Rider 42 Professional Development Research Study

Presented to the Texas Education Agency
January 2011

Rider 42 Professional Development Research Study

January 2011

Prepared for:
Texas Education Agency

Prepared by:

University of Texas at Dallas – Education Research Center

Gibson Consulting Group, Inc.

Learning Point Associates, an affiliate of American Institutes for Research

Acknowledgments

A unique aspect of this study has been the ongoing collaboration among the research team and multiple TEA staff. The research team would particularly like to acknowledge the contributions of Drs. Jennifer Broussard, David Goodman and Eishi Adachi of the Evaluation, Analyses and Planning Division for their project management support, including but not limited to weekly team meetings to ensure that projects needs were met, interfacing with school districts and regional services on data collection issues, interfacing with TEA program directors to ensure that the research team was up to date with program implementation decisions and review and feedback on data collection instruments and reports. The research team also acknowledges the time and effort that TEA staff responsible for the implementation of the PD Academies provided to ensure that the team had a full understanding of the goals, objectives, timelines and characteristics of each of the Academies. These staff include Anita Givens and Kerry Ballast from the Standards and Programs Division, Norma Torres-Martinez from the Standards and Alignment Division, and Stacy Avery and Laura Gaines from the State Initiatives Division. Finally, the team acknowledges the efforts of Patricia Sullivan from the Data Development, Analysis and Research Division and Nina Taylor from the Information Analyses Division for their assistance with data management, ensuring that the team receive the multiple data needed for this project in a timely and secure manner. We look forward to the continued collaboration with these and other agency staff to provide a high quality evaluation that can inform policy and practice for Texas schools.

Contributing Authors

University of Texas at Dallas – Education Research Center
Anne Ware, PhD
Jason LaTurner, PhD
Angelica Ware Herrera, PhD
Marshall Garland

Gibson Consulting Group, Inc.
Joseph Shields
Amie Rapaport, PhD
Cheyanne Rolf
Christi Kirshbaum
Elissa Yeates

Learning Point Associates, an affiliate of American Institutes for Research
Trisha Hinojosa, PhD
Julia Marchand
Briana Kleidon

ICF International
Thomas Horwood
Shauna Clarke
Antonio Marchesi, PhD
Jessica Zumdahl
Diane Boyd, PhD
Carol Hawk, PhD

The conclusions of this research do not necessarily reflect the opinions or official position of the Texas Education Agency, the Texas Higher Education Coordinating Board, or the State of Texas.

Table of Contents

Executive Summary

The purpose of the first interim report is to present findings related to the first research objective of the Rider 42 Professional Development Research Study (PDRS): "Assess the content of, delivery of, and participation in face-to-face PD Academies." The report first provides an overview of the legislative and program history of the Student Success Initiative (SSI) as the context in which Rider 42 Professional Development (PD) Academies were developed. The report continues with a description of the research, a presentation of the key findings of the study, and recommendations based on the findings. To provide additional formative feedback for program staff, the report also presents more detailed findings related to each research question. Finally, the report describes the next steps in the execution of the comprehensive evaluation of the Rider 42 PD Academies.

Background

History of the Student Success Initiative

The Rider 42 PD Academies are the latest in a series of steps by the Texas Legislature to focus efforts (both in dollars and in programming) to better support districts in educating students and ensuring they meet standards of proficiency in English language arts, mathematics, and science. Large portions of funding dollars from the Texas Education Agency (TEA) have recently been focused on the creation and implementation of PD Academies under the umbrella of the SSI, originally launched in 1999 with Senate Bill 4, during the 76th Legislative Session. The majority of the earlier SSI programming and funding were targeted to districts through the Accelerated Reading/Math Instruction grant programs (ARI/AMI). The purpose of those grants was to provide districts with additional financial resources to provide immediate, targeted instruction to students who demonstrated difficulty in reading and/or math. Later, the Intensive Reading Instruction (IRI) and Intensive Mathematics Instruction (IMI) grants were created under the SSI to provide further support for student achievement in campuses that had failed to improve students' Texas Assessment of Knowledge and Skills (TAKS) reading and math scores.

Since these initial student-focused efforts, the SSI has shifted to focus on statewide teacher professional development programs. This began in 2007 when the 80th Texas Legislature passed HB 2237 and created the Texas Adolescent Literacy Academies (TALA) under the SSI umbrella. In 2009, the 81st Texas Legislature, through Rider 42, appropriated nearly $152 million for the SSI with a particular emphasis on professional development for middle school and high school teachers. Rider 42 provided for the development, implementation, and evaluation (the study described here, PDRS) of the Rider 42 PD Academies and an online platform, Project Share, that extends teacher professional development opportunities. Rider 42 also provided for the Algebra Readiness Grant program.

Rider 42 PD Academies

The Rider 42 PD Academies developed by TEA in spring 2010 and implemented in summer 2010 included the MSTAR Math Academy for Grades 5-6, the MSTAR Math Academy for Grades 7-8, the Algebra I End-of-Course (EOC) Success Academy, the Science Academy for Grades 5-8, the Science Texas Essential

Knowledge and Skills (TEKS) Overview K-12 Academy, the Biology EOC Success Academy, and the English I and II EOC Success Academy. These Academies were designed to provide teachers with in-depth training in mathematics, English language arts, and science, with a particular emphasis on:

- Data-driven instructional planning.
- Alignment of instruction to the TEKS.
- Interventions for struggling students, namely Response to Intervention (RtI).
- Research-based strategies to improve the academic language skills of English language learners, the Texas English Language Proficiency Standards (ELPS).
- The new high school EOC assessments (beginning in 2011-12).
- Integration of the Texas College and Career Readiness Standards (CCRS).
- Introduction to Project Share, an online environment for future professional development opportunities.

Algebra Readiness Grant Program

Rider 42 also provides for the Algebra Readiness grant program for a subset of campuses in eligible Texas school districts and charter schools. This program is designed to deliver a more intensive professional development and support program to middle schools with a history of low, but improving, student math achievement. Funding is to be used for specific activities including but not limited to extended learning time for math, instructional coaching, and common planning time. As part of this grant program, math teachers in these schools are required to participate in face-to-face and online Rider 42 PD Academies, including the Algebra I EOC Success Academy, and the MSTAR Math Academy for Grades 5-6 or MSTAR Math Academy for Grades 7-8.

Project Share

In coordination with the development of the PD Academies, TEA has partnered with Epsilen (an e-learning platform) and the New York Times Knowledge Network to develop and implement Project Share. Project Share is a collection of Web 2.0 tools and applications that deliver ongoing PD courses and facilitate online professional learning communities for teachers across Texas. Teachers can also access digital content repositories (e.g., the *New York Times*, PBS Digital Learning Library, Smithsonian Education, etc.) that include articles, videos, images, podcasts and other interactive features as well as state-adopted instructional materials.

The Rider 42 PD Research Study

Background of the Study

The PDRS is being conducted by the University of Texas at Dallas Education Research Center (UTD-ERC) under contract with TEA. In response to the legislative guidance, the contract requires that the evaluation:

1. Determine the degree to which each PD Academy is translated into classroom practice.
2. Determine the most effective method for supporting each PD during the school year.
3. Provide constructive feedback to improve the quality and effectiveness of each PD.
4. Determine the effectiveness of each PD to positively affect student achievement outcomes.

To meet these requirements, the UTD-ERC, through a competitive process, partnered with Gibson Consulting Group, Inc. (Gibson), and Gibson's research partners ICF International and American Institutes for Research, to plan and execute the study.

The PDRS is a comprehensive formative and summative evaluation of seven PD Academies developed by TEA under Rider 42. The formative component of the evaluation describes the development and implementation of each Academy in terms of quality and fidelity. The summative component seeks to determine the effectiveness of each PD in terms of positively impacting teacher practices and student achievement. Additionally, the evaluation seeks to identify district and campus supports, including those funded by the Algebra Readiness Grant program, which may contribute to positive changes in teacher practices and student outcomes.

This evaluation is being conducted in three phases. Phase I of the evaluation began in February 2010 and concluded with the development of a comprehensive evaluation plan in May 2010. Phases II and III involve execution of the project plan, with Phase II beginning in April 2010 and concluding at the end of August 2011 with a report on the impact of the fiscal year 2010 PD Academies on changes in teacher instructional practices and on student achievement results. Contingent upon additional funding, Phase III will begin in September 2011 and continue through August 2013.

Research Objectives and Questions

In order to measure the impact of the PD on teacher practices and student achievement, the evaluation team proposed a research design that includes five research objectives:

1) Objective 1: Assess the content of, delivery of, and participation in face-to-face PD Academies.
2) Objective 2: Assess the content of, delivery of, and participation in online PD through Project Share.
3) Objective 3: Assess the impact of PD on teacher knowledge, changes in instructional practices, and changes in collaborative behavior.
4) Objective 4: Determine the impact of PD received on student achievement outcomes.
5) Objective 5: Determine the impact of district and campus supports on teacher knowledge, changes in instructional practices, changes in collaborative behavior, and ultimately student achievement outcomes.

The current interim report focuses only on Objective 1, specifically addressing the quality of PD delivered to regional trainers at training-of-trainers (TOTs) sessions, the quality and fidelity of training

that was turned around and delivered to teachers, teacher participation levels, and the extent to which district and campus supports impacted teacher participation rates in face-to-face PD. Ten specific research questions are addressed in Objective 1:

1A. What types of content and activities were included as part of each level of training (i.e., training of state and regional trainers, as well as training of teachers)?

1B. To what extent does the content of each Academy reflect best practices for teacher professional development?

1C. To what extent does the content of each Academy reflect best practices for instruction in respective subject areas?

1D. To what extent is the content of each Academy aligned with national and state standards in respective subject areas?

1E. What is the quality of the training provided to the regional trainers?

1F. What are the professional characteristics of the regional trainers?

1G. In what ways, and to what extent, was each Academy promoted to teachers across Texas?

1H. What is the quality of the training provided to teachers?

1I. To what extent is the PD training implemented with fidelity to teachers across the regional education service centers?

1J. What are the professional characteristics of the teachers who participated in face-to-face training?

Data Sources and Methods of Data Collection

The data sources and methods necessary for answering Objective 1 research questions include:

A. **Meetings with TEA program staff and PD developers and implementers**: Information collected through interviews with TEA program staff, PD developers, and PD implementers provided the team with critical information that helped to tailor the evaluation plan to fit the specific contexts of each individual Academy.

B. **Document review and analysis:** The research team reviewed pertinent documents to gain a more thorough understanding of the various elements of the development and implementation of each Academy.

C. **Expert reviews of training materials:** Three panels of nationally recognized experts (one for each academic content area covered by the summer 2010 Rider 42 PD Academies) reviewed the PD Academy curriculum materials to provide an external assessment of the quality of the PD. The experts used the National Staff Development Council (NSDC) Standards[1] to assess how the

[1] For more information regarding the NSDC Standards used for this project, see http://www.learningforward.org/standards/index.cfm

various Academies aligned with best practices in terms of content, context and process standards for PD. The experts' feedback was analyzed and synthesized into brief points about each set of materials for each Academy highlighting those components that were considered to be in strong, moderate or weak alignment with national standards for professional development and national and state standards for instruction.

D. **Observations of state-level meetings:** At least one member of the evaluation team attended each of the state trainings that were held by PD content developers with representatives from education service centers (ESCs) to refine the PD content and help them better understand the purpose and design of each Academy.

E. **Observations of regional TOTs:** Members of the evaluation team observed at least one the regional TOT session for each Academy to collect qualitative and quantitative data about the content and delivery of TOT sessions.

F. **Observations of teacher professional development:** Members of the evaluation team observed the training delivered by the regional trainers to PD participants in a subsample of 29 PD sessions across Texas. Individual observation protocols were customized for each Academy to measure the fidelity of how training was delivered to classroom teachers. The protocols also included items that were common across all Academies including training delivery, interactions of the presenters and participants, and training climate. Ratings (on a scale of 1 to 4) were assigned in each of four domains: training fidelity, training delivery, interactions between presenters and participants, and training climate. In addition, observers assigned an overall capsule rating on a scale of 1 to 5 where 1 means "ineffective PD" and 5 reflects "exemplary PD."

G. **Collection of participant data and information:** Each ESC submitted attendance records of the TOT trainer participants and the participants at each of the summer 2010 trainings. Additional teacher demographic data were obtained from ERC databases. The TOT data were used to calculate the number of sessions conducted within each Academy and the proportion of trained trainers who turned around training to teachers. The PD participant data were used to describe the characteristics of the teachers who attended the Academies and the extent to which they are representative of teachers across the state.

H. **Survey of ESC administrators:** The ESC Administrator Survey collected information about the different ways in which ESCs across the state marketed and advertised the Academies to teachers, as well as the nature and extent of TEA's and ESCs' involvement in the implementation of the Academies.

I. **Survey of regional trainers:** The regional trainers responded to questions about the quality of the TOT sessions as well as their preparedness and actual experience delivering the training to teachers. Data from survey items that addressed the same topic were combined to create summary scores.

J. **Survey of professional development participants:** PD participants responded to questions about the quality and effectiveness of the PD Academies, the utility of Project Share and the anticipated changes in teacher knowledge and classroom practices. As with the regional trainer survey, data from similar items were combined to create summary scores.

Preliminary Findings

Rider 42 PD Academy Content

Research Question 1A: What types of content and activities were included as part of each level of training (i.e., training of state and regional trainers, as well as training of teachers)?

The format of the PD materials was standard across all Academies in that detailed presenter guides, participant guides, and PowerPoint presentations were provided for trainers and participants. Unique to each Academy was a specific focus on particular content and concepts. For example, the materials for the two MSTAR Math Academies (Grades 5-6 and Grades 7-8) and for the Algebra I EOC Success Academy included learner profiles that highlighted common student mistakes as well as activities to encourage participant discussions about instructional practices. The Math Academies also contained content designed to improve teachers' depth of understanding of particular mathematical concepts with a focus on fractions and ratios for the MSTAR Math for Grades 5-6 Academy, a focus on proportions and percentages for the MSTAR Math for Grades 7-8 Academy and a focus on functions (linear), equations, and inequalities for the Algebra I EOC Success Academy. Both MSTAR Academies provided instruction for teachers on how to administer the MSTAR Universal Screener to their students and all Math Academies provide an overview of the Project Share website.

The Science Academy materials included an emphasis on improving teacher participants' understanding of the new science TEKS and how this understanding could be integrated into teachers' classroom practice. Activities encouraged participant discussion and thinking about ELPS, CCRS, and RtI strategies when developing and implementing science lessons. The Science Academies for Grades 5-8 and the Biology EOC Success Academy included sample lessons that participants went through during the training. Participants were able to look at content and standards from both a teacher and student perspective.

The focus of the English Language Arts (ELA) Academy varied considerably compared to the other Academies. The ELA Academy was designed to provide an overview of the English I and II EOCs, to explain the connections between the EOCs and tools (support frameworks and standards, including TEKS, CCRS, and ELPS) that are available to teachers to help students succeed, and to orient participants in upcoming PD courses that will be available through Project Share.

Research Question 1B: To what extent does the content of each Academy reflect best practices for teacher professional development?

Math Academies

The panel of math experts indicated a strong alignment of the materials across the three math Academies to the "quality teaching," "collaboration," and "learning" standards for staff development (for definitions of these standards please see the interim report). In addition, the "data driven" standard for Algebra I EOC Success Academy was strongly reflective of best practices for teacher PD due to the sample assessment items that were shown with right and wrong answers. Experts reported moderate alignment between the math Academies materials and four of the standards for staff development – "equity," "learning communities," "research-based," and "design." The expert panel report indicated a weak alignment with "data-driven" standards for the two MSTAR Academies and with the "resources" standard across all three Academies. The experts attributed these weaker alignments to a need for more information on the Universal Screener and Project Share.

The greatest concern of experts across the math Academies pertained to insufficient activities for participants to develop conceptual understanding and computational mastery. The math panel experts also unanimously expressed a need to strengthen the level of content instruction. They indicated that teachers would benefit from exposure to curriculum/content that is beyond their present grade level as well as how their grade-level materials fit into the broader discipline of math.

Science Academies

The science experts concluded that the content and activities of the science Academies were well aligned with national standards and would provide useful activities for teachers. The experts indicated a strong alignment of the materials across the three science Academies to the "quality teaching," "learning communities," "design," "learning," and "collaboration" standards for staff development and a moderate alignment between the science Academies materials and three of the standards: "equity," "data-driven" (for Science TEKS Overview Academy for Grades K-12), and "research-based."

Science expert panel members, however, addressed some weaknesses with the Science Academy sessions. They found weak alignment with the "resources" standard in that little to no information on Project Share was provided in any of the science Academies' materials. The experts also noted that some of the instructions need more clarification and that the materials could be strengthened by providing participants with more opportunities to "practice" integrating the activities into a classroom environment.

ELA Academies

ELA experts indicated that the materials for the ELA Academy were reflective of best practices for teacher PD across all but one standard ("data-driven"). ELA experts recommended the materials be enhanced by ensuring that teachers understand specifically how to use their awareness of the state standards to strengthen their instruction. All experts indicated that greater specificity is required so teachers understand how to translate key ideas into quality classroom practice. Experts also

recommended that the developers include samples of student work that demonstrate key concepts communicated during training.

Research Question 1C: To what extent does the content of each Academy reflect best practices for instruction in respective subject areas?

Overall, the expert panels indicated a strong or moderate alignment of the materials with best practices in instruction for each of the areas under review, including the alignment to national and state standards. Some of the common themes that were highlighted by experts include active engagement of participants (and ultimately students), modeling of hands-on activities, and creating feedback loops between presenters and participants to generate understanding and to correct misconceptions.

Math and science experts indicated that they noticed a strong correlation between the content and the state standards (the TEKS) in their respective subjects. Additionally, there were several activities that were determined to be beneficial for student learning. There was consensus among the experts, however, that if increased student achievement is the aim of the Academies, there must be a concentrated effort to increase the conceptual understanding of the teacher participants and provide numerous opportunities throughout the Academies to practice the various concepts that are covered in the Academies.

Delivery of the Face-to-Face PD Academies

Research Question 1E: What is the quality of the training provided to the regional trainers?

Observers reported that the master trainers presenting to the regional trainers at the TOTs were very knowledgeable about the subject matter and had exemplary presentation skills. At both the State Trainings and TOTs, there was high level of emphasis placed on turning around the PD with a high degree of fidelity at each of the ESCs across Texas. At each of the TOTs, the majority of the content was provided to regional trainers in a manner that would enable them to effectively conduct the training. For the Project Share portion of the TOT, the observers reported that the master trainers were less familiar with this new platform for PD and, as a result, could not fully convey the tool's functionality to attendees.

As indicated in the regional trainer survey responses, participants expressed broad satisfaction with the delivery and quality of the TOT sessions they attended. More importantly, the majority of participants also responded that the TOT sessions prepared them to train teachers and was a good use of their time. Comparisons of the trainers' survey responses from each Academy revealed that the Algebra I EOC Success Academy and Science for Grades 5-8 Academies had higher ratings of quality than any of the other Academy TOTs, while the MSTAR Math Academy for Grades 7-8 and English I and II EOC Success Academy TOTs tended to receive the lowest ratings. With the exception of the ELA trainers, the majority of respondents indicated that the Project Share system was covered only to a moderate or minimum extent at the TOT they attended and reported low levels of satisfaction with the Project Share portion of the Presenter's Guide.

Research Question 1F: What are the professional characteristics of the regional trainers?

A total of 1,313 individuals attended at least one Academy's TOT session to become trained as a regional trainer. Of these, 44% conducted a PD session during summer 2010 (as of August 6th, 2010). Approximately two-thirds of the trainers are employed by schools or districts within an ESC region, 19% were ESC employees, and the remaining 15% were categorized as "other" (e.g., contractors, consultants). The education and experience levels of the regional trainers was high, with over two-thirds holding a Masters or Doctorate degree, 93% indicating that they have over six years of experience as a K-12 teacher, and slightly more than 75% reporting more than 60 hours of experience providing professional development. However, very few reported experience in the online facilitation of courses or training.

Research Question 1G: In what ways, and to what extent, was each Academy promoted to teachers across Texas?

ESCs did not report any unique or innovative method of communicating the PD Academies. ESC administrators generally felt the PD Academies were promoted similarly to how other PD efforts are promoted. A clear challenge in promoting these Academies was the short amount of time ESCs had to announce the PD offerings and recruit teachers. Many ESCs commented that promotion efforts could be improved by starting earlier in the year. Teachers most commonly learned about the PD Academies through their school principal or another colleague at their campus, and approximately 20% reported that they learned about the PD Academies through their regional ESC's website.

Research Question 1H: What is the quality of the training provided to teachers?

Overall, the regional trainers provided high quality professional development. Observers of the summer PD Academies rated the trainers highly in "presenter delivery," "interactions between presenters and participants," and "training climate." Observers also gave favorable overall ratings of each of the PD Academies. Of note are the particularly high overall ratings given to the Algebra I EOC Success Academy PD and the Science Academies for Grades 5-8. While observers rated the PD Academies particularly high on the indicators of PD delivery, such as giving clear directions, circulating around the room, collegiality, and active engagement, the observers gave moderate ratings on the more challenging indicators of PD delivery, such as instructors' modeling of effective instructional strategies, and use of questioning strategies, and the intellectual rigor of participants' responses. If teachers are to effectively use these higher level strategies to facilitate higher level thinking with their students, follow-up PD may need to focus more specifically on these skills.

Analysis of the regional trainer survey shows most regional trainers were positive about their delivery of training to teachers, with the majority reporting that they were able to follow the materials and activities in the presenter's guide and incorporate what they learned from their TOT session. In addition, regional trainers, particularly trainers of the three-day long Biology EOC Success Academy, MSTAR Math Academy for Grades 5-6, and Algebra I EOC Success Academy, were moderately to greatly confident that teachers they trained would be well prepared to effectively teach the concepts presented in the

Academies and improve student outcomes. However, across all Academies, they were less positive about the extent to which they could address participants' concerns and differentiate instruction. This could be due in part to some of the trainers' perceptions that there was not enough time to cover the material, a concern most frequently reported by Algebra I EOC Success Academy trainers.

The responses of PD participants to survey questions about the quality of the training they received are consistent with the generally positive results from the regional trainer survey and from the observer ratings. An overwhelming majority of respondents indicated high levels of satisfaction with the training delivery and with instructor competence. The PD participants were also positive about the content of the PD with 80% to 85% of respondents for all Academies except ELA reporting most frequently that the PD covered key content (the TEKS), EOC assessments, CCCR, ELPS and RtI to a moderate or great extent. ELA participants reported lower ratings with 35% indicating that key content was not covered at all or covered to a minimal extent. In response to questions about how the PD impacted their teaching, a similar pattern emerged. A large majority of respondents for all Academies, with the exception of ELA, reported that the PD had positively impacted their general knowledge, their content specific knowledge, and their knowledge related to classroom instruction. In contrast, higher percentages of ELA participants indicated that the PD had no impact or minimal impact on their teaching. It is also of note that math teachers were less positive about the impact of the training on their knowledge of the Universal Screener, with the majority indicating that the PD increased their knowledge to a minimal or moderate extent.

With the exception of the English I and II EOC Success Academy, PD participants reported that Project Share was either not covered as part of the PD Academy or it was given minimal to moderate exposure (less than 20 minutes). A relatively small proportion of teachers (approximately one in five) indicated that they were prepared or very prepared to use Project Share after the training they received. More than 75% of respondents indicated they were either somewhat interested or interested in Project Share as a potential PD platform, and another 7% of teachers indicated that they were very interested in Project Share. Thus, it appears there is interest among teachers in using the Project Share system, but additional marketing and training may be required.

Research Question 1I: To what extent is the PD training implemented with fidelity to teachers across the regional education service centers?

Overall, the Rider 42 PD Academies were implemented across the state with a reasonably high degree of fidelity. Observers noted the strongest evidence of fidelity in terms of the presenters' use of the content and standards handouts, as well as presenting videos when appropriate. There was a slightly lower rating for observations regarding the extent to which presenters followed the materials/activities in the Presenter Guide as planned. Of the three support frameworks introduced at the Academies, RtI and ELPS appear to have been implemented with greater fidelity than CCRS. The lowest rated indicator of fidelity was the orientation to Project Share. As discussed earlier, limited information about Project Share was available to trainers at the time of the PD Academies. There is some noticeable variation in the evidence of fidelity overall across the various Academies with the Science Academies for Grades 5-8

receiving the highest average rating on fidelity and English I and II EOC Success Academy receiving the lowest.

Participation in the Face-to-Face PD Academies

Research Question 1J: What are the professional characteristics of the teachers who participated in face-to-face training?

As of August 6th, 2010, over 19,000 participants attended one of the seven subject-specific Academies targeted in this research study. Teachers across the state also participated in other SSI-related Academies that are not part of this evaluation (e.g., TALA, ELPS). The PD Academy participation rates varied substantially across regions ranging from less than 10% of teachers attending in some regions to greater than 50% in others. With the exception of English I and II EOC Success Academy, the participants represented approximately one-quarter or more of the number of 2009-10 teachers. Participation in middle school Academies was particularly high with approximately 39% of 2009-10 middle school science teachers attending the Science Academies and approximately 38% of 2009-10 middle school mathematics teachers attending a MSTAR Math Academy. This focus on middle school bodes well for Texas in 'building a base' of learning that students can take with them to higher grades. Additionally, a number of teachers attended both their subject Academy and either the ELPS Academy or the Science TEKS Overview Academy for Grades K-12, possibly enhancing or reinforcing the impact of the content specific PD. This possibility will be examined in the future analyses of teacher and student outcomes.

Demographic data (e.g., gender, ethnicity, teaching experience) suggest that, with few exceptions, the PD Academies participants are representative of teachers and campuses across the state. With the exception of the MSTAR Math Academies, the campuses of the PD participants were similar to those of non-participants in terms of 2009 TAKS passing rates, and student socio-economic status. If TEA seeks to target teachers from a more at-risk sample of campuses, these data suggest that more work may need to be done so that these campuses are over-represented in the sample.

Conclusions and Recommendations

The evaluation results indicate that, over a short time period, the PD developers were successful in preparing PD programs in the core content areas of math, science, and ELA that were well aligned with national standards for PD and best practices for content instruction and TEKS. From the expert reviews, it is evident the content of the PD was of good quality, would engage teachers with the presenters and with each other, and would enhance teaching. In their efforts to improve future PD, staff should consider and address the expert reviewer comments regarding poor alignment with the PD standards for "resources" reported for each of the math and science Academies and the poor alignment with "data-driven" standards reported for the English I and II EOC Success Academy and MSTAR Math Academies for Grades 5-6 and Grades 7-8. There was consensus among the experts for PD developers and TEA staff to make a concentrated effort to increase the conceptual understanding of the teacher participants and provide numerous opportunities throughout the Academies to practice the various concepts covered in the Academies.

Based on observations of the PD delivery, future training for both the regional trainers and for teachers could benefit from added focus on the more challenging indicators of quality PD such as use of questioning strategies, and the intellectual rigor of participants' questions. The PD could also be improved with additional focus on college and career readiness standards and more examples of student work, particularly in the area of ELPS. The roll-out of Project Share is likely to improve the alignment of the PD in these areas, particularly for the MSTAR Math Academies with the recent implementation of Universal Screener training for Middle School math teachers via Project Share. Similarly, ELA alignment with "data driven" standards should also improve as program staff continues with their plans for implementation of online ELA courses through Project Share.

In addition to developing quality PD content over a short time period, TEA and ESC staff successfully recruited and trained large numbers of highly qualified regional trainers who delivered the PD to over 19,000 teachers across the state. The teacher PD participants represented approximately one-quarter or more of the number of 2009-10 teachers with the highest participation at the middle school level (38% for MSTAR Math Academies for Grades 5-8 and 40% for Science Academies for Grades 5-8).

Across all Academies, the majority of the regional trainers reported high levels of satisfaction with the quality and fidelity with which they delivered the training. Observations of training delivery confirmed these perceptions with overall high ratings of quality and fidelity across all observations. Teacher survey responses also indicate the training was well-delivered, covered key content and impacted teachers knowledge and instructional practices to a moderate or great extent. Of concern are the lower levels of satisfaction and preparedness to train others reported by ELA and MSTAR Math 7-8 regional trainers and the lower levels of satisfaction and impact reported by participants at the English I and II EOC Success Academies. Of additional concern is the lack of evidence that the CCRS standards were implemented with fidelity in the PD training. Being able to teach to these higher standards is increasingly important not only because of the higher accountability standards coming with the new statewide tests but also because of the increasing need for students to be better prepared for college and career challenges. TEA program staff should review the CCRS portions of the PD, including recommendations from the expert panels to determine what improvements should be made for future TOT sessions. With the increasing use of Project Share for online PD, program staff will have additional opportunity to provide specific reinforcements and support in these areas.

As TEA and ESC staff plan new training for summer 2011 and supplement the current training through the rollout of Project Share, the evaluation results highlight a critical need to prepare trainers to facilitate teachers' use of Project Share. The regional trainers reported that they do not have much experience in facilitating online PD and reported that they received lower levels of preparation in this area than in the delivery of face-to-face PD.

TEA has achieved a high capacity for delivering PD with over 13,000 trainers across the state prepared to support the ongoing PD implementation throughout the school year. Given the costs associated with training so many regional trainers, TEA and ESC staff should determine how best to recruit more teacher participants, and tap into this group of trainers to deliver more face-to-face trainings. Results from the

ESC administrator survey suggest that staff are already considering ways to increase teacher participation including starting promotion efforts earlier in the year and utilizing social networking media to reach more participants. With additional training in the delivery of online PD, program staff could also use these trainers to provide more support for the use of Project Share in districts across the state. Particular attention should be paid to increasing high school teacher participation rates in anticipation of the coming shift to EOC exams. The roll out of Project Share, already in progress, will provide an opportunity for increased teacher participation without having to wait for another series of summer sessions.

Continuing Evaluation Activities

As noted earlier, this Interim Report presents findings related to Research Objective 1, answering research questions addressing the content of, delivery of, and participation in the seven PD Academies implemented during the summer of 2010. As described below, research activities over the coming months will continue to more comprehensively address the first research objective, and new activities will commence that address the remaining research objectives.

Future activities will include the collection and analysis of PD participant (teacher) survey data in spring 2011. The research team will also continue to collect and analyze of PD participant data for teachers attending Rider 42 PD Academies offered after August 5, 2010. Finally, as required by the contract between TEA and the UTD-ERC, data will be collected for the 2011 PD Academies (e.g., Geometry, Algebra II, English III, Chemistry and Physics EOC Academies) to ensure data are available in the event the evaluation is extended by the 82nd Legislature.

The research team will also conduct a document review and analysis of Project Share planning and implementation materials with input from an expert panel of reviewers. Future survey administrations will gauge region and district staffs' exposure to, fluency in, and usage and support of the online system. Last, the research team will collect and analyze usage data (e.g., number of log-ins, time online, content areas accessed, courses completed) available through the online system.

The spring 2011 teacher survey mentioned above will address teachers' perceptions of their teaching knowledge and practices after they have had the opportunity to implement instructional strategies taught in the PD Academies and participate in online PD and collaborative activities through Project Share. The research team will also conduct classroom observations of teachers who attended the Rider 42 PD Academies and comparable teachers who did not attend PD. A final measure of change in teacher knowledge, practices, and behavior will come from a comparison of scores on the Learning Math for Teaching assessment between middle school math teachers who have attended PD and those who have not.

In addition to the content-specific Academies under review as part of this study, the research team will assess the impact of participating in *both* an ELPS Academy and a related content-specific Academy on teacher instructional practices and student achievement results.

As a first step, sophisticated statistical analyses will be employed to determine the extent to which teacher participation in training (both online and face-to-face) impacted student achievement. Since a variety of factors could influence the extent to which the professional development impacts teacher practices and student achievement, data collected from sources previously described will be used to examine the extent to which various factors, such as the presence or absence of particular campus or district supports, increase or decrease the effectiveness of participating in professional development. These analyses will be exploratory in nature but are expected to provide important insights into the contexts within which PD is most likely to positively affect instructional practice and student outcomes.