t-ratio	Approximate *df*	*p*-value	Odds Ratio
Intercept of effectiveness	-0.926	.161	-5.73	328	0.000	0.396
TxPEP participation	-0.490	.227	-2.15	328	0.032	0.613
Female	0.613	.189	3.23	328	0.002	1.846
Principal minority status	0.245	.183	1.33	328	0.182	1.278
Percentage of students meeting TAKS mathematics standards (c)	0.017	.008	2.08	328	0.037	1.017
Percentage of students meeting TAKS reading standards (c)	-0.029	.011	-2.52	328	0.012	0.971
Slope of week (intercept)	-0.037	.085	-0.43	329	0.666	0.964
TxPEP participation	0.218	.122	1.77	329	0.076	1.243
Principal education	-0.209	.157	-1.33	329	0.185	0.812
Salary (c)	0.000	.000	3.23	329	0.002	1.000
Percentage of teachers with advanced degrees (pa)	-1.002	.510	-1.96	329	0.050	0.367

Source: Evaluator analysis of TxPEP principal checklist data and administrative data on principals and schools.
Note: pa = principal average; c = current (2007–08) value.

Figure H2 shows the relationships among log odds for each of the effectiveness categories over time. Each of the six plotted lines illustrate the odds of a TxPEP or comparison principal selecting option 1 (the lowest level of effectiveness) rather than options 2, 3, or 4; selecting option 2 rather than 3 or 4, etc.

Figure H2. Relationships Among Log Odds for Each Effectiveness Category Over Time (*N* = 334)
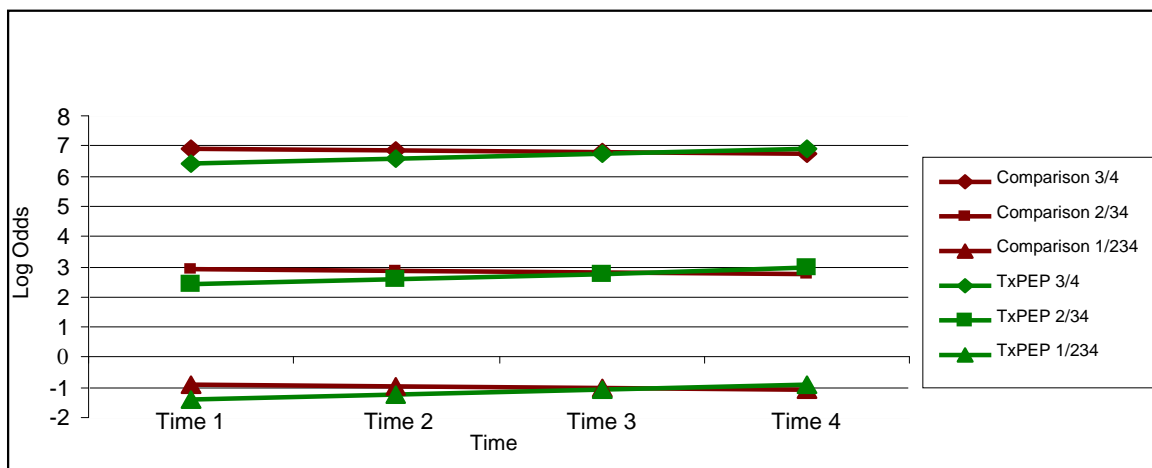
Source: Evaluator analysis of TxPEP principal checklist data and administrative data on principals and schools.

Analysis of Principal Checklist Data

Among TxPEP principals, attendance at TxPEP events was evaluated for differences in time spent, effectiveness, and extent of incorporating TxPEP information.

- With respect to time spent working on leadership activities, on the initial set of checklists (January/February 2008) principals who went on to attend more events were 1.33 times (or 33 percent) more likely to select a higher category of time spent working on leadership activities than similar principals who attended fewer events ($p = .032$) (see Table H3)..

- Over the course of the program there was no significant difference in the rate of change over time between the three groups ($p = .180$) (see Table H3).

Table H3. Time Spent Working on Leadership (TxPEP Principals Only) ($N = 155$)

Fixed Effect	Coefficient	Standard Error	t-ratio	Approximate *df*	*p*-value	Odds Ratio
Intercept of time spent	-2.055	.119	-17.13	151	0.000	0.128
TxPEP attendance	0.286	.131	2.16	151	0.032	1.331
Student-teacher ratio (pa)	0.010	.001	6.60	151	0.000	1.010
Total students (c)	0.001	.0001	3.55	151	0.001	1.001
Slope of week (intercept)	0.062	.054	1.14	149	0.256	1.064
Principal minority status	0.347	.115	3.01	149	0.004	1.415
TxPEP attendance	0.164	.121	1.34	149	0.180	1.780
Teacher experience (pa)	-0.044	.021	-2.01	149	0.046	0.957
Percentage of students meeting TAKS mathematics standards (c)	0.009	.003	2.64	149	0.009	1.009
Disciplinary actions (c)	0.201	.054	3.65	149	0.001	1.222

Source: Evaluator analysis of TxPEP principal checklist data and administrative data on principals and schools.
Note: pa = principal average; c = current (2007–08) value. "Disciplinary Actions" is a ratio of the total number of disciplinary actions within a school divided by the total number of current students.

- With respect to effectiveness in providing strong leadership, there were no differences on the initial (January/February 2008) checklists ($p = .813$) and no change over time ($p = .729$) among principals who attended varying numbers of events (see Table H4).

Table H4. Effectiveness in Providing Strong Leadership (TxPEP Principals Only) (*N*= 155)

Fixed Effect	Coefficient	Standard Error	t-ratio	Approximate *df*	*p*-value	Odds Ratio
Intercept of effectiveness	-1.462	.165	-8.84	150	0.000	0.232
Female	.672	.283	2.36	150	0.019	1.958
Salary (c)	.000	.000	2.75	150	0.007	1.000
TxPEP attendance	.059	.249	0.23	150	0.813	1.060
Percentage of students meeting TAKS reading standards (c)	-.031	.011	-2.81	150	0.006	0.970
Slope of week (intercept)	.136	.082	1.64	149	0.102	1.146
Female	.243	.167	1.45	149	0.148	1.275
TxPEP attendance	.053	.153	0.34	149	0.729	1.054
Total students (c)	.001	.000	2.74	149	0.007	1.001
Percentage of teachers with advanced degrees (pa)	-1.121	.561	-1.99	149	0.047	0.325
Technical assistance team status (c)	.647	.278	2.32	149	0.022	1.910

Source: Evaluator analysis of TxPEP principal checklist data and administrative data on principals and schools.
Note: pa = principal average; c = current (2007–08) value.

- With respect to the extent of incorporating TxPEP information into leadership behavior, there were no differences on the initial (January/February 2008) checklists (*p* = .641) and no change over time (*p* = .558) among principals who attended varying numbers of events (see Table H5).

Table H5. Extent to Which TxPEP Information Was Incorporated (TxPEP Principals Only) (*N* = 155)

Fixed Effect	Coefficient	Standard Error	t-ratio	Approximate *df*	*p*-value	Odds Ratio
Intercept of effectiveness	-4.064	.293	-13.83	148	0.000	0.017
Principal minority status	1.975	.485	4.06	148	0.000	7.381
TxPEP attendance	0.193	.414	0.46	148	0.641	1.213
Percent economically disadvantaged students (pa)	1.906	1.176	1.62	148	0.107	6.742
Student-teacher ratio (pa)	0.034	.005	6.03	148	0.000	1.035
Percentage of teachers with advanced degrees (pa)	-6.483	2.391	-2.71	148	0.008	0.001
Student attendance (pa)	0.030	.011	2.61	148	0.010	1.031
Slope of week (intercept)	0.198	.147	1.34	153	0.182	1.219
TxPEP attendance	-0.150	.256	-0.58	153	0.558	0.860

Source: Evaluator analysis of TxPEP principal checklist data and administrative data on principals and schools.
Note: pa = principal average; c = current (2007–08) value.

Appendix I
Responses to Items Included
in the Fall 2008 Principal Leadership Survey on the
Utility and Usefulness of TxPEP to Program Participants

This appendix summarizes responses to three sets of items included in the fall 2008 Principal Leadership Survey that asked respondents to indicate the extent to which they had incorporated information from TxPEP into their daily work and strategic planning and the extent to which they found TxPEP useful in helping them develop specific leadership skills or knowledge. These items are included in a separate appendix because they focus on the utility and usefulness of the TxPEP program rather than on principal ratings of their leadership abilities or on perceived improvements in school or student performance. (Appendix J describes the methods used in analyzing principals' ratings of their principal leadership abilities on the fall 2007, spring 2008, and fall 2008 Principal Leadership Surveys. Appendix M summarizes responses to individual items on the spring 2008 Principal Leadership Survey regarding perceived improvements in school and student performance over the course of the 2007-08 school year.)

As shown in Table I1, more than 85% of TxPEP participants who responded to the fall 2008 Principal Leadership Survey reported that they had incorporated what they had learned from TxPEP into their daily work *to a moderate* or *to a great extent* in all six leadership areas emphasized by the program.

Table I1. Principals' Use of Information From TxPEP in Their Daily Work (*N* = 128)

To what extent have you incorporated into your daily work what you learned from the TxPEP program in the following areas?	Not at all	To a minimal extent	To a moderate extent	To a great extent
Resource management	5%	9%	60%	26%
Change management	2%	12%	55%	30%
School or program evaluation	4%	10%	52%	34%
Building learning communities	2%	12%	50%	35%
Ethical Leadership	4%	5%	42%	49%
Data-driven decision making	2%	7%	37%	54%

Source: Evaluator analysis of responses to items on the fall 2008 Principal Leadership Survey focusing on the utility of TxPEP to program participants.

Similarly, as shown in Table I2, more than 80% of TxPEP participants who responded to the fall 2008 Principal Leadership Survey reported that they had incorporated what they had learned from TxPEP into their strategic planning *to a moderate* or *to a great extent* in all six leadership areas emphasized by the program.

**Table I2. Principals' Use of Information From TxPEP to
Inform Strategic Planning (*N* = 128)**

To what extent have you incorporated into your strategic planning what you have learned from the TxPEP program in the following areas?	Not at all	To a minimal extent	To a moderate extent	To a great extent
School or program evaluation	5%	13%	54%	29%
Resource management	5%	13%	54%	29%
Change management	4%	13%	48%	35%
Building learning communities	4%	11%	45%	41%
Ethical leadership	5%	7%	45%	44%
Data-driven decision making	0%	8%	38%	52%

Source: Evaluator analysis of responses to items on the fall 2008 Principal Leadership Survey focusing on the utility of TxPEP to program participants.

TxPEP participants who responded to the fall 2008 Principal Leadership Survey also were asked to indicate the extent to which TxPEP had helped them develop specific leadership skills and knowledge (e.g., using data, understanding the change process). As shown in Figure I3, more than 80% of survey respondents reported that TxPEP had helped them develop skills or knowledge *to a moderate* or *to a great extent* in all leadership domains asked about.

**Table I3. Principals' Perception of TxPEP's Influence on
Their Knowledge and Skills in Several Domains (*N* = 128)**

To what extent has what you learned in the TxPEP program helped you in the following areas?	Not at all	To a minimal extent	To a moderate extent	To a great extent
Maximizing your resources	5%	12%	55%	28%
Using data	2%	13%	39%	46%
Developing strategic plans	3%	11%	53%	33%
Monitoring organizational performance	2%	12%	51%	35%
Understanding the change process	2%	11%	52%	35%
Building effective teams	3%	10%	48%	39%
Communicating effectively	2%	11%	44%	43%
Creating a culture of respect and appreciation for others	3%	9%	37%	52%
Understanding your strengths as a leader	2%	8%	38%	53%
Identifying areas in which you can improve as a leader	1%	7%	38%	55%

Source: Evaluator analysis of responses to items on the fall 2008 Principal Leadership Survey focusing on the usefulness of TxPEP to program participants.

Appendix J
Analysis of Principals' Ratings of Their Leadership Abilities
From the Principal Leadership Survey

This appendix describes the methods used in analyzing principal ratings of their leadership abilities on the fall 2007, spring 2008, and fall 2008 Principal Leadership Surveys. The methods used to establish the reliability and validity of measures of principal leadership abilities are first described. The methods used in analyzing the principal leadership scale scores are then presented.

Psychometric Analysis of Principal Leadership Ratings

To ensure the quality of the principal leadership ratings used in the evaluation of the effectiveness of the TxPEP program, the principal survey was investigated with regard to both validity and reliability. The topics outlined in the *Standards for Educational and Psychological Testing* (American Educational Research Association, American Psychological Association, and National Council on Measurement in Education, 1999) were used as guiding principals for this analysis.

Validity can be defined as the degree to which evidence and theory support the use and interpretations of survey scores. The most current conception of validity is that of a unitary concept that is "an overall evaluative judgment" based on multiple forms of evidence (Messick, 1995, p. 741). A psychometric analysis using the Rasch rating scale model (Rasch, 1960; Andrich, 1978; Wright & Masters, 1982) as implemented with WINSTEPS (Linacre, 2005) was conducted on the principal survey data to examine the quality of the survey and to produce the construct-level scores used in analyses of principal leadership ratings described in this report. The rating scale model (RSM) can be written in the following format (Linacre, 2004):

$$\pi_{nix} = \frac{\exp \sum_{j=0}^{x} (\beta_n - (\delta_i + \tau_j))}{\sum_{k=0}^{m} \exp \sum_{j=0}^{k} (\beta_n - (\delta_i + \tau_j))} \tag{1}$$

The above equation describes the probability that a respondent n, with ability (or level of agreement) β_n on the underlying construct, responds with a rating of x to item i of difficulty δ_i (where the response scale is ordered from 0 to m). The τ_j represent the rating scale thresholds, or transition points, between categories.

The psychometric analysis of the quality of the survey included an evaluation of the following properties:

- **Point Measure Correlation:** Point-measure correlations assess the degree to which responses to a particular item correlate with the person measures of the individuals providing these responses.

- **Person Reliability:** Reliability is crucial to a discussion of the generalizability of the scores produced from an instrument. Reliability indices range from 0 to 1, with values closest to 1 being considered best.

- **Item Fit:** Fit statistics assess the degree to which the observed responses agree with the expected responses predicted by the model.

- **Unidimensionality:** The degree to which the scores approximate unidimensional measures was determined through the use of a principal components analysis (PCA) of the residuals obtained by fitting the data to a Rasch model. PCA can identify subsets of items which may be measuring hidden constructs (e.g., reading comprehension for mathematics items with heavy reading content).

- **Rating Scale Functioning:** The survey response options were analyzed to ensure that respondents perceived the meaning of each option in a consistent manner across items. More positive responses (such as *agree* and *strongly agree*) should be selected by respondents with higher overall construct scores.

Presented below are reliabilities and sample sizes for each of the leadership constructs analyzed for the principal survey. The sample sizes listed are those used in the WINSTEPS calibration of the data. Rasch scale scores are relatively unaffected by sample deviations (due to the mathematical independence of the item and person parameters); therefore, the full data sets were used to develop the construct scores. Descriptive statistics regarding the scale scores and sample sizes used in statistical modeling are presented later in this appendix.

Table J1. Reliability and Sample Size by Construct: Principal Leadership Survey

Construct	Reliability	Sample Size		
		Time 1	Time 2	Time 3
Change management	0.81	541	320	313
Building learning communities	0.76	536	320	312
Data-driven decision making	0.84	534	320	312
Ethical leadership	0.79	534	320	311
Resource management	0.83	533	320	309
School and program evaluation	0.87	530	319	309

Source: Evaluator analysis of responses to the Principal Leadership Survey.

Analyses of Principal Leadership Scale Scores

The psychometric analysis of principals' self-ratings of their leadership abilities produced a construct-level score or "scale score" for each construct that the survey was designed to measure. These scale scores were analyzed in two ways:

1. The data for the comparison of TxPEP and comparison schools was explored using a series of two-level hierarchical linear models (HLMs) using the reduced maximum likelihood estimation method. All models were two-level with time (repeated responses) at level 1 nested within level 2, which modeled principal- and school-level factors.

2. Exploration of the relationship between differing amounts of TxPEP program participation and principal leadership scale scores was modeled using a repeated measures generalized linear regression and an ordinary least squares estimation method.

Various principal- and school-level factors were used to control for systematic differences between schools. Failure to control for these systematic differences could lead to an overstating or understating of the potential impact of the TxPEP program on principal leadership abilities. Collinearity diagnostics were conducted on all variables resulting in several covariates being tested for inclusion in the final models. These variables included some which were termed "principal averages." Principal average variables represent the average of that variable for an individual principal for up to five years (the five years prior to and including 2007-08). For example, if a principal had worked in Texas for three years and during those three years worked in three schools with the total number of students at each school being 600, 620, and 640, then the "principal average" for total number of students associated with that principal would be 620. The variables that were tested for inclusion in the final models were:

> 2007–08 values for: percent economically disadvantaged students, percent limited English proficient students, percent minority students, percent special education students, total number of students, number of times a principal changed schools in the five years prior to and including 2007-08, current percentage of students meeting TAKS mathematics proficiency standards, current percentage of students meeting TAKS reading proficiency standards

> Principal averages for: percent economically disadvantaged students, percent limited English proficient students, percent minority students, percent special education students, total number of students, and teacher-student ratio.

For the analysis of the data from only TxPEP schools, only the variable of interest (classification of attendance at TxPEP required and optional events) was used. Due to small and unequal sample sizes, leaving too many variables in the model produced unstable estimates.

Sample

Data were collected in fall 2007, spring 2008, and again in fall 2008 from principals in both TxPEP and comparison schools. There were a total of 1201 survey respondents.[1] However, the survey was designed so that principals could exit the survey prior to completing it. The number of responses for each construct therefore varies. Moreover, only those responses for which data were available for principal and school factors could be included in the analyses.

Data from only the TxPEP schools included 246 responses across the three survey administrations. The distribution across the attendance categories (explained more fully below) was approximately equal to the distribution across the full sample of TxPEP schools

Table J2A shows the raw means, standard deviations, and minimum and maximum values for all leadership scale scores separately for TxPEP and comparison principals. Table J2B shows the results of comparing principals from TxPEP and comparison schools on covariates used in the modeling.

Table J2A. Scale Scores From the Principal Leadership Survey: Unadjusted Means, Standard Deviations and Minimum and Maximum Values

	Variable	*N*	Minimum	Maximum	Mean	Standard Deviation
TxPEP	Change management	460	-1.80	131.26	82.84	24.47
	Building learning communities	458	24.95	121.55	81.94	20.51
	Data-driven decision making	457	-18.69	135.03	92.13	32.14
	Ethical leadership	456	29.00	147.92	105.49	28.58
	Resource management	455	-19.72	125.00	67.68	22.59
	School and program evaluation	455	-40.16	145.17	82.98	34.63
Comparison	Building learning communities	710	3.36	121.55	88.03	20.97
	Change management	714	15.44	131.26	88.36	24.09
	Data-driven decision making	709	-18.69	135.03	95.46	30.48
	Ethical leadership	709	-40.17	147.92	110.69	29.96
	Resource management	707	-19.72	125.00	71.87	22.91
	School and program evaluation	703	-26.56	145.17	86.76	34.90

Source: Evaluator analysis of responses to the Principal Leadership Survey.
Note: The *N*'s refer to scale scores across the three surveys not to individuals.

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[1] This number includes anyone who completed any part of the survey, even if he or she responded to only one question. However, in calculating survey response rates, individuals who answered only the first section of the survey were excluded from the calculation because they answered no questions that pertained to principal leadership abilities. The first section of the fall 2007 survey asked only if the respondent was participating in TxPEP; the first section of the spring 2008 and fall 2008 surveys asked about the respondents' years of experience as principal.

Analysis of covariates after matching TxPEP and comparison schools and principals indicated that principals in the two groups did not differ on most of the covariates. There were only four variables used in the modeling that remained significantly different as shown in Table J2B. They were:

- Current percent economically disadvantaged students

- Current percent minority students

- Current principal salary

- Principal average for student-teacher ratio

**Table J2B. Characteristics on Which TxPEP and Comparison
Schools and Principals Differ**

Variable	T-Tests				
	Method	**Variances**	**DF**	**t Value**	**Pr > |t|**
Current percent economically disadvantaged students	Satterthwaite	Unequal	520	2.67	0.01
Current percent limited English proficient students	Satterthwaite	Unequal	478	0.00	1.00
Current percent minority students	Satterthwaite	Unequal	515	2.33	0.02
Current salary	Satterthwaite	Unequal	515	-3.37	0.00
Current percent special education students	Pooled	Equal	621	-0.37	0.71
Current teacher full-time equivalents	Pooled	Equal	620	-0.88	0.38
Current total students	Pooled	Equal	621	-1.74	0.08
Principal average percent economically disadvantaged students	Satterthwaite	Unequal	489	0.37	0.71
Principal average percent limited English proficient students	Satterthwaite	Unequal	485	-0.16	0.87
Principal average percent minority students	Satterthwaite	Unequal	499	1.11	0.27
Principal average percent special education students	Pooled	Equal	621	-0.81	0.42
Principal average student-teacher ratio	Pooled	Equal	621	2.92	0.00
Principal average teacher experience	Satterthwaite	Unequal	470	-1.46	0.15
Principal average total students	Pooled	Equal	621	-0.68	0.50

Source: Evaluator analysis of Principal Leadership Survey responses and administrative data on principals and schools.
Notes: Satterthwaite refers to the Welch-Satterthwaite t-test, which is an alternative to the pooled-variance t-test, and is used when the assumption that the two populations have equal variances seems unreasonable.

Tables Summarizing HLM Results

Tables J3A – J8B summarize the results of the modeling of the principal leadership scale scores for both TxPEP and comparison principals. The main purpose of fitting these models was to explore the differences in scale scores between TxPEP and comparison principals across the three time points of survey administration (fall 2007, spring 2008, and fall 2008).

For each leadership construct, two tables are provided. The "A" tables provide the test of the coefficients for the variables entered into the model. The intercept represents the average scale score for the comparison principals at time 1 of data collection (fall 2007). The estimate for TxPEP schools can be found by adding the estimate for TxPEP variable to this intercept. In other words, the estimate for the TxPEP variable represents the difference between TxPEP and comparison principal scale scores. A positive number indicates that TxPEP principals had higher scale scores than comparison principals. A negative number indicates that TxPEP principals had lower scale scores than comparison principals. For ease of interpretation, the average scale scores for both TxPEP and comparison principals at each time point are presented in the "B" tables.

Table J3A. Results of Analysis of Principal Scale Scores
for Change Management (*N* = 1073)

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison time 1)	88.47	1.45	570	60.88	<.0001
Program Effects					
Comparison time 3	1.49	1.74	488	0.86	0.39
Comparison time 2	-0.21	1.78	488	-0.12	0.90
TxPEP	-7.37	2.26	570	-3.27	0.001
TxPEP time 3	7.78	2.65	488	2.94	0.004
TxPEP time 2	2.07	2.58	488	0.80	0.42
Covariates					
Number of principal school changes	-2.34	0.89	570	-2.62	0.01
Principal average percent economically disadvantaged students	0.17	0.04	570	3.80	0.0002
Principal average total students	0.01	0.002	570	3.17	0.002

Source: Evaluator analysis of Principal Leadership Survey responses and administrative data on principals and schools.

Table J3B. Least Square Means for Change Management

Administration	TxPEP Principals	Comparison Principals	Average
Time 1	81.09	88.47	84.78
Time 2	82.94	88.25	85.60
Time 3	90.36	89.96	90.16
Average	84.80	88.89	—

Source: Evaluator analysis of responses to the Principal Leadership Survey.

**Table J4A. Results of Analysis of Principal Scale Scores for
Building Learning Communities ($N = 1012$)**

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison time 1)	89.43	1.32	537	67.59	<.0001
Program Effects					
Comparison time 3	-1.29	1.69	459	-0.76	0.45
Comparison time 2	-2.09	1.66	459	-1.26	0.21
TxPEP	-7.43	2.04	537	-3.65	0.0003
TxPEP Time 3	7.93	2.54	459	3.13	0.002
TxPEP Time 2	1.51	2.35	459	0.64	0.52
Covariates					
Number of principal school changes	-1.59	0.74	537	-2.16	0.03
Principal average percent economically disadvantaged students	0.18	0.04	537	4.79	<.0001
Principal average total students	0.01	0.002	537	3.61	0.0003
Percentage of students meeting TAKS mathematics standards	0.10	0.05	537	2.18	0.03

Source: Evaluator analysis of Principal Leadership Survey responses and administrative data on principals and schools.

Table J4B. Least Squares Means for
Building Learning Communities

Administration	TxPEP Principals	Comparison Principals	Average
Time 1	82.00	89.43	85.71
Time 2	81.42	87.34	84.38
Time 3	88.64	88.14	88.39
Average	84.02	88.30	—

Source: Evaluator analysis of responses to the Principal Leadership Survey.

Table J5A. Results of Analysis of Principal Scale Scores for
Data-Driven Decision Making ($N = 1012$)

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison time 1)	96.65	1.98	537	48.77	<.0001
Program Effects					
Comparison time 3	-4.53	2.50	459	-1.81	0.07
Comparison time 2	1.89	2.67	459	0.71	0.48
TxPEP	-6.62	3.01	537	-2.20	0.03
TxPEP time 3	12.73	3.74	459	3.40	0.001
TxPEP time 2	2.57	3.81	459	0.68	0.50
Covariates					
Principal average percent special education students	-0.21	0.18	537	-1.14	0.25
Principal average percent economically disadvantaged students	0.31	0.06	537	5.06	<.0001
Principal average total students	0.01	0.002	537	2.62	0.01
Percentage of students meeting TAKS reading standards	0.32	0.11	537	2.91	0.004

Source: Evaluator analysis of Principal Leadership Survey responses and administrative data on principals and schools.

**Table J5B. Least Squares Means
for Data-Driven Decision Making**

Administration	TxPEP Principals	Comparison Principals	Average
Time 1	90.03	96.65	93.34
Time 2	94.49	98.54	96.52
Time 3	98.23	92.12	95.17
Average	94.25	95.77	

Source: Evaluator analysis of responses to the Principal Leadership Survey.

**Table J6A. Results of Analysis of Principal Scale Scores for
Ethical Leadership ($N = 1064$)**

Solution for Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept (comparison time 1)	109.61	1.73	567	63.42	<.0001
Program Effects					
Comparison time 3	3.80	2.20	483	1.72	0.09
Comparison time 2	2.26	2.36	483	0.96	0.34
TxPEP	-4.61	2.65	567	-1.74	0.08
TxPEP time 3	2.23	3.40	483	0.66	0.51
TxPEP time 2	-4.93	3.39	483	-1.45	0.15
Covariates					
Number of principal school changes	0.01	0.002	567	3.18	0.002
Principal average percent economically disadvantaged students	0.14	0.05	567	2.58	0.01

Source: Evaluator analysis of Principal Leadership Survey responses and administrative data on principals and schools.

**Table J6B. Least Squares Means
for Ethical Leadership**

Administration	TxPEP Principals	Comparison Principals	Average
Time 1	105.00	109.61	107.30
Time 2	102.33	111.87	107.10
Time 3	111.02	113.40	112.21
Average	106.12	111.63	—

Source: Evaluator analysis of responses to the Principal Leadership Survey.

**Table J7A. Results of Analysis of Principal Scale Scores for
Resource Management ($N = 1061$)**

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison time 1)	71.01	1.35	564	52.54	<.0001
Program Effects					
Comparison time 3	2.29	1.47	482	1.56	0.12
Comparison time 2	0.81	1.58	482	0.52	0.61
TxPEP	-6.28	2.11	564	-2.98	0.003
TxPEP time 3	6.02	2.23	482	2.69	0.01
TxPEP time 2	4.34	2.28	482	1.91	0.06
Covariates					
Number of principal school changes	-2.67	0.84	564	-3.16	0.002
Principal average total students	0.004	0.002	564	2.23	0.03
Principal average percent economically disadvantaged students	0.26	0.04	564	6.38	<.0001

Source: Evaluator analysis of Principal Leadership Survey responses and administrative data on principals and schools.

**Table J7B. Least Squares Means
for Resource Management**

Administration	TxPEP Principals	Comparison Principals	Average
Time 1	64.73	71.01	67.87
Time 2	69.89	71.83	70.86
Time 3	73.04	73.30	73.17
Average	69.22	72.05	—

Source: Evaluator analysis of responses to the Principal Leadership Survey.

**Table J8A. Results of Analysis of Principal Scale Scores for
School and Program Evaluation** (*N* = 1057)

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison time 1)	82.31	2.12	564	38.79	<.0001
Program Effects					
Comparison time 3	6.52	2.48	478	2.63	0.01
Comparison time 2	7.03	2.52	478	2.78	0.01
TxPEP	-6.90	3.28	564	-2.10	0.04
TxPEP time 3	12.99	3.78	478	3.44	0.001
TxPEP time 2	5.44	3.63	478	1.50	0.13
Covariates					
Number of principal school changes	-3.24	1.28	564	-2.53	0.01
Principal average total students	0.01	0.003	564	3.57	0.0004
Principal average percent economically disadvantaged students	0.28	0.06	564	4.53	<.0001

Source: Evaluator analysis of Principal Leadership Survey responses and administrative data on principals and schools.

**Table J8B. Least Squares Means
for School and Program Evaluation**

Administration	TxPEP Principals	Comparison Principals	Average
Time 1	75.41	82.31	78.86
Time 2	87.88	89.34	88.61
Time 3	94.92	88.83	91.88
Average	86.07	86.83	—

Source: Evaluator analysis of responses to the Principal Leadership
Survey.

Results for the Analysis of the Relationship Between TxPEP Participants' Attendance Levels and Their Leadership Ratings

Tables J9 – J15 summarize the results of the modeling of the principal leadership scale scores for TxPEP participants. The main purpose of this modeling was to look for differences in principal scale scores based on a classification of principals' attendance at TxPEP required and optional events. Table J9 presents the number of principals for each attendance classification. Tables J10A – J15B summarize the analytic findings. The "A" tables present the findings from the repeated measures analysis. The "B" tables present the average scale score for each attendance classification at the three time points of measurement (fall 2007, spring 2008, and fall 2008).

Frequencies for Attendance Classifications

**Table J9. Frequencies of Attendance Classifications for
TxPEP Participation in Required and Optional Events**

Attendance Classification	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Low/Low	73	29.67	73	29.67
High/Low	131	53.25	204	82.93
High/High	42	17.07	246	100.00

Source: Evaluator analysis of TxPEP attendance data.

Repeated Measures Analysis of Variance

Table J10A. Analysis of the Relationship Between Attendance Levels and TxPEP Participants' Leadership Scale Scores for Change Management

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Time	2	2441.01	1220.51	4.18	0.02
Time * attendance	4	1184.54	296.14	1.01	0.40
Error (time)	154	44959.19	291.94	—	

Source: Evaluator analysis of TxPEP attendance data and TxPEP participants' responses to the Principal Leadership Survey.
Note: Time * attendance refers to the interaction of time of survey administration and attendance classification.

Table J10B. Least Squares Means for Change Management Attendance Analysis

Attendance Classification	Time 1	Time 2	Time 3
Low/Low	63.82	82.11	84.31
High/Low	81.14	83.68	91.02
High/High	79.73	76.96	83.31

Source: Evaluator analysis of TxPEP attendance data and TxPEP participants' responses to the Principal Leadership Survey.

Table J11A. Analysis of the Relationship Between Attendance Levels and TxPEP Participants' Leadership Scale Scores for Building Learning Communities

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Time	2	2312.35	1156.17	5.42	0.005
Time * attendance	4	1063.58	265.89	1.25	0.29
Error (time)	150	32021.76	213.47	—	

Source: Evaluator analysis of TxPEP attendance data and TxPEP participants' responses to the Principal Leadership Survey.
Note: Time * attendance refers to the interaction of time of survey administration and attendance classification.

Table J11B. Least Squares Means for Building Learning Communities Attendance Analysis

Attendance Classification	Time 1	Time 2	Time 3
Low/Low	78.65	74.40	92.35
High/Low	80.17	83.04	89.0006
High/High	81.29	72.80	82.64

Source: Evaluator analysis of TxPEP attendance data and TxPEP participants' responses to the Principal Leadership Survey.

Table J12A. Analysis of the Relationship Between Attendance Levels and TxPEP Participants' Leadership Scale Scores for Data-Driven Decision Making

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Time	2	1796.39835	898.19918	1.8	0.1682
Time * attendance	4	9494.93402	2373.73351	4.77	0.0012
Error (time)	150	74692.97601	497.95317		—

Source: Evaluator analysis of TxPEP attendance data and TxPEP participants' responses to the Principal Leadership Survey.
Note: Time * attendance refers to the interaction of time of survey administration and attendance classification.

Table J12B. Least Squares Means for Data-Driven Decision Making Attendance Analysis

Attendance Classification	Time 1	Time 2	Time 3
Low/Low	88.66	79.78	87.72
High/Low	90.09	98.72	100.87
High/High	110.34	80.25	88.77

Source: Evaluator analysis of TxPEP attendance data and TxPEP participants' responses to the Principal Leadership Survey.

Table J13A. Analysis of the Relationship Between Attendance Levels and TxPEP Participants' Leadership Scale Scores for Ethical Leadership

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Time	2	1117.73	558.87	1.43	0.24
Time * attendance	4	580.15	145.04	0.37	0.83
Error (time)	148	57687.07	389.78	—	

Source: Evaluator analysis of TxPEP attendance data and TxPEP participants' responses to the Principal Leadership Survey.
Note: Time * attendance refers to the interaction of time of survey administration and attendance classification.

Table J13B. Least Squares Means for Ethical Leadership Attendance Analysis

Attendance Classification	Time 1	Time 2	Time 3
Low/Low	105.22	105.94	110.19
High/Low	103.73	104.27	111.96
High/High	109.42	100.01	111.83

Source: Evaluator analysis of TxPEP attendance data and TxPEP participants' responses to the Principal Leadership Survey.

Table J14A. Analysis of the Relationship Between Attendance Levels and TxPEP Participants' Leadership Scale Scores for Resource Management

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Time	2	2029.34	1014.67	6.15	0.003
Time * attendance	4	786.62	196.66	1.19	0.32
Error (time)	146	24081.85	164.94	—	

Source: Evaluator analysis of TxPEP attendance data and TxPEP participants' responses to the Principal Leadership Survey.
Note: Time * attendance refers to the interaction of time of survey administration and attendance classification.

Table J14B. Least Squares Means for Resource Management Attendance Analysis

Attendance Classification	Time 1	Time 2	Time 3
Low/Low	54.92	77.26	68.47
High/Low	65.41	70.73	74.15
High/High	68.73	72.82	74.14

Source: Evaluator analysis of TxPEP attendance data and TxPEP participants' responses to the Principal Leadership Survey.

Table J15A. Analysis of the Relationship Between Attendance Levels and TxPEP Participants' Leadership Scale Scores for School and Program Evaluation

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Time	2	5103.99	2551.995	5.33	0.01
Time * attendance	4	553.02	138.26	0.29	0.88
Error (time)	146	69895.44	478.74		—

Source: Evaluator analysis of TxPEP attendance data and TxPEP participants' responses to the Principal Leadership Survey.
Note: Time * attendance refers to the interaction of time of survey administration and attendance classification.

Table J15B. Least Squares Means for School and Program Evaluation Attendance Analysis

Attendance Classification	Time 1	Time 2	Time 3
Low/Low	60.05	71.17	87.41
High/Low	79.23	87.15	95.98
High/High	82.58	86.34	93.03

Source: Evaluator analysis of TxPEP attendance data and TxPEP participants' responses to the Principal Leadership Survey.

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Appendix K
Analysis of Teacher Survey Scale Scores

This appendix describes the methods used in analyzing items from the teacher survey that could be combined to form scales. The methods used to establish the reliability and validity of teachers' ratings of principal leadership abilities as well as measures of perceived improvement in school and student performance are first described. The methods used in analyzing the principal scale scores are then presented.

Psychometric Analysis of the Teacher Survey

In order to ensure the quality of the survey scores used in the evaluation of the effectiveness of the TxPEP program, the teacher survey was investigated with regard to both validity and reliability. The topics outlined in the *Standards for Educational and Psychological Testing* (American Educational Research Association, American Psychological Association, and National Council on Measurement in Education, 1999) were used as guiding principals for this analysis.

Validity can be defined as the degree to which evidence and theory support the use and interpretations of survey scores. The most current conception of validity is that of a unitary concept that is "an overall evaluative judgment" based on multiple forms of evidence (Messick, 1995, p. 741). A psychometric analysis using the Rasch rating scale model (Rasch, 1960; Andrich, 1978; Wright & Masters, 1982) as implemented with WINSTEPS (Linacre, 2005) was conducted on the teacher survey data to examine the quality of the survey and to produce the construct-level scores used in the analyses of teacher ratings of principal leadership and school and student improvement described in this report. The rating scale model (RSM) can be written in the following format (Linacre, 2004):

$$\pi_{nix} = \frac{\exp\sum_{j=0}^{x}(\beta_n - (\delta_i + \tau_j))}{\sum_{k=0}^{m}\exp\sum_{j=0}^{k}(\beta_n - (\delta_i + \tau_j))} \tag{1}$$

The above equation describes the probability that a respondent *n*, with ability (or level of agreement) β_n on the underlying construct, responds with a rating of *x* to item *i* of difficulty δ_i (where the response scale is ordered from 0 to *m*). The τ_j represent the rating scale thresholds, or transition points, between categories.

The psychometric analysis of the quality of the survey included an evaluation of the following properties:

- **Point Measure Correlation:** Point-measure correlations assess the degree to which responses to a particular item correlate with the person measures of the individuals providing these responses.

- **Person Reliability:** Reliability is crucial to a discussion of the generalizability of the scores produced from an instrument. Reliability indices range from 0 to 1, with values closest to 1 being considered best.

- **Item Fit:** Fit statistics assess the degree to which the observed responses agree with the expected responses predicted by the model.

- **Unidimensionality:** The degree to which the scores approximate unidimensional measures was determined through the use of a principal components analysis (PCA) of the residuals obtained by fitting the data to a Rasch model. PCA can identify subsets of items which may be measuring hidden constructs (e.g., reading comprehension for mathematics items with heavy reading content).

- **Rating Scale Functioning:** The survey response options were analyzed to ensure that respondents perceived the meaning of each option in a consistent manner across items. More positive responses (such as *agree* and *strongly agree*) should be selected by respondents with higher overall construct scores.

Presented below are reliabilities and sample sizes for each of the constructs analyzed for the teacher survey. The sample sizes listed are those used in the WINSTEPS calibration of the data. Rasch scale scores are relatively unaffected by sample deviations (due to the mathematical independence of the item and person parameters); therefore, the full data sets were used to develop the construct scores. Descriptive statistics regarding the scale scores and sample sizes used in statistical modeling are presented later in this appendix.

Table K1. Reliability and Sample Size by Construct: Teacher Survey

Construct	Reliability	Sample Size
Data use	0.79	4239
Change management	0.75	4282
Ethical leadership	0.72	4282
School environment	0.76	4419
School leadership	0.91	4282
Shared leadership	0.83	4347
School/teacher improvement	0.85	3568
Student improvement	0.82	3568

Source: Evaluator analysis of responses to the TxPEP teacher survey.

Analyses of Teacher Survey Scale Scores

The psychometric analysis of teachers' ratings of principal leadership abilities and their responses to questions regarding perceived improvements in school/teacher and student performance produced a construct-level score or "scale score" for each construct measured by the teacher survey. Two types of analyses were conducted using the survey scale scores: propensity score analysis (PSA) and hierarchical linear modeling (HLM).

Various school-level factors were used in order to control for systematic differences between schools. Failure to control for these systematic differences could lead to overstating or understating of the potential impact of the TxPEP program on teacher ratings. Collinearity diagnostics were conducted on all variables resulting in the following covariates being tested for inclusion in the final models:

> Percent economically disadvantaged students, percent limited English proficient students, percent minority students, percent special education students, total number of students, number of disciplinary actions,[1] student-teacher ratio, teacher experience, percentage of teachers with advanced degrees, current principal salary (used as a proxy for principal experience), percentage of students meeting TAKS proficiency standards in reading, a dichotomous version of campus rating (AU versus non-AU).

For the analysis of the data from only TxPEP schools, the contribution of fewer covariates was explored. Due to small and unequal sample sizes, leaving too many variables in the model produced extremely unstable estimates; therefore full models were run with variables representing No Child Left Behind (NCLB) categories[2] and a variable measuring total number of students in each school.

Sample

Data were collected in the spring of 2008 from teachers in both TxPEP and comparison schools. There were 4,817 surveys completed. However, the survey was designed so that teachers could exit the survey prior to completing it. Therefore, the number of responses for each construct varies. Moreover, only those responses for which data were available for the school factors could be included in the analyses.

Data from only the TxPEP schools included approximately 2,000 responses from approximately 120 schools. Although 120 schools do not represent the full TxPEP population, the distribution across the attendance categories (explained more fully below) was approximately equal to the distribution across the full sample.

Propensity Score Analysis

Using SAS 9.0, a logistic regression was fit by modeling a series of covariates resulting in matched pairs of observations from TxPEP and comparison schools. The logistic regression model used the following variables to estimate probabilities of group membership (into TxPEP or comparison schools): percent minority students, percent economically disadvantaged students, percent special education students, percent limited English proficient students; student-teacher ratio, teacher experience, district type, and school type. Matching teachers to the order of the

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[1] Number of disciplinary incidents was divided by total number of students in order to get a ratio or percentage of incidents.

[2] NCLB categories include: percent economically disadvantaged students, percent limited English proficient students, percent minority students, and percent special education students.

second decimal yielded from 508–762 *pairs* of teachers for the analysis (the number varied depending on the construct being analyzed).

T-tests were performed on the covariates after matching. Table K2 lists the tests of difference between TxPEP and comparison schools using the *teacher* as the unit of analysis. This table reveals that TxPEP and comparison schools differed after matching on two covariates: percent economically disadvantaged students and total number of students. Table K3, however, shows that when the unit of analysis is the school, there are no differences in covariates between TxPEP and comparison schools.

**Table K2. Tests of Difference Between TxPEP and Comparison Schools
Using the Teacher as the Unit of Analysis**

Variable	Method	DF	t Value	Pr > |t|
Percent minority students	Satterthwaite	1742	1.30	0.19
Percent economically disadvantaged students	Satterthwaite	1802	-3.33	0.00
Percent special education students	Satterthwaite	1800	-0.22	0.83
Percent limited English proficient students	Pooled	1802	0.02	0.98
Student-teacher ratio	Satterthwaite	1797	-0.27	0.79
Total students	Pooled	1802	-2.09	0.04
Teacher experience	Satterthwaite	1800	-4.52	<.0001
District type	Satterthwaite	1741	1.22	0.22
School type	Satterthwaite	1802	0.43	0.67

Source: Evaluator analysis of TxPEP teacher survey responses and administrative data on schools.
Note: Satterthwaite refers to the Welch-Satterthwaite t-test, which is an alternative to the pooled-variance t-test, and is used when the assumption that the two populations have equal variances seems unreasonable.

**Table K3. Tests of Difference Between TxPEP and Comparison Schools
Using the School as the Unit of Analysis**

Variable	Method	DF	t Value	Pr > |t|
Percent minority students	Satterthwaite	98.3	0.64	0.53
Percent economically disadvantaged students	Satterthwaite	107	-0.44	0.66
Percent special education students	Satterthwaite	107	0.50	0.62
Percent limited English proficient students	Satterthwaite	107	0.29	0.77
Student-teacher ratio	Satterthwaite	108	-0.56	0.57
Total students	Satterthwaite	106	-1.31	0.19
Teacher experience	Satterthwaite	109	-1.34	0.18
District type	Satterthwaite	99.7	-0.19	0.85
School type	Satterthwaite	104	-0.94	0.35

Source: Evaluator analysis of TxPEP teacher survey responses and administrative data on schools.
Note: Satterthwaite refers to the Welch-Satterthwaite t-test, which is an alternative to the pooled-variance t-test, and is used when the assumption that the two populations have equal variances seems unreasonable.

Matched t-tests were used to test for differences in the responses of teachers from TxPEP and comparison schools. The difference scores represent the values of comparison teachers subtracted from the TxPEP teachers' values; therefore a positive score indicates that the TxPEP teachers' response values were higher (see Table K4).

**Table K4. Mean Differences in TxPEP and Comparison Teachers'
Scale Scores**

Variable	DF	t Value	Mean Difference	Standard Error	Pr > |t|
Data use	701	-2.21	-3.35	1.51	0.03
Change management	713	-4.28	-13.37	3.12	<.0001
Ethical leadership	713	-3.43	-9.05	2.64	0.001
School environment	761	-6.70	-10.00	1.49	<.0001
School leadership	713	-4.28	-8.67	2.03	<.0001
Shared leadership	739	-4.53	-11.25	2.48	<.0001
Student improvement	507	0.33	0.73	2.24	0.74
School/teacher improvement	507	-2.03	-4.51	2.22	0.04

Source: Evaluator analysis of responses to the TxPEP teacher survey.

HLM Modeling

Using SAS 9.0, hierarchical linear models were fit using reduced maximum likelihood estimation. All models were two-level with teacher responses at level 1 and school factors at level 2. In all models, the intercept was treated as random.

Three models were fit for each scale: one with just the TxPEP indicator variable; one with all covariates; and one with only covariates with probabilities less than 0.20. Final model selection was made by comparing several variables from among the three models using AIC (Akaike's Information Criterion), intraclass correlation, and r^2 between predicted and actual values.

Table K5 shows the raw means, standard errors, and the minimum and maximum values for each scale score for both TxPEP and comparison teachers. The remaining tables come from the HLM analyses.

Table K5. Scale Scores From the Teacher Survey: Unadjusted Means, Standard Errors and Minimum and Maximum Values

	Variable	*N*	Minimum	Maximum	Mean	Standard Error
	Teacher Scale Scores					
TxPEP	Data use	2162	-36.11	97.96	59.84	0.61
	Change management	2186	-76.81	136.69	63.40	1.29
	Ethical leadership	2186	-57.07	123.40	74.68	1.08
	School environment	2259	-24.40	100.22	53.08	0.60
	School leadership	2186	-46.34	114.43	57.30	0.81
	Shared leadership	2225	-52.65	127.58	56.52	1.00
	School/teacher improvement	1695	-44.03	125.69	52.84	0.88
	Student improvement	1695	-40.36	126.85	53.36	0.91
Comparison	Data use	2077	-36.11	97.96	62.29	0.63
	Change management	2096	-76.81	136.69	72.23	1.26
	Ethical leadership	2096	-57.07	123.40	78.95	1.08
	School environment	2160	-24.40	100.22	60.37	0.62
	School leadership	2096	-46.34	114.43	63.39	0.82
	Shared leadership	2122	-52.65	127.58	62.94	1.02
	School/teacher improvement	1873	-44.03	125.69	55.43	0.80
	Student improvement	1873	-40.36	126.85	53.30	0.79

Source: Evaluator analysis of responses to the TxPEP teacher survey.

Tables Summarizing HLM Results

Tables K6A – K13C summarize the results of the modeling of the teacher survey scale scores for both TxPEP and comparison schools. The main purpose of fitting these models was to explore the differences in scale scores between teachers in TxPEP schools and teachers in a selected group of comparison schools.

For each scale score three tables are provided. The "A" tables provide the number of teachers for which scale scores could be computed as well as the number of schools that those teachers came from. The "B" tables provide the test of the coefficients for the variables entered into the model. The intercept represents the average scale score for the comparison schools. The estimate for TxPEP schools can be found by adding the estimate for the TxPEP variable to this intercept. In other words, the estimate for the TxPEP variable represents the difference between teacher scale scores in comparison and TxPEP schools. A positive number indicates that teachers at TxPEP schools had higher scale scores than teachers at comparison schools. A negative number indicates that teachers at TxPEP schools had lower scale scores than teachers at comparison schools. For ease of interpretation the average scale scores for both the TxPEP and comparison schools are presented in the "C" tables.

Data Use

Table K6A. Teacher Survey Responses for Data Use

N campuses	212
N responses	3890

Source: Evaluator analysis of responses to the TxPEP teacher survey.

Table K6B. Results of Analysis of Teacher Scale Scores for Data Use

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	61.92	1.31	199	47.42	<.0001
TxPEP	-2.53	1.85	199	-1.36	0.17
Percent special education students	-0.40	0.32	199	-1.23	0.22
Total students	-0.004	0.002	199	-2.21	0.03
Percentage of students meeting TAKS reading proficiency standards	0.22	0.09	199	2.38	0.02
Percentage of teachers with advanced degrees	-0.06	0.13	199	-0.47	0.64
Percentage of teachers with advanced degrees * TxPEP	-0.15	0.16	199	-0.91	0.36
Percent special education students * TxPEP	0.54	0.40	199	1.36	0.18

Source: Evaluator analysis of TxPEP teacher survey responses and administrative data on schools.
Note: An asterisk (*) indicates an interaction term.

Table K6C. Least Squares Means for Data Use

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	59.39	1.26
Comparison	61.92	1.31

Source: Evaluator analysis of responses to the TxPEP teacher survey.

Change Management

Table K7A. Teacher Survey Responses
for Change Management

N campuses	229
N responses	4107

Source: Evaluator analysis of responses to the
TxPEP teacher survey.

Table K7B. Results of Analysis of Teacher Scale Scores for Change Management

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	71.55	3.07	215	23.31	<.0001
TxPEP	-12.71	4.57	215	-2.78	0.01
Percent minority students	-0.09	0.12	215	-0.80	0.42
Percent special education students	-0.87	0.63	215	-1.39	0.17
Total students	-0.003	0.005	215	-0.62	0.54
Percent minority students * TxPEP	0.20	0.17	215	1.17	0.24
Percent special education students * TxPEP	1.45	0.82	215	1.76	0.08
Total students * TxPEP	-0.02	0.01	215	-1.95	0.05

Source: Evaluator analysis of TxPEP teacher survey responses and administrative data on schools.
Note: An asterisk (*) indicates an interaction term.

Table K7C. Least Squares Means for
Change Management

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	58.85	3.38
Comparison	71.55	3.07

Source: Evaluator analysis of responses to the TxPEP
teacher survey.

Ethical Leadership

Table K8A. Teacher Survey Responses
for Ethical Leadership

N campuses	229
N responses	4107

Source: Evaluator analysis of responses to the
TxPEP teacher survey.

Table K8B. Results of Analysis of Teacher Scale Scores for Ethical Leadership

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	79.75	2.37	219	33.65	<.0001
TxPEP	-7.33	3.51	219	-2.09	0.04
Total students	-0.001	0.00	219	-0.15	0.88
Total students * TxPEP	-0.01	0.01	219	-1.75	0.08

Source: Evaluator analysis of TxPEP teacher survey responses and administrative data on schools.
Note: An asterisk (*) indicates an interaction term.

Table K8C. Least Squares Means for
Ethical Leadership

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	72.41	2.58
Comparison	79.75	2.37

Source: Evaluator analysis of responses to the TxPEP
teacher survey.

School Environment

Table K9A. Teacher Survey Responses
for School Environment

N campuses	215
N responses	4086

Source: Evaluator analysis of responses to
the TxPEP teacher survey.

Table K9B. Results of Analysis of Teacher Scale Scores for School Environment

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	62.84	1.93	202	32.62	<.0001
TxPEP	-10.28	2.60	202	-3.95	0.00
Disciplinary actions per student	-4.36	1.91	202	-2.29	0.02
Principal education	0.05	0.08	202	0.57	0.57
Current percent limited English proficient students	0.05	0.07	202	0.65	0.52
Percentage of students meeting TAKS reading proficiency standards	0.38	0.15	202	2.52	0.01
Principal education * TxPEP	-0.22	0.12	202	-1.94	0.05
Disciplinary actions * TxPEP	6.98	2.41	202	2.90	0.00
Current percent limited English proficient students * TxPEP	0.13	0.10	202	1.35	0.18
Percentages of student meeting TAKS reading standards * TxPEP	-0.15	0.21	202	-0.70	0.48

Source: Evaluator analysis of TxPEP teacher survey responses and administrative data on schools.
Note: An asterisk (*) indicates an interaction term.

Table K9C. Least Squares Means for
School Environment

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	52.56	1.75
Comparison	62.84	1.93

Source: Evaluator analysis of responses to the TxPEP
teacher survey.

School Leadership

Table K10A. Teacher Survey Responses
for School Leadership

N campuses	229
N responses	4107

Source: Evaluator analysis of responses to the
TxPEP teacher survey.

Table K10B. Results of Analysis of Teacher Scale Scores for School Leadership

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	63.54	1.93	215	32.95	<.0001
TxPEP	-8.79	2.86	215	-3.07	0.00
Principal education	0.03	0.10	215	0.32	0.75
Percent special education students	-0.30	0.39	215	-0.77	0.44
Total students	-0.002	0.00	215	-0.73	0.47
Principal education * TxPEP	-0.07	0.14	215	-0.52	0.61
Percent special education students * TxPEP	0.59	0.52	215	1.14	0.26
Total students * TxPEP	-0.01	0.01	215	-1.75	0.08

Source: Evaluator analysis of TxPEP teacher survey responses and administrative data on schools.
Note: An asterisk (*) indicates an interaction term.

Table K10C. Least Squares Means for
School Leadership

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	54.75	2.11
Comparison	63.54	1.93

Source: Evaluator analysis of responses to the TxPEP
teacher survey.

Shared Leadership

Table K11A. Teacher Survey Responses
for Shared Leadership

N campuses	649
N responses	4168

Source: Evaluator analysis of responses to
the TxPEP teacher survey.

Table K11B. Results of Analysis of Teacher Scale Scores for Shared Leadership

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	64.42	2.25	217	28.59	<.0001
TxPEP	-7.53	3.14	217	-2.40	0.02
Principal education	0.52	0.17	217	3.10	0.00
Percent minority students	-0.34	0.13	217	-2.63	0.01
Principal education * TxPEP	-0.66	0.23	217	-2.85	0.00
Percent minority students * TxPEP	0.42	0.18	217	2.38	0.02

Source: Evaluator analysis of TxPEP teacher survey responses and administrative data on schools.
Note: An asterisk (*) indicates an interaction term.

Table K11C. Least Squares Means
for Shared Leadership

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	56.89	2.19
Comparison	64.42	2.25

Source: Evaluator analysis of responses to the TxPEP
teacher survey.

School/Teacher Improvement

Table K12A. Teacher Survey Responses
for School/Teacher Improvement

N campuses	229
N responses	3438

Source: Evaluator analysis of responses to the
TxPEP teacher survey.

Table K12B. Results of Analysis of Teacher Scale Scores for
School/Teacher Improvement

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	55.95	1.78	209	31.36	<.0001
TxPEP	-6.95	2.68	209	-2.60	0.01
Principal education	0.29	0.14	209	2.01	0.05
Percent minority students	-0.13	0.11	209	-1.21	0.23
Percent special education students	-0.34	0.37	209	-0.94	0.35
Total students	-0.0003	0.003	209	-0.10	0.92
Principal education * TxPEP	-0.39	0.19	209	-2.03	0.04
Percent minority students * TxPEP	0.31	0.15	209	2.07	0.04
Percent special education students * TxPEP	0.37	0.50	209	0.75	0.46
Total students * TxPEP	-0.02	0.01	209	-3.78	0.00

Source: Evaluator analysis of TxPEP teacher survey responses and administrative data on schools.
Note: An asterisk (*) indicates an interaction term.

Table K12C. Least Squares Means
for School/Teacher Improvement

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	49.00	2.00
Comparison	55.95	1.78

Source: Evaluator analysis of responses to the TxPEP
teacher survey.

Student Improvement

Table K13A. Teacher Survey Responses
for Student Improvement

N campuses	229
N responses	3438

Source: Evaluator analysis of responses to the
TxPEP teacher survey.

Table K13B. Results of Analysis of Teacher Scale Scores for
Student Improvement

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	53.77	2.09	215	25.73	<.0001
TxPEP	-2.78	3.12	215	-0.89	0.37
Total students	-0.001	0.00	215	-0.18	0.86
Total students * TxPEP	-0.01	0.01	215	-1.90	0.06

Source: Evaluator analysis of TxPEP teacher survey responses and administrative data on schools.
Note: An asterisk (*) indicates an interaction term.

Table K13C. Least Squares Means
for Student Improvement

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	50.99	2.32
Comparison	53.77	2.09

Source: Evaluator analysis of responses to the TxPEP
teacher survey.

Results for the Analysis of the Relationship Between TxPEP Participants' Attendance Levels and Teachers' Ratings of Their Leadership

Tables K14A – K21C summarize the results of the modeling of the teacher survey scale scores for teachers from TxPEP schools. The main purpose of this modeling was to look for differences in teacher scale scores based on a classification of principals' attendance at TxPEP required and optional events (see above for a description of the classification scheme).

For each scale score three tables are provided. The "A" tables provide the number of teachers for which scale scores could be computed as well as the number of schools that those teachers came from. The "B" tables provide the test of the coefficients for the variables entered into the model. The intercept represents the average scale score for schools in which principals were classified as having "High/High" attendance. The estimates for "Low/Low" and "High/Low" represent the difference between the intercept (High/High) and the respective category. A positive number for either of these estimates indicates that teachers from these schools had higher scale scores than teachers who came from schools where the principal was classified as having "High/High" attendance. A negative number for either of these estimates indicates that teachers from these schools had lower scale scores than teachers who came from schools where the principal was classified as having "High/High" attendance. For ease of interpretation the average scale scores for all three principal attendance classification groups are presented in the "C" tables.

Data Use

Table K14A. Teacher Survey Responses for Data Use

N campuses	120
N responses	1994

Source: Evaluator analysis of responses to the TxPEP teacher survey.

Table K14B. Analysis of Relationship Between TxPEP Attendance Levels and Teacher Data Use Scale Scores

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (High/High)	61.05	2.60	112	23.51	<.0001
Low/Low	-5.52	4.18	112	-1.32	0.19
High/Low	-0.94	2.99	112	-0.31	0.75
Percent limited English proficient students	0.11	0.06	112	2.02	0.05
Percent special education students	0.42	0.25	112	1.65	0.10

Source: Evaluator analysis of responses to the TxPEP teacher survey, administrative data on schools, and TxPEP attendance data.

Table K14C. Least Squares Means
for TxPEP Attendance Groups:
Teacher Data Use Scale Scores

Least Squares Means		
	Estimate	**Standard Error**
Low/Low	55.53	3.25
High/Low	60.11	1.49
High/High	61.05	2.60

Source: Evaluator analysis of responses to the TxPEP
teacher survey and TxPEP attendance data.

Change Management

Table K15A. Teacher Survey Responses
for Change Management

N campuses	120
N responses	2016

Source: Evaluator analysis of responses
to the TxPEP teacher survey.

Table K15B. Analysis of Relationship Between TxPEP Attendance Levels and
Teacher Change Management Scale Scores

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (High/High)	72.19	6.61	111	10.93	<.0001
Low/Low	-26.62	10.61	111	-2.51	0.01
High/Low	-10.79	7.64	111	-1.41	0.16
Percent limited English proficient students	0.16	0.14	111	1.14	0.26
Percent special education students	1.03	0.62	111	1.66	0.10
Total students	-0.02	0.01	111	-2.61	0.01

Source: Evaluator analysis of responses to the TxPEP teacher survey, administrative data on schools, and TxPEP
attendance data.

Table K15C. Least Squares Means
for TxPEP Attendance Groups:
Teacher Change Management Scale Scores

Least Squares Means		
	Estimate	**Standard Error**
Low/Low	45.57	8.25
High/Low	61.40	4.05
High/High	72.19	6.61

Source: Evaluator analysis of responses to the TxPEP
teacher survey and TxPEP attendance data.

Ethical Leadership

Table K16A. Teacher Survey Responses
for Ethical Leadership

N campuses	120
N responses	2016

Source: Evaluator analysis of responses to
the TxPEP teacher survey.

Table K16B. Analysis of Relationship Between TxPEP Attendance Levels and
Teacher Ethical Leadership Scale Scores

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (High/High)	83.28	4.95	111	16.83	<.0001
Low/Low	-24.02	7.89	111	-3.05	0.00
High/Low	-9.76	5.76	111	-1.69	0.09
Principal education	-0.11	0.14	111	-0.80	0.43
Percent limited English proficient students	0.05	0.11	111	0.46	0.65
Total students	-0.01	0.01	111	-2.07	0.04

Source: Evaluator analysis of responses to the TxPEP teacher survey, administrative data on schools, and
TxPEP attendance data.

**Table K16C. Least Squares Means
for TxPEP Attendance Groups:
Teacher Ethical Leadership Scale Scores**

Least Squares Means		
	Estimate	**Standard Error**
Low/Low	59.26	6.27
High/Low	73.52	3.02
High/High	83.28	4.95

Source: Evaluator analysis of responses to the TxPEP
teacher survey and TxPEP attendance data.

School Environment

**Table K17A. Teacher Survey Responses
for School Environment**

N campuses	120
N responses	2081

Source: Evaluator analysis of responses to
the TxPEP teacher survey.

**Table K17B. Analysis of Relationship Between TxPEP Attendance Levels and
Teacher School Environment Scale Scores**

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (High/High)	55.51	2.72	110	20.41	<.0001
Low/Low	-11.51	4.33	110	-2.66	0.01
High/Low	-2.13	3.16	110	-0.67	0.50
Principal education	-0.19	0.08	110	-2.42	0.02
Percent limited English proficient students	0.16	0.07	110	2.45	0.02
Percent special education students	0.38	0.25	110	1.49	0.14
Total students	-0.01	0.00	110	-2.70	0.01

Source: Evaluator analysis of responses to the TxPEP teacher survey, administrative data on schools, and
TxPEP attendance data.

Table K17C. Least Squares Means
for TxPEP Attendance Groups:
Teacher School Environment Scale Scores

Least Squares Means		
	Estimate	**Standard Error**
Low/Low	43.99	3.41
High/Low	53.38	1.64
High/High	55.51	2.72

Source: Evaluator analysis of responses to the TxPEP
teacher survey and TxPEP attendance data.

School Leadership

Table K18A. Teacher Survey Responses
for School Leadership

N campuses	120
N responses	2016

Source: Evaluator analysis of responses
to the TxPEP teacher survey.

Table K18B. Analysis of Relationship Between TxPEP Attendance Levels and
Teacher School Leadership Scale Scores

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (High/High)	61.98	4.04	111	15.35	<.0001
Low/Low	-17.37	6.48	111	-2.68	0.01
High/Low	-5.37	4.67	111	-1.15	0.25
Percent limited English proficient students	0.09	0.09	111	1.05	0.30
Percent special education students	0.60	0.38	111	1.57	0.12
Total students	-0.01	0.00	111	-2.69	0.01

Source: Evaluator analysis of responses to the TxPEP teacher survey, administrative data on schools, and
TxPEP attendance data.

Table K18C. Least Squares Means
for TxPEP Attendance Groups:
Teacher School Leadership Scale Scores

Least Squares Means		
	Estimate	**Standard Error**
Low/Low	44.62	5.04
High/Low	56.62	2.47
High/High	61.98	4.04

Source: Evaluator analysis of responses to the TxPEP
teacher survey and TxPEP attendance data.

Shared Leadership

Table K19A. Teacher Survey Responses
for Shared Leadership

N campuses	120
N responses	2051

Source: Evaluator analysis of responses
to the TxPEP teacher survey.

Table K19B. Analysis of Relationship Between TxPEP Attendance Levels and
Teacher Shared Leadership Scale Scores

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (High/High)	60.18	4.61	111	13.05	<.0001
Low/Low	-15.64	7.43	111	-2.10	0.04
High/Low	-5.25	5.34	111	-0.98	0.33
Percent limited English proficient students	0.11	0.10	111	1.08	0.28
Percent special education students	0.41	0.43	111	0.95	0.34
Total students	-0.02	0.01	111	-3.08	0.00

Source: Evaluator analysis of responses to the TxPEP teacher survey, administrative data on schools, and
TxPEP attendance data.

Table K19C. Least Squares Means
for TxPEP Attendance Groups:
Teacher Shared Leadership Scale Scores

Least Squares Means		
	Estimate	**Standard Error**
Low/Low	44.54	5.78
High/Low	54.94	2.81
High/High	60.18	4.61

Source: Evaluator analysis of responses to the TxPEP
teacher survey and TxPEP attendance data.

School/Teacher Improvement

Table K20A. Teacher Survey Responses
for School/Teacher Improvement

N campuses	120
N responses	1568

Source: Evaluator analysis of responses
to the TxPEP teacher survey.

Table K20B. Analysis of Relationship Between TxPEP Attendance Levels and
Teacher School/Teacher Improvement Scale Scores

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (High/High)	53.20	3.84	109	13.85	<.0001
Low/Low	-5.91	6.31	109	-0.94	0.35
High/Low	-2.15	4.43	109	-0.48	0.63
Total students	-0.02	0.00	109	-4.14	<.0001

Source: Evaluator analysis of responses to the TxPEP teacher survey, administrative data on schools,
and TxPEP attendance data.

**Table K20C. Least Squares Means for
TxPEP Attendance Groups: Teacher
School/Teacher Improvement Scale Scores**

Least Squares Means		
	Estimate	**Standard Error**
Low/Low	47.30	5.01
High/Low	51.06	2.34
High/High	53.20	3.84

Source: Evaluator analysis of responses to the TxPEP
teacher survey and TxPEP attendance data.

Student Improvement

**Table K21A. Teacher Survey Responses
for Student Improvement**

N campuses	120
N responses	1568

Source: Evaluator analysis of responses
to the TxPEP teacher survey.

**Table K21B. Analysis of Relationship Between TxPEP Attendance Levels and
Teacher Student Improvement Scale Scores**

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (High/High)	55.01	4.79	109	11.49	<.0001
Low/Low	-10.69	7.85	109	-1.36	0.18
High/Low	-2.20	5.53	109	-0.40	0.69
Total students	-0.01	0.01	109	-2.04	0.04

Source: Evaluator analysis of responses to the TxPEP teacher survey, administrative data on schools,
and TxPEP attendance data.

**Table K21C. Least Squares Means
for TxPEP Attendance Groups:
Teacher Student Improvement Scale Scores**

Least Squares Means		
	Estimate	**Standard Error**
Low/Low	44.32	6.24
High/Low	52.81	2.97
High/High	55.01	4.79

Source: Evaluator analysis of responses to the TxPEP
teacher survey and TxPEP attendance data.

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Appendix L
Descriptive Analysis of Individual Items From the
Spring 2008 Teacher Survey

The following figures illustrate the frequency of responses to items on the TxPEP teacher survey that could not be scaled. These items focus on the teaching and learning environment of the school. The frequency of each response is presented for teachers from both TxPEP and comparison schools.

- As shown in Figure L1, a greater percentage of teachers from comparison schools *strongly agree* that teachers have high expectations and standards for all students compared to teachers at TxPEP schools (38% and 31%, respectively).

- However, a slightly higher percentage of teachers from TxPEP schools *agree* that teachers have high expectations and standards for all students compared to teachers at comparison schools (53% and 51%, respectively).

Figure L1. Teachers Have High Academic Expectations for All Students
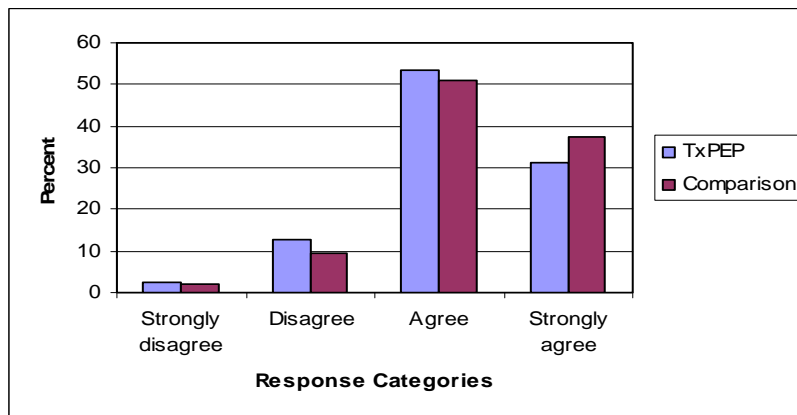
Source: Evaluator analysis of responses to the TxPEP teacher survey.

- As shown in Figure L2, a greater percentage of teachers from comparison schools *strongly agree* that teachers set high standards for themselves compared to teachers at TxPEP schools (37% and 31%, respectively).

- However, a slightly higher percentage of teachers from TxPEP schools *agree* that teachers set high standards for themselves, compared to teachers at comparison schools (57% and 54%, respectively).

Figure L2. Teachers Set High Expectations for Themselves
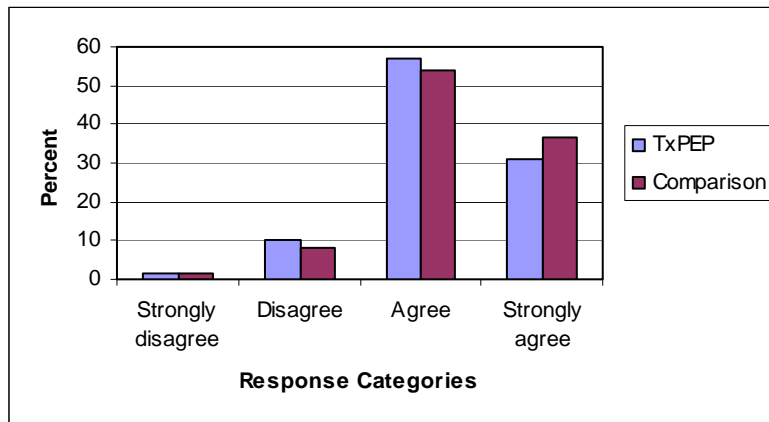
Source: Evaluator analysis of responses to the TxPEP teacher survey.

- As shown in Figure L3, a slightly higher percentage of teachers from comparison schools *strongly agree* that teachers feel responsible to help each other improve instruction compared to teachers at TxPEP schools (32% and 30%, respectively).

- Equal percentages (51%) of teachers from each type of school *agree* that they feel responsible to help each other improve instruction.

Figure L3. Teachers Feel Responsible to Help Each Other Improve Instruction
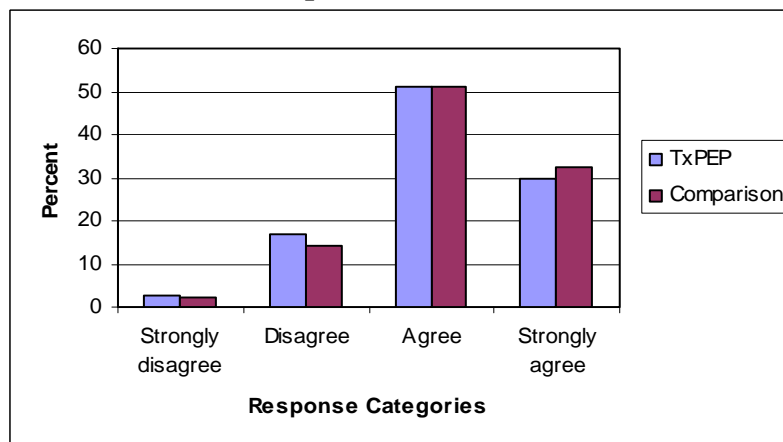
Source: Evaluator analysis of responses to the TxPEP teacher survey.

- As shown in Figure L4, a greater percentage of teachers from comparison schools *strongly agree* that teachers help monitor discipline in the entire school, not just in their classroom, compared to teachers at TxPEP schools (32% and 27%, respectively).

- A marginally higher percentage of teachers from comparison schools *agree* that teachers help monitor discipline in the entire school, not just in their classroom, compared to teachers at TxPEP schools (48% and 47%, respectively).

Figure L4. Teachers Help Monitor Discipline in the Entire School
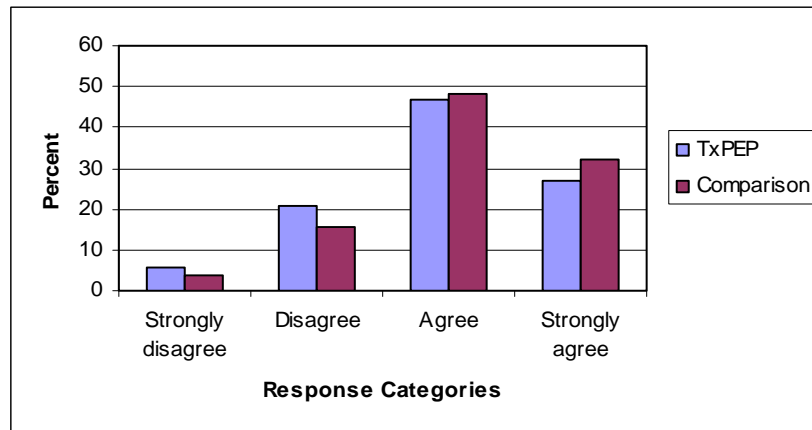
Source: Evaluator analysis of responses to the TxPEP teacher survey.

- As shown in Figure L5, a greater percentage of teachers from comparison schools *strongly agree* that teachers consistently share ideas and beliefs about schooling, teaching, and learning compared to teachers at TxPEP schools (31% and 26%, respectively).

- However, a higher percentage of teachers from TxPEP schools *agree* that teachers consistently share ideas and beliefs about schooling, teaching, and learning compared to teachers at comparison schools (60% and 54%, respectively).

Figure L5. Teachers Share Ideas About Schooling
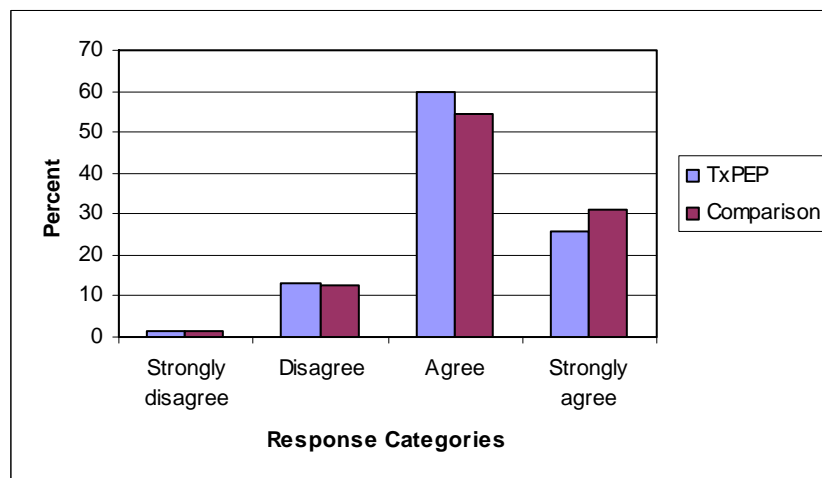
Source: Evaluator analysis of responses to the TxPEP teacher survey.

- As shown in Figure L6, a higher percentage of teachers from comparison schools *strongly agree* that teachers have scheduled times to meet and collaborate with other teachers in their grade level or subject area compared to teachers at TxPEP schools (41% and 37%, respectively).

- A marginally higher percentage of teachers from comparison schools *agree* that teachers have scheduled times to meet and collaborate with other teachers in their grade level or subject area compared to teachers at TxPEP schools (46% and 45%, respectively).

**Figure L6. Teachers Have Scheduled Times to Collaborate
With Other Teachers**
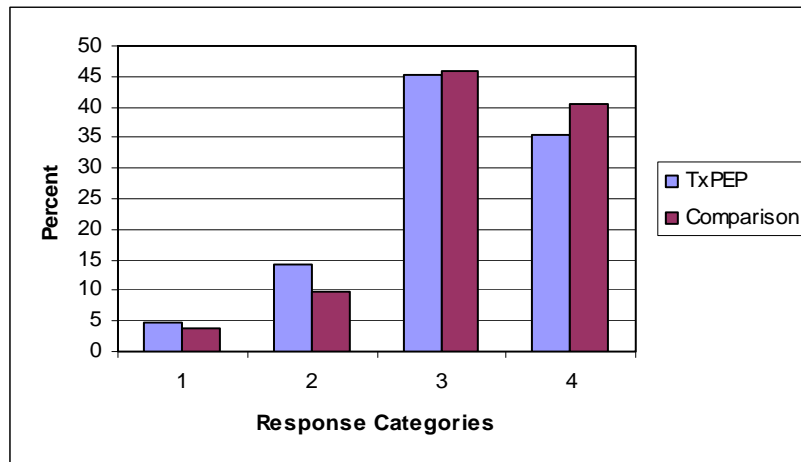
Source: Evaluator analysis of responses to the TxPEP teacher survey.

- As shown in Figure L7, a marginally higher percentage of teachers from comparison schools *strongly agree* that there are funds and resources available to allow teachers to take advantage of professional development activities compared to teachers at TxPEP schools (30% and 29%, respectively).

- A marginally higher percentage of teachers from TxPEP schools *agree* that there are funds and resources available to allow teachers to take advantage of professional development activities compared to teachers at comparison schools (54% and 53%, respectively).

Figure L7. Resources Are Available for Teacher Professional Development
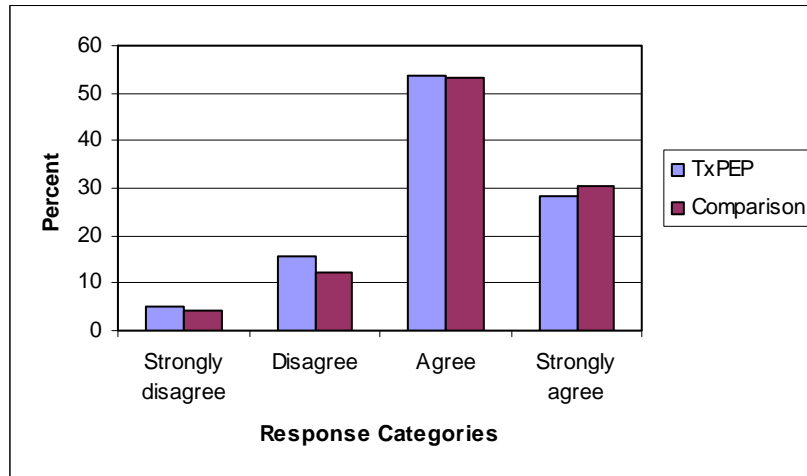
Source: Evaluator analysis of responses to the TxPEP teacher survey.

- As shown in Figure L8, a greater percentage of teachers from comparison schools *strongly agree* that the principal encourages teachers to take advantage of professional development opportunities compared to teachers at TxPEP schools (48% and 41%, respectively).

- However, a higher percentage of teachers from TxPEP schools *agree* that the principal encourages teachers to take advantage of professional development opportunities compared to teachers at comparison schools (51% and 46%, respectively).

Figure L8. The Principal Encourages Teacher Professional Development
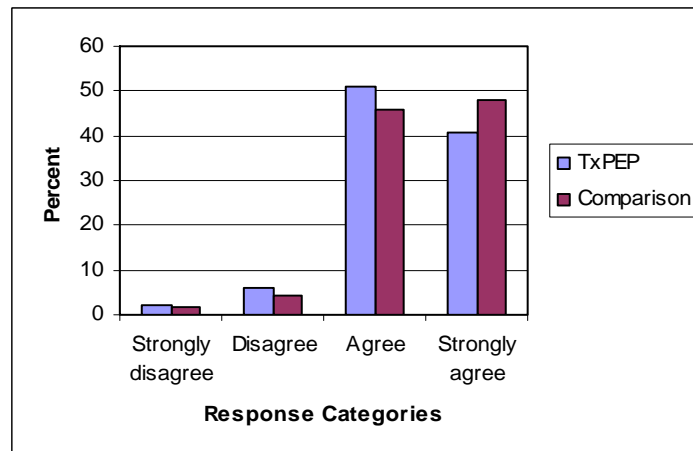
Source: Evaluator analysis of responses to the TxPEP teacher survey.

- As shown in Figure L9, a greater percentage of teachers from comparison schools *strongly agree* that professional development opportunities allow them to work on aspects of teaching they are trying to improve compared to teachers at TxPEP schools (42% and 36%, respectively).

- However, a higher percentage of teachers from TxPEP schools *agree* that professional development opportunities allow them to work on aspects of teaching they are trying to improve compared to teachers at comparison schools (55% and 50%, respectively).

Figure L9. Professional Development Allows Teachers to Work on Aspects of Their Teaching They Are Trying to Improve
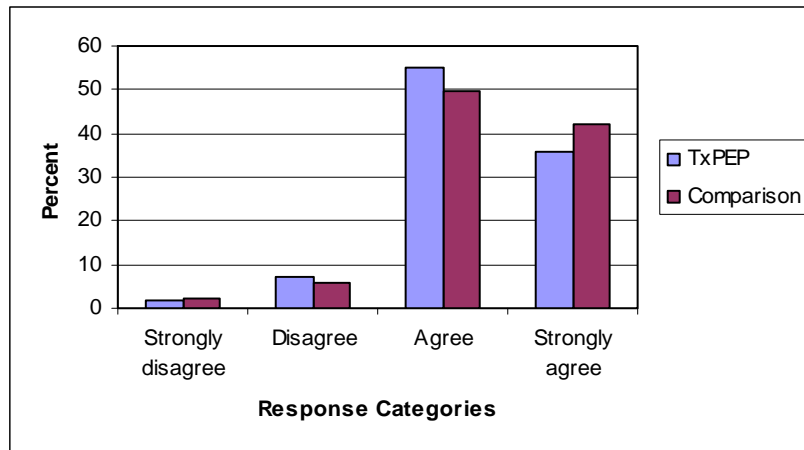
Source: Evaluator analysis of responses to the TxPEP teacher survey.

- As shown in Figure L10, a greater percentage of teachers from comparison schools *strongly agree* that professional development activities provide them with opportunities to learn about evidence-based best practices compared to teachers at TxPEP schools (40% and 33%, respectively).

- However, a higher percentage of teachers from TxPEP schools *agree* that professional development activities provide them with opportunities to learn about evidence-based best practices compared to teachers at comparison schools (57% and 52%, respectively).

Figure L10. Professional Development Activities Provides Opportunities for Teachers to Learn About Evidence-Based Best Practices
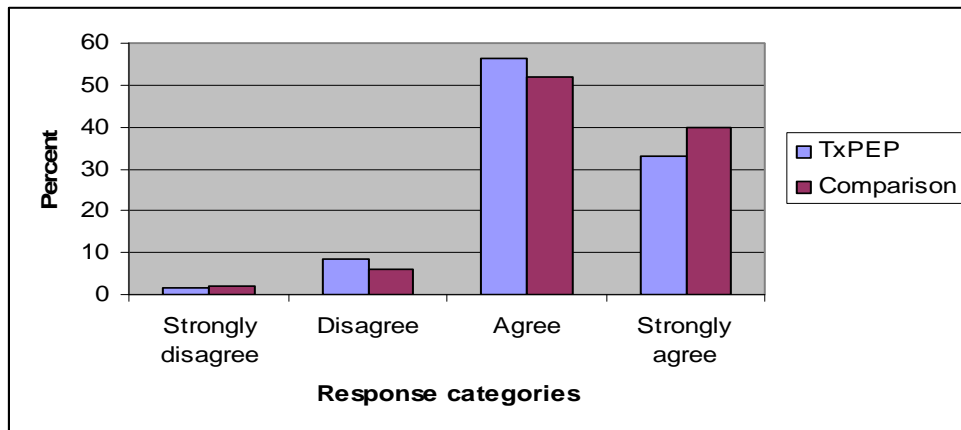
Source: Evaluator analysis of responses to the TxPEP teacher survey.

Appendix M
Descriptive Analysis of Individual Items From the Spring 2008 Principal Leadership Survey

The following figures illustrate the frequency of responses to items on the spring 2008 Principal Leadership Survey that could not be scaled. The frequency of each response is presented for both TxPEP and comparison principals. Responses to items focusing on perceived improvements in school/teacher performance over the course of the 2007-08 school year are presented first, followed by responses to items focusing on perceived improvements in student performance over the course of the 2007-08 school year

Principals' Perceptions of Improvements in School/Teacher Performance Over the Course of the 2007-08 School Year

As shown in Figure M1, a higher percentage of TxPEP principals compared to comparison principals *agreed* (59% and 56, respectively) or *strongly agreed* (15% and 10%, respectively) that teacher attendance improved over the course of the 2007-08 school year.

Figure M1. Teacher Attendance Improved at My School
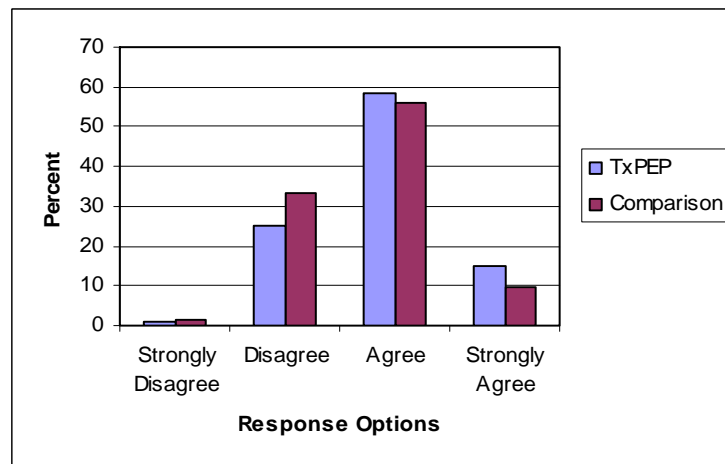
Source: Evaluator analysis of responses to the spring 2008 Principal Leadership Survey.

As shown in Figure M2, a similar percentage of TxPEP and comparison principals *agreed* (62% and 63%, respectively) or *strongly agreed* (29% and 30%, respectively) that teachers were more open to learning new instructional strategies during the 2007-08 school year than they had been during the previous school year.
.

**Figure M2. Teachers Are More Open to Learning
New Instructional Strategies**
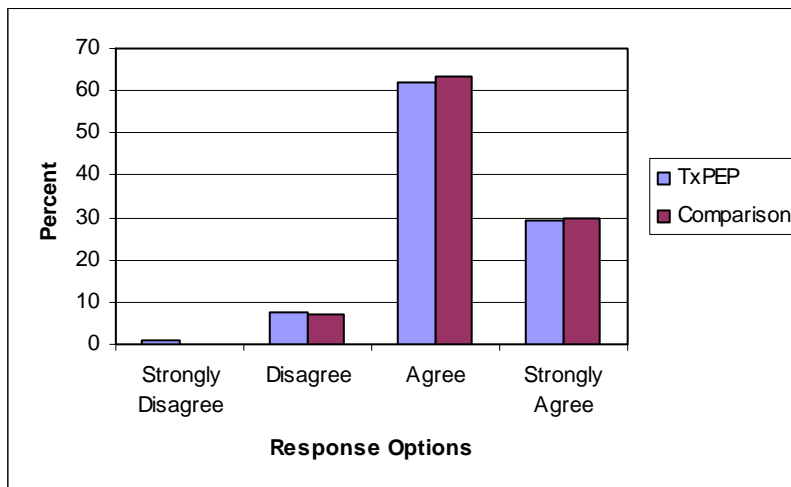
Source: Evaluator analysis of responses to the spring 2008 Principal
Leadership Survey.

As shown in Figure M3, a higher percentage of TxPEP principals compared to comparison principals *agreed* (62% and 59%, respectively) or *strongly agreed* (27% and 25%, respectively) that teachers made greater use of problem-based learning strategies during the 2007-08 school year than they had during the previous school year.

**Figure M3. Teachers Are Making Greater Use of
Problem-Based Learning Strategies**
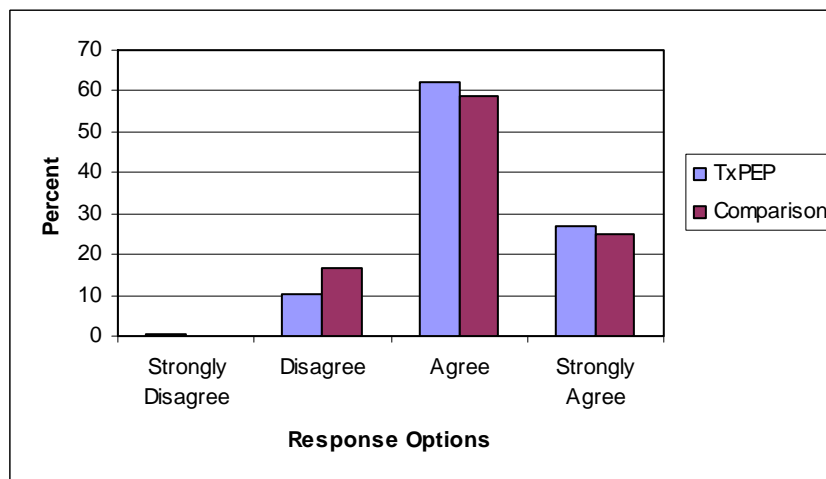
Source: Evaluator analysis of responses to the spring 2008 Principal Leadership
Survey.

As shown in Figure M4, a higher percentage of TxPEP principals compared to comparison principals *agreed* that teachers were more satisfied with professional development activities during the 2007-08 school year than they had been during the previous school year (66% and 60%, respectively), whereas the same percentage of TxPEP and comparison principals *strongly agreed* with this statement (22%).

**Figure M4. Teachers Are More Satisfied With
Professional Development**
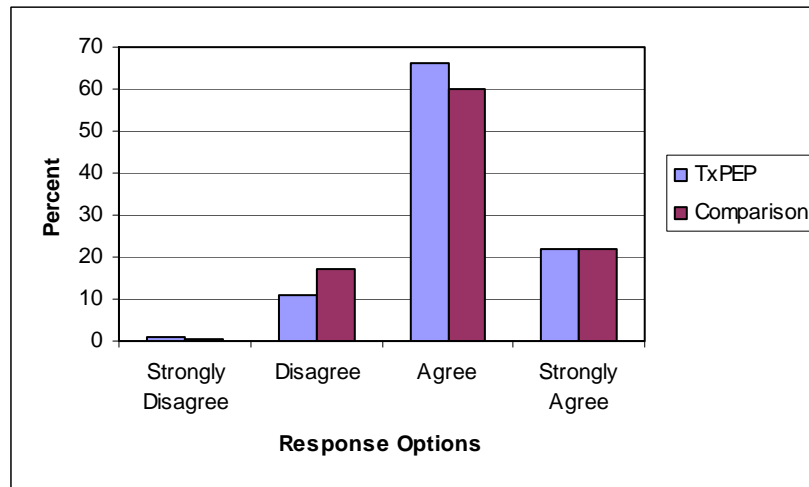
Source: Evaluator analysis of responses to the spring 2008 Principal Leadership Survey.

As shown in Figure M5, a higher percentage of comparison principals compared to TxPEP principals *strongly agreed* that teacher retention rates had improved during the 2007-08 school year (37% and 31%, respectively). Similar percentages of comparison and TxPEP principals *agreed* with this statement (50% and 51%, respectively).

Figure M5. Teacher Retention Rates Are Improving
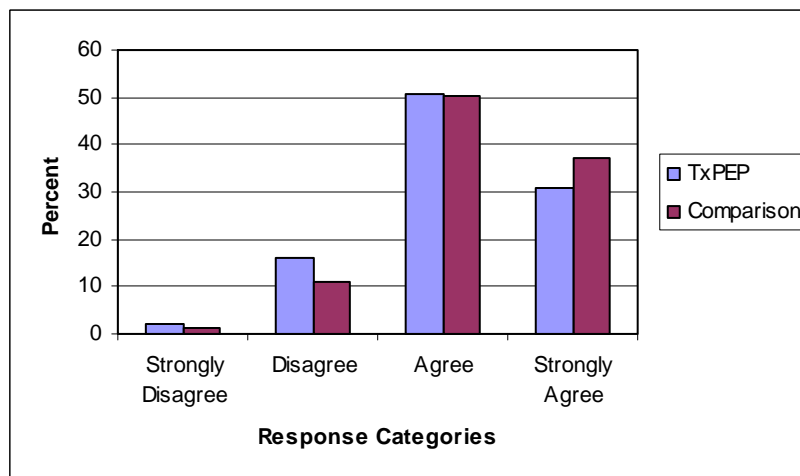
Source: Evaluator analysis of responses to the spring 2008 Principal Leadership Survey.

Principals' Perceptions of Improvements in Student Performance Over the Course of the 2007-08 School Year

As shown in Figure M6, a higher percentage of TxPEP principals compared to comparison principals *agreed* (53% and 51%, respectively) or *strongly agreed* (37% and 31%, respectively) that there were fewer discipline problems at their school during the 2007-08 school year.

Figure M6. There Are Fewer Discipline Problems at My School
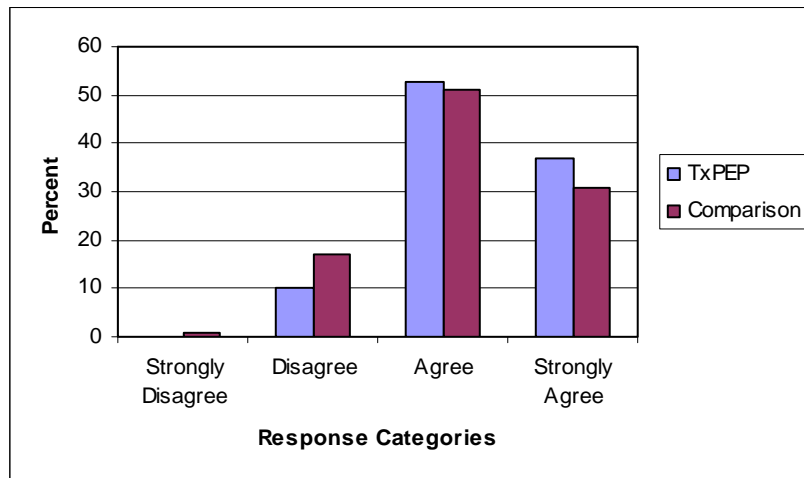
Source: Evaluator analysis of responses to the spring 2008 Principal Leadership Survey.

As shown in Figure M7, a higher percentage of TxPEP principals compared to comparison principals *agreed* (56% and 52%, respectively) or *strongly agreed* (21% and 17%, respectively) that student attendance improved at their school during the 2007-08 school year.

Figure M7. Student Attendance Has Improved for All Students
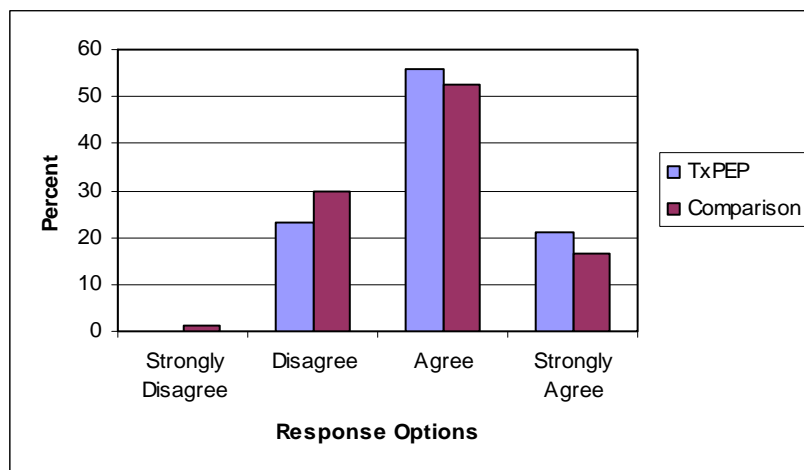
Source: Evaluator analysis of responses to the spring 2008 Principal Leadership Survey.

As shown in Figure M8, a higher percentage of TxPEP principals compared to comparison principals *strongly agreed* that there was greater student engagement during the 2007-08 school year than there had been during the previous school year (36 percent and 30 percent, respectively), whereas a higher percentage of comparison principals compared to TxPEP principals *agreed* with this statement (66 percent and 55 percent, respectively).

Figure M8. There Is Greater Student Engagement at My School
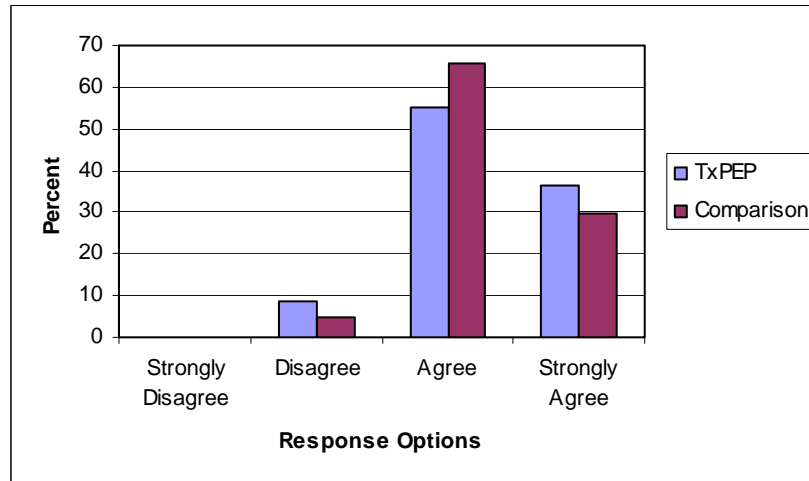
Source: Evaluator analysis of responses to the spring 2008 Principal Leadership Survey.

As shown in Figure M9, a higher percentage of TxPEP principals compared to comparison principals *strongly agreed* that student standardized test scores improved during the 2007-08 school year (40% and 37%, respectively), whereas a higher percentage of comparison principals compared to TxPEP principals *agreed* with this statement (57% and 52%, respectively).

Figure M9. Students' Standardized Test Scores Are Improving
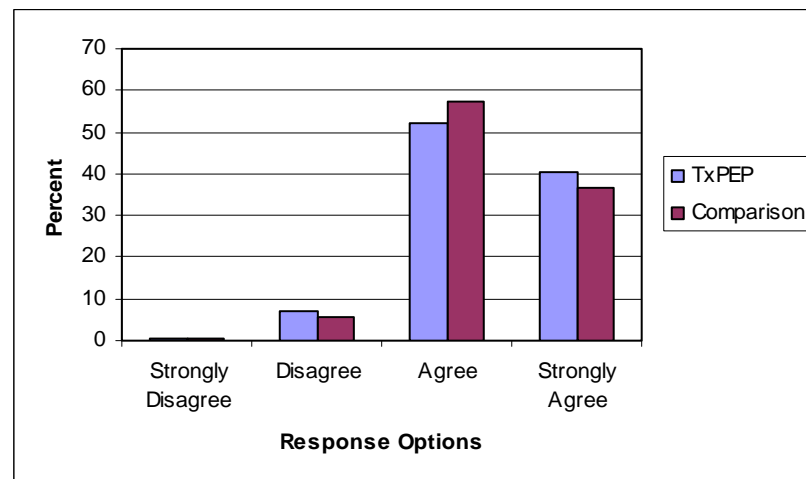
Source: Evaluator analysis of responses to the spring 2008 Principal Leadership Survey.

As shown in Figure M10, a higher percentage of TxPEP principals compared to comparison principals *agreed* that student promotion and graduation rates improved during the 2007-08 (67% and 62%, respectively), whereas the same percentage of TxPEP and comparison principals *strongly agreed* with this statement (26%).

Figure M10. Student Promotion and Graduation Rates Are Improving
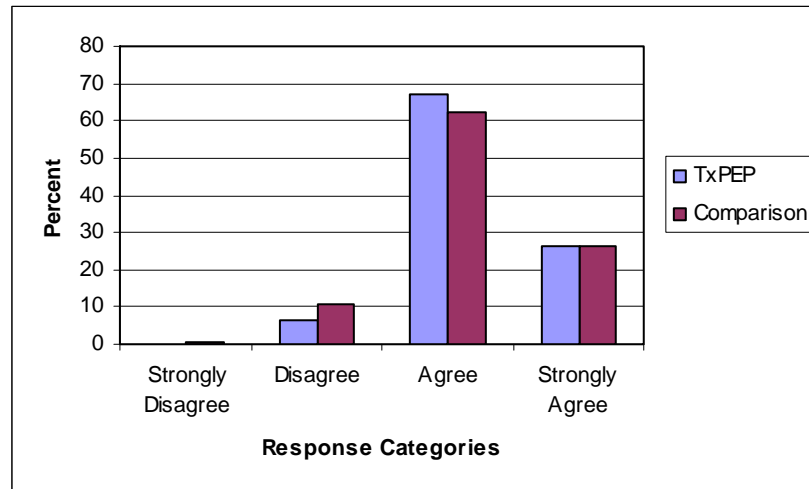
Source: Evaluator analysis of responses to the spring 2008 Principal Leadership Survey.

Appendix N
Descriptive Statistics for the Fall 2007 and Spring 2008 Administrations of the LPI and the 21st Century Principal Assessment

This appendix presents descriptive statistics for the fall 2007 and spring 2008 Leadership Practices Inventory (LPI) and 21st Century Principal Assessment.

Table N1 presents the means, standard deviations, and minimum and maximum values for TxPEP participants' self-ratings on the fall 2007 and spring 2008 administrations of the LPI. Table N2 presents the same descriptive statistics for the average observer ratings for the two administrations of the LPI. Analyses are restricted to TxPEP participants who participated throughout the program ($N = 306$) and completed one or both administrations of the LPI. As both of these tables indicate, there is very little variability in either the self- or observer ratings at either time point. For each leadership practice measured, the average distance of individual ratings from the mean is approximately 1 point or less. There is a small decrease in standard deviations for both self- and observer ratings between the fall 2007 and spring 2008 administrations of the LPI indicating that the ratings become less variable over time, but these differences are slight There is very little change in the average self- or observer ratings between the fall 2007 and spring 2008 administrations of the assessment. The largest difference is an increase of 0.17 in the average self-rating for the Challenge the Process variable (from 7.84 to 8.21), which is a difference of approximately 0.15 standard deviations, a small difference.

Table N1. TxPEP Participants' Self-Ratings on the Fall 2007 and Spring 2008 Administrations of the Leadership Practices Inventory (LPI)

Fall 2007 (Self)	N	Minimum	Maximum	Mean	Standard Deviation
Model the way	293	4.83	10.00	8.30	1.01
Inspire a shared vision	293	3.50	10.00	8.06	1.25
Challenge the process	293	2.17	10.00	7.84	1.22
Enable others to act	293	5.00	10.00	8.56	0.86
Encourage the heart	293	3.50	10.00	8.19	1.26
Spring 2008 (Self)	N	Minimum	Maximum	Mean	Standard Deviation
Model the way	259	4.67	10.00	8.34	0.96
Inspire a shared vision	259	4.17	10.00	8.21	1.10
Challenge the process	259	4.00	10.00	8.01	1.11
Enable others to act	259	4.67	10.00	8.60	0.82
Encourage the heart	259	3.67	10.00	8.09	1.20

Source: Evaluator analysis of TxPEP participants' self-ratings on the fall 2007 and spring 2008 administrations of the LPI.

Table N2. TxPEP Participants' Observer Ratings on the Fall 2007 and Spring 2008 Administrations of the Leadership Practices Inventory (LPI)

Fall 2007 (Observer)	N	Minimum	Maximum	Mean	Standard Deviation
Model the way	286	4.50	9.96	8.60	0.90
Inspire a shared vision	286	4.17	9.94	8.57	0.94
Challenge the process	286	3.92	9.88	8.35	0.93
Enable others to act	286	4.33	9.87	8.77	0.80
Encourage the heart	286	5.00	9.94	8.58	0.96
Spring 2008 (Observer)	**N**	**Minimum**	**Maximum**	**Mean**	**Standard Deviation**
Model the way	259	4.94	9.88	8.58	0.86
Inspire a shared vision	259	5.77	9.88	8.63	0.81
Challenge the process	259	5.31	9.88	8.39	0.82
Enable others to act	259	5.46	9.88	8.77	0.74
Encourage the heart	259	5.13	9.96	8.56	0.90

Source: Evaluator analysis of TxPEP participants' observer ratings on the fall 2007 and spring 2008 administrations of the LPI.
Note: For each participant, ratings were averaged for multiple observers to create a single observer rating; the observer mean is the average of those averages.

Table N3 presents the means, standard deviations, and minimum and maximum values for TxPEP participants' self-ratings on the fall 2007 and spring 2008 administrations of the 21st Century Principal Assessment. Table N4 presents the same descriptive statistics for the averaged observer ratings for the two administrations of the 21st Century Principal Assessment. Analyses are restricted to TxPEP participants who participated throughout the program ($N = 306$) and completed one or both administrations of the 21st Century Principal Assessment.

As was the case with the LPI assessments, there is very little variability in self- or observer ratings at either time point. The standard deviations decrease for some measures but increase for others. For example, there is an increase in the standard deviations for Developing Others and Understanding Strengths and Weaknesses. On the whole, however, there is very little change in the average self- or observer ratings between the fall and spring administrations of the assessment.

Table N3. TxPEP Participants' Self-Ratings on the Fall 2007 and Spring 2008 Administrations of the 21st Century Principal Assessment

Fall 2007 (Self)	N	Minimum	Maximum	Mean	Standard Deviation
Setting instructional direction	272	0.00	5.00	4.06	0.58
Teamwork	272	0.00	5.00	4.28	0.59
Sensitivity	272	0.00	5.00	4.15	0.60
Judgment	272	2.40	5.00	4.08	0.53
Results orientation	272	2.40	5.00	4.14	0.57
Organizational ability	272	2.25	5.00	3.92	0.60
Oral communication	272	1.29	5.00	4.32	0.60
Written communication	272	0.00	5.00	4.09	0.75
Development of others	272	2.17	5.00	3.94	0.64
Understanding strengths/ weaknesses of self	272	1.67	5.00	3.97	0.65
Spring 2008 (Self)	N	Minimum	Maximum	Mean	Standard Deviation
Setting instructional direction	265	2.00	5.00	4.09	.48
Teamwork	265	2.71	5.00	4.26	.51
Sensitivity	265	2.22	5.00	4.10	.55
Judgment	265	0.00	5.00	4.09	.59
Results orientation	265	0.00	5.00	4.11	.57
Organizational ability	265	0.00	5.00	3.98	.59
Oral communication	265	0.00	5.00	4.28	.73
Written communication	265	0.00	5.00	4.24	.76
Development of others	265	0.00	5.00	3.87	.78
Understanding strengths/ weaknesses of self	265	0.00	5.00	4.06	.84

Source: Evaluator analysis of TxPEP participants' self-ratings on the fall 2007 and spring 2008 administrations of the 21st Century Principal Assessment.

**Table N4. TxPEP Participants' Observer Ratings on the
Fall 2007 and Spring 2008 Administrations of the 21st Century
Principal Assessment**

Fall 2007 (Observer)	N	Minimum	Maximum	Mean	Standard Deviation
Setting instructional direction	272	3.11	5.00	4.38	.37
Teamwork	272	3.24	5.00	4.39	.38
Sensitivity	272	2.69	4.98	4.31	.44
Judgment	272	2.70	5.00	4.35	.37
Results orientation	272	2.40	5.00	4.35	.42
Organizational ability	272	2.62	5.00	4.30	.40
Oral communication	272	2.67	5.00	4.46	.41
Written communication	272	3.35	5.00	4.56	.37
Development of others	272	2.67	4.97	4.28	.42
Understanding strengths/ weaknesses of self	272	2.78	5.00	4.42	.38
Spring 2008 (Observer)	N	Minimum	Maximum	Mean	Standard Deviation
Setting instructional direction	265	2.69	5.00	4.37	0.39
Teamwork	265	2.89	5.00	4.35	0.39
Sensitivity	265	2.67	5.00	4.27	0.45
Judgment	265	2.97	5.00	4.37	0.39
Results orientation	265	2.50	5.00	4.35	0.43
Organizational ability	265	2.61	5.00	4.32	0.41
Oral communication	265	3.33	5.00	4.60	0.32
Written communication	265	2.33	5.00	4.60	0.35
Development of others	265	2.75	5.00	4.28	0.40
Understanding strengths/ weaknesses of self	265	2.83	5.00	4.42	0.37

Source: Evaluator analysis of TxPEP participants' observer ratings on the fall 2007 and spring 2008 administrations of the 21st Century Principal Assessment.
Note: For each participant, observer ratings were averaged for multiple observers to create a single observer rating; the observe mean is the average of those averages.

Appendix O
Analysis of Student Achievement Data

This appendix describes the procedures used to analyze TEA student achievement data for TxPEP and comparison schools. Student achievement data were first analyzed to see if there were differences among the TxPEP and comparison schools. If there were differences between TxPEP and comparison schools we could then explore whether or not changes in principals' self-ratings of their principal leadership abilities were related to (or predictive of) differences in student academic achievement.

Analytic Methodology

Student achievement was explored by fitting two years of data with a series of hierarchical linear models (HLMs). All models were either two- or three-level with students nested in schools and schools nested in districts. When the models would not converge with three levels, they were reduced to two-level models. Longitudinal analysis could not be carried out using scale scores because the test scores are not vertically equated. Data were therefore analyzed separately for mathematics and reading for each grade level for which data were available (grades 3–11).

Various student-level characteristics were included in the modeling in order to account for systematic differences among the different groups of students. Variables tested for their contribution to the model included: prior student academic achievement (as measured by test scores from 2006–07), minority status, special education status, limited English proficiency status, and gender. Economically disadvantaged status was not included in the modeling because it was highly correlated with minority status and there were more missing data for the economically disadvantaged variable than for the minority status variable.

Analysis of the 2007-08 achievement data are presented first for reading then for mathematics. Within each grade level there are four tables. The "A" tables present the number of student records analyzed as well as the number of schools from which those records came. The "B" tables present the tests of significance for all variables included in the models. The intercept in these tables represents the average scale score of students in comparison schools. The estimate for the TxPEP variable represents the difference between student scale scores in comparison schools and student scale scores in TxPEP schools. A positive number indicates that students in TxPEP schools have a higher average scale score than students in comparison schools. A negative number indicates that students in TxPEP schools have a lower average scale score than students in comparison schools.

The "C" tables present the 2007-08 model-adjusted means for the TxPEP schools and the comparison schools. These averages reflect average achievement after taking into account the influence of the covariates. The "D" tables present the 2006-07 and 2007-08 unadjusted means for the TxPEP schools and the comparison schools. These averages do not take into account the influence of any of the covariates.

Grade 3 Reading (3-level HLM)

Table O1A. Sample Size for Student Grade 3 Reading Scores: TxPEP and Comparison Schools

N campuses	423
N student records	29588

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O1B. Results of Analysis of Student Grade 3 Reading Scores: TxPEP and Comparison Schools

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2251.34	2.92	421	771.40	<.0001
TxPEP	-33.62	7.48	421	-4.49	<.0001
Limited English proficiency status	-33.84	2.43	29000	-13.93	<.0001
Special education status	-99.43	3.72	29000	-26.69	<.0001
Gender	-22.95	1.99	29000	-11.52	<.0001
Minority status	-80.25	3.23	29000	-24.83	<.0001

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O1C. Least Squares Means for Grade 3 Reading Scores: TxPEP and Comparison Schools

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	2217.72	6.89
Comparison	2251.34	2.92

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

**Table O1D. Unadjusted Means for Grade 3 Reading Scores:
TxPEP and Comparison Schools**

Unadjusted Means				
	Variable	***N***	**Mean**	**Std Dev**
TxPEP	Reading scale score 2007	116	1938.03	99.46
	Reading scale score 2008	3831	2217.68	186.57
Comparison	Reading scale score 2007	575	1974.74	121.89
	Reading scale score 2008	25757	2252.92	183.43

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment
of Knowledge and Skills.

Grade 4 Reading (2-level HLM)

**Table O2A. Sample Size for Student
Grade 4 Reading Scores:
TxPEP and Comparison Schools**

N campuses	415
N student records	17217

Source: Evaluator analysis of student
reading scores for the 2007–08 Texas
Assessment of Knowledge and Skills.

**Table O2B. Results of Analysis of Student
Grade 4 Reading Scores: TxPEP and Comparison Schools**

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2214.83	1.92	413	1156.52	<.0001
Reading scale score 2007	0.63	0.01	17000	105.29	<.0001
TxPEP	-8.54	5.01	413	-1.71	0.09
Limited English proficiency status	-11.22	2.92	17000	-3.85	0.0001
Minority status	-16.07	2.95	17000	-5.45	<.0001
Reading scale score 2007 * TxPEP	0.04	0.02	17000	2.53	0.01
Limited English proficiency status* TxPEP	17.53	8.08	17000	2.17	0.03
Minority status * TxPEP	-24.28	7.74	17000	-3.14	0.0017

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.
Note: An asterisk (*) indicates an interaction term.

Table O2C. Least Squares Means for Grade 4 Reading Scores: TxPEP and Comparison Schools

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	2206.29	4.63
Comparison	2214.83	1.92

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O2D. Unadjusted Means for Grade 4 Reading Scores: TxPEP and Comparison Schools

Unadjusted Means				
	Variable	***N***	**Mean**	**Std Dev**
TxPEP	Reading scale score 2007	2481	2217.79	186.46
	Reading scale score 2008		2183.35	179.85
Comparison	Reading scale score 2007	15487	2261.50	177.27
	Reading scale score 2008		2218.58	168.25

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Grade 5 Reading (3-level HLM)

Table O3A. Sample Size for Student Grade 5 Reading Scores: TxPEP and Comparison Schools

N campuses	415
N student records	18743

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

**Table O3B. Results of Analysis of Student
Grade 5 Reading Scores: TxPEP and Comparison Schools**

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2222.62	2.07	413	1075.04	<.0001
Reading scale score 2007	0.74	0.01	18000	121.14	<.0001
TxPEP	-10.73	5.22	413	-2.06	0.04
Limited English proficiency status	-21.45	3.12	18000	-6.86	<.0001
Special education status	-9.27	5.23	18000	-1.77	0.08
Gender	-4.58	1.90	18000	-2.41	0.02
Minority status	-23.54	2.75	18000	-8.57	<.0001

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

**Table O3C. Least Squares Means for Grade 5 Reading
Scores: TxPEP and Comparison Schools**

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	2211.89	4.79
Comparison	2222.62	2.07

Source: Evaluator analysis of student reading scores for
the 2007–08 Texas Assessment of Knowledge and Skills.

**Table O3D. Unadjusted Means for Grade 5 Reading Scores:
TxPEP and Comparison Schools**

Unadjusted Means				
	Variable	**N**	**Mean**	**Std Dev**
TxPEP	Reading scale score 2007	3051	2160.73	176.63
	Reading scale score 2008		2190.50	193.98
Comparison	Reading scale score 2007	16603	2203.14	170.38
	Reading scale score 2008		2228.22	185.83

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment
of Knowledge and Skills.

Grade 6 Reading (3-Level HLM)

Table O4A. Sample Size for Student Grade 6 Reading Scores: TxPEP and Comparison Schools

N campuses	255
N student records	10621

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O4B. Results of Analysis of Student Grade 6 Reading Scores: TxPEP and Comparison Schools

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2332.33	3.29	253	708.74	<.0001
Reading scale score 2007	0.73	0.01	10000	84.05	<.0001
TxPEP	-20.16	8.53	253	-2.36	0.02
Limited English proficiency status	-34.89	5.28	10000	-6.60	<.0001
Special education status	-17.09	8.18	10000	-2.09	0.04
Gender	-17.42	2.79	10000	-6.24	<.0001
Minority status	-14.78	4.40	10000	-3.36	0.00
Limited English proficiency status * TxPEP	29.45	14.72	10000	2.00	0.05
Minority status * TxPEP	-43.59	11.95	10000	-3.65	0.00

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.
Note: An asterisk (*) indicates an interaction term.

Table O4C. Least Squares Means for Grade 6 Reading Scores: TxPEP and Comparison Schools

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	2312.16	7.87
Comparison	2332.33	3.29

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

**Table O4D. Unadjusted Means for Grade 6 Reading Scores:
TxPEP and Comparison Schools**

Unadjusted Means				
	Variable	*N*	**Mean**	**Std Dev**
TxPEP	Reading scale score 2007	1389	2153.44	183.48
	Reading scale score 2008		2283.84	205.42
Comparison	Reading scale score 2007	9621	2210.00	176.14
	Reading scale score 2008		2338.74	201.13

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Grade 7 Reading (3-level HLM)

**Table O5A. Sample Size for Student
Grade 7 Reading Scores:
TxPEP and Comparison Schools**

N campuses	246
N student records	22722

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

**Table O5B. Results of Analysis of Student
Grade 7 Reading Scores: TxPEP and Comparison Schools**

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2234.30	1.77	244	1263.61	<.0001
Reading scale score 2007	0.55	0.00	22000	132.87	<.0001
TxPEP	-5.21	4.48	244	-1.16	0.25
Limited English proficiency status	-44.30	3.02	22000	-14.69	<.0001
Special education status	-15.46	4.73	22000	-3.27	0.00
Minority status	-25.16	2.39	22000	-10.53	<.0001

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O5C. Least Squares Means for Grade 7 Reading Scores: TxPEP and Comparison Schools

Least Squares Means		
	Estimate	Standard Error
TxPEP	2229.09	4.11
Comparison	2234.30	1.77

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O5D. Unadjusted Means for Grade 7 Reading Scores: TxPEP and Comparison Schools

Unadjusted Means				
	Variable	*N*	Mean	Std Dev
TxPEP	Reading scale score 2007	3658	2267.14	205.54
	Reading scale score 2008		2210.21	172.33
Comparison	Reading scale score 2007	20151	2312.69	204.35
	Reading scale score 2008		2239.76	169.23

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Grade 8 Reading (2-level HLM)

Table O6A. Sample Size for Student Grade 8 Reading Scores: TxPEP and Comparison Schools

N campuses	252
N student records	29780

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O6B. Results of Analysis of Student
Grade 8 Reading Scores: TxPEP and Comparison Schools

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2331.46	1.52	250	1532.54	<.0001
Reading scale score 2007	0.77	0.01	30000	148.11	<.0001
TxPEP	-9.99	3.79	250	-2.63	0.01
Limited English proficiency status	-45.58	3.57	30000	-12.75	<.0001
Special education status	-27.70	4.43	30000	-6.26	<.0001
Gender	-11.03	1.48	30000	-7.43	<.0001
Minority status	-17.509	2.1304	30000	-8.22	<.0001
Limited English proficiency status* TxPEP	15.0043	8.6738	30000	1.73	0.0837

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.
Note: An asterisk (*) indicates an interaction term.

Table O6C. Least Squares Means for Grade 8 Reading
Scores: TxPEP and Comparison Schools

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	2321.47	3.47
Comparison	2331.46	1.52

Source: Evaluator analysis of student reading scores for
the 2007–08 Texas Assessment of Knowledge and Skills.

Tale O6D. Unadjusted Means for Grade 8 Reading Scores:
TxPEP and Comparison Schools

Unadjusted Means				
	Variable	**N**	**Mean**	**Std Dev**
TxPEP	Reading scale score 2007	4592	2191.47	162.18
	Reading scale score 2008		2303.71	184.60
Comparison	Reading scale score 2007	26486	2221.41	158.31
	Reading scale score 2008		2336.16	182.39

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment
of Knowledge and Skills.

Grade 9 Reading (2-level HLM)

Table O7A. Sample Size for Student
Grade 9 Reading Scores:
TxPEP and Comparison Schools

N campuses	241
N student records	13513

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O7B. Results of Analysis of Student
Grade 9 Reading Scores: TxPEP and Comparison Schools

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2204.54	2.56	239	862.22	<.0001
Reading scale score 2007	0.57	0.01	13000	92.15	<.0001
TxPEP	-15.25	5.50	239	-2.78	0.01
Limited English proficiency status	-48.61	3.73	13000	-13.05	<.0001
Special education status	-32.99	5.77	13000	-5.71	<.0001
Gender	-13.28	2.04	13000	-6.53	<.0001
Minority status	-28.4699	3.1821	13000	-8.95	<.0001

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O7C. Least Squares Means for Grade 9 Reading
Scores: TxPEP and Comparison Schools

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	2189.28	4.87
Comparison	2204.54	2.56

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O7D. Unadjusted Means for Grade 9 Reading Scores:
TxPEP and Comparison Schools

Unadjusted Means				
	Variable	*N*	**Mean**	**Std Dev**
TxPEP	Reading scale score 2007	2543	2198.14	190.03
	Reading scale score 2008		2187.74	161.42
Comparison	Reading scale score 2007	12061	2205.33	186.63
	Reading scale score 2008		2206.38	170.42

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Grade 10 Reading (2-level HLM)

Table O8A. Sample Size for Student
Grade 10 Reading Scores:
TxPEP and Comparison Schools

N campuses	249
N student records	37883

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O8B. Results of Analysis of Student
Grade 10 Reading Scores: TxPEP and Comparison Schools

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2245.02	2.05	247	1096.07	<.0001
Reading scale score 2007	0.45	0.00	38000	124.54	<.0001
TxPEP	-2.48	4.24	247	-0.58	0.56
Limited English proficiency status	-54.24	2.23	38000	-24.37	<.0001
Special education status	-46.59	2.96	38000	-15.77	<.0001
Gender	-17.72	1.01	38000	-17.61	<.0001
Minority status	-24.866	1.4963	38000	-16.62	<.0001
Special education status * TxPEP	14.4152	6.9719	38000	2.07	0.0387
Minority status * TxPEP	7.4838	3.7853	38000	1.98	0.048

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.
Note: An asterisk (*) indicates an interaction term.

Table O8C. Least Squares Means for Grade 10 Reading Scores: TxPEP and Comparison Schools

Least Squares Means		
	Estimate	Standard Error
TxPEP	2242.55	3.72
Comparison	2245.02	2.05

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O8D. Unadjusted Means for Grade 10 Reading Scores: TxPEP and Comparison Schools

Unadjusted Means				
	Variable	*N*	Mean	Std Dev
TxPEP	Reading scale score 2007	6455	2210.43	157.84
	Reading scale score 2008		2233.68	127.44
Comparison	Reading scale score 2007	32864	2237.76	161.08
	Reading scale score 2008		2251.40	132.86

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Grade 11 Reading (3-level HLM)

Table O9A. Sample Size for Student Grade 11 Reading Scores: TxPEP and Comparison Schools

N campuses	245
N student records	34984

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

**Table O9B. Results of Analysis of Student
Grade 11 Reading Scores: TxPEP and Comparison Schools**

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2271.48	1.43	243	1587.63	<.0001
Reading scale score 2007	0.71	0.00	35000	163.39	<.0001
TxPEP	-1.27	3.01	243	-0.42	0.67
Limited English proficiency status	-46.50	2.44	35000	-19.05	<.0001
Special education status	-41.12	2.71	35000	-15.18	<.0001
Gender	1.86	0.94	35000	1.99	0.05
Minority status	-25.6409	1.214	35000	-21.12	<.0001

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment of Knowledge and Skills.

**Table O9C. Least Squares Means for Grade 11 Reading
Scores: TxPEP and Comparison Schools**

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	2270.21	2.66
Comparison	2271.48	1.43

Source: Evaluator analysis of student reading scores for
the 2007–08 Texas Assessment of Knowledge and Skills.

**Table O9D. Unadjusted Means for Grade 11 Reading Scores:
TxPEP and Comparison Schools**

Unadjusted Means				
	Variable	**N**	**Mean**	**Std Dev**
TxPEP	Reading scale score 2007	5628	2210.98	120.18
	Reading scale score 2008	5628	2252.21	128.45
Comparison	Reading scale score 2007	30238	2240.81	123.43
	Reading scale score 2008	30238	2278.07	131.39

Source: Evaluator analysis of student reading scores for the 2007–08 Texas Assessment
of Knowledge and Skills.

Grade 3 Mathematics (3-level HLM)

Table O10A. Sample Size for Student Grade 3 Mathematics Scores: TxPEP and Comparison Schools

N campuses	423
N student records	29185

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O10B. Results of Analysis of Student Grade 3 Mathematics Scores: TxPEP and Comparison Schools

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2225.98	3.59	421	619.38	<.0001
TxPEP	-50.34	9.18	421	-5.49	<.0001
Limited English proficiency status	7.23	2.82	29000	2.56	0.01
Special education status	-99.97	4.10	29000	-24.39	<.0001
Gender	13.13	2.19	29000	5.99	<.0001
Minority status	-70.37	3.58	29000	-19.64	<.0001
Limited English proficiency status * TxPEP	3.315	8.5726	29000	0.39	0.699

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.
Note: An asterisk (*) indicates an interaction term.

Table O10C. Least Squares Means for Grade 3 Mathematics Scores: TxPEP and Comparison Schools

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	2175.64	8.44
Comparison	2225.98	3.59

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

**Table O10D. Unadjusted Means for Grade 3 Mathematics Scores:
TxPEP and Comparison Schools**

Unadjusted Means				
	Variable	***N***	**Mean**	**Std Dev**
TxPEP	Mathematics scale score 2007	117	1937.68	99.10
	Mathematics scale score 2008	3760	2218.50	186.76
Comparison	Mathematics scale score 2007	576	1974.32	121.83
	Mathematics scale score 2008	25323	2253.66	183.26

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas
Assessment of Knowledge and Skills.

Grade 4 Mathematics (3-level HLM)

**Table O11A. Sample Size for Student
Grade 4 Mathematics Scores:
TxPEP and Comparison Schools**

N campuses	415
N student records	17763

Source: Evaluator analysis of student
mathematics scores for the 2007–08
Texas Assessment of Knowledge and
Skills.

**Table O11B. Results of Analysis of Student
Grade 4 Mathematics Scores: TxPEP and Comparison Schools**

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2238.54	2.99	413	748.36	<.0001
Mathematics scale score 2007	0.69	0.01	17000	117.48	<.0001
TxPEP	-10.27	7.63	413	-1.35	0.18
Limited English proficiency status	-5.07	2.81	17000	-1.80	0.0715
Special education status	0.37	4.86	17000	0.08	0.94
Gender	8.83	1.94	17000	4.55	<.0001
Minority status	-13.8511	3.2502	17000	-4.26	<.0001
Mathematics scale score 2007 * TxPEP	0.02921	0.01558	17000	1.88	0.0608
Special education status * TxPEP	-42.9724	13.5626	17000	-3.17	0.0015
Minority * TxPEP	-10.6417	8.4232	17000	-1.26	0.2065

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and
Skills.
Note: An asterisk (*) indicates an interaction term.

Table O11C. Least Squares Means for Grade 4 Mathematics Scores: TxPEP and Comparison Schools

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	2228.25	7.02
Comparison	2238.54	2.99

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O11D. Unadjusted Means for Grade 4 Mathematics Scores: TxPEP and Comparison Schools

Unadjusted Means				
	Variable	**N**	**Mean**	**Std Dev**
TxPEP	Mathematics scale score 2007	2619	2162.33	192.22
	Mathematics scale score 2008		2200.43	198.39
Comparison	Mathematics scale score 2007	16157	2218.28	191.72
	Mathematics scale score 2008		2244.57	189.52

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Grade 5 Mathematics (3-level HLM)

Table O12A. Sample Size for Student Grade 5 Mathematics Scores: TxPEP and Comparison Schools

N campuses	415
N student records	19060

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O12B. Results of Analysis of Student
Grade 5 Mathematics Scores: TxPEP and Comparison Schools

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2279.05	2.96	413	768.78	<.0001
Mathematics scale score 2007	0.86	0.01	19000	142.21	<.0001
TxPEP	-9.16	7.44	413	-1.23	0.22
Limited English proficiency status	-20.49	3.70	19000	-5.54	<.0001
Special education status	-17.41	5.54	19000	-3.14	0.00
Minority status	0.37	3.50	19000	0.11	0.92
Limited English proficiency status * TxPEP	17.9649	9.1459	19000	1.96	0.0495
Minority status * TxPEP	-22.4846	8.8108	19000	-2.55	0.0107

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Note: An asterisk (*) indicates an interaction term.

Table O12C. Least Squares Means for Grade 5
Mathematics Scores: TxPEP and Comparison Schools

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	2269.90	6.83
Comparison	2279.05	2.96

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O12D. Unadjusted Means for Grade 5 Mathematics Scores:
TxPEP and Comparison Schools

Unadjusted Means				
	Variable	**N**	**Mean**	**Std Dev**
TxPEP	Mathematics scale score 2007	3080	2183.14	193.80
	Mathematics scale score 2008		2237.46	226.31
Comparison	Mathematics scale score 2007	16906	2226.99	194.49
	Mathematics scale score 2008		2284.07	228.24

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Grade 6 Mathematics (3-level HLM)

Table O13A. Sample Size for Student Grade 6 Mathematics Scores: TxPEP and Comparison Schools

N campuses	252
N student records	10743

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O13B. Results of Analysis of Student Grade 6 Mathematics Scores: TxPEP and Comparison Schools

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2278.91	5.21	250	437.17	<.0001
Mathematics scale score 2007	0.74	0.01	10000	105.61	<.0001
TxPEP	-24.28	13.20	250	-1.84	0.07
Limited English proficiency status	-13.76	4.99	10000	-2.76	0.0058
Special education status	-26.00	7.82	10000	-3.33	0.00
Minority status	-13.86	4.72	10000	-2.93	0.00
Minority status * TxPEP	-26.098	12.8697	10000	-2.03	0.0426

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.
Note: An asterisk (*) indicates an interaction term.

Table O13C. Least Squares Means for Grade 6 Mathematics Scores: TxPEP and Comparison Schools

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	2254.63	12.13
Comparison	2278.91	5.21

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O13D. Unadjusted Means for Grade 6 Mathematics Scores: TxPEP and Comparison Schools

Unadjusted Means				
	Variable	**N**	**Mean**	**Std Dev**
TxPEP	Mathematics 2007 scale score	1395	2193.07	227.24
	Mathematics 2008 scale score		2211.58	233.13
Comparison	Mathematics 2007 scale score	9817	2271.44	225.44
	Mathematics 2008 scale score		2284.13	235.90

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Grade7 Mathematics (3-level HLM)

Table O14A. Sample Size for Student Grade 7 Mathematics Scores: TxPEP and Comparison Schools

N campuses	246
N student records	22877

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O14B. Results of Analysis of Student Grade 7 Mathematics Scores: TxPEP and Comparison Schools

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2187.95	2.75	244	795.96	<.0001
Mathematics scale score 2007	0.55	0.00	23000	181.03	<.0001
TxPEP	-4.04	6.93	244	-0.58	0.56
Limited English proficiency status	-15.46	2.43	23000	-6.35	<.0001
Special education status	-14.22	3.59	23000	-3.96	<.0001
Minority status	-18.14	2.10	23000	-8.65	<.0001

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O14C. Least Squares Means for Grade 7 Mathematics Scores: TxPEP and Comparison Schools

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	2183.91	6.36
Comparison	2187.95	2.75

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O14D. Unadjusted Means for Grade 7 Mathematics Scores: TxPEP and Comparison Schools

Unadjusted Means				
	Variable	**N**	**Mean**	**Std Dev**
TxPEP	Mathematics scale score 2007	3690	2173.04	232.58
	Mathematics scale score 2008		2158.50	164.40
Comparison	Mathematics scale score 2007	20277	2232.02	231.51
	Mathematics scale score 2008		2196.92	167.11

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Grade 8 Mathematics (3-level HLM)

Table O15A. Sample Size for Student Grade 8 Mathematics Scores: TxPEP and Comparison Schools

N campuses	251
N student records	29673

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

**Table O15B. Results of Analysis of Student
Grade 8 Mathematics Scores: TxPEP and Comparison Schools**

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2201.38	2.54	249	865.63	<.0001
Mathematics scale score 2007	0.88	0.00	29000	193.34	<.0001
TxPEP	7.21	6.25	249	1.15	0.25
Limited English proficiency status	-10.66	2.70	29000	-3.94	<.0001
Special education status	-1.92	4.09	29000	-0.47	0.64
Gender	10.88	1.26	29000	8.65	<.0001
Minority status	-22.7047	1.9024	29000	-11.93	<.0001
Mathematics scale score 2007 * TxPEP	0.02018	0.01193	29000	1.69	0.0906
Special education status * TxPEP	-14.6508	9.8445	29000	-1.49	0.1367

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.
Note: An asterisk (*) indicates an interaction term.

**Table O15C. Least Squares Means for Grade 8 Mathematics
Scores: TxPEP and Comparison Schools**

Least Squares Means		
	Estimate	**Standard Error**
TxPEP	2208.60	5.71
Comparison	2201.38	2.54

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

**Table O15D. Unadjusted Means for Grade 8 Mathematics Scores:
TxPEP and Comparison Schools**

Unadjusted Means				
	Variable	*N*	**Mean**	**Std Dev**
TxPEP	Mathematics scale score 2007	4579	2149.84	160.26
	Mathematics scale score 2008		2184.37	183.65
Comparison	Mathematics scale score 2007	26366	2186.92	162.38
	Mathematics scale score 2008		2210.26	182.87

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Grade 9 Mathematics (3 level)

Table O16A. Sample Size for Student Grade 9 Mathematics Scores: TxPEP and Comparison Schools

N campuses	240
N student records	13089

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O16B. Results of Analysis of Student Grade 9 Mathematics Scores: TxPEP and Comparison Schools

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2083.35	3.36	238	619.28	<.0001
Mathematics scale score 2007	0.89	0.01	13000	130.58	<.0001
TxPEP	1.60	7.14	238	0.22	0.82
Limited English proficiency status	-24.61	4.31	13000	-5.70	<.0001
Special education status	-28.42	6.64	13000	-4.28	<.0001
Gender	8.46	2.48	13000	3.42	0.00
Minority status	-29.9149	3.5789	13000	-8.36	<.0001
Limited English proficiency status * TxPEP	17.4876	10.5087	13000	1.66	0.0961
Gender * TxPEP	-9.0739	5.8769	13000	-1.54	0.1226

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.
Note: An asterisk (*) indicates an interaction term.

Table O16C. Least Squares Means for Grade 9 Mathematics Scores: TxPEP and Comparison Schools

Least Square Means		
	Estimate	**Standard Error**
TxPEP	2084.95	6.31
Comparison	2083.35	3.36

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O16D. Unadjusted Means for Grade 9 Mathematics Scores: TxPEP and Comparison Schools

Unadjusted Means					
	Variable	*N*	**Mean**	**Std Dev**
TxPEP	Mathematics scale score 2007	2471	2074.36	177.26
	Mathematics scale score 2008		2074.51	203.88
Comparison	Mathematics scale score 2007	11682	2081.05	183.24
	Mathematics scale score 2008		2082.12	214.66

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Grade 10 Mathematics (3 level)

Table O17A. Sample Size for Student Grade 10 Mathematics Scores: TxPEP and Comparison Schools

N campuses	250
N student records	37498

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O17B. Results of Analysis of Student Grade 10 Mathematics Scores: TxPEP and Comparison Schools

Solution for Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept (comparison schools)	2149.88	1.66	248	1294.58	<.0001
Mathematics scale score 2007	0.71	0.00	37000	259.84	<.0001
TxPEP	6.34	3.46	248	1.83	0.07
Limited English proficiency status	-7.55	2.46	37000	-3.07	0.0021
Special education status	-3.21	3.21	37000	-1.00	0.32
Minority status	-9.30	1.41	37000	-6.61	<.0001
Limited English proficiency status * TxPEP	-14.1412	5.3237	37000	-2.66	0.0079
Special education status * TxPEP	17.1657	7.662	37000	2.24	0.0251

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.
Note: An asterisk (*) indicates an interaction term.

**Table O17C. Least Squares Means for Grade 10 Mathematics
Scores: TxPEP and Comparison Schools**

Least Squares Means		
	Estimate	Standard Error
TxPEP	2156.21	3.04
Comparison	2149.88	1.66

Source: Evaluator analysis of student mathematics scores
for the 2007–08 Texas Assessment of Knowledge and
Skills.

**Table O17D. Unadjusted Means for Grade 10 Mathematics Scores:
TxPEP and Comparison Schools**

Unadjusted Means				
	Variable	*N*	Mean	Std Dev
TxPEP	Mathematics scale score 2007	6417	2106.37	193.14
	Mathematics scale score 2008		2123.37	172.01
Comparison	Mathematics scale score 2007	32553	2157.66	215.37
	Mathematics scale score 2008		2156.66	185.78

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas
Assessment of Knowledge and Skills.

Grade 11 Mathematics (3 level)

**Table O18A. Sample Size for Student
Grade 11 Mathematics Scores:
TxPEP and Comparison Schools**

N campuses	244
N student records	34575

Source: Evaluator analysis of student
mathematics scores for the 2007–08
Texas Assessment of Knowledge and
Skills.

Table O18B. Results of Analysis of Student
Grade 11 Mathematics Scores: TxPEP and Comparison Schools

Solution for Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept (comparison schools)	2233.81	2.10	242	1063.90	<.0001
Mathematics scale score 2007	0.85	0.00	34000	254.82	<.0001
TxPEP	7.69	4.37	242	1.76	0.08
Limited English proficiency status	-11.00	2.72	34000	-4.05	<.0001
Special education status	-31.69	3.39	34000	-9.35	<.0001
Gender	3.02	1.07	34000	2.82	0.00
Minority status	-12.9063	1.4267	34000	-9.05	<.0001

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O18C. Least Squares Means for Grade 11 Mathematics
Scores: TxPEP and Comparison Schools

Least Squares Means		
	Estimate	Standard Error
TxPEP	2241.50	3.83
Comparison	2233.81	2.10

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.

Table O18D. Unadjusted Means for Grade 11 Mathematics Scores:
TxPEP and Comparison Schools

Unadjusted Means					
	Variable	*N*	Mean	Std Dev
TxPEP	Mathematics scale score 2007	5543	2120.24	166.90
	Mathematics scale score 2008		2207.88	175.60
Comparison	Mathematics scale score 2007	29973	2169.07	179.50
	Mathematics scale score 2008		2242.67	186.74

Source: Evaluator analysis of student mathematics scores for the 2007–08 Texas Assessment of Knowledge and Skills.